Wisconsin Forward Exam and Wisconsin Academic Standards Grades 3–8 English Language Arts, Grades 3–8 Mathematics, Grades 4 and 8 Science

# Third-Party Independent Alignment Study Report July 6, 2017

The findings in this study are those of the independent reviewing team and do **not** represent the opinion of the State of Wisconsin.

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## **Executive Summary**

An independent alignment study was conducted for the Wisconsin Department of Public Instruction in Madison, Wisconsin, May 9–11, 2017. The study was conducted by Dr. James Augustin, a national alignment expert, who served as the trainer, facilitator, and writer of the report. The study also included an auditor, Dr. Barbara Kapinus, who served to support Dr. Augustin ensuring that the study was not compromised in any way. Specifically, the auditor's role was to observe the work of the independent reviewers, ensuring that the steps in the process were accurately followed. Additional information regarding the qualifications of Dr. Augustin and Dr. Kapinus can be found in the section of the report labeled *Alignment Study Participants*.

The third-party independent alignment study examined in detail the alignment of fourteen different test forms administered to Wisconsin students in spring 2017. The test forms were custom developed to measure Wisconsin's established educational standards in those content areas. The actual study included national reviewers as well as reviewers from Wisconsin who analyzed the Wisconsin Forward Exam and Wisconsin Academic Standards. Sixteen reviewers (eight reviewers from Wisconsin and eight national reviewers) analyzed the Wisconsin Forward Exam and Wisconsin Academic Standards for English Language Arts at grades 3 through 8. Fifteen reviewers (seven reviewers from Wisconsin and eight national reviewers) analyzed the Wisconsin Forward Exam and Wisconsin Academic Standards for Mathematics at grades 3 through 8. Eight reviewers (four reviewers from Wisconsin and four national reviewers) analyzed the Wisconsin Forward Exam and Wisconsin Model Academic Standards for Science at grades 4 and 8. Reviewers included English Language Arts, mathematics, and science experts and teachers, as well as administrators, professors, and assessment specialists. Reviewers analyzed the 2017 operational tests for each grade according to Dr. Norman Webb's alignment methodology. Additional information regarding the qualifications of the national reviewers and Wisconsin reviewers, including the process for selection, can be found in the section of the report labeled Alignment Study Participants.

Four test alignment criteria or alignment dimensions were examined for each of the fourteen tests. These criteria were Categorical Concurrence, Depth-of-Knowledge Consistency, Range-of-Knowledge Correspondence, and Balance of Representation. The criteria have been defined and explained by Norman Webb in a series of publications describing his model of standards-based test alignment.

Data on the alignment of the Wisconsin Forward Exam were collected from several committees composed of Wisconsin educators and national content alignment experts from around the United States, following the methodology developed by Norman Webb. The data collected were then statistically analyzed to determine if each test form met the statistical criteria established by the alignment model.

Taken as a whole, the findings were extremely positive for the fourteen Wisconsin tests examined in detail. Nine tests met the minimum statistical criteria for all four alignment dimensions for all the tests' domains as reflected in the standards and the DPI-approved test designs. This means that all the domains or groups of standards within each test were represented

by at least six test score points, including an appropriate range of learning standards covered within each domain. In addition, the score points measuring standards within each domain were reasonably balanced across the standards within each of the domains. Also, as desired, the depth-of-knowledge levels (or cognitive complexity) of the items measuring the standards within each domain were generally consistent with the depth-of-knowledge levels of the learning standards.

Of the remaining five test forms included in the study, four forms met the statistical criteria for three of the four dimensions of alignment. One form met the statistical criteria for two of the four alignment dimensions.

In English Language Arts, all forms were acceptably aligned on all four dimensions, with the exception of the grade 6 English Language Arts form which showed perfect alignment on three of the four dimensions (Categorical Concurrence, Range-of-Knowledge Correspondence, and Balance of Representation). The one area (Depth-of-Knowledge Consistency) where possible improvement to alignment was noted was in the grade 6 form for the Listening standards.

In Mathematics, four of the six tests for grades 4 through 7 were acceptably aligned on all four alignment criteria. The grade 3 form showed perfect alignment on three of the four dimensions (Categorical Concurrence, Range-of-Knowledge Correspondence, and Balance of Representation). The one area (Depth-of-Knowledge Consistency) where possible improvement to alignment was noted was in the grade 3 form for the Geometry standards. At grade 8, the form showed perfect alignment on two of the four dimensions (Range-of-Knowledge Correspondence, and Balance of Representation). The two alignment areas where possible improvements to alignment could be made was noted by reviewers' results for Depth-of-Knowledge Consistency in the grade 8 form for Functions standards and Categorical Concurrence in the grade 8 form for Statistics and Probability standards.

Regarding the Science assessments for grades 4 and 8, each met the statistical criteria for three of the four alignment dimensions. Grade 4 Science alignment results showed only the dimension of Categorical Concurrence for one domain as being in need of improvement. The grade 8 Science test's only weakness was of the alignment dimension of Range-of-Knowledge Correspondence for two different domains.

Reviewing the statistical analyses of the expert judgments of the educators who participated in the Wisconsin alignment study, it is apparent that as a collection, the forms are well aligned with the educational standards they were designed to measure. The tests have covered a good range of the content specified in the state's standards in each of the three content areas for each grade studied. The items measuring those standards are appropriately balanced across the standards within each grade. Depth-of-knowledge levels of the items were consistent with the depth-of-knowledge levels of the standards they were intended to measure, with only a few exceptions noted above. The discussion of the detailed alignment study results in the report includes information from study participants on specific ways in which the few weak criteria revealed during the study might be strengthened as the Wisconsin Department of Public Instruction moves forward with item and test form development for future test administrations. Overall, the very positive results of the alignment study at the item and form levels suggest only minor specific adjustments may be needed to enhance a sound existing development process.

## **Overview of the Report**

This report includes the results of three independent alignment studies. One study involved the alignment of the Wisconsin Academic Standards for English Language Arts to the set of items selected for use operationally on the spring 2017 grades 3–8 Wisconsin Forward Exams in English Language Arts. The second study involved the alignment of the Wisconsin Academic Standards for Mathematics to the set of items selected for use operationally on the spring 2017 grades 3–8 Wisconsin Forward Exams in Mathematics. The third study involved the alignment of the Wisconsin Academic Standards for Science to the set of items selected for use operationally on the spring 2017 grades 4 and 8 Wisconsin Forward Exams in Science.

## Structure of the Wisconsin Academic Standards

Wisconsin Academic Standards specify what students should know and be able to do in the classroom. They serve as goals for teaching and learning. Setting high standards enables students, parents, educators, and citizens to know what students should have learned at a given point in time. In Wisconsin, all state standards serve as a model. Locally elected school boards adopt academic standards in each subject area to best serve their local community.

#### **English Language Arts**

Wisconsin Standards for English Language Arts provide clear expectations around student learning at each grade level. As an integrated discipline, English Language Arts provides opportunities to use specific skills throughout all aspects of student learning.

The Wisconsin Academic Standards break English Language Arts into four distinct areas: Reading, Writing, Speaking/Listening, and Language. The Standards comprise three main sections: a comprehensive K-5 section and two content area-specific sections for grades 6-12, one for ELA and one for history/social studies, science, and technical subjects. Each section is divided into strands. K-5 and 6-12 ELA have Reading, Writing, Speaking and Listening, and Language strands; the 6-12 history/ social studies, science, and technical subjects section focuses on Reading and Writing. Wisconsin has a U.S. Department of Education waiver from assessing speaking standards as part of the Forward Exam (see Appendix F of this report.) Each strand is headed by a strand-specific set of College and Career Readiness (CCR) Anchor Standards that is identical across all grades and content areas. Standards for each grade within K-8 and for grades 9-10 and 11-12 follow the CCR anchor standards in each strand. Each grade-specific standard (as these standards are collectively referred to) corresponds to the same-numbered CCR anchor standard. Put another way, each CCR anchor standard has an accompanying grade-specific standard translating the broader CCR statement into grade-appropriate end-of-year expectations. Individual CCR anchor standards can be identified by their strand, CCR status, and number (R.CCR.6, for example). Individual grade-specific standards can be identified by their strand, grade, and number (or number and letter, where applicable), so that RI.4.3, for example, stands for Reading, Informational Text, grade 4, standard 3 and W.5.1a stands for Writing, grade 5, standard 1a. Strand designations can be found in brackets alongside the full strand title.

A single K–5 section lists standards for reading, writing, speaking, listening, and language across the curriculum, reflecting the fact that most or all of the instruction students in these grades receive comes from one teacher. Grades 6–12 are covered in two content area–specific sections, the first for the English language arts teacher and the second for teachers of history/social studies, science, and technical subjects. Each section uses the same CCR anchor standards but also includes grade-specific standards tuned to the literacy requirements of the particular discipline(s).

#### **Mathematics**

Mathematical proficiency is essential for every student in Wisconsin. The Wisconsin Standards for Mathematics demonstrate a commitment to high expectations for what students should learn and the instructional shifts that will prepare them for their future. Educators and leaders at all levels must take on the challenge and the responsibility to ensure that all students are mathematically literate. Students should analyze, reason, and communicate ideas effectively as they pose, formulate, interpret, and solve mathematical problems in a variety of situations to ensure success in a world beyond the classroom.

The Standards for Mathematical Content describe the sequence of important mathematics content that students learn. They are a combination of procedures and understandings. These content standards are organized around domains and clusters that are specified by grade level, kindergarten through grade 8, and by conceptual category at high school. The domains at all levels are based on research-based learning progressions detailing what is known about students' mathematical knowledge, skill, and understanding. The progressions build from grade to grade and topic to topic, providing K–12 focus and coherence. Other important cross-grade themes that should be noted and investigated are concepts such as the role of units and unitizing, the properties of operations across arithmetic and algebra, operations and the problems they solve, transformational geometry, reasoning and sense-making, and modeling of and with mathematics.

The narratives at each K-8 grade level specify two to four key areas identified as the primary focus of instruction. These are referred to as critical areas. At the high school level, the narratives describe the focus for each conceptual category, as well as the connections to other categories and domains.

#### Science

The Wisconsin Model Academic Standards for Science set clear and specific goals for teaching and learning, and they are not meant to supplant curriculum. Instead, they should help school districts to develop curriculum units that focus on specific academic results. Districts are encouraged to engage in professional conversations suggested by this document and by the National Science Education Standards.

The Wisconsin Science Standards follow the format and content of the National Science Education Standards. Three of the content standards (D. Physical Science; E. Earth and Space Science, and F. Life and Environmental Science) address the knowledge base of science, while the other content standards address the application of knowledge. A reader looking for more of the details inherent in the content standards may refer to the Wisconsin Model Academic Standards.

## Wisconsin Forward Exams Test Design Considerations

#### Item Types Appearing on the Wisconsin Forward Exams

The list below is representative of some of the possible item types that appeared on the spring 2017 Wisconsin Forward Exams.

#### Selected-Response (SR) Items

Selected-response (SR) items are an efficient method for measuring a broad range of content and can be used to assess a variety of skills. There are three types of SR items used on the online assessments: multiple-choice (MC), enhanced selected response (ESR), and evidence-based selected response (EBSR). In all cases, SR items require that a student determines the correct answer(s) to the question posed from a provided list. While it is still possible for a student to perform some work directly related to determining the correct answer, the student is not required to generate the content of the answer when responding to a selected-response item. An exception to this requirement is mathematics short-response/gridded-response items where students will be required to enter a short alphanumeric response.

#### Multiple-Choice (MC) Items

Multiple-choice (MC) items on Wisconsin's assessments have four answer choices, including three distractors and one correct answer. Distractors for Mathematics represent common misconceptions, incorrect logic, incorrect application of an algorithm, or computational errors, etc. Distractors for ELA are written to represent a common misinterpretation, predisposition, unsound reasoning, or casual reading, etc. A correct response to an MC item is worth one raw point. The process skills, directives, and action statements within an MC item also specifically align with the Wisconsin State Standards. MC items are present at all grades and are used with all content areas.

MC items can be further defined by being linked to, or independent from, a stimulus source. Items that operate independent of a stimulus are also known as "stand-alone MC." Stand-alone items may still have tables, graphs, or other information used in support of the stem. ELA uses a mixture of MC items linked to a stimulus passage and some that are stand-alone. For Mathematics, all MC items are considered stand-alone.

#### Enhanced Selected-Response (ESR) Items

The enhanced selected-response items (ESR) are multi-part autoscored items which may be varying combinations of multiple-choice, multiple-response, gridded-response, completion or short-answer, and technology-enhanced items that explore in greater depth and cognitive complexity the knowledge, skills, and abilities specified by mathematics standards. Typically, this item type has a common focus and explores authentic problem-solving skills. An example of a Statistics and Probability mathematics ESR item would utilize a data-table stimulus where part

A uses a TE graphing tool to create a bar graph of the data presented and part B asks students to calculate the mean of the data using a short-response item.

#### 2-Part Evidence-Based Selected Response (EBSR) Items

The 2-part evidence-based selected-response (EBSR) items have two parts and are designed to elicit an evidence-based response based on what a student has read from a stimulus passage. EBSR items are used only with the ELA online assessment, and each EBSR item is linked to a stimulus passage or to a stimulus passage set. There are several variations of 2-part EBSR items, but all 2-part EBSR items have an Accuracy piece and an Evidence piece.

The Accuracy piece of the item is part A. Part A of a typical EBSR item will be similar to a standard MC test question. A student analyzes a passage and chooses a single, best (correct) answer from four answer choices. Part B of a typical EBSR item will elicit evidence from the stimulus passage and requires that the student selects one or more correct answers based on the response the student provided to Part A. Part B is also different from Part A in that it may have five or six answer options (rather than just four answer options typical of an MC item) and more than one option may be correct.

#### Text-Dependent Analysis (TDA) Items

Text-dependent analysis (TDA) items will be used in the ELA assessment portion of the Wisconsin Forward Exam. Unlike a prompt, the TDA item is a text-based analysis based on a passage or a multiple-passage set that each student has read during the assessment. Both Literature and Informational Texts are addressed through this item type. Students must draw on basic writing skills while inferring and synthesizing information from the passage in order to develop a comprehensive, holistic essay response. The demand required of a student's reading and writing skills in response to a TDA item coincides with the similar demands required for a student to be college and career ready. The TDA responses are scored using a holistic scoring guideline on a 1- to 12-point scale. This item type is supported by all Wisconsin English Language Arts standards across all grades for both Reading Literature and Reading Informational Texts and by the Writing standards 1, 2, 3, 4, and 9 across all grades.

#### Technology-Enhanced (TE) Items

Technology-enhanced (TE) item types share the same functional structure of traditional paper and pencil test questions; however, the expansive features and functions of a computer-based medium allow for the incorporation of technical enhancements into traditional elements of a test question, such as the item stem, the stimulus (if any), the response area, or a combination of all three). TE items are used in the content areas of ELA, Mathematics, and Science.

Item types such as drag-and-drop, hot-spot, and in-line selection of multiple answers from dropdown menus broaden item presentation with engaging, interactive open-ended items.

A wide variety of TE item types are present on the Wisconsin Forward Exam including:

Clock Input, where a student is able to add an hour hand and minute hand to the clock.

Angle Draw Input, where given a base line the student can represent an angle.

- Short Input, where there are many types of short inputs that can be used. (The number of characters is usually limited to a relatively small number in order to facilitate auto-scoring. The types of characters allowed can also be limited to text only, numbers only, or a mix. An equation editor can be utilized to assist the student in creating something as basic as a fraction or something more complex. The available symbols and templates in the equation builder can be customized for a program. Certain Short Input items can also be used in paper-based tests as a gridded-response item.)
- Bar Graph Input, where students can produce bar graphs with prepopulated titles, labels, and scales or can allow for the student to populate them. (The number of bars and the color of the bars is predetermined by the system. A reset feature is available that allows the student to start over from the original configuration.)
- Number Line Input, where students can create a graph that might involve plotting points only or points and lines (Both solid and open "dots" are available as well as line segments and rays. Number line graphs can have prepopulated titles, labels, and scales or can allow for the student to populate them.)
- Coordinate Graph Input, allows for the graphing and labeling of points and lines (Regions, determined by plotted lines can be shaded. Solid and open "dots" as well as solid and dashed lines are available to the student. Coordinate graphs can have prepopulated titles, labels, and scales or can allow for the student to populate them.)
- Line Plot Input, used as another way to graphically represent data (The basic structure is provided for the student. Certain labeling on the line plot can be done by the student. A reset feature is available that allows the student to start over from the original configuration.)
- List Input, a combination of the short input described earlier with the ability for the student to add additional input boxes. For example, it can be used for describing the steps in a process without revealing to the student the number of steps needed. (The added input boxes can be rearranged and/or deleted.)
- Drag and Drop Input, a wide variety of ways are available where a drag and drop input can be utilized (The main difference between it and a drag and paste is that each draggable entity can be used only once with a drag and drop input. A reset feature is available that allows the student to start over from the original configuration.)
- Drag and Paste Input, a wide variety of ways are available where drag and paste input can be utilized. (The main difference between it and a drag and drop is that each draggable entity can be used more than once with a drag and paste input. A reset feature is available that allows the student to start over from the original configuration.)
- Drop-Down List Input, creates a situation in which a great deal of information about a student's grasp of a concept can be gathered with a single item. (Students can be asked to choose from three function types, four number of real zero responses, and two inverse function responses. For one function alone, this provides 24 possible answer combinations. With the three functions we can gain a considerable amount of information, making this almost an open-ended item type.)

- Pictograph Using Drag and Paste, actually another example of drag and paste, but worth mentioning on its own as it is a type of graphing often used at lower grade levels.
- Circle Graph, allows for the creation of a graph that allows the student to create and label the "wedges" that represent the data. (Circle graphs can have a prepopulated title or can allow for the student to populate it. The color of the "wedges" is predetermined by the system.)
- Matching, allows for the use of text or graphics as the matching objects. (The student clicks on one object and then clicks on a second object to connect them.)
- Highlighting Text, allows for designated text to be highlighted in a word, phrase, sentence, or paragraph.
- Graphic Modification Hot Spot, allows for one image to replace another image when a hot spot is clicked.

#### Wisconsin Forward Exams English Language Arts Test Design Considerations

The Wisconsin Academic Standards for English Language Arts assessed on the Wisconsin Forward Exams are organized into classifications as shown below. These classifications are used throughout the grade levels. The first letter or first two letters represent the domain. The Standards are further delineated by numbers representing the anchor standards and grade-specific standards. The complete set of Standards assessed on the Wisconsin Forward Exams can be found at the Wisconsin Department of Public Instruction's website: https://dpi.wi.gov/ela/standards. They are also listed in Appendix B of this report.

- RL= Reading Standards for Literature
- RI= Reading Standards for Informational Text
- W= Writing Standards
- SL= Speaking and Listening Standards
- L= Language Standards

Table 1 below summarizes the structure of the 2017 Wisconsin Forward Exams English Language Arts.

| 2017 Wisconsin Forward Exams English Language Arts |                          |             |           |                   |                           |                    |                        |                         |
|----------------------------------------------------|--------------------------|-------------|-----------|-------------------|---------------------------|--------------------|------------------------|-------------------------|
|                                                    | No. of P                 | assage Sets |           | No. of Core Items |                           |                    |                        |                         |
| Grade                                              | Literature Informational |             | Listening | SR/TE<br>(1 pt)   | SR/TE/<br>EBSR<br>(2 pts) | TDA<br>(12<br>pts) | Total<br>Core<br>Items | Total<br>Core<br>Points |
| 3                                                  | 2-3                      | 1-2         | 2–3       | 24-26             | 8-12                      | 1                  | 34                     | 53                      |
| 4                                                  | 2-3                      | 1-2         | 2–3       | 25-27             | 8-12                      | 1                  | 35                     | 56                      |
| 5                                                  | 2-3                      | 1-2         | 2–3       | 25-27             | 8-12                      | 1                  | 35                     | 56                      |
| 6                                                  | 2-3                      | 2-3         | 2–3       | 25-27             | 8-12                      | 1                  | 36                     | 56                      |
| 7                                                  | 2-3                      | 2-3         | 2–3       | 25-27             | 8-12                      | 1                  | 36                     | 56                      |
| 8                                                  | 2-3                      | 2-3         | 2–3       | 25-27             | 8-12                      | 1                  | 36                     | 56                      |

#### Table 1: Structure of the 2017 Wisconsin Forward Exams English Language Arts

#### Wisconsin Forward Exams Mathematics Test Design Considerations

The Wisconsin Academic Standards for Mathematics assessed on the Wisconsin Forward Exams are organized into classifications as shown below. The first letter or first two letters represent the domain. The Standards are further delineated by numbers representing the anchor standards and grade-specific standards. The complete set of Standards assessed on the Wisconsin Forward Exams can be found at the Wisconsin Department of Public Instruction's website: https://dpi.wi.gov/math/standards. They are also listed in Appendix B of this report.

- OA= Operations and Algebraic Thinking
- NBT= Numbers and Operations in Base Ten
- NF=Numbers and Operations—Fractions
- MD= Measurement and Data
- G= Geometry
- RP= Ratios and Proportional Relationships
- NS=The Number System
- EE= Expressions and Equations
- SP= Statistics and Probability
- F= Functions

Table 2 below summarizes the structure of the 2017 Wisconsin Forward Exams Mathematics.

| Table 2: Structure of the 20 | <b>17 Wisconsin Forward</b> | <b>Exams Mathematics</b> |
|------------------------------|-----------------------------|--------------------------|
|------------------------------|-----------------------------|--------------------------|

| 2017 Wisconsin Forward Exams Mathematics |                        |              |                        |                         |  |  |  |  |
|------------------------------------------|------------------------|--------------|------------------------|-------------------------|--|--|--|--|
|                                          | No. of Co              | re Items     | e Items                |                         |  |  |  |  |
| Grade                                    | MC/MS/SA/SEQ<br>(1 pt) | TE<br>(1 pt) | Total<br>Core<br>Items | Total<br>Core<br>Points |  |  |  |  |
| 3                                        | 37                     | 5            | 42                     | 42                      |  |  |  |  |
| 4                                        | 41                     | 5            | 46                     | 46                      |  |  |  |  |
| 5                                        | 41                     | 5            | 46                     | 46                      |  |  |  |  |
| 6                                        | 41                     | 5            | 46                     | 46                      |  |  |  |  |
| 7                                        | 41                     | 5            | 46                     | 46                      |  |  |  |  |
| 8                                        | 41                     | 5            | 46                     | 46                      |  |  |  |  |

#### Wisconsin Forward Exams Science Test Design Considerations

The Wisconsin Academic Standards for Science assessed on the Wisconsin Forward Exams are organized into classifications as shown below. These classifications are used in grades 4 and 8. The first letter or first two letters represent the domain. The Standards are further delineated by numbers representing the grade level and performance standard. The complete set of Standards assessed on the Wisconsin Forward Exams can be found at the Wisconsin Department of Public Instruction's website: https://dpi.wi.gov/science/standards. They are also listed in Appendix B of this report.

- A= Science Connections
- B= Nature of Science
- C= Science Inquiry
- D= Physical Science
- E= Earth and Space Science
- F= Life and Environmental Science
- G= Science Applications
- H=Science in Personal and Social Perspectives

Table 3 below summarizes the structure of the 2017 Wisconsin Forward Exams for Science.

| 2017 Wisconsin Forward Exams Science |                                          |         |                      |  |  |  |
|--------------------------------------|------------------------------------------|---------|----------------------|--|--|--|
|                                      | No. of Cor                               | e Items |                      |  |  |  |
| Grade                                | Selected<br>ResponseTotal<br>Core<br>SRs |         | Total Core<br>Points |  |  |  |
| 4                                    | 40                                       | 40      | 40                   |  |  |  |
| 8                                    | 40                                       | 40      | 40                   |  |  |  |

Table 3: Structure of the 2017 Wisconsin Forward Exams Science

## **Overview of the Third-Party Independent Alignment Studies**

The Wisconsin Forward Exams and Wisconsin Academic Standards Third-Party Independent Alignment Studies for English Language Arts grades 3-8, Mathematics grades 3-8, and Science grades 4 and 8 were conducted in Madison, Wisconsin, on May 9–11, 2017. One alignment study involved a review of the Wisconsin Forward Exams in English Language Arts grades 3-8 operational forms for alignment to the Wisconsin Academic Standards for English Language Arts. The second alignment study involved a review of the Wisconsin Forward Exams in Mathematics grades 3-8 operational forms for alignment to the Wisconsin Academic Standards for Mathematics. The third study involved a review of the Wisconsin Forward Exams in Science grades 4 and 8 operational forms for alignment to the Wisconsin Academic Standards for Science. The purpose of each alignment study was to determine the degree of alignment among the standards and the operational test items found on the corresponding grade-level Wisconsin Forward Exam. Each study was based on Webb's alignment model, a model developed by Dr. Norman Webb of the Wisconsin Center for Educational Research. The Webb model requires a balanced alignment-study review approach, which brings together in-state alignment and/or subject-area experts and national alignment and/or subject-area experts with the goal of ensuring that the alignment study is valid and reliable. The primary role of the independent reviewers is to judge the depth-of-knowledge level of each item and to identify the primary, and possibly a secondary, standard to which each item is aligned. A description of the third-party independent reviewers for each study can be found below, in the Alignment Study Participants section of this report. A detailed description of the alignment process used with the studies, including summary tables showing the results of each alignment study, can also be found in this report. Overall, the alignment relationships between the Wisconsin Academic Standards and the Wisconsin Forward Exams for each study are acceptable.

#### **Alignment Study Participants**

For the Wisconsin Forward Exams alignment studies, thirty-nine independent alignment experts were engaged in the study as follows: sixteen English Language Arts reviewers (eight Wisconsin reviewers and eight national reviewers), fifteen Mathematics reviewers (seven Wisconsin reviewers and eight national reviewers), and eight Science reviewers (four Wisconsin reviewers and four national reviewers). Both the Wisconsin reviewers and the national reviewers were individuals who had not been involved in the Wisconsin Forward Exams item and assessment development process but who had teaching experience and/or extensive background and expertise in content-specific curriculum. Wisconsin educators interested in participating as reviewers in the alignment study submitted an application and resume to the WDPI. Selection criteria for reviewers was based on educator experience and familiarity with Wisconsin academic standards, demographics, and geographic representation across the state. In addition, reviewers for a specific grade and subject area could not have prior experience participating in any Forward Exam item review for that same grade and subject area. The national reviewers were individuals with previous alignment study experience; a list of their names, with resumes, were provided to

the Wisconsin Department of Public Instruction. The Department approved the final list of national reviewers.

A summary of the qualifications of the Wisconsin reviewers is provided in Tables 5 and 6 in the following sections. Table 4 below provides demographic information regarding the national reviewers. In addition to subject-area and/or curriculum expertise, the national alignment reviewers represented the diverse needs of students.

| Female | Male | African<br>American | White | American<br>Indian | Hispanic | ELL<br>Specialist |
|--------|------|---------------------|-------|--------------------|----------|-------------------|
| 17     | 3    | 3                   | 14    | 1                  | 2        | 2                 |

| Table 4: Demographic | <b>Representation of the</b> | National Alignment Reviewers |
|----------------------|------------------------------|------------------------------|
| 01                   | 1                            | 0                            |

In addition to the Wisconsin alignment reviewers and the national alignment reviewers, two additional alignment experts were involved in the study. One served as an independent auditor of the process, ensuring that the study was not compromised in any way. The second national alignment expert, who has experience in conducting alignment studies using Webb's alignment model, served as the overall alignment process trainer and main facilitator of the third-party independent review process. Dr. James Augustin served in this role. Dr. Augustin is a nationally known alignment expert who has participated in a number of alignment studies using the Webb model. His role in this third-party independent alignment studies using the Webb model. His role in this third-party independent alignment study was to oversee the entire alignment process, ensuring that the review was conducted correctly. Dr. Augustin was responsible for analyzing the results and providing the interpretation of the alignment results. He also provided reviewers with alignment training, including understanding Webb's depth-of-knowledge levels and understanding the alignment process. The information below provides additional information regarding both the national alignment study third-party facilitator/trainer and the national alignment study third-party independent auditor.

#### National Alignment Study Facilitator/Trainer

#### James Augustin, PhD

Dr. James Augustin has extensive experience serving as the overall alignment process trainer and main facilitator of the third-party independent review process. He also serves to analyze the alignment data, and he provides written conclusions based upon the data. Dr. Augustin is uniquely qualified to serve in this role, having participated as a national alignment expert for several state alignment studies, including programs for Alabama, Alaska, Idaho, Louisiana, Pennsylvania, Nebraska, and Maryland. For these studies, Dr. Augustin served as a trainer, lead facilitator, report writer, and/or reviewer for the alignment studies, which were based on Dr. Norman Webb's methodology. He has also consulted with the Commonwealth of Puerto Rico on alignment study procedures for the Commonwealth's testing program. Dr. Augustin has contributed numerous research, evaluation, and program-development reports on curriculum and measurement topics published by the University of Wisconsin and other education and

government agencies. He served as guest editor of a special issue of *Measurement and Evaluation in Counseling and Development* (2002).

In addition to Dr. Augustin's alignment study experience, he has served as a measurement consultant providing support for the development of a number of large-scale assessment programs. He was also most recently the director of Large-Scale Assessment with Educational Testing Service (ETS), where he was responsible for overseeing the development of multiple and complex assessments for large-scale assessment programs. Dr. Augustin was also a test development director for The Psychological Corporation/Harcourt Educational Measurement. In addition, he was with the Wisconsin Assessment Center at the University of Wisconsin and the Department of Psychology at North Carolina State University.

Dr. Augustin received his PhD degree in human resource development psychology, with advanced study in measurement and testing, from North Carolina State University at Raleigh. He received an MA degree in psychology from Marquette University and a BA degree in psychology from Trinity University in San Antonio, Texas.

#### National Alignment Study Third-Party Independent Auditor

#### Barbara Kapinus, PhD

Dr. Barbara Kapinus is a consultant in education, having recently consulted for such organizations as the Partnership for Assessment of Readiness for College and Careers (PARCC), the Smarter Balanced Assessment Consortium (SBAC), the Literacy Design Collaborative (LDC), Educational Testing Service (ETS), and the Stanford Center for Assessment, Learning, and Equity (SCALE). She has also consulted on several projects for the U.S. Department of Education, most notably the National Center for Education Statistics (NCES). In addition, she has worked on several state reading assessments, standards development projects, curriculum efforts, and staff development programs through which she has gained extensive alignment experience. She has served as a national alignment auditor and/or group facilitator for alignment studies using Webb's methodology in Alabama, Nebraska, and Pennsylvania.

Most recently, Dr. Kapinus served as the director of English Language Arts for the Smarter Balanced Assessment Consortium (SBAC). Prior to her work at SBAC, she retired from the National Education Association, where she was a senior policy analyst for over thirteen years. Dr. Kapinus also served as the director of the Curriculum and Instructional Improvement Program at the Council of Chief State School Officers, where she worked on projects and state collaborations related to standards implementation, assessment, reading, workplace readiness, early learning, and Title I. Her experience also includes eight years as Specialist for Reading and Communication Skills at the Maryland State Department of Education and sixteen years in Prince George's County Public Schools in several roles, including classroom teacher, reading specialist, and curriculum specialist.

Dr. Kapinus has published works on reading research, research applications, assessment, and education policy and instruction. She has served on numerous committees of the International

Literacy Association, the National Assessment of Education Progress, and the National Reading Conference, including those committees responsible for alignment.

Dr. Kapinus received an undergraduate degree in history from the University of California at Berkeley and MA and PhD degrees in reading from the University of Maryland at College Park.

#### English Language Arts Third-Party Independent Reviewers

For this Wisconsin Forward Exams English Language Arts alignment study, sixteen of the thirtynine independent alignment experts were engaged in the English Language Arts study of grades 3–8 as follows: eight for grades 3–5; eight for grades 6–8. Additional information concerning the Wisconsin reviewers and the national reviewers can be found in the sections below.

#### Wisconsin English Language Arts Third-Party Independent Reviewers

The English Language Arts educators from the State of Wisconsin who served as reviewers have extensive experience in English language arts education instruction and/or curriculum. They represented a variety of occupations in the field of education. The reviewers were from both urban and rural areas of Wisconsin. The Wisconsin third-party independent English language arts reviewers' information is summarized in Table 5 below.

| Reviewer              | Grade      | Gender | Current Position                  | Urban/          |
|-----------------------|------------|--------|-----------------------------------|-----------------|
|                       |            |        |                                   | Suburban/ Rural |
| Karin Exo             | grades 3-5 | F      | Reading Specialist                | Rural           |
| Amy Johnson           | grades 3-5 | F      | Assistant Director of Instruction | Suburban        |
| Kathryn Moser         | grades 3-5 | F      | Teaching, Learning, Coordinator   | Rural           |
| Julie Spalding        | grades 1-9 | F      | Teacher                           | Urban           |
| Robyn Bindrich        | grades 6-8 | F      | Literacy Coach, Teacher Leader    | Rural           |
| Amy Diderckson        | grades 7-8 | F      | Literacy Coach                    | Urban           |
| Andrea Heckner        | grades 1-9 | F      | Reading Specialist                | Urban           |
| Elizabeth Wartzenluft | grades K-8 | F      | Teacher                           | Urban           |

Table 5: Wisconsin English Language Arts Third-Party Independent Reviewers

#### National English Language Arts Reviewers

#### Margaret E. Weldon, EdD

Dr. Margaret Weldon has served as an English language arts national expert for alignment studies based on the methodology of Dr. Norman Webb for Alabama, Alaska, Nebraska, Idaho, Maryland, Oklahoma, Pennsylvania, and most recently Nebraska. She has served as a trainer/facilitator as well as an independent reviewer. She was an assessment specialist for the Alabama Department of Education, and in this role she managed the writing assessment program development and administration for grades 5, 7, and 11. She led the development of the reading assessment (grades 3–8) for the Alabama Reading and Mathematics Test and the reading comprehension and language subject-area tests of the Alabama High School Graduation Exam (third ed.). She also collaborated on the development of the Alabama Early Learning Assessment K, 1, and 2 reading tests. Dr. Weldon has conducted statewide writing programs for teachers and administrators, covering composition, instructional strategies, holistic scoring, and reading instruction. She has participated in National Assessment of Educational Progress (NAEP) item reviews for reading and writing and in standard setting using bookmark and modified-Angoff methodologies.

Dr. Weldon was a classroom teacher and administrator for nineteen years for Montgomery Public Schools and worked as a central office administrator, directing the implementation of the state assessment program for a school system of 35,000 students. She has also served as an English department chairperson and a Title I reading specialist.

Dr. Weldon received a BS degree in secondary English education, an MS degree in secondary reading education, and an EdD degree in educational leadership, foundations, and technology from Auburn University.

#### Stacy Reeves, PhD

Dr. Stacy Reeves is associate professor (tenured) at the University of Southern Mississippi, Hattiesburg. In this position, she teaches undergraduate and graduate classroom-management courses and literacy courses for initial and advanced teacher licensure. Dr. Reeves is chair and cochair of undergraduate honors' theses, specialist students' action research field projects, and doctoral candidates' dissertations in literacy and related areas. She is also a professionaldevelopment trainer for area schools and other groups that work with students. Dr. Reeves serves on a variety of committees and other university-based decision-making groups, and she is on the board of a multinationality school in Limuru, Kenya, providing support for the assessment of students in literacy and making suggestions to teachers, parents, and other parties for students' growth in literacy.

Before this position, Dr. Reeves taught for many years, including at William Carey University, Hattiesburg, Mississippi, and at the University of Southern Mississippi, Hattiesburg. She was also an elementary school teacher for Hattiesburg Public Schools. Dr. Reeves is a member of the Mississippi Reading Association, having served as state president from 2010 to 2011, and is an active member of the International Reading Association. She has served as an English language arts national alignment study expert for state assessment alignment studies based on Dr. Norman Webb's methodology in Alabama, Nebraska, and Pennsylvania.

Dr. Reeves received a BS degree in elementary education and an MS degree in education, with an emphasis on Reading/Literacy, from the University of Southern Mississippi. She received a PhD degree in curriculum and instruction, with a minor in technology, from Mississippi State University.

#### Carol Lightfoot Steen

Ms. Carol Lightfoot Steen is currently an educational consultant, providing services such as, but not limited to, developing reading and language arts assessments for large-scale assessment programs and reviewing and revising items for alignment to content curriculum standards. She has participated as an English language arts national expert for alignment studies based on Dr. Webb's methodology in Pennsylvania and Nebraska. Over the years, Ms. Steen worked closely with state departments of education personnel, providing team leadership in test design, item standard alignment, and item development. She also prepared materials for use in large-scale assessment programs and contributed to various state projects for English language learner instruction. Ms. Steen also provided grant coordination services to a Peer Assistant and Review Joint Panel for the California State Department of Education. Funds were granted for the development of a series of workshops designed to meet the needs of veteran teachers.

Prior to her work as an educational consultant, Ms. Steen served as a classroom teacher for over twelve years. As a classroom teacher, she provided presentations to peers on such topics as strategies using rubrics and portfolios.

Ms. Steen received a BS degree in English at California State Polytechnic University, San Luis Obispo, California. She has also taken courses at various universities including the University of California, Santa Barbara, Santa Cruz, and Berkeley. She holds a lifetime California Teacher's Credential and has specialized in coursework for English language learners.

#### Jennifer Edstrom

Currently, Ms. Edstrom serves as a principal educational consultant, providing instructional seminars on curriculum development, assessment, and best practices for teachers. Additionally, she serves as a Field Supervisor for the University of San Diego, observing, assessing, and instructing teaching candidates during California state teaching certification process. Ms. Edstrom has also authored several publications in the field of education.

Ms. Edstrom's prior experience includes teaching and staff development. Her alignment experience includes work with large-scale assessment programs, for which she has overseen content development for a variety of K–8 reading/language arts state and district-implemented assessment programs in accordance with state standards and benchmarks, including assessment programs for the state of Washington. She has also participated as an English language arts national expert for alignment studies based on Dr. Webb's methodology in Pennsylvania and Nebraska. In addition to her development experience, she has trained Washington State educator committees in all aspects of assessment development, including item writing, bias and sensitivity review, rubric writing, item review, and alignment of items to standards. Ms. Edstrom has also served as a consultant to Educational Testing Services (ETS).

Ms. Edstrom received her BS degree from Wellesley College in Wellesley, Massachusetts, and her MS degree in curriculum and instruction from the University of San Diego, San Diego, California. At the University of San Diego, she received an award of distinction from the department of learning and teaching and was a merit scholar and a graduate research fellow.

#### Anne Malone

Ms. Anne Malone has been an educational consultant, focusing on reading and language arts item and test development since 1996. During these years she has provided such services as constructing test items based on college- and career-ready standards, including multiple-choice, written response, and technology-assisted items for all levels of assessments—from primary through high school. She has also reviewed passages, both previously published and original, for all levels of reading and writing assessments. Ms. Malone's alignment experience includes verifying correlations, depth-of-knowledge levels, and answer keys for alignment studies for a number of large-scale assessment programs. She has served as an English language arts national expert for alignment studies based on Dr. Webb's methodology in Pennsylvania and Nebraska.

Ms. Malone has also developed classroom instructional materials such as teacher manuals, including a revision of a junior-high level reading series, an intermediate grade spelling program, and a remedial high school reading series. For this work, she created activities for below-level, on-level, and gifted students as well as cross-curricular and learning-style-based activities and materials for parents.

Ms. Malone is also a former teacher; she taught freshman composition courses at the University of Dayton and at Ohio State University. She served as chief justice for the Oakwood High School Speech and Debate Team and as a judge at regional and state competitions.

Ms. Malone received a BS degree in English language arts from the University of Akron and an MS degree in journalism from Ohio State University.

#### Christie McWilliams-Abendroth, EdD

Dr. Christie McWilliams-Abendroth currently serves as a national English language arts consultant. In this role, she has provided professional development services in gifted education, differentiation, and other educational topics to departments, administrators, and teachers. As a consultant, Dr. McWilliams-Abendroth has extensive experiencing in reviewing items for alignment with state standards, and she has assisted with test item development processes in a variety of disciplines, including serving as a research and measurement facilitator. She has participated as an English language arts national expert for an alignment study based on Dr. Webb's methodology in Pennsylvania. She has also participated in item reviews, including reviews of items for alignment to state standards.

Prior to becoming an educational consultant, Dr. McWilliams-Abendroth also served a number of years as a classroom teacher for both K–12 and postsecondary. Her postsecondary teaching experience includes serving as an instructor of English at Sam Houston State University. In addition, Dr. McWilliams-Abendroth has published articles on topics such as college- and career-ready standards and creative teaching strategies. She is a member of Phi Delta Kappa and has served as chapter president. Dr. McWilliams-Abendroth holds several certificates, including a Michigan School Administrator Certificate and an Administrator's Certificate from Texas. She is also a certified gifted and talented educator.

Dr. McWilliams-Abendroth received a BA degree and an MA degree in English from Sam Houston State University, and she received an EdD degree in curriculum and instruction (focus on gifted and talented education) from the University of Houston, Houston, Texas.

#### Karen Brinkmann

Ms. Brinkmann is an experienced item and test developer who has spent many years reviewing items for alignment to standards. She currently serves as a content writer/editor for Brinkmann Education Consulting where she creates reading and language arts passages and items for large-scale assessment programs. Her experience includes developing items for the Smarter Balanced Assessment Consortium (SBAC) and the Partnership for Assessment of Readiness for College and Careers (PARCC). As a result of this experience, she is quite knowledgeable of college- and career-ready standards, including understanding the rigor of the standards. She is also knowledgeable in the development of English language arts assessments to measure career- and college-ready standards. Additionally, she has participated as an English language arts national expert for an alignment study based on Dr. Webb's methodology in Nebraska. Ms. Brinkmann is an accomplished facilitator, having worked with many educators throughout the country facilitating reviews of items, including alignment reviews. Ms. Brinkmann's experience also includes teaching students in grades pre-K through grade 6.

Ms. Brinkmann received an MS degree in elementary education from the University of Illinois at Urbana-Champaign. Ms. Brinkmann was a member of Kappa Delta Pi Education Honor Society and served as a graduate teaching assistant. Ms. Brinkmann received a BS degree in speech communication from the University of Illinois at Urbana-Champaign. Ms. Brinkmann currently holds a Texas teaching certificate with special endorsements in speech communication and social studies.

#### Gail Gordon-Allen

Ms. Gail Gordon-Allen is a reading and English professor at Truman College, Chicago, IL. In this role, she teaches integrated communication strategies, develops curricula and syllabi, and collaborates on customized reading and writing textbooks. She is also the co-owner and CEO of Adage Consulting, where she develops reading and language arts curriculum content, textbook manuscripts, ancillary materials, and assessments for the pre-kindergarten through college level. She has extensive experience in curriculum and assessment development, having worked with Chicago Public Schools, McGraw-Hill Education, Houghton Mifflin Harcourt, and the Association for Supervision and Curriculum Development. Ms. Gordon-Allen has also served as a reading and language arts test development specialist, developing assessments for the states of California, Washington, North Carolina, and Georgia. Additionally, she has presented at numerous conferences and seminars; most recently, she presented "Developmental Reading and Writing Strategies" at the Faculty Development Week for the City Colleges of Chicago.

Ms. Gordon-Allen received an MS degree in Curriculum and Instruction with a specialization in reading and language development through Southern Illinois University and a BS in Speech Pathology through Illinois State University. She has also completed PhD coursework in Educational Policy Studies, with a specialization in history and sociology of literacy and literacy research through the University of Illinois at Urbana-Champaign.

#### Mathematics Third-Party Independent Reviewers

For this Wisconsin Forward Exams Mathematics alignment study, fifteen of the thirty-nine independent alignment experts were engaged in the mathematics study of grades 3–8 as follows: eight for grades 3–5 and eight for grades 6–8. Additional information concerning the Wisconsin reviewers and the national reviewers can be found in the sections below.

#### Wisconsin Mathematics Third-Party Independent Reviewers

The mathematics educators from the State of Wisconsin who served as reviewers have extensive experience in mathematics instruction and/or curriculum. They represented a variety of occupations in the field of education. The reviewers were from both urban and rural areas of Wisconsin. The Wisconsin third-party independent mathematics reviewers' information is summarized in Table 6 below.

| Reviewer           | Grade       | Gender | Current Position            | Urban/          |
|--------------------|-------------|--------|-----------------------------|-----------------|
|                    |             |        |                             | Suburban/ Rural |
| Kathy Calder       | grades 3-5  | F      | Math Specialist             | Suburban        |
| Cathy Fernan       | grades 3-5  | F      | Retired Teacher             | Suburban        |
| Kristine Gettelman | grades 1-6  | F      | District Mathematics Leader | Urban           |
| Lori Cash          | grades 5-8  | F      | Teacher                     | Suburban        |
| Eric Conn          | grades 6-8  | М      | Curriculum Coordinator      | Suburban        |
| Kelly Lam          | grades 6-11 | F      | Math Specialist             | Rural           |
| Bernard Rahming    | grades 6-8  | F      | Math Teaching Specialist    | Urban           |

#### Table 6: Wisconsin Mathematics Third-Party Independent Reviewers

#### **National Mathematics Reviewers**

#### Amanda Ross, EdD

Dr. Amanda Ross is an educational consultant. She has written and reviewed mathematics curriculum for all levels, spanning pre-kindergarten through higher education. Much of this experience has consisted of curriculum development and development of assessment items. As a result of this development work, she has extensive experience with all assessment types, including formative, summative, diagnostic, and alternate assessments, and experience with a wide variety of item types, including online interactive assessment items. Dr. Ross's specific work with state and national alignment of items to general and extended standards has included work with appropriate depth-of-knowledge levels and content alignment at specific grades. Additionally, she has served as a mathematics national alignment study expert for alignment study expert for alignment studies based on Webb's methodology in Alabama and Pennsylvania.

Dr. Ross has also developed materials for mathematics professional-development training for the National Council of Teachers of Mathematics (NCTM). In addition, she has facilitated NCTM's

Learn-Reflect strand at affiliate and national conferences. She has also trained middle and high school algebra teachers for Texas A&M University while serving as MathStar Site Coordinator. She has also published articles in various noted journals, as well as a chapter in a recently published book.

Dr. Ross received a BS degree and an MS degree from Stephen F. Austin State University, where she majored in elementary education with an emphasis in mathematics. She received an EdD degree from Texas A&M University, where she majored in curriculum and instruction in mathematics education.

#### Manuel Barajas-Sandoval

Mr. Manuel Barajas-Sandoval's experience includes teaching mathematics at River Valley High School, Yuba City, California. This position involved teaching AP classes and collaborating with special-education teachers to create courses accessible to students with disabilities. In addition, he taught courses specially designed for English language learners. Mr. Barajas-Sandoval also worked with a major item and test development publisher on the work of the Smarter Balanced Assessment Consortium (SBAC), writing K–12 mathematics items. He also served with a team of educators as part of the accessibility team, reviewing items and assessments to ensure alignment and accessibility for English language learners and students with disabilities. He has served as a national alignment study expert for alignment studies based on Webb's model of alignment for Alabama and Nebraska.

Mr. Barajas-Sandoval graduated with honors from California State University, Sacramento, California, where he earned a BA degree in education with a major in mathematics. He then went on to complete a two-year internship credentialing program with Project Pipeline in Sacramento, California, where he performed advanced-placement training at California State University. Mr. Barajas-Sandoval is currently enrolled in a master's program at California State University. He is fluent in English and Spanish, having learned English as a second language.

#### Tom Muchlinski, PhD

A dedicated mathematics education professional, Dr. Muchlinski is an instructor of mathematics education at the University of Minnesota and the Executive Director of the Minnesota Council of Teachers of Mathematics. He has also been a mathematics specialist for the Minnesota Department of Education and an assistant professor at Southwest Minnesota State University. As a mathematics specialist, he facilitated state mathematics standards development and advised the state commissioner of education on policy and legislation affecting mathematics education. He has taught undergraduate mathematics education courses as well as supervised student teachers at the University of Minnesota and Southwest Minnesota State University. As a high school teacher, Dr. Muchlinski taught in Minnesota schools for twenty-six years; his courses included Algebra I through Advanced Placement Calculus. He is active in many organizations such as the National Council of Supervisors of Mathematics, National Council of Teachers of Mathematics, and Phi Delta Kappa International. Dr. Muchlinski has also served as a project coordinator for the Minnesota Mathematics Achievement Project (MNMAP) at the University of Minnesota. His responsibilities included designing and coordinating data collection procedures and assisting with data analysis. Dr. Muchlinski disseminates his research findings through journal articles and conference presentations. He has participated as a mathematics national expert for alignment studies based on Dr. Webb's methodology for the states of Idaho, Maryland, and California.

Dr. Muchlinski received a BA degree in Mathematics from St. John's University, an MS degree in Curriculum and Instruction from St. Cloud State University, and a PhD in Mathematics Education from University of North Carolina at Chapel Hill.

#### Maria DeRosia

Ms. Maria DeRosia has served as a mathematics educator for over sixteen years and has established high expectations for students during this time. Over the years, she has taught several grades, including grades 3, 4, 5, and kindergarten. She has collaborated with staff to integrate academic curriculum with specialty-area teachers. She has also designed and taught before-school math tutoring programs for at-risk students, and she has served as a district advisor for mathematics and science education. In addition, she has served as a literacy/curriculum and instruction specialist and as a district team member for the Science Atlas Rubicon Curriculum Mapping. Ms. DeRosia is an accomplished presenter, having presented staff development workshops in mathematics at both the district and building levels. In addition to Ms. DeRosia's mathematics teaching experience, she has also been a computer lab teacher.

Ms. DeRosia's alignment experience involves her work with the Michigan Department of Education, where she currently serves as a content and bias/sensitivity advisor, item writer/reviewer, and data reviewer for the MEAP, MI-Access, Interim Assessment, and special education assessments for the State of Michigan. Recently, she has served as a mathematics national expert for an alignment study based on Dr. Webb's methodology in Pennsylvania. Ms. DeRosia received her BS degree in education from the University of Michigan and her MS degree in education from Marygrove College.

#### Linda Bridges

Ms. Linda Bridges is currently a secondary Alabama Mathematics, Science, and Technology Initiative (AMSTI) Specialist at the University of Alabama in Huntsville. In this capacity, Ms. Bridges serves as an AMSTI trainer for grades 6–12 mathematics teachers; develops and presents professional development sessions and workshops to grades 6–12 mathematics teachers; models inquiry-based, hands-on lessons in grades 5–12 AMSTI mathematics classrooms; models and uses appropriate forms of technology in lesson presentations and teacher training; and presents AMSTI overview sessions to pre-service teachers at local universities. Ms. Bridges has also worked as a college algebra adjunct teacher at Northwest Mississippi Community College and the University of Mississippi in Oxford.

In addition to her university teaching experience, Ms. Bridges has over thirty-two years of teaching experience at the middle school and high school levels, including five years teaching Algebra II, Calculus I and II, AP Statistics, Integrating Science/Mathematics with Technology

and Data Analysis, Theory of Equations, and other individualized courses at the Mississippi School for Mathematics and Science. Ms. Bridges is also a mentor for teachers seeking National Board Certification and a member of the Alabama Council of Teachers of Mathematics, the National Council of Teachers of Mathematics, and the Council of Presidential Awardees in Mathematics. She has been extensively involved in state and national mathematics initiatives throughout her educational career.

Ms. Bridges received a BS degree in mathematics from Mississippi University for Women and an MS degree in secondary mathematics education from the University of Mississippi. She has participated as a mathematics national expert for alignment studies based on Dr. Webb's methodology in the state assessment programs of California, Iowa, and Pennsylvania.

#### Rachelle Rogers, EdD

Dr. Rachelle Rogers is currently a Clinical Assistant Professor in the Department of Curriculum and Instruction at Baylor University in Waco, Texas. Her responsibilities include teaching content pedagogy for secondary and middle school mathematics teaching associates and supervising university interns. She has also served as the mathematics laboratory coordinator at Baylor University and as a mentor teacher at Texas State University. Dr. Rogers is also extensively involved in a number of mathematics initiatives and community programs: university liaison for University High School; co-principal investigator for Action Research and Its Impact on PDS Partnerships; director of GEAR UP Project S.T.O.M.P.; co-director of GEAR UP Lesson Study; instructor for Teacher Quality Grant; instructor for GEAR UP Super Saturdays; president of the Central Texas Council of Teachers of Mathematics; member of the Professional Development Schools (PDS) Coordinating Council; member of the PDS Research Symposium; chair of the middle school task force; member of the secondary certificate team; member of the middle school certificate team; and member of the National Council for Accreditation of Teacher Education (NCATE) middle school and secondary mathematics Specialty Professional Association (SPA) report teams. Dr. Rogers has participated as a Mathematics national expert for California, Iowa, and Pennsylvania alignment studies based on Dr. Norman Webb's methodology. Additionally, she has authored and coauthored numerous manuscripts and research publications, professionally presented at state and national educational conferences, and reviewed for the National Council of Teachers of Mathematics (NCTM) publication Mathematics Teaching in the Middle School.

Dr. Rogers received a BA degree in mathematics from Texas Lutheran University and an MA degree in curriculum and instruction from Texas State University. She received an EdD degree in curriculum and instruction, with a minor in mathematics education, from Baylor University.

#### Leo Edwards Jr., EdD

Dr. Leo Edwards has participated as a Mathematics national expert for Alaska, Alabama, Idaho, Iowa, Maryland, Nebraska, and Oklahoma alignment studies based on Dr. Norman Webb's methodology. He currently serves as a mathematics education consultant for state departments of education, school districts, and other educational resource groups and agencies. His work includes many research and professional practices, including projects awarded and funded by the Eisenhower Fund, NASA, Texas Instruments, the National Science Foundation, and other states, universities, and educational organizations. He is a contributing author for several mathematics textbooks for elementary and secondary levels from publishers that include Silver Burdett Ginn and Glencoe/Merrill. Dr. Edwards has conducted numerous mathematics topics at the elementary and secondary levels. In addition to his position on the faculty at Fayetteville State University, Dr. Edwards has held leadership positions that include director of the Mathematics & Science Education Center, acting dean of the Colleges of Arts and Sciences, and acting vice chancellor for Academic Affairs.

Dr. Edwards received a BS degree in Mathematics from Fayetteville State University, an Med degree in mathematics education from Temple University, an MA degree in computer sciences from Goddard College, and an EdD degree in curriculum and instruction from Utah State University.

#### Kristen Bieda, PhD

Dr. Kristen Bieda is an associate professor in teacher education at Michigan State University, East Lansing, Michigan. She also serves as the Associate Director of Mathematics at the CREATE for STEM Institute in the Michigan State University College Education. Dr. Bieda has served as an external alignment reviewer through the University of Wisconsin–Madison, for the AlgebraNation curriculum, and for the states of Michigan and Pennsylvania. She has presented at numerous meetings, including the American Educational Research Association in New Orleans, Louisiana, a symposium at the National Council for Teachers of Mathematics Research presession in Indianapolis, Indiana, and in Taipei, Taiwan. Dr. Bieda has had work published in the *Journal for Research in Mathematics Education*, and *Mathematics Teaching in the Middle School*, and has co-authored a book titled *Essential Understandings for Proof and Proving in 9– 12 Mathematics* by the National Council of Teachers of Mathematics.

She received her doctorate in Curriculum and Instruction through the University of Wisconsin– Madison. Dr. Bieda received an MS degree in Mathematics, Teacher Certification in Secondary Mathematics, and a BS in Administrative Management through Missouri State University. She is also the recipient of the Michigan State University Teacher-Scholar Award, an AERA Special Interest Group for Research in Mathematics Education Early Career Publication Award, a Michigan State University Lilly Teaching Fellowship, and the Wisconsin Doctoral Research Program Fellowship.

#### Science Third-Party Independent Reviewers

For this Wisconsin alignment study, eight of the thirty-nine independent alignment experts were engaged in the science study of grades 4 and 8. Additional information concerning the Wisconsin reviewers and the national reviewers can be found in the sections below.

#### Wisconsin Science Third-Party Independent Reviewers

The science educators from the State of Wisconsin who served as reviewers have extensive experience in science instruction and/or curriculum. They represented a variety of occupations in the field of education. The reviewers were from both urban and rural areas of Wisconsin. The Wisconsin third-party independent science reviewers' information is summarized in Table 7 below.

| Reviewer          | Grade      | Gender | Current Position                    | Urban/ Suburban/ |
|-------------------|------------|--------|-------------------------------------|------------------|
|                   |            |        |                                     | Rural            |
|                   |            |        | Director of Curriculum, Instruction |                  |
| Thersea Burzynski | grade 4    | F      | and Assessment                      | Rural            |
| Heather Grabarski | grades 4-5 | F      | 5th Grade Teacher                   | Rural            |
|                   |            |        | 6th Grade Science Teacher,          |                  |
| Brian O'Leary     | grades 4-8 | М      | Middle School Athletic Director     | Suburban         |
| Kendal Sass       | grade 8    | F      | 7th Grade Science Teacher           | Rural            |

#### Table 7: Wisconsin Science Third-Party Independent Reviewers

#### **National Science Reviewers**

#### J. Svalberg

Ms. Svalberg has over twelve years of science teaching experience at the middle school and high school levels, which included the development of curriculum and labs for Biology I, Biology II, Chemistry, Astronomy, and Physical Sciences. She has conducted numerous item-writer workshops and participated in state committee meetings to review assessment items and item data, in addition to developing formative and interim science assessments.

In addition to her teaching experience, Ms. Svalberg has over eighteen years of experience in science test development activities. She has constructed science assessment items based on state-specific standards and worked to align author-submitted items to state standards. Ms. Svalberg has constructed passages and science-based scenarios designed to support multiple assessment items and prepared paper and online science test versions for implementation in the field. In her work, Ms. Svalberg has led science test development for a number of projects, including Project Lead the Way, Graduate Records Examination, and state projects, including those in Pennsylvania, Maryland, California, Virginia, Massachusetts, Georgia, Oklahoma and Mississippi.

She maintains her Texas teaching certification in biology, chemistry, and life/Earth sciences, in addition to an active membership in the National Science Teacher Association for twenty-three years. Ms. Svalberg earned a BS degree in biomedical sciences from Texas A&M University in College Station, Texas. She has also completed graduate work in chemical oceanography from Texas A&M.

#### Verna Lee Wood

Ms. Verna Lee Wood is a Texas certified science educator with over twenty years of classroom experience, teaching all levels of chemistry and biology. She has been a science teacher and Science Department Chairperson for Texas Public Independent School Districts, as well as an Adjunct Instructor of Biology at Dallas County Community College. Additionally, Ms. Wood is a member of the National Science Teachers Association and Science Teachers Association of Texas. Ms. Wood also has over fifteen years of experience as a Science Assessment Specialist. During this time, she has worked on numerous projects and state assessments, including Texas TAKS and STAAR projects, Ohio, Massachusetts, Delaware, Virginia, California, New Mexico, and Mississippi. In this work, Ms. Wood has directed science content development for grades 4–12, including chemistry, biology, and integrated sciences. She recently served as a science national alignment expert for an alignment study based on Webb's model of alignment in Alabama.

Ms. Wood received a BS degree in Secondary Education with biology and chemistry certification from the University of Houston. She received an MS degree in Biology and Secondary Education from Texas Woman's University and has completed graduate coursework in math and statistics at University of Texas.

#### Letty Maxwell, PhD

Dr. Letty Maxwell is currently Acting Vice President and Head of Faculty for Abu Dhabi Education Council, UAE. Dr. Maxwell has an extensive background in science education. As Chief Operating Officer of Intersect Group D.C., she developed a STEM framework for NASA education production products and managed standard alignment models and projects to be used by K–12 education institutions. As a teacher in Ohio, Virginia, and the District of Columbia, she provided mainstream and special education instruction in elementary science. Ms. Maxwell was rated a Highly Qualified Teacher in the District of Columbia, Ohio, and Virginia for eleven years. Her responsibilities included using researched-based educational practices to instruct students using local, state, and national standards.

In addition to her service in school systems, Dr. Maxwell has worked as an Educational Site Leader at Harvard University and as an adjunct professor at John Carroll University and at McDaniel College in Maryland. She has received the Congressional Award for Outstanding Education Service to Youth and has been named Cleveland Municipal Schools District Teacher of the Year. Dr. Maxwell has presented at the National Blue Ribbon Conference and National Science Teachers Association. She has also participated in third-party alignment studies based on Webb's methodology for several large-scale assessment programs where she was involved in aligning test questions to state standards for Alabama, Alaska, Louisiana, and Maryland. Dr. Maxwell completed a BA degree in social work and an MA degree in teaching from the University of Pittsburgh. She completed her PhD degree in K–12 Education Leadership in May 2014.

#### Sandra Enger, PhD

Dr. Enger is an associate professor of education at the University of Alabama-Huntsville and associate director for science education. Her recent presentations and publications include "Intersections of Art, Writing, and Science" and "Incorporating Multiple Intelligences in Science Inquiry" at the annual meeting of the National Science Teachers Association (NSTA) and *Assessing Student Understanding in Science: A Standards-Based K–12 Handbook*, Corwin Press. Dr. Enger has participated as a national science expert for Alabama, Alaska, Iowa, Maryland, Nebraska, West Virginia, Oklahoma, and Pennsylvania alignment studies based on Dr. Norman Webb's methodology.

She served as head biology teaching assistant at the University of Iowa, biology teaching assistant at the University of Mississippi, and national scientific officer for the Republic of Trinidad and Tobago. She has taught science courses at the junior high school level in Wisconsin and at the high school level in Arkansas; she has also taught in Greece.

Dr. Enger holds a PhD degree in science education from the University of Iowa with a thesis entitled *The Relationship between Science Learning Opportunities and Ninth Grade Students' Performance on a Set of Open-Ended Science Questions.* She received an MS degree in biology and a BS degree in science from Winona State University in Minnesota. Dr. Enger is a member

of the Alabama Science Teachers Association (ASTA), American Educational Research Association (AERA), National Association for Research in Science Teaching (NARST), and National Science Teachers Association (NSTA).

## Alignment Study: Approach and Process

As stated earlier in this report, the Wisconsin Forward Exams English Language Arts, Mathematics, and Science alignment studies were based on the work of Dr. Norman Webb, Wisconsin Center for Educational Research, University of Wisconsin–Madison. In his work, Webb states that the alignment of the standards or objectives for student learning with tests for measuring students' attainment of these expectations is an essential component for an effective standards-based education system. The Wisconsin alignment studies were designed to model Webb's procedures, including the use of depth-of-knowledge levels and Webb's definition of alignment (Webb, 1997/2002/2006). The definition is as follows:

Alignment is defined as the degree to which expectations and assessments are in agreement and serve in conjunction with one another to guide the system toward students learning what they are expected to know and do. As such, alignment is a quality of the relationship between expectations and assessments and not a specific attribute of either of these two system components. Alignment describes the match between expectations and assessment that can be legitimately improved by changing either student expectations or assessments. Seen as a relationship between two or more system components, alignment can be determined by using the multiple criteria described in detail in a National Institute of Science Education (NISE) research monograph, *Criteria for Alignment of Expectations and Assessments* (Webb, 1997).

#### Webb's Alignment Model

Webb's alignment model is based upon four criteria: depth-of-knowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation. Reviewers used these four criteria to assess the content agreement between the Wisconsin Academic Standards and assessment items. For each alignment criterion, an acceptable level was defined by what would be required to ensure that a student had met the standards.

A brief description of the alignment criteria is provided below. Additional information can be found in the chapter of this report labeled Alignment Criteria.

*Depth-of-knowledge consistency*—an indication of whether the cognitive demands required of the students by the assessment are consistent with what students are expected to know and do as stated in the Wisconsin Academic Standards.

*Categorical concurrence*—a general indication of how well the test includes items that measure content from each of the Wisconsin Academic Standards.

*Range-of-knowledge correspondence*—an indication of whether the extent of knowledge expected of students by a Wisconsin Academic Standard is the same as the extent of knowledge required of students to answer the test items correctly.

*Balance of representation*—the degree to which one Wisconsin Academic Standard is given more emphasis on the test than another Wisconsin Academic Standard. An index (Webb, 2002) is used to judge the distribution of the test items.

The Webb model has been used extensively in many alignment studies throughout the country and has been recommended for use by the Council of Chief State School Officers (CCSSO). The alignment criteria in the Webb model also adhere to the guidelines specified in the United States Department of Education's Standards and Assessments peer review documents, including the Draft Annotated Assessment Peer Review guidance provided on November 10, 2015. Additional information regarding the Webb model criteria can be found in the chapter labeled Alignment Criteria of this report.

#### **Alignment Study Procedure**

As stated earlier, five panels of individuals were assembled to serve as participants in this study examining the alignment of operational tests administered in spring 2017. One panel of eight individuals focused on examining the alignment of English Language Arts tests administered to Wisconsin students in grades 3–5, and a second panel of eight individuals examined the alignment of English Language Arts tests constructed for students in grades 6–8. Two additional panels of individuals examined the alignment of Mathematics tests constructed for students in grades 3 through 5 (eight panelists) and grades 6 through 8 (seven panelists). A fifth panel of eight individuals examined the alignment of Science tests constructed for students in grades 4 and 8. The study was planned so that four individuals on each panel were educators from school districts in Wisconsin who have worked with the state's standards. The remaining educators on each panel evaluating the assessments were selected from various states across the country for their content expertise in English language arts, mathematics, or science. During the study's data collection phase, the panel of seven individuals reviewing the Mathematics tests for grades 6–8 included three Wisconsin educators and four out-of-state experts.

The panelists met for a period of two days (Science assessments) or three days (English Language Arts and Mathematics assessments) during the second week of May 2017 to participate in the alignment study. Dr. Norman Webb's (1999, 2005) definition and model of alignment were followed in the design of the data collection for the study. At the beginning of the meeting all panelists were provided with an orientation presentation. The presentation covered Webb's definition of alignment and his conceptualization of alignment criteria, including a detailed discussion of depth-of-knowledge (DOK) levels and alignment criteria. The alignment process all panelists would follow was also introduced. Further instruction was provided to the panels as they progressed through the five steps of the process. Individual panelists were given instruction on aspects of specific steps when this was requested or judged necessary by the trainer. The five group facilitators also assisted with instruction and guidance. Characteristics of Wisconsin's assessments required some special instructions during the data collection phase of the study.

Step 1 focused on reaching consensus on the DOK level of each standard after panelists had made initial DOK assignments. All panelists participated in the discussions so that the judgments of Wisconsin educators and the national content experts could be considered in reaching

consensus on the DOK level of each standard. The panel facilitator made sure that there was adequate discussion whenever needed before designating the consensus DOKs. The trainer noted that discussions were thoughtful and balanced, and no one panelist dominated the discussions in each content area.

Detailed instruction was provided by the trainer and facilitator at the beginning of each subsequent step, 2 through 5. Panelists worked independently at steps 2 through 5, which focused on making judgments regarding alignment at the individual test-item and test-form levels. Panelists worked at a pace comfortable to them, and all panelists had sufficient time to thoroughly examine the alignment of all grade-level tests assigned to their group.

Judgments of the panelists were statistically analyzed according to Webb's model of alignment. The model's statistical alignment criteria were applied, and the results were reviewed along with the panelists' written responses to a debriefing questionnaire (step 5) completed for each grade.

The reader should keep the following information in mind as the results for English Language Arts are reviewed. The ELA standards in Wisconsin cover five domains within the subject area: Reading for Literature, Reading for Informational Text, Writing, Speaking and Listening, and Language. Wisconsin has received a waiver for the Speaking and Listening Standards from the U.S. Department of Education (see Appendix F of this report). In compliance with the waiver, speaking skills are not assessed by the Forward Exams and are therefore not included in this report. The two Reading domains and the Speaking and Listening domain have somewhat more general anchor-level standards that fall into one to three clusters that are assessed on the Wisconsin Forward Exams. The Writing and Language domains each contain an additional level of detail describing much more specific aspects of the Writing process and types and purposes of Writing or conventions of standard English language and vocabulary acquisition and use.

In order to achieve more consistent and comparable analyses of the alignment criteria for the Writing and Language domains for range-of-knowledge correspondence, selected data were collapsed to the anchor-level standards. For example, standards 5.L.1.a, 5.L.1.b, 5.L.1.c, 5.L.1.d, and 5.L.1.e, which cover verbs, conjunctions, and prepositions, were coded to 5.L.1 concerning conventions of standard English grammar. Data were captured at the most detailed grade-specific level of the standard (e.g., 5.L.1.a), then collapsed to the grade-specific anchor level of the standard (e.g., 5.L.1.a) for analysis. The alignment study panel found that alignment at anchor-level standard was the most appropriate level for which to conduct alignment analysis.

A high-level overview of the steps in the process is provided on the next page. The Wisconsin Academic Standards, along with the DOK consensus values, can be found in Appendix B of this report. The alignment study process also involved the electronic capture of data. Information about the electronic data capture tool and its use in the process is provided below.

#### The Electronic Data Capture Tool

The electronic data capture tool was used in the third-party alignment studies. The tool was designed specifically to facilitate the gathering of independent reviewers' judgments. For the Wisconsin Forward Exams English Language Arts, Mathematics, and Science third-party

alignment studies, the application automated the process of aligning the Wisconsin Academic Standard for a given content area and the test items found on the corresponding Forward Exam. The tool and its reports made it possible to gauge in a timely manner the alignment, based on Webb's alignment model, between the Wisconsin Academic Standards and the items on the exam. In addition, the tool also provided opportunities for reviewers to provide additional information regarding items, including providing comments related to source of challenge. The item-by-objective or standard codings by reviewers were then aggregated and analyzed.

The national alignment expert, Dr. James Augustin, provided training on the overall alignment process and DOK levels and also served as the lead facilitator. As stated earlier in this report, Dr. Augustin has extensive experience training third-party independent review committee members in the use of electronic data capture software for alignment studies. The training provided information on understanding not only the DOK levels but also proper use of the electronic data capture tool when assigning a DOK level to each Wisconsin Academic Standard and item. A high-level overview of the process is provided on the next page.

## Alignment Study Process

## Step 1: Determining the depth-of-knowledge (DOK) level

Reviewers individually determined the DOK level for each Wisconsin Academic Standard. They discussed their DOK ratings in order to reach a group consensus.

## Step 2: Taking the test

Reviewers took the test and recorded their answers and comments about the test items.

# **Step 3: Determining what each test item measured and the DOK level for each test item** *Step 3.1*

Using the first three test items, reviewers independently determined what each item measured by assigning it to a primary standard (and a secondary standard, if applicable). A group discussion took place; however, reaching consensus on what each item measured was not required. *Step 3.2* 

Reviewers independently determined the DOK levels of the first three items. Reviewers were instructed to code only one DOK level (1, 2, or 3) for each of the three items. Reviewers also independently noted any source of challenge for the first three items. A group discussion took place; however, reaching consensus on the DOK levels of the first three items was not required. *Step 3.3* 

Reviewers continued to independently determine the primary standard and the secondary standard, if applicable, for the remainder of the test items.

*Step 3.4* 

Reviewers independently determined the DOK levels for the remainder of the test items. Again, the reviewers were instructed to code only one DOK level for each of the remaining test items.

Throughout the alignment process, reviewers independently noted any source of challenge for each test item and provided written comments as necessary.

## Step 4: Summarizing alignment criteria of test items

Once reviewers determined the primary and/or secondary standard for each test item and the DOK level for each test item, they analyzed the entire test for DOK consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation.

## **Step 5: Debriefing Questionnaire**

Reviewers independently shared feedback about the process, the test items, and the standards.

## Alignment Criteria

Reviewers assessed specific criteria related to the content alignment between the Wisconsin Academic Standards and test items. The four criteria receiving major attention were depth-ofknowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation. For each alignment criterion, an acceptable level was defined by what would be required to ensure that a student had met the standards.

Depth-of-knowledge consistency—an indication of whether the cognitive demands required of the students on the assessment are consistent with what students are expected to know and do as stated in the Wisconsin Academic Standards. According to Webb's alignment model, depth-ofknowledge consistency between the assessment items and the Wisconsin Academic Standards indicates alignment if what is elicited from students on the assessment is as demanding cognitively as what students are expected to know and be able to do as stated in the standards. Therefore, for consistency to exist between the assessment items and the Wisconsin Academic Standards, each item should be coded at the same depth-of-knowledge level as the standard or one level above the depth-of-knowledge level of the standard. According to Webb's alignment model, as a measure of consistency, at least 50% of the items corresponding to a Wisconsin Academic Standard must be at or above the depth-of-knowledge level of the content standard. For depth-of-knowledge consistency, this criterion was judged by first allowing reviewers to align the items to the Wisconsin Academic Standards (see Appendix B of this report).

The Webb definitions for the depth-of-knowledge levels were used for this alignment study. The levels are as follows: Level 1 (Recall and Reproduction), Level 2 (Skills and Concepts), and Level 3 (Strategic and Extended Thinking). Additional information concerning the levels can be found in Appendix A of this report.

*Categorical concurrence*—a general indication of how well the assessment includes items that measure content from each standard. According to Webb (2002), an important aspect of alignment between each Wisconsin Academic Standard and the assessment is whether both address the same content categories. The categorical concurrence criterion provides a very general indication of alignment if the Wisconsin Academic Standards and the set of operational assessment items incorporate the same content. Webb's alignment model recommends that at least six items be aligned to a given domain. For this alignment study, this criterion was judged by first allowing reviewers to make a determination as to whether the test as a whole included items measuring content from each of the Wisconsin Academic Standards. The reviewers used their professional opinions and the Webb guiding principle to determine that having at least six items measuring content from each domain is a good indicator of categorical concurrence between the standards and the test (Webb, 2002, p. 7).

Using Webb's model, the number of items used to determine categorical concurrence, six for this study, is based on estimating the number of items that could produce a reasonably reliable subscale for estimating students' mastery of content on that subscale. Of course, many factors have to be considered in determining a reasonable number, including the reliability of the subscale, the mean score, and the cutoff score for determining mastery. Using a procedure developed by Subkoviak (1988) and assuming that the cutoff score is the mean and that the

reliability of one item is 0.1, it was estimated that six items would produce an agreement coefficient of at least 0.63. This indicates that about 63% of the group would be consistently classified as either masters or non-masters if two equivalent test administrations were employed. The agreement coefficient would increase if the cutoff score was increased to one standard deviation from the mean to 0.77 and, with a cutoff score of 1.5 standard deviations from the mean, to 0.88.

Again, for this Wisconsin alignment study, the criterion was judged by first allowing reviewers to align the items to the Wisconsin Academic Standards. Six items were assumed as a minimum number of items for a test measuring content knowledge related to a group of standards and as a basis for making some decisions about students' knowledge of those standards. If the mean for six items is three, and one standard deviation is one item, then a cutoff score set at four would produce an agreement coefficient of 0.77. Any fewer items with a mean of one-half of the items would require a cutoff that would allow a student to miss only one item. This would be a very stringent requirement considering a reasonable standard error of measurement on the subscale. (See Appendix C of this report.)

*Range-of-knowledge correspondence*—an indication of whether the extent of knowledge expected of students by a Wisconsin Academic Standard is the same as the extent of knowledge required of students to answer the assessment items correctly. According to Webb's alignment model, for standards and the items on a given assessment to be aligned, the breadth of knowledge required by both should be comparable. This is called the range-of-knowledge correspondence. The range-of-knowledge correspondence criterion is used to judge whether a comparable span of knowledge expected of students by the Wisconsin Academic Standards is the same as, or corresponds to, the span of knowledge that students need in order to correctly answer the items on the assessment. According to Webb's alignment model, to attain an acceptable range-of-knowledge correspondence, at least 50% of the Wisconsin Academic Standards must have at least one item aligned to them. The range-of-knowledge correspondence criterion was judged by first allowing reviewers to align the items to the Wisconsin Academic Standards. (See Appendix C of this report.)

*Balance of representation*—the degree to which one Wisconsin Academic Standard is given more emphasis on the assessment than another Wisconsin Academic Standard. An index is used to judge the distribution of the test items. This index only considers the standard that has at least one related assessment item. The index in this study was computed by considering the difference in the proportion of standards and the proportion of hits (corresponding items) assigned to the standards. An index value of one signifies perfect balance and is obtained if the hits are equally distributed among the standards. Index values that approach zero signify that a large proportion of the hits are on only one or two of all the standards. Depending on the number of standards and the number of hits, a unimodal distribution has an index value of less than 0.5. A bimodal distribution has an index value of around 0.55 or 0.6. Index values of 0.7 or higher indicate that items are distributed among all the standards within a domain, at least to some degree. Index values between 0.6 and 0.7 indicate that the balance-of-representation criterion has only been "moderately" met. The balance-of-representation criterion was judged by first allowing reviewers to align the items to the Wisconsin Academic Standards. (See Appendix C of this report.) A summary of Webb's alignment criteria can be found in Table 8.

| Alignment<br>Level | Depth-of-<br>Knowledge<br>Consistency | Categorical<br>Concurrence | Range-of-<br>Knowledge<br>Correspondence | Balance of<br>Representation |
|--------------------|---------------------------------------|----------------------------|------------------------------------------|------------------------------|
| Yes                | ≥50%                                  | mean is 6 or more          | ≥50%                                     | ≥0.70                        |
| Yes*               | 40%-49%                               | mean is 5 to 5.9           | 40%-49%                                  | 0.60-0.69                    |
| Weak               | less than 40%                         | mean is less than 5        | less than 40%                            | less than 0.60               |

## Table 8: Alignment Levels for the Four Criteria

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

The results for each of the four criteria discussed in this section were calculated using Webb's methodology, reviewers' averaged ratings, and reviewers' comments. The results for depth-of-knowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation are included in Appendix C of this report.

# Depth-of-Knowledge Alignment Analysis of the Wisconsin Academic Standards and Wisconsin Forward Exams: English Language Arts

The first major step in the alignment process involved reviewers' determination of the depth-ofknowledge (DOK) levels of the Wisconsin Academic Standards as shown in Table 9 below. Additional information regarding the various levels of depth of knowledge can be found in Appendix A of this final report.

|       | N f                             |              | Standards b         | y DOK Level | Overall DOK                          |
|-------|---------------------------------|--------------|---------------------|-------------|--------------------------------------|
| Grade | No. of<br>Standards<br>Assessed | DOK<br>Level | No. of<br>Standards | Percentage  | Average of<br>Wisconsin<br>Standards |
|       |                                 | 1            | 27                  | 39.7%       |                                      |
| 3     | 68                              | 2            | 27                  | 39.7%       | 2                                    |
|       |                                 | 3            | 14                  | 20.6%       |                                      |
|       |                                 | 1            | 16                  | 24%         |                                      |
| 4     | 68                              | 2            | 35                  | 51%         | 2                                    |
|       |                                 | 3            | 17                  | 25%         |                                      |
|       |                                 | 1            | 11                  | 17%         |                                      |
| 5     | 66                              | 2            | 35                  | 53%         | 2                                    |
|       |                                 | 3            | 20                  | 30%         |                                      |
|       |                                 | 1            | 7                   | 11%         |                                      |
| 6     | 64                              | 2            | 21                  | 33%         | 3                                    |
|       |                                 | 3            | 36                  | 56%         |                                      |
|       |                                 | 1            | 4                   | 6.5%        |                                      |
| 7     | 61                              | 2            | 14                  | 23.0%       | 3                                    |
|       |                                 | 3            | 43                  | 70.5%       |                                      |
|       |                                 | 1            | 5                   | 8%          |                                      |
| 8     | 63                              | 2            | 14                  | 22%         | 3                                    |
|       |                                 | 3            | 44                  | 70%         |                                      |

## Table 9: Summary of DOK Consensus Results for English Language Arts

#### **Alignment Results**

Using the electronic data capture tool, reviewers independently determined what each item measured. They also entered the DOK level for each item. The calculation software provided the statistical analysis to determine whether each Forward Exam as a whole included items measuring content from each of the Wisconsin Academic Standards groups of standards. The tool also provided the statistical analysis to determine depth-of-knowledge consistency, range-of-knowledge correspondence, and balance of representation.

A high-level summary alignment analysis for depth-of-knowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation is provided in Tables 10–15. The results indicate that the alignment relationship between the Wisconsin Academic Standards and the corresponding Forward Exam is acceptable, as noted in the section labeled Interpretation of English Language Arts Alignment Results of this report. Additional detailed information is provided in Appendix C and Appendix D of this report.

| General Summary ELA Grade 3 |                            |                    |                       |                              |  |
|-----------------------------|----------------------------|--------------------|-----------------------|------------------------------|--|
|                             | Categorical<br>Concurrence | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |
| RL                          | Yes                        | Yes                | Yes                   | Yes                          |  |
| RI                          | Yes                        | Yes                | Yes                   | Yes                          |  |
| $\mathbf{W}^{\dagger}$      | Yes                        | Yes                | Yes*                  | Yes                          |  |
| SL                          | Yes                        | Yes                | Yes                   | Yes                          |  |
| $\mathbf{L}^{\dagger}$      | Yes*                       | Yes                | Yes*                  | Yes                          |  |

Table 10: Grade 3 English Language Arts Alignment Summary

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 3.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 3.W.2) for analysis of the range-of-knowledge correspondence criterion.

#### Table 11: Grade 4 English Language Arts Alignment Summary

|                        | General Summary ELA Grade 4 |                    |                       |                              |  |  |
|------------------------|-----------------------------|--------------------|-----------------------|------------------------------|--|--|
|                        | Categorical<br>Concurrence  | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| RL                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| RI                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| $\mathbf{W}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| SL                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| $\mathbf{L}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 4.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 4.W.2) for analysis of the range-of-knowledge correspondence criterion.

|                        | General Summary ELA Grade 5 |                    |                       |                              |  |  |
|------------------------|-----------------------------|--------------------|-----------------------|------------------------------|--|--|
|                        | Categorical<br>Concurrence  | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| RL                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| RI                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| $\mathbf{W}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| SL                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| $\mathbf{L}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |

Table 12: Grade 5 English Language Arts Alignment Summary

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 5.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 5.W.2) for analysis of the range-of-knowledge correspondence criterion.

#### Table 13: Grade 6 English Language Arts Alignment Summary

|                        | General Summary ELA Grade 6 |                    |                       |                              |  |  |
|------------------------|-----------------------------|--------------------|-----------------------|------------------------------|--|--|
|                        | Categorical<br>Concurrence  | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| RL                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| RI                     | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| $\mathbf{W}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| SL                     | Yes                         | Weak               | Yes                   | Yes                          |  |  |
| $\mathbf{L}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 6.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 6.W.2) for analysis of the range-of-knowledge correspondence criterion.

## Table 14: Grade 7 English Language Arts Alignment Summary

|                        | General Summary ELA Grade 7 |                    |                       |                              |  |  |
|------------------------|-----------------------------|--------------------|-----------------------|------------------------------|--|--|
|                        | Categorical<br>Concurrence  | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| RL                     | Yes                         | Yes*               | Yes                   | Yes                          |  |  |
| RI                     | Yes                         | Yes*               | Yes                   | Yes                          |  |  |
| $\mathbf{W}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |
| SL                     | Yes                         | Yes*               | Yes                   | Yes                          |  |  |
| $\mathbf{L}^{\dagger}$ | Yes                         | Yes                | Yes                   | Yes                          |  |  |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 7.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 7.W.2) for analysis of the range-of-knowledge correspondence criterion.

| General Summary by ELA Grade 8 |                            |                    |                       |                              |  |
|--------------------------------|----------------------------|--------------------|-----------------------|------------------------------|--|
|                                | Categorical<br>Concurrence | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |
| RL                             | Yes                        | Yes*               | Yes                   | Yes                          |  |
| RI                             | Yes                        | Yes*               | Yes                   | Yes                          |  |
| $\mathbf{W}^{\dagger}$         | Yes                        | Yes                | Yes                   | Yes                          |  |
| SL                             | Yes*                       | Yes                | Yes                   | Yes                          |  |
| $\mathbf{L}^{\dagger}$         | Yes                        | Yes                | Yes                   | Yes                          |  |

Table 15: Grade 8 English Language Arts Alignment Summary

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

<sup>†</sup> Data were collected at the most detailed standard level (e.g., 8.W.2.a) which were then collapsed to the anchorlevel standards (e.g., 8.W.2) for analysis of the range-of-knowledge correspondence criterion.

## Interpretation of English Language Arts Alignment Results

During step 1 of the alignment study data collection process, all of the English Language Arts (ELA) standards at each of the grade levels were assigned a consensus DOK of either 1, 2, or 3 by the panelists. The overall ELA DOK means for the individual grades' standards ranged from 2 to 3, with the higher means appropriately appearing at the higher grades.

Analyses of the panelists' judgments and application of Webb's statistical criteria revealed that the 2017 English Language Arts operational test forms for Wisconsin's student population in grades 3 through 8 are acceptable. The 2017 operational forms do have some areas where alignment could be improved (as noted in the debriefing comments), particularly on the alignment dimension of Range-of-Knowledge Correspondence and some areas such as Depth-of-Knowledge Consistency where alignment can be strengthened even though minimum criteria were achieved. In their debriefing comments, most ELA panelists found that the alignment of forms overall was acceptable or in need of slight improvement. In a few instances, one or more panelists stated that more improvement in the alignment was needed. Panelists generally viewed the ELA assessments as covering a range of cognitive complexity and difficulty necessary to yield a range of performance among Wisconsin's students in classrooms at grades 3 through 8. However, they noted a few needs for improvement in their written comments regardless of their overall description of the alignment.

The following are notable findings on the English Language Arts alignment for each specific grade.

## Grade 3

Alignment of the grade 3 ELA assessment is **solidly aligned**, with the test form meeting the statistical criteria for the Categorical Concurrence, Depth-of-Knowledge Consistency, Range-of-Knowledge Correspondence, and Balance of Representation dimensions of alignment. However, one notable area where alignment could be strengthened by the addition of items is the criterion of Categorical Concurrence for the Language domain. This would provide better coverage of the larger number of detailed Language standards. Range-of-Knowledge Correspondence could also

be strengthened by improving coverage of the Language domains.

Three panelists described the overall alignment as acceptable in their responses to the debriefing questions. Four panelists described the overall alignment as in need of slight improvement, and one panelist said the alignment was in need of more improvement. In addition to their comments, observed above, that coverage of the Language standards needed improvement, some comments were made about the cognitive complexity of the items. It was stated that most items were judged to be at the DOK 2 level, leading the panelists to write that more DOK level 1 and/or DOK level 3 items were needed in order for the assessment to yield a full range of student performance. Five panelists recommended the addition of more DOK level 3 (strategic thinking) items. Four panelists said more DOK level 1 (recall) items were needed to better measure students at the lower levels of performance. Two panelists commented that illustrations (e.g., charts, maps, photographs) needed to be added to the test's passages used to measure the Reading Standards for Informational Text.

## Grade 4

The grade 4 assessment is **solidly aligned** with the grade 4 standards in English Language Arts. The grade 4 test statistically meets all four criteria for all the domains within ELA. This was reinforced by the written comments made by the panelists to the debriefing questions. Six panelists described the overall alignment as acceptable. One panelist described the alignment as in need of slight improvement, and the eighth panelist said the alignment was in need of more improvement.

Most specific debriefing comments concerning coverage, emphasis, cognitive complexity, and difficulty were positive, although four panelists would have liked to have seen better coverage of the Language standards. While alignment within the Reading domains was solid, one panelist notably made a comment about the lack of paired passages, which would have allowed more DOK level 3 items, and one panelist expressed a desire for more balance between content measuring Reading for Literature (less) and Reading for Informational Text (more needed). Although panelists were generally satisfied with the cognitive complexity of the collection of items on the form, two panelists expressed a desire for more DOK level 3 items to better assess the complete range of student performance.

## Grade 5

The grade 5 assessment is **solidly aligned** with the grade 5 ELA standards, having met the statistical criteria for all four alignment dimensions for all the ELA domains. Six of the panelists described the alignment as acceptable in their debriefing comments. Two of those individuals on the panel reviewing the assessments for grades 3 through 5 made specific comments that the grade 5 assessment was the best aligned of the three assessments they examined. Two panelists said the alignment was in need of slight improvement.

The panelists generally believed that the grade 5 assessment does a good job of covering the range of ELA standards, although two panelists stated there was too much emphasis placed on the Listening standards, and four panelists did observe that the assessment was lacking in

coverage of the detailed Language standards. As a group, they were pleased with the overall rigor (cognitive complexity and difficulty) of the test. One panelist specifically expressed approval of the inclusion of paired passages and drama, yielding better coverage of the two Reading domains, and another panelist found the interest level of the Reading passages was strong at grade 5.

## Grade 6

Alignment of the grade 6 assessment was **satisfactory** with one exception: Depth-of-Knowledge Consistency alignment was weak for the Speaking and Listening domain, indicating that panelists generally judged the Listening test items to be at a lower level of cognitive complexity than the Listening standards they intended to measure. In fact, four panelists specifically wrote in their debriefing responses about their unease with the Listening items. One panelist stated that "in the speaking and listening area, I think that the test is perhaps more nuanced than the standards are."

In their debriefing comments, three panelists described the overall grade 6 alignment as acceptable. The remaining five panelists all said the alignment was in need of slight improvement. A variety of suggestions were expressed in addition to the observations concerning the Listening items. Two panelists expressed concern that the Writing task seemed dependent upon unfamiliar reading text in order for the student to perform well. The need for clearer wording of some items and an improved balance between Reading and Writing content or between Reading Literature and Reading Informational Text were also offered as things to slightly improve.

## Grade 7

Alignment of the grade 7 ELA assessment was **satisfactory** across the four alignment dimensions (criteria). However, analyses indicated that Depth-of-Knowledge Correspondence could be strengthened for three ELA domains: Reading Literature, Reading Informational Text, and Speaking and Listening. Several panelists expressed in their written comments a desire for more short-answer questions on the assessment in order to increase the number of DOK level 3 (strategic thinking) items measuring Reading and Writing.

In their responses to the debriefing questions, two panelists described the grade 7 alignment as acceptable, five panelists described the alignment as in need of slight improvement, and one panelist said more improvement was required. Concerns expressed by multiple panelists included the need to expand coverage of the standards by adding paired passages for compare/contrast items, poetry for vocabulary acquisition items, and writing tasks that go beyond literary analysis.

## Grade 8

Grade 8 alignment of the ELA assessment was **satisfactory**, but analysis of panelists' item judgments revealed some criteria where alignment could be strengthened: 1) Categorical Concurrence for Speaking and Listening; and 2) Depth-of-Knowledge Consistency for the two Reading domains. Five panelists did express concerns that the assessment did not sufficiently address the Listening domain standards. Seven of the eight panelists believed the difficulty level and cognitive complexity of the ELA items could be improved in order to accurately measure the higher end of the range of student performance.

In their debriefing comments, four panelists said the grade 8 alignment was in need of slight improvement, and three panelists said more improvements were needed. One panelist described the alignment as acceptable. Lack of appropriate rigor in the test content and weaknesses in measuring the Listening domain standards mentioned earlier were contributing factors to these overall judgments. Panelists' other suggestions for improvement included better coverage of the range of standards, especially in Reading and Writing, more constructed-response opportunities (including requiring an additional writing prompt) to measure DOK level 3 (strategic thinking), and more concise language in items that are written to more closely fit the grade 8 ELA standards.

# Depth-of-Knowledge Alignment Analysis of the Wisconsin Academic Standards and Wisconsin Forward Exams: Mathematics

The first major step in the alignment process involved reviewers' determination of the depth-ofknowledge (DOK) levels of the Wisconsin Academic Standards as shown in Table 16 below. Additional information regarding the various levels of depth of knowledge can be found in Appendix A of this report.

| Creada | No. of<br>Standards | DOK   | Standards by D   | Overall DOK<br>Average of |                        |
|--------|---------------------|-------|------------------|---------------------------|------------------------|
| Grade  | Assessed            | Level | No. of Standards | Percentage                | Wisconsin<br>Standards |
|        |                     | 1     | 15               | 41%                       |                        |
| 3      | 37                  | 2     | 20               | 54%                       | 2                      |
|        |                     | 3     | 2                | 5%                        |                        |
|        |                     | 1     | 17               | 46%                       |                        |
| 4      | 37                  | 2     | 20               | 54%                       | 2                      |
|        |                     | 3     | 0                | 0%                        |                        |
|        |                     | 1     | 16               | 40%                       |                        |
| 5      | 40                  | 2     | 24               | 60%                       | 2                      |
|        |                     | 3     | 0                | 0%                        |                        |
|        |                     | 1     | 16               | 34%                       |                        |
| 6      | 47                  | 2     | 25               | 53%                       | 2                      |
|        |                     | 3     | 6                | 13%                       |                        |
|        |                     | 1     | 9                | 21%                       |                        |
| 7      | 43                  | 2     | 30               | 70%                       | 2                      |
|        |                     | 3     | 4                | 9%                        |                        |
|        |                     | 1     | 7                | 19%                       |                        |
| 8      | 36                  | 2     | 22               | 61%                       | 2                      |
|        |                     | 3     | 7                | 19%                       |                        |

## Table 16: Summary of DOK Consensus Results for Mathematics

## Alignment Results

Using the electronic data capture tool, reviewers independently determined what each item measured. They also entered the depth-of-knowledge level for each item. The calculation software provided the statistical analysis to determine whether each Forward Exam as a whole included items measuring content from each of the Wisconsin Academic Standards domains. The tool also provided the statistical analysis to determine depth-of-knowledge consistency, range-of-knowledge correspondence, and balance of representation.

A high-level summary alignment analysis for depth-of-knowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation is provided in Tables 17–22. The results indicate that the alignment relationship between the Wisconsin Academic Standards and the corresponding Forward Exam is acceptable, as noted in the section labeled Interpretation of Mathematics Alignment Results of this report. Additional detailed information is provided in Appendix C and Appendix D of this report.

|     | General Summary Grade 3 Mathematics |                    |                       |                              |  |  |
|-----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|
|     | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| OA  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NBT | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NF  | Yes                                 | Yes                | Yes                   | Yes*                         |  |  |
| MD  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| G   | Yes*                                | Weak               | Yes                   | Yes                          |  |  |

 Table 17: Grade 3 Mathematics Alignment Summary

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

## Table 18: Grade 4 Mathematics Alignment Summary

|     | General Summary Grade 4 Mathematics |                    |                       |                              |  |  |
|-----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|
|     | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| OA  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NBT | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NF  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| MD  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| G   | Yes                                 | Yes                | Yes                   | Yes                          |  |  |

 Table 19: Grade 5 Mathematics Alignment Summary

|     | General Summary Grade 5 Mathematics |                    |                       |                              |  |  |
|-----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|
|     | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |
| OA  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NBT | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| NF  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| MD  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |
| G   | Yes                                 | Yes                | Yes                   | Yes                          |  |  |

|    | General Summary Grade 6 Mathematics |                    |                       |                              |  |  |  |  |  |
|----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|--|--|--|
|    | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |  |  |  |
| RP | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |  |
| NS | Yes                                 | Yes                | Yes*                  | Yes                          |  |  |  |  |  |
| EE | Yes                                 | Yes                | Yes*                  | Yes                          |  |  |  |  |  |
| G  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |  |
| SP | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |  |

#### Table 20: Grade 6 Mathematics Alignment Summary

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

#### Table 21: Grade 7 Mathematics Alignment Summary

|    | General Summary Grade 7 Mathematics |                    |                       |                              |  |  |  |  |
|----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|--|--|
|    | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |  |  |
| RP | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| NS | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| EE | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| G  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| SP | Yes                                 | Yes                | Yes*                  | Yes                          |  |  |  |  |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

#### Table 22: Grade 8 Mathematics Alignment Summary

|    | General Summary Grade 8 Mathematics |                    |                       |                              |  |  |  |  |
|----|-------------------------------------|--------------------|-----------------------|------------------------------|--|--|--|--|
|    | Categorical<br>Concurrence          | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of Representation |  |  |  |  |
| NS | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| EE | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| F  | Yes                                 | Weak               | Yes                   | Yes                          |  |  |  |  |
| G  | Yes                                 | Yes                | Yes                   | Yes                          |  |  |  |  |
| SP | Weak                                | Yes                | Yes                   | Yes                          |  |  |  |  |

#### **Interpretation of Mathematics Alignment Results**

Examination of the overall means of the DOKs assigned to the Mathematics standards at each grade reveals an average DOK level of 2 across grades 3 through 8. Most Mathematics standards were assigned a DOK of 1 or 2, but a small number of standards at grades 3, 6, 7, and 8 were assigned a DOK level of 3. No standards at grades 4 and 5 were assigned a DOK of 3.

Analyses of the panelists' judgments regarding the test content revealed that the alignments of the Mathematics assessments for all six grades generally met the statistical criteria. The only weaknesses found occurred at grades 3 and 8. Similarly, in their responses to the debriefing

questions, half or more of the panelists described each grade's Mathematics assessment as acceptable.

The following are highlights of the findings by grade for the Mathematics assessments.

## Grade 3

The grade 3 test content **met the statistical criteria** for the alignment dimensions of Categorical Concurrence, Range of Knowledge, and Balance of Representation. The only weakness found by the analysis of panelists' judgments was for the alignment dimension of DOK Consistency for Geometry.

While four (half) the panelists noted in their debriefing comments that the overall alignment was acceptable, three panelists said the form was in need of slight improvement and one panelist said the assessment was in need of more improvement. Most panelists made observations about the underrepresentation of one or more domain in the collection of items on the form. Although gaps in Geometry were specifically noted by one panelist, Measurement and Data was mentioned by five panelists as also needing representation by more items on the assessment. Measurement and Data includes nine learning standards at grade 3. Five panelists noted the need for more DOK level 3 items in order to better measure the full range of student performance on the grade 3 Mathematics standards.

## Grade 4

The grade 4 Mathematics assessment alignment **was solid**, meeting all the statistical requirements for alignment on the four criteria. Similar to grade 3, four panelists noted in their debriefing comments that the grade 4 overall alignment was acceptable. Three panelists described the assessment as in need of slight improvement, and one panelist said more improvements were needed. The most often mentioned needs were the need for more items covering the Numbers and Operations group of standards (noted by five panelists) and the need to strengthen cognitive complexity of the assessment items by having more DOK level 3 items. (It is important to note, however, that panelists did not consider any of the Mathematics standards at grade 4 as DOK level 3.)

## Grade 5

The grade 5 Mathematics assessment alignment **was solid**, meeting all the statistical requirements for alignment on the four criteria. In their debriefing comments, two panelists described the alignment as acceptable, five said the alignment was in need of slight improvement, and one panelist said the alignment was in need of more improvement. The most often mentioned specific improvement (noted by six panelists) was the need for more items measuring the standards in the Numbers and Operations-Fractions, which includes fourteen learning standards. The majority of panelists were generally satisfied with the cognitive complexity of the items on the grade 5 assessment. However, three panelists noted the desirability of including more DOK level 3 items on the assessment in order to strengthen the alignment. One of these panelists said that students were not given sufficient opportunities by the

assessment content to demonstrate deeper levels of understanding Mathematics, mathematical reasoning, and strategic thinking, resulting in the overall judgment by the panelist that the test was in need of improvement. This panelist also made a similar observation regarding the grade 3 and grade 4 alignments. (It is important to note, however, that panelists did not consider any of the Mathematics standards at grade 4 or grade 5 as DOK level 3.)

## Grade 6

Alignment of the grade 6 test was **satisfactory** for all four criteria. However, evident from both the data and debriefing comments, Range-of-Knowledge Correspondence could be strengthened by improving coverage of the fifteen standards within Number System and the sixteen standards within Expressions and Equations. In their comments, three panelists observed that the Range-of-Knowledge Correspondence coverage of the standards was insufficient, specifically citing the need for better assessment of standards within The Number System group of standards.

Overall, five panelists described alignment of the grade 6 assessment as acceptable. One panelist described the alignment as perfect. One panelist said the test form alignment was in need of slight improvement. The panelists observed an appropriate overall level of cognitive complexity among the test content; nevertheless, three judges expressed the desire for more DOK level 3 questions on the assessment.

## Grade 7

Statistical analysis of the panelists' judgments revealed that the grade 7 assessment **met all four alignment criteria**. This finding was reinforced by the panelists' responses to the debriefing questions. Five of the seven panelists described the overall alignment as acceptable, and one panelist described the alignment as perfect. The remaining panelist described the alignment as in need of more improvement, citing observation of several areas regarding Balance of Representation across the standards.

## Grade 8

The grade 8 alignment **met the statistical criteria** for Range-of-Knowledge Correspondence and Balance of Representation. Weaknesses were found for the Categorical Concurrence and Depth-of-Knowledge Consistency criteria. Categorical Concurrence was weak for Statistics and Probability, meaning the panelists identified an insufficient number of items aligned to the four standards within the group of standards.

In their debriefing comments, six panelists described the alignment of the grade 8 assessment as acceptable, generally noting good coverage of the content standards and an appropriate level of cognitive complexity and difficulty among the test items. One panelist stated that the assessment's alignment was in need of more improvement. This panelist observed an overemphasis of The Number System, Functions, and Geometry standards to the detriment of the measurement of the Expressions and Equations and the Statistics and Probability standards.

# Depth-of-Knowledge Alignment Analysis of the Wisconsin Academic Standards and Wisconsin Forward Exams: Science

The first major step in the alignment process involved reviewers' determination of the depth-ofknowledge (DOK) levels of the Wisconsin Academic Standards as shown in Table 23 below. Additional information regarding the various levels of depth of knowledge can be found in Appendix A of this report.

| Grade | No. of<br>Standards<br>Assessed | DOK<br>Level | Standards by DOK Level |     | ОК |  | Overall DOK<br>Average of<br>Wisconsin<br>Standards |
|-------|---------------------------------|--------------|------------------------|-----|----|--|-----------------------------------------------------|
|       |                                 |              |                        |     |    |  |                                                     |
|       |                                 | <u> </u>     | 7                      | 16% |    |  |                                                     |
| 4     | 45                              | 2            | 33                     | 73% | 2  |  |                                                     |
|       |                                 | 3            | 5                      | 11% |    |  |                                                     |
|       |                                 | 1            | 9                      | 14% |    |  |                                                     |
| 8     | 63                              | 2            | 43                     | 68% | 2  |  |                                                     |
|       |                                 | 3            | 11                     | 17% |    |  |                                                     |

## Table 23: Summary of DOK Consensus Results for Science

## Alignment Results

Using the electronic data capture tool, reviewers independently determined what each item measured. They also entered the depth-of-knowledge level for each item. The calculation software provided the statistical analysis to determine whether each Forward Exam as a whole included items measuring content from each of the Wisconsin Academic Standards domains. The tool also provided the statistical analysis to determine depth-of-knowledge consistency, range-of-knowledge correspondence, and balance of representation.

A high-level summary alignment analysis for depth-of-knowledge consistency, categorical concurrence, range-of-knowledge correspondence, and balance of representation is provided in Tables 24 and 25. The results of the alignment relationship between the Wisconsin Academic Standards and the corresponding Forward Exam is overall acceptable, as noted in the section of this report labeled Interpretation of Science Alignment Results. Additional detailed information is provided in Appendix C and Appendix D of this report.

| Ge                                  | General Summary Science Grade 4 |                    |                       |                                 |  |  |  |  |  |
|-------------------------------------|---------------------------------|--------------------|-----------------------|---------------------------------|--|--|--|--|--|
|                                     | Categorical<br>Concurrence      | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of<br>Representation |  |  |  |  |  |
| A-B. Science Connections & Nature   |                                 |                    |                       |                                 |  |  |  |  |  |
| of Science                          | Yes*                            | Yes                | Yes                   | Yes                             |  |  |  |  |  |
| C. Science Inquiry                  | Yes                             | Yes                | Yes                   | Yes                             |  |  |  |  |  |
| D. Physical Science                 | Yes                             | Yes                | Yes                   | Yes                             |  |  |  |  |  |
| E. Earth and Space Science          | Weak                            | Yes                | Yes                   | Yes                             |  |  |  |  |  |
| F. Life & Environmental Science     | Yes                             | Yes                | Yes                   | Yes                             |  |  |  |  |  |
| G-H. Science Applications & Science |                                 |                    |                       |                                 |  |  |  |  |  |
| in Social and Personal Perspectives | Yes*                            | Yes                | Yes*                  | Yes                             |  |  |  |  |  |

#### Table 24: Grade 4 Science Alignment Summary

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

#### Table 25: Grade 8 Science Alignment Summary

| General Summary Science Grade 8                                            |                            |                    |                       |                                 |  |  |  |  |
|----------------------------------------------------------------------------|----------------------------|--------------------|-----------------------|---------------------------------|--|--|--|--|
|                                                                            | Categorical<br>Concurrence | DOK<br>Consistency | Range<br>of Knowledge | Balance<br>of<br>Representation |  |  |  |  |
| A-B. Science Connections & Nature<br>of Science                            | Yes*                       | Yes*               | Weak                  | Yes                             |  |  |  |  |
| C. Science Inquiry                                                         | Yes                        | Yes                | Yes*                  | Yes                             |  |  |  |  |
| D. Physical Science                                                        | Yes                        | Yes*               | Yes                   | Yes                             |  |  |  |  |
| E. Earth and Space Science                                                 | Yes                        | Yes                | Yes*                  | Yes                             |  |  |  |  |
| F. Life & Environmental Science                                            | Yes                        | Yes                | Yes*                  | Yes                             |  |  |  |  |
| G-H. Science Applications & Science<br>in Social and Personal Perspectives | Yes*                       | Yes                | Weak                  | Yes                             |  |  |  |  |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

#### **Interpretation of Science Alignment Results**

Examination of the overall means of the DOKs assigned to the Science standards at the two grades at which Science is assessed reveals a very similar pattern. Most Science standards (approximately 70% at each grade) were assigned a DOK of 2, but smaller numbers of standards at both grades 4 and 8 were assigned a DOK level of 1 or 3. Consequently, overall means of the assigned DOKs were 2 for both grade 4 and grade 8.

Alignment for both Science assessments was generally satisfactory, although areas in which alignment can be strengthened were revealed by the data analyses as well as the panelists' debriefing comments.

## Grade 4

The grade 4 assessment **met all four alignment criteria to a satisfactory degree**. However, Categorical Concurrence would be strengthened by the addition of one or more clearly-related test items to each of the following two areas: Science Connections & Nature of Science and Science Applications & Science in Social and Personal Perspectives.

In their debriefing responses, three panelists described the overall alignment of the grade 4 Science assessment to be acceptable. Three panelists described it as in need of slight improvement, while the remaining two panelists said the assessment needed more improvement. Notably, all eight panelists expressed comments about uneven coverage of the content standards and/or specific holes or deficits in the assessment's coverage of specific categories of standards. Five panelists also expressed an opinion about the volume and level of reading required of fourth grade students by the science assessment, perhaps to the detriment of measuring deeper levels of scientific knowledge and reasoning. Reinforcing this was the observation of six panelists that there were no DOK level 3 items requiring strategic thinking on the grade 4 Science test.

#### Grade 8

The alignment dimensions of Categorical Concurrence, Depth-of-Knowledge Consistency, and Balance of Representation were **satisfactory** for the grade 8 Science assessment. The Range-of-Knowledge Correspondence criterion was not met for two of the six domains. Range-of-Knowledge Correspondence was weak for Science Connections & Nature of Science as well as for Science Applications & Science in Social and Personal Perspectives. Similar to the grade 4 alignment findings, Categorical Concurrence of the grade 8 assessment met the minimum statistical criterion, but Categorical Concurrence of the Science Connections & Nature of Science group of standards and the Science Applications & Science in Social and Personal Perspectives group of standards would be strengthened by adding one or more clearly related science items to each.

Reviewing overall alignment of the grade 8 Science assessment, three panelists described the alignment as acceptable in their debriefing comments, and five panelists said the alignment was in need of slight improvement. Four of the panelists wrote that the grade 8 assessment did not cover the full range of Wisconsin's Science content standards. Specific observations were made about an emphasis on the assessment of processes over science content domains in the test items, especially noting a lack of sufficient coverage of the Life & Environmental Science domain standards. Three panelists commented on the need to improve the rigor of the assessment by adding more DOK level 3 items (requiring higher-level strategic thinking) to the very limited number of these items on the test reviewed.

## **Reliability among Reviewers**

The intra-class correlation is based on the mean squares from the analysis of variance of a twoway random effects model, reviewers crossed with items (Shroud and Fleiss, 1979), as described in Appendix E. The overall intra-class correlation among the reviewers' assignment of depth-ofknowledge levels to items was reasonably high. If there is a low variance among the reviewers' coding in assigning depth-of-knowledge levels to items, the intra-class correlation has greater error. Table 26 provides a summary of the intra-class correlation and the percentage of items coded as the same depth-of-knowledge by all reviewers.

| Course          | Intra-Class Correlation | Percentage of Items Coded to<br>the Same Depth of Knowledge |
|-----------------|-------------------------|-------------------------------------------------------------|
| ELA Grade 3     | 0.93                    | 27%                                                         |
| ELA Grade 4     | 0.91                    | 41%                                                         |
| ELA Grade 5     | 0.91                    | 38%                                                         |
| ELA Grade 6     | 0.88                    | 14%                                                         |
| ELA Grade 7     | 0.72                    | 8%                                                          |
| ELA Grade 8     | 0.87                    | 11%                                                         |
| Math Grade 3    | 0.80                    | 7%                                                          |
| Math Grade 4    | 0.90                    | 41%                                                         |
| Math Grade 5    | 0.83                    | 15%                                                         |
| Math Grade 6    | 0.77                    | 11%                                                         |
| Math Grade 7    | 0.64                    | 13%                                                         |
| Math Grade 8    | 0.75                    | 17%                                                         |
| Science Grade 4 | 0.76                    | 18%                                                         |
| Science Grade 8 | 0.86                    | 15%                                                         |

## Table 26: Summary of Reliability among Reviewers

## **Consistency among Wisconsin Reviewers and National Reviewers**

The Wisconsin Technical Advisory Committee (TAC) suggested including a short paragraph reporting consistency between Wisconsin educators and national experts. The following serves to address the TAC request.

Again, one method of computing agreement for raters is the intra-class correlation. The intraclass correlation is based on the mean squares from the analysis of variance of a two-way random effects model, and reviewers crossed with items (Shroud and Fleiss, 1979). The TAC was interested in differences between the results of the national experts and Wisconsin Educators. Table 27 provides the overall or combined intra-class correlation as well as the intraclass correlation for the experts and the educators. It should be noted that in grades 6, 7, and 8 for mathematics there were only three teachers in those panels.

The overall intra-class correlation among the reviewers' assignment of depth-of-knowledge levels to items was reasonably high. Table 27 provides a summary of the intra-class correlation combined and separate by expertise.

|         |       |          | Intra-Class Correlations |                     |  |  |  |  |  |  |
|---------|-------|----------|--------------------------|---------------------|--|--|--|--|--|--|
| Subject | Grade | Combined | National Experts         | Wisconsin Educators |  |  |  |  |  |  |
| ELA     | 3     | 0.93     | 0.87                     | 0.90                |  |  |  |  |  |  |
| ELA     | 4     | 0.91     | 0.90                     | 0.83                |  |  |  |  |  |  |
| ELA     | 5     | 0.91     | 0.89                     | 0.82                |  |  |  |  |  |  |
| ELA     | 6     | 0.88     | 0.91                     | 0.73                |  |  |  |  |  |  |
| ELA     | 7     | 0.72     | 0.64                     | 0.64                |  |  |  |  |  |  |
| ELA     | 8     | 0.87     | 0.75                     | 0.84                |  |  |  |  |  |  |
| Math    | 3     | 0.80     | 0.71                     | 0.67                |  |  |  |  |  |  |
| Math    | 4     | 0.90     | 0.85                     | 0.83                |  |  |  |  |  |  |
| Math    | 5     | 0.83     | 0.71                     | 0.71                |  |  |  |  |  |  |
| Math    | 6     | 0.77     | 0.47                     | 0.72                |  |  |  |  |  |  |
| Math    | 7     | 0.64     | 0.57                     | 0.47                |  |  |  |  |  |  |
| Math    | 8     | 0.75     | 0.65                     | 0.69                |  |  |  |  |  |  |
| Science | 4     | 0.76     | 0.63                     | 0.62                |  |  |  |  |  |  |
| Science | 8     | 0.86     | 0.80                     | 0.70                |  |  |  |  |  |  |

#### Table 27. Reliability among Rates Combined and Separate by Expertise

Although there are some differences between reliability of the National Experts and the Wisconsin Educators all of the correlations are significant. To further investigate the differences

between the experts and the educators, Table 28 provides the n-count, mean, and standard deviation Depth- of- Knowledge ratings for all reviewers combined, expert, and educator.

There are some slight differences in average ratings, but overall the results appear to be within reason for Webb Alignment Studies.

|         | Combined |     | Nati | onal Ex | perts | Wisconsin Educators |      |         |      |      |
|---------|----------|-----|------|---------|-------|---------------------|------|---------|------|------|
| Subject | Grade    | Ν   | Mean | SD      | Ν     | Mean                | SD   | <br>N   | Mean | SD   |
| ELA     | 3        | 360 | 1.91 | 0.65    | 180   | 1.95                | 0.60 | <br>180 | 1.87 | 0.70 |
| ELA     | 4        | 376 | 1.95 | 0.59    | 188   | 2.02                | 0.50 | <br>188 | 1.87 | 0.66 |
| ELA     | 5        | 384 | 2.14 | 0.59    | 192   | 2.19                | 0.55 | <br>192 | 2.09 | 0.63 |
| ELA     | 6        | 384 | 2.25 | 0.61    | 192   | 2.28                | 0.66 | <br>192 | 2.22 | 0.55 |
| ELA     | 7        | 384 | 2.25 | 0.61    | 192   | 2.58                | 0.53 | <br>192 | 2.22 | 0.53 |
| ELA     | 8        | 384 | 2.30 | 0.67    | 192   | 2.38                | 0.69 | <br>192 | 2.23 | 0.65 |
| Math    | 3        | 336 | 1.59 | 0.56    | 168   | 1.61                | 0.54 | <br>168 | 1.57 | 0.59 |
| Math    | 4        | 368 | 1.57 | 0.54    | 184   | 1.51                | 0.53 | 184     | 1.64 | 0.54 |
| Math    | 5        | 368 | 1.61 | 0.52    | 184   | 1.62                | 0.51 | <br>184 | 1.60 | 0.52 |
| Math    | 6        | 322 | 1.66 | 0.57    | 184   | 1.60                | 0.53 | <br>138 | 1.72 | 0.60 |
| Math    | 7        | 321 | 1.76 | 0.59    | 184   | 1.68                | 0.57 | <br>137 | 1.87 | 0.60 |
| Math    | 8        | 322 | 1.67 | 0.56    | 184   | 1.60                | 0.52 | 138     | 1.78 | 0.59 |
| Science | 4        | 320 | 1.54 | 0.52    | 160   | 1.73                | 0.57 | 160     | 1.50 | 0.50 |
| Science | 8        | 320 | 1.68 | 0.55    | 160   | 1.73                | 0.57 | 160     | 1.63 | 0.52 |

 Table 28: Summary Statistics Combined and by Rater Expertise

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# Appendix A

Depth-of-Knowledge Levels

#### Reading Depth-of-Knowledge (DOK) Levels

*Reading Level 1*. Level 1 requires students to receive or recite facts or to use simple skills or abilities. Oral reading that does not include analysis of the text, as well as basic comprehension of a text, is included. Items require only a shallow understanding of the text presented and often consist of verbatim recall from text, slight paraphrasing of specific details from the text, or simple understanding of a single word or phrase. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Support ideas by reference to verbatim or only slightly paraphrased details from the text.
- Use a dictionary to find the meanings of words.
- Recognize figurative language in a reading passage.

*Reading Level 2.* Level 2 includes the engagement of some mental processing beyond recalling or reproducing a response; it requires both comprehension and subsequent processing of text or portions of text. Inter-sentence analysis of inference is required. Some important concepts are covered, but not in a complex way. Standards and items at this level may include words such as summarize, interpret, infer, classify, organize, collect, display, compare, and determine whether fact or opinion. Literal main ideas are stressed. A Level 2 assessment item may require students to apply skills and concepts that are covered in Level 1. However, items require closer understanding of text, possibly through the item's paraphrasing of both the question and the answer. Some examples that represent, but do not constitute all of, Level 2 performance are:

- Use context cues to identify the meaning of unfamiliar words, phrases, and expressions that could otherwise have multiple meanings.
- Predict a logical outcome based on information in a reading selection.
- Identify and summarize the major events in a narrative.

*Reading Level 3.* Deep knowledge becomes a greater focus at Level 3. Students are encouraged to go beyond the text; however, they are still required to show understanding of the ideas in the text. Students may be encouraged to explain, generalize, or connect ideas. Standards and items at Level 3 involve reasoning and planning. Students must be able to support their thinking. Items may involve abstract theme identification, inference across an entire passage, or students' application of prior knowledge. Items may also involve more superficial connections between texts. Some examples that represent, but do not constitute all of, Level 3 performance are:

- Explain or recognize how the author's purpose affects the interpretation of a reading selection.
- Summarize information from multiple sources to address a specific topic.
- Analyze and describe the characteristics of various types of literature.

*Reading Level 4.* Higher-order thinking is central and knowledge is deep at Level 4. The standard or assessment item at this level will probably be an extended activity, with extended time provided for completing it. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require the application of significant conceptual understanding and higher-order thinking. Students take information from at least one passage of a text and are asked to apply this information to a new task. They may also be asked to develop hypotheses and perform complex analyses of the connections among texts. Some examples that represent, but do not constitute all of, Level 4 performance are:

- Analyze and synthesize information from multiple sources.
- Examine and explain alternative perspectives across a variety of sources.
- Describe and illustrate how common themes are found across texts from different cultures.

## Writing DOK Levels

*Writing Level 1.* Level 1 requires the student to write or recite simple facts. The focus of this writing or recitation is not on complex synthesis or analysis, but on basic ideas. The students are asked to list ideas or words, as in a brainstorming activity, prior to written composition; are engaged in a simple spelling or vocabulary assessment; or are asked to write simple sentences. Students are expected to write, speak, and edit using the conventions of Standard English. This includes using appropriate grammar, punctuation, capitalization, and spelling. Students demonstrate a basic understanding and appropriate use of such reference materials as a dictionary, thesaurus, or Web site. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Use punctuation marks correctly.
- Identify Standard English grammatical structures, including the correct use of verb tenses.

*Writing Level 2.* Level 2 requires some mental processing. At this level, students are engaged in first-draft writing or brief extemporaneous speaking for a limited number of purposes and audiences. Students are expected to begin connecting ideas, using a simple organizational structure. For example, students may be engaged in note-taking, outlining, or simple summaries. Text may be limited to one paragraph. Some examples that represent, but do not constitute all of, Level 2 performance are:

- Construct or edit compound or complex sentences, with attention to correct use of phrases and clauses.
- Use simple organizational strategies to structure written work.
- Write summaries that contain the main idea of the reading selection and pertinent details.

Writing Level 3. Level 3 requires some higher-level mental processing. Students are engaged in developing compositions that include multiple paragraphs. These compositions may

include complex sentence structure and may demonstrate some synthesis and analysis. Students show awareness of their audience and purpose through focus, organization, and the use of appropriate compositional elements. The use of appropriate compositional elements includes such things as addressing chronological order in a narrative, or including supporting facts and details in an informational report. At this stage, students are engaged in editing and revising to improve the quality of the composition. Some examples that represent, but do not constitute all of, Level 3 performance are:

- Support ideas with details and examples.
- Use voice appropriate to the purpose and audience.
- Edit writing to produce a logical progression of ideas.

*Writing Level 4.* Higher-level thinking is central to Level 4. The standard at this level is a multi-paragraph composition that demonstrates the ability to synthesize and analyze complex ideas or themes. There is evidence of a deep awareness of purpose and audience. For example, informational papers include hypotheses and supporting evidence. Students are expected to create compositions that demonstrate a distinct voice and that stimulate the reader or listener to consider new perspectives on the addressed ideas and themes. An example that represents, but does not constitute all of, Level 4 performance is:

• Write an analysis of two selections, identifying the common theme and generating a purpose that is appropriate for both.

#### Mathematics Depth-of-Knowledge (DOK) Levels

*Level 1 (Recall)* includes the recall of information such as a fact, definition, term, or a simple procedure, as well as performing a simple algorithm or applying a formula. That is, in mathematics, a one-step, well-defined, and straight algorithmic procedure should be included at this lowest level. Other key words that signify Level 1 include "identify," "recall," "recognize," "use," and "measure." Verbs such as "describe" and "explain" could be classified at different levels, depending on what is to be described and explained.

Level 2 (Skill/Concept) includes the engagement of some mental processing beyond an habitual response. A Level 2 assessment item requires students to make some decisions as to how to approach the problem or activity, whereas Level 1 requires students to demonstrate a rote response, perform a well-known algorithm, follow a set procedure (like a recipe), or perform a clearly defined series of steps. Keywords that generally distinguish a Level 2 item include "classify," "organize," "estimate," "make observations," "collect and display data," and "compare data." These actions imply more than one step. For example, to compare data requires first identifying characteristics of objects or phenomena and then grouping or ordering the objects. Some action verbs, such as "explain," "describe," or "interpret," could be classified at different levels depending on the object of the action. For example, interpreting information from a simple graph, or reading information from the graph, also are at Level 2. Interpreting information from a complex graph that requires some decisions on what features of the graph need to be considered and how information from the graph can be aggregated is at Level 3. Level 2 activities are not limited only to number skills, but may involve visualization skills and probability skills. Other Level 2 activities include noticing or describing non-trivial patterns, explaining the purpose and use of experimental procedures; carrying out experimental procedures; making observations and collecting data; classifying, organizing, and comparing data; and organizing and displaying data in tables, graphs, and charts.

Level 3 (Strategic Thinking) requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. In most instances, requiring students to explain their thinking is at Level 3. Activities that require students to make conjectures are also at this level. The cognitive demands at Level 3 are complex and abstract. The complexity does not result from the fact that there are multiple answers, a possibility for both Levels 1 and 2, but because the task requires more demanding reasoning. An activity, however, that has more than one possible answer and requires students to justify the response they give would most likely be at Level 3.

Other Level 3 activities include drawing conclusions from observations; citing evidence and developing a logical argument for concepts; explaining phenomena in terms of concepts; and deciding which concepts to apply in order to solve a complex problem.

Level 4 (Extended Thinking) requires complex reasoning, planning, developing, and thinking, most likely over an extended period of time. The extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. For example, if a student has to take the water temperature from a river each day for a month and then construct a graph, this would be classified as a Level 2. However, if the student is to conduct a river study that requires taking into consideration a number of variables, this would be a Level 4. At Level 4, the

cognitive demands of the task should be high and the work should be very complex. Students should be required to make several connections—relate ideas *within* the content area or *among* content areas—and have to select one approach among many alternatives on how the situation should be solved, in order to be at this highest level. Level 4 activities include designing *and* conducting experiments and projects; developing and proving conjectures, making connections between a finding and related concepts and phenomena; combining and synthesizing ideas into new concepts; and critiquing experimental designs.

#### Science Depth-of-Knowledge (DOK) Levels

Please note that, in science, "knowledge" can refer both to content knowledge and knowledge of scientific processes. This meaning of knowledge is consistent with the *National Science Education Standards* (NSES), which terms "Science as Inquiry" as its first Content Standard.

Level 1 (Recall and Reproduction) requires the recall of information, such as a fact, definition, term, or a simple procedure, as well as performance of a simple science process or procedure. Level 1 only requires students to demonstrate a rote response, use a well-known formula, follow a set procedure (like a recipe), or perform a clearly defined series of steps. A "simple" procedure is well defined and typically involves only one step. Verbs such as "identify," "recall," "recognize," "use," "calculate," and "measure" generally represent cognitive work at the recall and reproduction level. Simple word problems that can be directly translated into and solved by a formula are considered Level 1. Verbs such as "describe" and "explain" could be classified at different DOK levels, depending on the complexity of what is to be described and explained.

A student answering a Level 1 item either knows the answer or does not: that is, the item does not need to be "figured out" or "solved." In other words, if the knowledge necessary to answer an item automatically provides the answer to it, then the item is at Level 1. If the knowledge needed to answer the item is not automatically provided in the stem, the item is at least at Level 2. Some examples that represent, but do not constitute all of, Level 1 performance are:

- Recall or recognize a fact, term, or property.
- Represent in words or diagrams a scientific concept or relationship.
- Provide or recognize a standard scientific representation for simple phenomenon.
- Perform a routine procedure, such as measuring length.

Level 2 (Skills and Concepts) includes the engagement of some mental processing beyond recalling or reproducing a response. The content knowledge or process involved is more complex than in Level 1. Items require students to make some decisions as to how to approach the question or problem. Keywords that generally distinguish a Level 2 item include "classify," "organize," "estimate," "make observations," "collect and display data," and "compare data." These actions imply more than one step. For example, to compare data requires first identifying characteristics of the objects or phenomena and then grouping or ordering the objects. Level 2 activities include making observations and collecting data; classifying, organizing, and comparing data; and organizing and displaying data in tables, graphs, and charts. Some action verbs, such as "explain," "describe," or "interpret," could be classified at different DOK levels, depending on the complexity of the action. For example, interpreting information from a simple graph, requiring reading information from the graph, is a Level 2. An item that requires interpretation from a complex graph, such as making decisions regarding features of the graph that need to be considered and how information from the graph can be aggregated, is at Level 3. Some examples that represent, but do not constitute all of, Level 2 performance, are:

- Specify and explain the relationship between facts, terms, properties, or variables.
- Describe and explain examples and non-examples of science concepts.

- Select a procedure according to specified criteria and perform it.
- Formulate a routine problem, given data and conditions.
- Organize, represent, and interpret data.

Level 3 (Strategic Thinking) requires reasoning, planning, using evidence, and a higher level of thinking than the previous two levels. The cognitive demands at Level 3 are complex and abstract. The complexity does not result only from the fact that there could be multiple answers, a possibility for both Levels 1 and 2, but because the multi-step task requires more demanding reasoning. In most instances, requiring students to explain their thinking is at Level 3; requiring a very simple explanation or a word or two should be at Level 2. An activity that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3. Experimental designs in Level 3 typically involve more than one dependent variable. Other Level 3 activities include drawing conclusions from observations; citing evidence and developing a logical argument for concepts; explaining phenomena in terms of concepts; and using concepts to solve non-routine problems. Some examples that represent, but do not constitute all of Level 3 performance, are:

- Identify research questions and design investigations for a scientific problem.
- Solve non-routine problems.
- Develop a scientific model for a complex situation.
- Form conclusions from experimental data.

Level 4 (Extended Thinking) involves high cognitive demands and complexity. Students are required to make several connections—relate ideas within the content area or among content areas—and have to select or devise one approach among many alternatives to solve the problem. Many on-demand assessment instruments will not include any assessment activities that could be classified as Level 4. However, standards, goals, and objectives can be stated in such a way as to expect students to perform extended thinking. "Develop generalizations of the results obtained and the strategies used and apply them to new problem situations," is an example of a grade 8 objective that is a Level 4. Many, but not all, performance assessments and open-ended assessment activities requiring significant thought will be Level 4.

Level 4 requires complex reasoning, experimental design and planning, and probably will require an extended period of time either for the science investigation required by an objective, or for carrying out the multiple steps of an assessment item. However, the extended time period is not a distinguishing factor if the required work is only repetitive and does not require applying significant conceptual understanding and higher-order thinking. For example, if a student has to take the water temperature from a river each day for a month and then construct a graph, this would be classified as a Level 2 activity. However, if the student conducts a river study that requires taking into consideration a number of variables, this would be a Level 4. Some examples that represent, but do not constitute all of, a Level 4 performance are:

- Based on data provided from a complex experiment that is novel to the student, deduct the fundamental relationship between several controlled variables.
- Conduct an investigation, from specifying a problem to designing and carrying out an experiment, to analyzing its data and forming conclusions.

# Appendix B

Depth-of-Knowledge Consensus Values

|                                                                                                                                                                                                                     | Consensus |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Reading Standards for Literature 3.RL                                                                                                                                                                               |           |
| Key Ideas and Details                                                                                                                                                                                               |           |
| 3.RL.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.                                                                              | 1         |
| 3.RL.2 Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.               | 2         |
| 3.RL.3 Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.                                                            | 3         |
| Craft and Structure                                                                                                                                                                                                 |           |
| 3.RL.4 Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.                                                                                      | 2         |
| 3.RL.5 Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.            | 2         |
| 3.RL.6 Distinguish their own point of view from that of the narrator or those of the characters.                                                                                                                    | 3         |
| Integration of Knowledge and Ideas                                                                                                                                                                                  |           |
| 3.RL.7 Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).                              | 2         |
| 3.RL.8 Not applicable to literature.                                                                                                                                                                                | NA        |
| 3.RL.9 Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).                                              | 3         |
| 3.RL.10 Assessed locally.                                                                                                                                                                                           | NA        |
| Reading Standards for Informational Text 3.RI                                                                                                                                                                       |           |
| Key Ideas and Details                                                                                                                                                                                               |           |
| 3.RI.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.                                                                              | 1         |
| 3.RI.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.                                                                                                       | 2         |
| 3.RI.3 Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect. | 3         |

# Table B1EELA Grade 3 DOK Consensus

| Craft and Structure                                                                                                                                                                             |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 3.RI.4 Determine the meaning of general academic and domain-specific words and                                                                                                                  | 2  |
| phrases in a text relevant to a grade 3 topic or subject area.                                                                                                                                  |    |
| 3.RI.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.                                                  | 1  |
| 3.RI.6 Distinguish their own point of view from that of the author of a text.                                                                                                                   | 3  |
| Integration of Knowledge and Ideas                                                                                                                                                              |    |
| 3.RI.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur). | 2  |
| 3.RI.8 Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence).                                | 2  |
| 3.RI.9 Compare and contrast the most important points and key details presented in two texts on the same topic.                                                                                 | 3  |
| 3.RI.10 Assessed locally.                                                                                                                                                                       | NA |
| Writing Standards 3.W                                                                                                                                                                           |    |
| Text Types and Purposes                                                                                                                                                                         |    |
| 3.W.1 Write opinion pieces on topics or texts, supporting a point of view with reasons.                                                                                                         | 3  |
| 3.W.1.a Introduce the topic or text they are writing about, state an opinion, and create an organizational structure that lists reasons.                                                        | 2  |
| 3.W.1.b Provide reasons that support the opinion.                                                                                                                                               | 2  |
| 3.W.1.c Use linking words and phrases (e.g., because, therefore, since, for example) to connect opinion and reasons.                                                                            | 2  |
| 3.W.1.d Provide a concluding statement or section.                                                                                                                                              | 2  |
| 3.W.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.                                                                                          | 3  |
| 3.W.2.a Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.                                                                    | 2  |
| 3.W.2.b Develop the topic with facts, definitions, and details.                                                                                                                                 | 3  |
| 3.W.2.c Use linking words and phrases (e.g., also, another, and, more, but) to connect ideas within categories of information.                                                                  | 1  |
| 3.W.2.d Provide a concluding statement or section.                                                                                                                                              | 2  |
| 3.W.3 Write narratives to develop real or imagined experiences or events using                                                                                                                  |    |
| effective technique, descriptive details, and clear event sequences.                                                                                                                            | 3  |
| 3.W.3.a Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.                                                                    | 3  |
| 3.W.3.b Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.                                    | 3  |

| 3.W.3.c Use temporal words and phrases to signal event order.                                                                                                                                                                                                                                                                                                                                               | 1        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| 3.W.3.d Provide a sense of closure.                                                                                                                                                                                                                                                                                                                                                                         | 2        |
| Production and Distribution of Writing                                                                                                                                                                                                                                                                                                                                                                      | 2        |
| 3.W.4 With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)                                                                                                                                                                             | 3        |
| 3.W.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 3 on page 29.)                                                                                                                                                  | 3        |
| 3.W.6 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                     | NA       |
| Research to Build and Present Knowledge                                                                                                                                                                                                                                                                                                                                                                     |          |
| 3.W.7 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                     | NA       |
| 3.W.8 Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.                                                                                                                                                                                                                                     | 2        |
| 3.W.9 (Begins in grade 4)                                                                                                                                                                                                                                                                                                                                                                                   | NA       |
| 3.W.10 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                    | NA       |
| Speaking and Listening Standards 3.SL                                                                                                                                                                                                                                                                                                                                                                       |          |
| Comprehension and Collaboration                                                                                                                                                                                                                                                                                                                                                                             |          |
| 3.SL.1a-d Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                 | NA       |
| 3.SL.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.                                                                                                                                                                                                                          | 2        |
| 3.SL.3 Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.                                                                                                                                                                                                                                                                                              | 2        |
| Presentation of Knowledge and Ideas                                                                                                                                                                                                                                                                                                                                                                         |          |
| resentation of Miowedge and Ideas                                                                                                                                                                                                                                                                                                                                                                           |          |
| 3.SL.4 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                    | NA       |
| 5                                                                                                                                                                                                                                                                                                                                                                                                           | NA<br>NA |
| 3.SL.4 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                                    |          |
| 3.SL.4 Assessed locally.         3.SL.5 Assessed locally.                                                                                                                                                                                                                                                                                                                                                   | NA       |
| 3.SL.4 Assessed locally.<br>3.SL.5 Assessed locally.<br>3.SL.6 Assessed locally.                                                                                                                                                                                                                                                                                                                            | NA       |
| 3.SL.4 Assessed locally.         3.SL.5 Assessed locally.         3.SL.6 Assessed locally.         Language Standards 3.L                                                                                                                                                                                                                                                                                   | NA       |
| 3.SL.4 Assessed locally.         3.SL.5 Assessed locally.         3.SL.6 Assessed locally.         Language Standards 3.L         Conventions of Standard English         3.L.1 Demonstrate command of the conventions of standard English grammar and                                                                                                                                                      | NA<br>NA |
| <ul> <li>3.SL.4 Assessed locally.</li> <li>3.SL.5 Assessed locally.</li> <li>3.SL.6 Assessed locally.</li> <li>Language Standards 3.L</li> <li>Conventions of Standard English</li> <li>3.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</li> <li>3.L.1.a Explain the function of nouns, pronouns, verbs, adjectives, and adverbs in</li> </ul> | NA<br>NA |

| 3.L.1.d Form and use regular and irregular verbs.                                                                                                                                 | 1 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 3.L.1.e Form and use the simple (e.g., I walked; I walk; I will walk) verb tenses.                                                                                                | 1 |
| 3.L.1.f Ensure subject-verb and pronoun-antecedent agreement.*                                                                                                                    | 1 |
| 3.L.1.g Form and use comparative and superlative adjectives and adverbs, and choose between them depending on what is to be modified.                                             | 1 |
| 3.L.1.h Use coordinating and subordinating conjunctions.                                                                                                                          | 1 |
| 3.L.1.i Produce simple, compound, and complex sentences.                                                                                                                          | 2 |
| 3.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                                                          | 1 |
| 3.L.2.a Capitalize appropriate words in titles.                                                                                                                                   | 1 |
| 3.L.2.b Use commas in addresses.                                                                                                                                                  | 1 |
| 3.L.2.c Use commas and quotation marks in dialogue.                                                                                                                               | 1 |
| 3.L.2.d Form and use possessives.                                                                                                                                                 | 1 |
| 3.L.2.e Use conventional spelling for high-frequency and other studied words and for adding suffixes to base words (e.g., sitting, smiled, cries, happiness).                     | 1 |
| 3.L.2.f Use spelling patterns and generalizations (e.g., word families, position-based spellings, syllable patterns, ending rules, meaningful word parts) in writing words.       | 1 |
| 3.L.2.g Consult reference materials, including beginning dictionaries, as needed to check and correct spellings.                                                                  | 1 |
| Knowledge of Language                                                                                                                                                             |   |
| 3.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                | 1 |
| 3.L.3.a Choose words and phrases for effect.*                                                                                                                                     | 2 |
| 3.L.3.b Recognize and observe differences between the conventions of spoken and written standard English.                                                                         | 2 |
| Vocabulary Acquisition and Use                                                                                                                                                    |   |
| 3.L.4 Determine or clarify the meaning of unknown and multiple-meaning word<br>and phrases based on grade 3 reading and content, choosing flexibly from a range<br>of strategies. | 2 |
| 3.L.4.a Use sentence-level context as a clue to the meaning of a word or phrase.                                                                                                  | 2 |
| 3.L.4.b Determine the meaning of the new word formed when a known affix is                                                                                                        |   |
| added to a known word (e.g., agreeable/disagreeable, comfortable/uncomfortable, care/careless, heat/preheat).                                                                     | 1 |
| 3.L.4.c Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., company, companion).                                                          | 1 |
| 3.L.4.d Use glossaries or beginning dictionaries, both print and digital, to determine or clarify the precise meaning of key words and phrases.                                   | 1 |

| 3.L.5 Demonstrate understanding of word relationships and nuances in word meanings.                                                                                                                                                                  | 2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 3.L.5.a Distinguish the literal and nonliteral meanings of words and phrases in context (e.g., take steps).                                                                                                                                          | 2 |
| 3.L.5.b Identify real-life connections between words and their use (e.g., describe people who are friendly or helpful).                                                                                                                              | 2 |
| 3.L.5.c Distinguish shades of meaning among related words that describe states of mind or degrees of certainty (e.g., knew, believed, suspected, heard, wondered).                                                                                   | 2 |
| 3.L.6 Acquire and use accurately grade-appropriate conversational, general academic, and domain specific words and phrases, including those that signal spatial and temporal relationships (e.g., After dinner that night we went looking for them). | 1 |

|                                                                                                                                                                                                                                                                                        | Consensus |
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| Reading Standards for Literature 4.RL                                                                                                                                                                                                                                                  |           |
| Key Ideas and Details                                                                                                                                                                                                                                                                  |           |
| 4.RL.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.                                                                                                                                                | 2         |
| 4.RL.2 Determine a theme of a story, drama, or poem from details in the text; summarize the text.                                                                                                                                                                                      | 3         |
| 4.RL.3 Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).                                                                                                                | 2         |
| Craft and Structure                                                                                                                                                                                                                                                                    |           |
| 4.RL.4 Determine the meaning of words and phrases as they are used in a text, including those that allude to significant characters found in mythology (e.g., Herculean).                                                                                                              | 2         |
| 4.RL.5 Explain major differences between poems, drama, and prose, and refer to<br>the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts<br>of characters, settings, descriptions, dialogue, stage directions) when writing or<br>speaking about a text. | 2         |
| 4.RL.6 Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.                                                                                                                          | 2         |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                                                     |           |
| 4.RL.7 Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.                                                                                  | 3         |
| <i>4.RL.8</i> (Not applicable to literature)                                                                                                                                                                                                                                           | NA        |
| 4.RL.9 Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.                                                             | 3         |
| 4.RL.10 Assessed locally.                                                                                                                                                                                                                                                              | NA        |
| Reading Standards for Informational Text 4.RI                                                                                                                                                                                                                                          |           |
| Key Ideas and Details                                                                                                                                                                                                                                                                  |           |
| 4.RI.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.                                                                                                                                                | 2         |
| 4.RI.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.                                                                                                                                                                           | 2         |
| 4.RI.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.                                                                                                      | 2         |

| Craft and Structure                                                                                                                                                                                                                                                           |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 4.RI.4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.                                                                                                                                  | 2  |
| 4.RI.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.                                                                                                  | 2  |
| 4.RI.6 Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.                                                                                                                    | 3  |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                                            |    |
| 4.RI.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears. | 2  |
| 4.RI.8 Explain how an author uses reasons and evidence to support particular points in a text.                                                                                                                                                                                | 2  |
| 4.RI.9 Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.                                                                                                                                                     | 3  |
| 4.RI.10 Assessed locally.                                                                                                                                                                                                                                                     | NA |
| Writing Standards 4.W                                                                                                                                                                                                                                                         |    |
| Text Types and Purposes                                                                                                                                                                                                                                                       |    |
| 4.W.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.                                                                                                                                                                       | 3  |
| 4.W.1.a Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.                                                                                                       | 2  |
| 4.W.1.b Provide reasons that are supported by facts and details.                                                                                                                                                                                                              | 2  |
| 4.W.1.c Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).                                                                                                                                                                      | 1  |
| 4.W.1.d Provide a concluding statement or section related to the opinion presented.                                                                                                                                                                                           | 2  |
| 4.W.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.                                                                                                                                                                        | 3  |
| 4.W.2.a Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.                                                                           | 3  |
| 4.W.2.b Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.                                                                                                                                      | 3  |
| 4.W.2.c Link ideas within categories of information using words and phrases (e.g., another, for example, also, because).                                                                                                                                                      | 1  |

| 4.W.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.                                                                                                                                                          | 2  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 4.W.2.e Provide a concluding statement or section related to the information or explanation presented.                                                                                                                                                     | 2  |
| 4.W.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.                                                                                                        | 3  |
| 4.W.3.a Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.                                                                                                     | 3  |
| 4.W.3.b Use dialogue and description to develop experiences and events or show the responses of characters to situations.                                                                                                                                  | 3  |
| 4.W.3.c Use a variety of transitional words and phrases to manage the sequence of events.                                                                                                                                                                  | 2  |
| 4.W.3.d Use concrete words and phrases and sensory details to convey experiences and events precisely.                                                                                                                                                     | 2  |
| 4.W.3.e Provide a conclusion that follows from the narrated experiences or events.                                                                                                                                                                         | 2  |
| Production and Distribution of Writing                                                                                                                                                                                                                     |    |
| 4.W.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)                                     | 3  |
| 4.W.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 4 on page 29.) | 3  |
| 4.W.6 Assessed locally.                                                                                                                                                                                                                                    | NA |
| Research to Build and Present Knowledge                                                                                                                                                                                                                    |    |
| 4.W.7 Assessed locally.                                                                                                                                                                                                                                    | NA |
| 4.W.8 Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.                                                                    | 2  |
| 4.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.                                                                                                                                                    | 3  |
| 4.W.9.a Apply grade 4 Reading standards to literature (e.g., "Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character's thoughts, words, or actions].").                          | 3  |
| 4.W.9.b Apply grade 4 Reading standards to informational texts (e.g., "Explain<br>how an author uses reasons and evidence to support particular points in a text").                                                                                        | 3  |
| 4.W.10 Assessed locally.                                                                                                                                                                                                                                   | NA |
|                                                                                                                                                                                                                                                            |    |

| Speaking and Listening Standards 4.SL                                                                                                                  |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Comprehension and Collaboration                                                                                                                        |    |
| 4.SL.1a-d Assessed locally.                                                                                                                            | NA |
| 4.SL.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. | 2  |
| 4.SL.3 Identify the reasons and evidence a speaker provides to support particular points.                                                              | 2  |
| Presentation of Knowledge and Ideas                                                                                                                    |    |
| 4.SL.4 Assessed locally.                                                                                                                               | NA |
| 4.SL.5 Assessed locally.                                                                                                                               | NA |
| 4.SL.6 Assessed locally.                                                                                                                               | NA |
| Language Standards 4.L                                                                                                                                 |    |
| Conventions of Standard English                                                                                                                        |    |
| 4.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.                                           | 1  |
| 4.L.1.a Use relative pronouns (who, whose, whom, which, that) and relative adverbs (where, when, why).                                                 | 1  |
| 4.L.1.b Form and use the progressive (e.g., I was walking; I am walking; I will be walking) verb tenses.                                               | 1  |
| 4.L.1.c Use modal auxiliaries (e.g., can, may, must) to convey various conditions.                                                                     | 1  |
| 4.L.1.d Order adjectives within sentences according to conventional patterns (e.g., a small red bag rather than a red small bag).                      | 1  |
| 4.L.1.e Form and use prepositional phrases.                                                                                                            | 1  |
| 4.L.1.f Produce complete sentences, recognizing and correcting inappropriate fragments and run-ons.*                                                   | 2  |
| 4.L.1.g Correctly use frequently confused words (e.g., to, too, two; there, their).*                                                                   | 1  |
| 4.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                               | 1  |
| 4.L.2.a Use correct capitalization.                                                                                                                    | 1  |
| 4.L.2.b Use commas and quotation marks to mark direct speech and quotations from a text.                                                               | 1  |
| 4.L.2.c Use a comma before a coordinating conjunction in a compound sentence.                                                                          | 1  |
| 4.L.2.d Spell grade-appropriate words correctly, consulting references as needed.                                                                      | 1  |

| Knowledge of Language                                                                                                                                                                                                                                                                                                                                |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 4.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                                                                                                                                                                                   | 2 |
| 4.L.3.a Choose words and phrases to convey ideas precisely.*                                                                                                                                                                                                                                                                                         | 2 |
| 4.L.3.b Choose punctuation for effect.*                                                                                                                                                                                                                                                                                                              | 2 |
| 4.L.3.c Differentiate between contexts that call for formal English (e.g., presenting ideas) and situations where informal discourse is appropriate (e.g., small-group discussion).                                                                                                                                                                  | 1 |
| Vocabulary Acquisition and Use                                                                                                                                                                                                                                                                                                                       |   |
| 4.L.4 Determine or clarify the meaning of unknown and multiple-meaning words<br>and phrases based on grade 4 reading and content, choosing flexibly from a range<br>of strategies.                                                                                                                                                                   | 2 |
| 4.L.4.a Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase.                                                                                                                                                                                                                             | 2 |
| 4.L.4.b Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph).                                                                                                                                                                                                  | 2 |
| 4.L.4.c Consult reference materials (e.g., dictionaries, glossaries, thesauruses),<br>both print and digital, to find the pronunciation and determine or clarify the<br>precise meaning of key words and phrases.                                                                                                                                    | 1 |
| 4.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.                                                                                                                                                                                                                                            | 2 |
| 4.L.5.a Explain the meaning of simple similes and metaphors (e.g., as pretty as a picture) in context.                                                                                                                                                                                                                                               | 2 |
| 4.L.5.b Recognize and explain the meaning of common idioms, adages, and proverbs.                                                                                                                                                                                                                                                                    | 2 |
| 4.L.5.c Demonstrate understanding of words by relating them to their opposites (antonyms) and to words with similar but not identical meanings (synonyms).                                                                                                                                                                                           | 2 |
| 4.L.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation). | 2 |

|                                                                                      | Consensus |
|--------------------------------------------------------------------------------------|-----------|
| Reading Standards for Literature 5.RL                                                |           |
| Key Ideas and Details                                                                |           |
| 5.RL.1 Quote accurately from a text when explaining what the text says explicitly    | 2         |
| and when drawing inferences from the text.                                           | 2         |
| 5.RL.2 Determine a theme of a story, drama, or poem from details in the text,        |           |
| including how characters in a story or drama respond to challenges or how the        | 3         |
| speaker in a poem reflects upon a topic; summarize the text.                         |           |
| 5.RL.3 Compare and contrast two or more characters, settings, or events in a story   | 2         |
| or drama, drawing on specific details in the text (e.g., how characters interact).   |           |
| Craft and Structure                                                                  |           |
| 5.RL.4 Determine the meaning of words and phrases as they are used in a text,        | 2         |
| including figurative language such as metaphors and similes.                         |           |
| 5.RL.5 Explain how a series of chapters, scenes, or stanzas fits together to provide | 2         |
| the overall structure of a particular story, drama, or poem.                         | 2         |
| 5.RL.6 Describe how a narrator's or speaker's point of view influences how           | 3         |
| events are described.                                                                | 5         |
| Integration of Knowledge and Ideas                                                   |           |
| 5.RL.7 Analyze how visual and multimedia elements contribute to the meaning,         | _         |
| tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction,  | 2         |
| folktale, myth, poem).                                                               |           |
| 5.RL.8 (Not applicable to literature)                                                | NA        |
| 5.RL.9 Compare and contrast stories in the same genre (e.g., mysteries and           | 3         |
| adventure stories) on their approaches to similar themes and topics.                 |           |
| 5.RL.10 Assessed locally.                                                            | NA        |
| Reading Standards for Informational Text 5.RI                                        |           |
| Key Ideas and Details                                                                |           |
| 5.RI.1 Quote accurately from a text when explaining what the text says explicitly    | 2         |
| and when drawing inferences from the text.                                           | 2         |
| 5.RI.2 Determine two or more main ideas of a text and explain how they are           | 2         |
| supported by key details; summarize the text.                                        | L         |
| 5.RI.3 Explain the relationships or interactions between two or more individuals,    |           |
| events, ideas, or concepts in a historical, scientific, or technical text based on   | 2         |
| specific information in the text.                                                    |           |

| Craft and Structure                                                                                                                                                                                                          |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 5.RI.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.                                                                                | 2  |
| 5.RI.5 Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.                                            | 3  |
| 5.RI.6 Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.                                                                              | 3  |
| Integration of Knowledge and Ideas                                                                                                                                                                                           |    |
| 5.RI.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.                                                    | 2  |
| 5.RI.8 Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).                                                                | 3  |
| 5.RI.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.                                                                                                | 3  |
| 5.RI.10 Assessed locally.                                                                                                                                                                                                    | NA |
| Writing Standards 5.W                                                                                                                                                                                                        |    |
| Text Types and Purposes                                                                                                                                                                                                      |    |
| 5.W.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.                                                                                                                      | 3  |
| 5.W.1.a Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose                                                     | 2  |
| writer's purpose.<br>5.W.1.b Provide logically ordered reasons that are supported by facts and details.                                                                                                                      | 2  |
| 5.W.1.c Link opinion and reasons using words, phrases, and clauses (e.g., consequently, specifically).                                                                                                                       | 2  |
| 5.W.1.d Provide a concluding statement or section related to the opinion presented.                                                                                                                                          | 2  |
| 5.W.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.                                                                                                                       | 3  |
| 5.W.2.a Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension. | 3  |
| 5.W.2.b Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.                                                                                     | 3  |
| 5.W.2.c Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).                                                                                            | 2  |
|                                                                                                                                                                                                                              |    |

| 5.W.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.                                                                                                                                                                                           | 2  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 5.W.2.e Provide a concluding statement or section related to the information or explanation presented.                                                                                                                                                                                      | 2  |
| 5.W.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.                                                                                                                                         | 3  |
| 5.W.3.a Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally.                                                                                                                                      | 3  |
| 5.W.3.b Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations.                                                                                                                           | 3  |
| 5.W.3.c Use a variety of transitional words, phrases, and clauses to manage the sequence of events.                                                                                                                                                                                         | 2  |
| 5.W.3.d Use concrete words and phrases and sensory details to convey experiences and events precisely.                                                                                                                                                                                      | 2  |
| 5.W.3.e Provide a conclusion that follows from the narrated experiences or events.                                                                                                                                                                                                          | 2  |
| Production and Distribution of Writing                                                                                                                                                                                                                                                      |    |
| 5.W.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)                                                                      | 3  |
| 5.W.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 5 on page 29.) | 3  |
| 5.W.6 Assessed locally.                                                                                                                                                                                                                                                                     | NA |
| Research to Build and Present Knowledge                                                                                                                                                                                                                                                     |    |
| 5.W.7 Assessed locally.                                                                                                                                                                                                                                                                     | NA |
| 5.W.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.                                                                            | 2  |
| 5.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.                                                                                                                                                                                     | 3  |
| 5.W.9.a Apply grade 5 Reading standards to literature (e.g., "Compare and contrast two or more characters, settings, or events in a story or a drama, drawing on specific details in the text [e.g., how characters interact]").                                                            | 3  |
| 5.W.9.b Apply grade 5 Reading standards to informational texts (e.g., "Explain<br>how an author uses reasons and evidence to support particular points in a text,<br>identifying which reasons and evidence support which point[s]").                                                       | 3  |
| 5.W.10 Assessed locally.                                                                                                                                                                                                                                                                    | NA |
|                                                                                                                                                                                                                                                                                             | ,  |

| Speaking and Listening Standards 5.SL                                                                                                                                                                                         |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Comprehension and Collaboration                                                                                                                                                                                               |    |
| 5.SL.1a-d Assessed locally.                                                                                                                                                                                                   | NA |
| 5.SL.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.                                                                             | 2  |
| 5.SL.3 Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.                                                                                                                  | 2  |
| Presentation of Knowledge and Ideas                                                                                                                                                                                           |    |
| 5.SL.4 Assessed locally.                                                                                                                                                                                                      | NA |
| 5.SL.5 Assessed locally.                                                                                                                                                                                                      | NA |
| 5.SL.6 Assessed locally.                                                                                                                                                                                                      | NA |
| Language Standards 5.L                                                                                                                                                                                                        |    |
| Conventions of Standard English                                                                                                                                                                                               |    |
| 5.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.                                                                                                                  | 1  |
| 5.L.1.a Explain the function of conjunctions, prepositions, and interjections in general and their function in particular sentences.                                                                                          | 2  |
| 5.L.1.b Form and use the perfect (e.g., I had walked; I have walked; I will have walked) verb tenses.                                                                                                                         | 1  |
| 5.L.1.c Use verb tense to convey various times, sequences, states, and conditions.                                                                                                                                            | 1  |
| 5.L.1.d Recognize and correct inappropriate shifts in verb tense.*                                                                                                                                                            | 2  |
| 5.L.1.e Use correlative conjunctions (e.g., either/or, neither/nor).                                                                                                                                                          | 1  |
| 5.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                                                                                                      | 1  |
| 5.L.2.a Use punctuation to separate items in a series.*                                                                                                                                                                       | 1  |
| 5.L.2.b Use a comma to separate an introductory element from the rest of the sentence.                                                                                                                                        | 1  |
| 5.L.2.c Use a comma to set off the words yes and no (e.g., Yes, thank you), to set off a tag question from the rest of the sentence (e.g., It's true, isn't it?), and to indicate direct address (e.g., Is that you, Steve?). | 1  |
| 5.L.2.d Use underlining, quotation marks, or italics to indicate titles of works.                                                                                                                                             | 1  |
| 5.L.2.e Spell grade-appropriate words correctly, consulting references as needed.                                                                                                                                             | 1  |
| Knowledge of Language                                                                                                                                                                                                         |    |
| 5.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                                                            | 2  |
| 5.L.3.a Expand, combine, and reduce sentences for meaning, reader/listener interest, and style.                                                                                                                               | 3  |
| 5.L.3.b Compare and contrast the varieties of English (e.g., dialects, registers) used in stories, dramas, or poems.                                                                                                          | 2  |

| Vocabulary Acquisition and Use                                                                                                                                                                                                                                        |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 5.L.4 Determine or clarify the meaning of unknown and multiple-meaning words<br>and phrases based on grade 5 reading and content, choosing flexibly from a range<br>of strategies.                                                                                    | 2 |
| 5.L.4.a Use context (e.g., cause/effect relationships and comparisons in text) as a clue to the meaning of a word or phrase.                                                                                                                                          | 2 |
| 5.L.4.b Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., photograph, photosynthesis).                                                                                                                         | 2 |
| 5.L.4.c Consult reference materials (e.g., dictionaries, glossaries, thesauruses),<br>both print and digital, to find the pronunciation and determine or clarify the<br>precise meaning of key words and phrases.                                                     | 1 |
| 5.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.                                                                                                                                                             | 2 |
| 5.L.5.a Interpret figurative language, including similes and metaphors, in context                                                                                                                                                                                    | 2 |
| 5.L.5.b Recognize and explain the meaning of common idioms, adages, and proverbs.                                                                                                                                                                                     | 2 |
| 5.L.5.c Use the relationship between particular words (e.g., synonyms, antonyms, homographs) to better understand each of the words.                                                                                                                                  | 2 |
| 5.L.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., however, although, nevertheless, similarly, moreover, in addition). | 2 |

|                                                                                                                                                                                                | Consensus |
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| Reading Standards for Literature 6.RL                                                                                                                                                          |           |
| Key Ideas and Details                                                                                                                                                                          |           |
| 6.RL.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.                                                                   | 3         |
| 6.RL.2 Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.              | 2         |
| 6.RL.3 Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.                | 2         |
| Craft and Structure                                                                                                                                                                            |           |
| 6.RL.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone. | 2         |
| 6.RL.5 Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.               | 3         |
| 6.RL.6 Explain how an author develops the point of view of the narrator or speaker in a text.                                                                                                  | 3         |
| Integration of Knowledge and Ideas                                                                                                                                                             |           |
| 6.RL.7 Assessed locally.                                                                                                                                                                       | NA        |
| 6.RL.8 (Not applicable to literature)                                                                                                                                                          | NA        |
| 6.RL.9 Compare and contrast texts in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.     | 3         |
| Range of Reading and Level of Text Complexity                                                                                                                                                  |           |
| 6.RL.10 Assessed locally.                                                                                                                                                                      | NA        |
| Reading Standards for Informational Text 6.RI                                                                                                                                                  |           |
| Key Ideas and Details                                                                                                                                                                          |           |
| 6.RI.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.                                                                   | 3         |
| 6.RI.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.                       | 2         |
| 6.RI.3 Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).                                      | 3         |

| Craft and Structure                                                                                                                                                                                                                                                                         |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 6.RI.4 Determine the meaning of words and phrases as they are used in a text,                                                                                                                                                                                                               |    |
| including figurative, connotative, and technical meanings.                                                                                                                                                                                                                                  | 2  |
| 6.RI.5 Analyze how a particular sentence, paragraph, chapter, or section fits into                                                                                                                                                                                                          | 3  |
| the overall structure of a text and contributes to the development of the ideas.                                                                                                                                                                                                            | 5  |
| 6.RI.6 Determine an author's point of view or purpose in a text and explain how it                                                                                                                                                                                                          | 3  |
| is conveyed in the text.                                                                                                                                                                                                                                                                    | 5  |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                                                          |    |
| 6.RI.7 Assessed locally.                                                                                                                                                                                                                                                                    | NA |
| 6.RI.8 Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.                                                                                                                            | 3  |
| 6.RI.9 Compare and contrast one author's presentation of events with that of                                                                                                                                                                                                                | 2  |
| another (e.g., a memoir written by and a biography on the same person).                                                                                                                                                                                                                     | 3  |
| Range of Reading and Level of Text Complexity                                                                                                                                                                                                                                               |    |
| 6.RI.10 Assessed locally.                                                                                                                                                                                                                                                                   | NA |
| Writing Standards 6.W                                                                                                                                                                                                                                                                       |    |
| Text Types and Purposes                                                                                                                                                                                                                                                                     |    |
| 6.W.1 Write arguments to support claims with clear reasons and relevant evidence.                                                                                                                                                                                                           | 3  |
| 6.W.1.a Introduce claim(s) and organize the reasons and evidence clearly.                                                                                                                                                                                                                   | 2  |
| 6.W.1.b Support claim(s) with clear reasons and relevant evidence, using credible                                                                                                                                                                                                           | 2  |
| sources and demonstrating an understanding of the topic or text.                                                                                                                                                                                                                            | 3  |
| 6.W.1.c Use words, phrases, and clauses to clarify the relationships among claim(s)                                                                                                                                                                                                         | 3  |
| and reasons.                                                                                                                                                                                                                                                                                | _  |
| 6.W.1.d Establish and maintain a formal style.                                                                                                                                                                                                                                              | 3  |
| 6.W.1.e Provide a concluding statement or section that follows from the argument presented.                                                                                                                                                                                                 | 2  |
| 6.W.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.                                                                                                             | 3  |
| 6.W.2.a Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. | 3  |
| 6.W.2.b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.                                                                                                                                                                | 3  |
| 6.W.2.c Use appropriate transitions to clarify the relationships among ideas and concepts.                                                                                                                                                                                                  | 3  |
| 6.W.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.                                                                                                                                                                                           | 3  |

| 6.W.2.e Establish and maintain a formal style.                                                                                                                   | 3  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 6.W.2.f Provide a concluding statement or section that follows from the information                                                                              | 2  |
| or explanation presented.                                                                                                                                        | 2  |
| 6.W.3 Write narratives to develop real or imagined experiences or events using                                                                                   |    |
| effective technique, relevant descriptive details, and well-structured event                                                                                     | 3  |
| sequences.                                                                                                                                                       |    |
| 6.W.3.a Engage and orient the reader by establishing a context and introducing a                                                                                 |    |
| narrator and/or characters; organize an event sequence that unfolds naturally and                                                                                | 3  |
| logically.                                                                                                                                                       |    |
| 6.W.3.b Use narrative techniques, such as dialogue, pacing, and description, to                                                                                  | 3  |
| develop experiences, events, and/or characters.                                                                                                                  |    |
| 6.W.3.c Use a variety of transition words, phrases, and clauses to convey sequence                                                                               | 3  |
| and signal shifts from one time frame or setting to another.                                                                                                     |    |
| 6.W.3.d Use precise words and phrases, relevant descriptive details, and sensory                                                                                 | 3  |
| language to convey experiences and events.                                                                                                                       | _  |
| 6.W.3.e Provide a conclusion that follows from the narrated experiences or events.                                                                               | 2  |
| Production and Distribution of Writing                                                                                                                           |    |
| 6.W.4 Produce clear and coherent writing in which the development, organization,                                                                                 |    |
| and style are appropriate to task, purpose, and audience. (Grade-specific                                                                                        | 3  |
| expectations for writing types are defined in standards 1–3 above.)                                                                                              |    |
| 6.W.5 With some guidance and support from peers and adults, develop and                                                                                          |    |
| strengthen writing as needed by planning, revising, editing, rewriting, or trying a                                                                              | 3  |
| new approach. (Editing for conventions should demonstrate command of Language                                                                                    | C  |
| standards 1–3 up to and including grade 6 on page 53.)                                                                                                           |    |
| 6.W.6 Assessed locally.                                                                                                                                          | NA |
| Research to Build and Present Knowledge                                                                                                                          |    |
| 6.W.7 Assessed locally.                                                                                                                                          | NA |
| 6.W.8 Gather relevant information from multiple print and digital sources; assess                                                                                |    |
| the credibility of each source; and quote or paraphrase the data and conclusions of                                                                              | 3  |
| others while avoiding plagiarism and providing basic bibliographic information for                                                                               |    |
| Sources.<br>6 W.O. Draw avidance from literary or informational taxts to support analysis                                                                        |    |
| 6.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.                                                          | 3  |
|                                                                                                                                                                  |    |
| 6.W.9.a Apply grade 6 Reading standards to literature (e.g., "Compare and contrast                                                                               | 2  |
| texts in different forms or genres [e.g., stories and poems; historical novels and fantasy stories] in terms of their approaches to similar themes and topics"). | 3  |
|                                                                                                                                                                  |    |
| 6.W.9.b Apply grade 6 Reading standards to literary nonfiction (e.g., "Trace and                                                                                 | 2  |
| evaluate the argument and specific claims in a text, distinguishing claims that are                                                                              | 3  |
| supported by reasons and evidence from claims that are not").                                                                                                    |    |

| Range of Writing                                                                                                                                                                    |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 6.W.10 Assessed locally.                                                                                                                                                            | NA |
| Speaking and Listening Standards 6.SL                                                                                                                                               |    |
| Comprehension and Collaboration                                                                                                                                                     |    |
| 6.SL.1a-d Assessed locally.                                                                                                                                                         | NA |
| 6.SL.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study. | 3  |
| 6.SL.3 Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.                               | 3  |
| Presentation of Knowledge and Ideas                                                                                                                                                 |    |
| 6.SL.4 Assessed locally.                                                                                                                                                            | NA |
| 6.SL.5 Assessed locally.                                                                                                                                                            | NA |
| 6.SL.6 Assessed locally.                                                                                                                                                            | NA |
| Language Standards 6.L                                                                                                                                                              |    |
| Conventions of Standard English                                                                                                                                                     |    |
| 6.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.                                                                        | 2  |
| 6.L.1.a Ensure that pronouns are in the proper case (subjective, objective, possessive).                                                                                            | 1  |
| 6.L.1.b Use intensive pronouns (e.g., myself, ourselves).                                                                                                                           | 1  |
| 6.L.1.c Recognize and correct inappropriate shifts in pronoun number and person.                                                                                                    | 1  |
| 6.L.1.d Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).                                                                                    | 2  |
| 6.L.1.e Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.   | 2  |
| 6.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                                                            | 1  |
| 6.L.2.a Use punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements.                                                                             | 1  |
| 6.L.2.b Spell correctly.                                                                                                                                                            | 1  |
| Knowledge of Language                                                                                                                                                               |    |
| 6.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                  | 2  |
| 6.L.3.a Vary sentence patterns for meaning, reader/listener interest, and style.                                                                                                    | 3  |
| 6.L.3.b Maintain consistency in style and tone.                                                                                                                                     | 3  |

| Vocabulary Acquisition and Use                                                                                                                                                                                            |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 6.L.4 Determine or clarify the meaning of unknown and multiple-meaning words<br>and phrases based on grade 6 reading and content, choosing flexibly from a range<br>of strategies.                                        | 2 |
| 6.L.4.a Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.                                                     | 2 |
| 6.L.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).                                                                             | 2 |
| 6.L.4.c Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.         | 1 |
| 6.L.4.d Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).                                                                   | 2 |
| 6.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.                                                                                                                 | 2 |
| 6.L.5.a Interpret figures of speech (e.g., personification) in context.                                                                                                                                                   | 2 |
| 6.L.5.b Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.                                                                             | 2 |
| 6.L.5.c Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., stingy, scrimping, economical, unwasteful, thrifty).                                                     | 2 |
| 6.L.6 Acquire and use accurately grade-appropriate general academic and domain-<br>specific words and phrases; gather vocabulary knowledge when considering a word<br>or phrase important to comprehension or expression. | 3 |

|                                                                                                                                                                                                                                                                                        | Consensus |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Reading Standards for Literature 7.RL                                                                                                                                                                                                                                                  |           |
| Key Ideas and Details                                                                                                                                                                                                                                                                  |           |
| 7.RL.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.                                                                                                                                         | 3         |
| 7.RL.2 Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.                                                                                                                                  | 3         |
| 7.RL.3 Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).                                                                                                                                                                 | 3         |
| Craft and Structure                                                                                                                                                                                                                                                                    |           |
| 7.RL.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama. | 2         |
| 7.RL.5 Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.                                                                                                                                                                         | 3         |
| 7.RL.6 Analyze how an author develops and contrasts the points of view of different characters or narrators in a text.                                                                                                                                                                 | 3         |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                                                     |           |
| 7.RL.7 Assessed locally.                                                                                                                                                                                                                                                               | NA        |
| 7.RL.8 (Not applicable to literature)                                                                                                                                                                                                                                                  | NA        |
| 7.RL.9 Compare and contrast a fictional portrayal of a time, place, or character and a historical account of the same period as a means of understanding how authors of fiction use or alter history.                                                                                  | 3         |
| Range of Reading and Level of Text Complexity                                                                                                                                                                                                                                          |           |
| 7.RL.10 Assessed locally.                                                                                                                                                                                                                                                              | NA        |
| Reading Standards for Informational Text 7.RI                                                                                                                                                                                                                                          |           |
| Key Ideas and Details                                                                                                                                                                                                                                                                  |           |
| 7.RI.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.                                                                                                                                         | 3         |
| 7.RI.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.                                                                                                                              | 3         |
| 7.RI.3 Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).                                                                                                      | 3         |

| Craft and Structure                                                                                                                                                                                                                                                                                                                                                                                |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7.RI.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.                                                                                                                                                                                         | 2  |
| 7.RI.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.                                                                                                                                                                                                                                      | 3  |
| 7.RI.6 Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.                                                                                                                                                                                                                                                  | 3  |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                                                                                                                                                                 |    |
| 7.RI.7 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                           | NA |
| 7.RI.8 Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.                                                                                                                                                                                                                  | 3  |
| 7.RI.9 Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.                                                                                                                                                                                                | 3  |
| Range of Reading and Level of Text Complexity                                                                                                                                                                                                                                                                                                                                                      |    |
| 7.RI.10 Assessed locally.                                                                                                                                                                                                                                                                                                                                                                          | NA |
| Writing Standards 7.W                                                                                                                                                                                                                                                                                                                                                                              |    |
| Text Types and Purposes                                                                                                                                                                                                                                                                                                                                                                            |    |
| 7.W.1 Write arguments to support claims with clear reasons and relevant evidence.                                                                                                                                                                                                                                                                                                                  | 3  |
| 7.W.1.a Introduce claim(s), acknowledge alternate or opposing claims, and organize the reasons and evidence logically.                                                                                                                                                                                                                                                                             | 3  |
| 7.W.1.b Support claim(s) with logical reasoning and relevant evidence, using                                                                                                                                                                                                                                                                                                                       | 3  |
| accurate, credible sources and demonstrating an understanding of the topic or text.                                                                                                                                                                                                                                                                                                                |    |
|                                                                                                                                                                                                                                                                                                                                                                                                    | 3  |
| accurate, credible sources and demonstrating an understanding of the topic or text.<br>7.W.1.c Use words, phrases, and clauses to create cohesion and clarify the                                                                                                                                                                                                                                  | 3  |
| accurate, credible sources and demonstrating an understanding of the topic or text.<br>7.W.1.c Use words, phrases, and clauses to create cohesion and clarify the<br>relationships among claim(s), reasons, and evidence.                                                                                                                                                                          | 3  |
| <ul> <li>accurate, credible sources and demonstrating an understanding of the topic or text.</li> <li>7.W.1.c Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.</li> <li>7.W.1.d Establish and maintain a formal style.</li> </ul>                                                                                           |    |
| <ul> <li>accurate, credible sources and demonstrating an understanding of the topic or text.</li> <li>7.W.1.c Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), reasons, and evidence.</li> <li>7.W.1.d Establish and maintain a formal style.</li> <li>7.W.1.e Provide a concluding statement or section that follows from and supports</li> </ul> | 3  |

| 7.W.2.b Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.                                                                                                                                                                                                                                    | 3  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7.W.2.c Use appropriate transitions to create cohesion and clarify the relationships among ideas and concepts.                                                                                                                                                                                                                                                  | 3  |
| 7.W.2.d Use precise language and domain-specific vocabulary to inform about or explain the topic.                                                                                                                                                                                                                                                               | 3  |
| 7.W.2.e Establish and maintain a formal style.                                                                                                                                                                                                                                                                                                                  | 3  |
| 7.W.2.f Provide a concluding statement or section that follows from and supports the information or explanation presented.                                                                                                                                                                                                                                      | 3  |
| 7.W.3 Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.                                                                                                                                                                                          | 3  |
| 7.W.3.a Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically.                                                                                                                                                                 | 3  |
| 7.W.3.b Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.                                                                                                                                                                                                                                 | 3  |
| 7.W.3.c Use a variety of transition words, phrases, and clauses to convey sequence<br>and signal shifts from one time frame or setting to another.                                                                                                                                                                                                              | 3  |
| 7.W.3.d Use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events.                                                                                                                                                                                                              | 3  |
| 7.W.3.e Provide a conclusion that follows from and reflects on the narrated experiences or events.                                                                                                                                                                                                                                                              | 3  |
| Production and Distribution of Writing                                                                                                                                                                                                                                                                                                                          |    |
| 7.W.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)                                                                                                                                  | 3  |
| 7.W.5 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grade 7 on page 53.) | 3  |
| 7.W.6 Assessed locally.                                                                                                                                                                                                                                                                                                                                         | NA |
| Research to Build and Present Knowledge                                                                                                                                                                                                                                                                                                                         |    |
| 7.W.7 Assessed locally.                                                                                                                                                                                                                                                                                                                                         | NA |
| 7.W.8 Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.                                                               | 3  |

| 7.W.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.                                                                                                                                                                 | 3  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 7.W.9.a Apply grade 7 Reading standards to literature (e.g., "Compare and contrast<br>a fictional portrayal of a time, place, or character and a historical account of the<br>same period as a means of understanding how authors of fiction use or alter<br>history"). | 3  |
| 7.W.9.b Apply grade 7 Reading standards to literary nonfiction (e.g. "Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims").                      | 3  |
| Range of Writing                                                                                                                                                                                                                                                        |    |
| 7.W.10 Assessed locally.                                                                                                                                                                                                                                                | NA |
| Speaking and Listening Standards 7.SL                                                                                                                                                                                                                                   |    |
| Comprehension and Collaboration                                                                                                                                                                                                                                         |    |
| 7.SL.1a-d Assessed locally.                                                                                                                                                                                                                                             | NA |
| 7.SL.2 Analyze the main ideas and supporting details presented in diverse media<br>and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify<br>a topic, text, or issue under study.                                                       | 3  |
| 7.SL.3 Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.                                                                                                                 | 3  |
| Presentation of Knowledge and Ideas                                                                                                                                                                                                                                     |    |
| 7.SL.4 Assessed locally.                                                                                                                                                                                                                                                | NA |
| 7.SL.5 Assessed locally.                                                                                                                                                                                                                                                | NA |
| 7.SL.6 Assessed locally.                                                                                                                                                                                                                                                | NA |
| Language Standards 7.L                                                                                                                                                                                                                                                  |    |
| Conventions of Standard English                                                                                                                                                                                                                                         |    |
| 7.L.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.                                                                                                                                                            | 2  |
| 7.L.1.a Explain the function of phrases and clauses in general and their function in specific sentences.                                                                                                                                                                | 2  |
| 7.L.1.b Choose among simple, compound, complex, and compound-complex sentences to signal differing relationships among ideas.                                                                                                                                           | 2  |
| 7.L.1.c Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers.                                                                                                                                                       | 2  |
| 7.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                                                                                                                                                | 1  |
| 7.L.2.a Use a comma to separate coordinate adjectives (e.g., It was a fascinating, enjoyable movie but not He wore an old [,] green shirt).                                                                                                                             | 1  |
| 7.L.2.b Spell correctly.                                                                                                                                                                                                                                                | 1  |
| L V                                                                                                                                                                                                                                                                     | 1  |

| Knowledge of Language                                                                                                                                                                                                                     |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 7.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                                                                        | 2 |
| 7.L.3.a Choose language that expresses ideas precisely and concisely, recognizing and eliminating wordiness and redundancy.                                                                                                               | 3 |
| Vocabulary Acquisition and Use                                                                                                                                                                                                            |   |
| 7.L.4 Determine or clarify the meaning of unknown and multiple-meaning words<br>and phrases based on grade 7 reading and content, choosing flexibly from a range<br>of strategies.                                                        | 2 |
| 7.L.4.a Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.                                                                     | 2 |
| 7.L.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., belligerent, bellicose, rebel).                                                                                           | 2 |
| 7.L.4.c Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. | 1 |
| 7.L.4.d Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).                                                                                   | 2 |
| 7.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.                                                                                                                                 | 2 |
| 7.L.5.a Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.                                                                                                                                    | 3 |
| 7.L.5.b Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.                                                                                                            | 2 |
| 7.L.5.c Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., refined, respectful, polite, diplomatic, condescending).                                                                 | 2 |
| 7.L.6 Acquire and use accurately grade-appropriate general academic and domain-<br>specific words and phrases; gather vocabulary knowledge when considering a word<br>or phrase important to comprehension or expression.                 | 3 |

|                                                                                                                                                                                                                                                | Consensus |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Reading Standards for Literature 8.RL                                                                                                                                                                                                          |           |
| Key Ideas and Details                                                                                                                                                                                                                          |           |
| 8.RL.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.                                                                                           | 3         |
| 8.RL.2 Determine a theme or central idea of a text and analyze its development<br>over the course of the text, including its relationship to the characters, setting, and<br>plot; provide an objective summary of the text.                   | 3         |
| 8.RL.3 Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.                                                                                      | 3         |
| Craft and Structure                                                                                                                                                                                                                            |           |
| 8.RL.4 Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts. | 3         |
| 8.RL.5 Compare and contrast the structure of two or more texts and analyze how the differing structure of each text contributes to its meaning and style.                                                                                      | 3         |
| 8.RL.6 Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.                                                  | 3         |
| Integration of Knowledge and Ideas                                                                                                                                                                                                             |           |
| 8.RL.7 Assessed locally.                                                                                                                                                                                                                       | NA        |
| 8.RL.8 (Not applicable to literature)                                                                                                                                                                                                          | NA        |
| 8.RL.9 Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths, traditional stories, or religious works such as the Bible, including describing how the material is rendered new.              | 3         |
| Range of Reading and Level of Text Complexity                                                                                                                                                                                                  |           |
| 8.RL.10 Assessed locally.                                                                                                                                                                                                                      | NA        |
| Reading Standards for Informational Text 8.RI                                                                                                                                                                                                  |           |
| Key Ideas and Details                                                                                                                                                                                                                          |           |
| 8.RI.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.                                                                                           | 3         |
| 8.RI.2 Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.                                                   | 3         |
| 8.RI.3 Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories).                                                                                | 3         |

| Craft and Structure                                                                                                                                                                                                                                           |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 8.RI.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.    | 3  |
| 8.RI.5 Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.                                                                                                | 3  |
| 8.RI.6 Determine an author's point of view or purpose in a text and analyze how<br>the author acknowledges and responds to conflicting evidence or viewpoints.                                                                                                | 3  |
| Integration of Knowledge and Ideas                                                                                                                                                                                                                            |    |
| 8.RI.7 Assessed locally.                                                                                                                                                                                                                                      | NA |
| 8.RI.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.                                             | 3  |
| 8.RI.9 Analyze a case in which two or more texts provide conflicting information<br>on the same topic and identify where the texts disagree on matters of fact or<br>interpretation.                                                                          | 3  |
| Range of Reading and Level of Text Complexity                                                                                                                                                                                                                 |    |
| 8.RI.10 Assessed locally.                                                                                                                                                                                                                                     | NA |
| Writing Standards 8.W                                                                                                                                                                                                                                         |    |
| Text Types and Purposes                                                                                                                                                                                                                                       |    |
| 8.W.1 Write arguments to support claims with clear reasons and relevant evidence.                                                                                                                                                                             | 3  |
| 8.W.1.a Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.                                                                                                      | 3  |
| 8.W.1.b Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.                                                                                              | 3  |
| 8.W.1.c Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.                                                                                                                | 3  |
| 8.W.1.d Establish and maintain a formal style.                                                                                                                                                                                                                | 3  |
| 8.W.1.e Provide a concluding statement or section that follows from and supports the argument presented.                                                                                                                                                      | 3  |
| 8.W.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.                                                                               | 3  |
| 8.W.2.a Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. | 3  |

| 8.W.2.b Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples. | 3  |
|-------------------------------------------------------------------------------------------------------------------------------------------|----|
| 8.W.2.c Use appropriate and varied transitions to create cohesion and clarify the                                                         |    |
| relationships among ideas and concepts.                                                                                                   | 3  |
| 8.W.2.d Use precise language and domain-specific vocabulary to inform about or                                                            | 3  |
| explain the topic.                                                                                                                        |    |
| 8.W.2.e Establish and maintain a formal style.                                                                                            | 3  |
| 8.W.2.f Provide a concluding statement or section that follows from and supports the information or explanation presented.                | 3  |
| 8.W.3 Write narratives to develop real or imagined experiences or events using                                                            |    |
| effective technique, relevant descriptive details, and well-structured event                                                              | 3  |
| sequences.                                                                                                                                | 5  |
| 8.W.3.a Engage and orient the reader by establishing a context and point of view                                                          |    |
| and introducing a narrator and/or characters; organize an event sequence that                                                             | 3  |
| unfolds naturally and logically.                                                                                                          | 5  |
| 8.W.3.b Use narrative techniques, such as dialogue, pacing, description, and                                                              |    |
| reflection, to develop experiences, events, and/or characters.                                                                            | 3  |
|                                                                                                                                           |    |
| 8.W.3.c Use a variety of transition words, phrases, and clauses to convey sequence,                                                       | 2  |
| signal shifts from one time frame or setting to another, and show the relationships                                                       | 3  |
| among experiences and events.                                                                                                             |    |
| 8.W.3.d Use precise words and phrases, relevant descriptive details, and sensory                                                          | 3  |
| language to capture the action and convey experiences and events.                                                                         | _  |
| 8.W.3.e Provide a conclusion that follows from and reflects on the narrated                                                               | 3  |
| experiences or events.                                                                                                                    | 5  |
| Production and Distribution of Writing                                                                                                    |    |
| 8.W.4 Produce clear and coherent writing in which the development, organization,                                                          |    |
| and style are appropriate to task, purpose, and audience. (Grade-specific                                                                 | 3  |
| expectations for writing types are defined in standards 1-3 above.)                                                                       |    |
| 8.W.5 With some guidance and support from peers and adults, develop and                                                                   |    |
| strengthen writing as needed by planning, revising, editing, rewriting, or trying a                                                       |    |
| new approach, focusing on how well purpose and audience have been addressed.                                                              | 3  |
| (Editing for conventions should demonstrate command of Language standards 1–3                                                             |    |
| up to and including grade 8 on page 53.)                                                                                                  |    |
| 8.W.6 Assessed locally.                                                                                                                   | NA |
|                                                                                                                                           |    |

| Research to Build and Present Knowledge                                                |    |
|----------------------------------------------------------------------------------------|----|
| 8.W.7 Assessed locally.                                                                | NA |
| 8.W.8 Gather relevant information from multiple print and digital sources, using       |    |
| search terms effectively; assess the credibility and accuracy of each source; and      | 3  |
| quote or paraphrase the data and conclusions of others while avoiding plagiarism       | 5  |
| and following a standard format for citation.                                          |    |
| 8.W.9 Draw evidence from literary or informational texts to support analysis,          | 3  |
| reflection, and research.                                                              | 5  |
| 8.W.9.a Apply grade 8 Reading standards to literature (e.g., "Analyze how a            |    |
| modern work of fiction draws on themes, patterns of events, or character types from    | 3  |
| myths, traditional stories, or religious works such as the Bible, including describing | 5  |
| how the material is rendered new").                                                    |    |
| 8.W.9.b Apply grade 8 Reading standards to literary nonfiction (e.g., "Delineate       |    |
| and evaluate the argument and specific claims in a text, assessing whether the         | 3  |
| reasoning is sound and the evidence is relevant and sufficient; recognize when         | C  |
| irrelevant evidence is introduced").                                                   |    |
| Range of Writing                                                                       |    |
| 8.W.10 Assessed locally.                                                               | NA |
| Speaking and Listening Standards 8.SL                                                  |    |
| Comprehension and Collaboration                                                        |    |
| 8.SL.1a-d Assessed locally.                                                            | NA |
| 8.SL.2 Analyze the purpose of information presented in diverse media and formats       |    |
| (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social,       | 3  |
| commercial, political) behind its presentation.                                        |    |
| 8.SL.3 Delineate a speaker's argument and specific claims, evaluating the              |    |
| soundness of the reasoning and relevance and sufficiency of the evidence and           | 3  |
| identifying when irrelevant evidence is introduced.                                    |    |
| Presentation of Knowledge and Ideas                                                    |    |
| 8.SL.4 Assessed locally.                                                               | NA |
| 8.SL.5 Assessed locally.                                                               | NA |
| 8.SL.6 Assessed locally.                                                               | NA |
| Language Standards 8.L                                                                 |    |
| Conventions of Standard English                                                        |    |
| 8.L.1 Demonstrate command of the conventions of standard English grammar and           | 2  |
| usage when writing or speaking.                                                        | 2  |
| 8.L.1.a Explain the function of verbals (gerunds, participles, infinitives) in general |    |
| and their function in particular sentences.                                            | 2  |
| 8.L.1.b Form and use verbs in the active and passive voice.                            | 2  |
| Proster Control Proster Control                                                        |    |

| 8.L.1.c Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.                                                                                                                               | 2 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 8.L.1.d Recognize and correct inappropriate shifts in verb voice and mood.                                                                                                                                                                | 2 |
| 8.L.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.                                                                                                                  | 1 |
| 8.L.2.a Use punctuation (comma, ellipsis, dash) to indicate a pause or break.                                                                                                                                                             | 1 |
| 8.L.2.b Use an ellipsis to indicate an omission.                                                                                                                                                                                          | 1 |
| 8.L.2.c Spell correctly                                                                                                                                                                                                                   | 1 |
| Knowledge of Language                                                                                                                                                                                                                     |   |
| 8.L.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.                                                                                                                                        | 2 |
| 8.L.3.a Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).   | 3 |
| Vocabulary Acquisition and Use                                                                                                                                                                                                            |   |
| 8.L.4 Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.                                                               | 2 |
| 8.L.4.a Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.                                                                     | 2 |
| 8.L.4.b Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, secede).                                                                                                 | 2 |
| 8.L.4.c Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech. | 1 |
| 8.L.4.d Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).                                                                                   | 2 |
| 8.L.5 Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.                                                                                                                                 | 2 |
| 8.L.5.a Interpret figures of speech (e.g. verbal irony, puns) in context.                                                                                                                                                                 | 2 |
| 8.L.5.b Use the relationship between particular words to better understand each of the words.                                                                                                                                             | 2 |
| 8.L.5.c Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).                                                                        | 2 |
| 8.L.6 Acquire and use accurately grade-appropriate general academic and domain-<br>specific words and phrases; gather vocabulary knowledge when considering a word<br>or phrase important to comprehension or expression.                 | 3 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Consensus |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>Operations and Algebraic Thinking 3.OA</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| Represent and solve problems involving multiplication and division.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
| 3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as $5 \times 7$ .                                                                                                                                                                                                                                                                                                                                | 1         |
| 3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$ .                                                                                                                                                                       | 1         |
| 3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.                                                                                                                                                                                                                                                                                                                     | 2         |
| 3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$ , $5 = \Box \div 3$ , $6 \times 6 = ?$ .                                                                                                                                                                                                                                                                                                 | 1         |
| Understand properties of multiplication and the relationship between                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
| multiplication and division.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |           |
| 3.OA.5 Apply properties of operations as strategies to multiply and divide.<br>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$ , then $15 \times 2 = 30$ , or by $5 \times 2 = 10$ , then $3 \times 10 = 30$ . (Associative property of multiplication.)<br>Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$ , one can find $8 \times 7$ as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.) | 2         |
| 3.OA.6 Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.                                                                                                                                                                                                                                                                                                                                                                                                                            | 1         |
| Multiply and divide within 100.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |
| 3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$ , one knows $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.                                                                                                                                                                                                                                                               | 1         |
| Solve problems involving the four operations, and identify explain patterns in arithmetic.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |
| 3.OA.8 Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.                                                                                                                                                                                                                                                                                                        | 2         |

| 3.OA.9 Identify arithmetic patterns (including patterns in the addition table or<br>multiplication table), and explain them using properties of operations. For example,<br>observe that 4 times a number is always even, and explain why 4 times a number | 2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| can be decomposed into two equal addends.                                                                                                                                                                                                                  |   |
| Number and Operations in Base Ten 3.NBT                                                                                                                                                                                                                    |   |
| Use place value understanding and properties of operations to perform multi-                                                                                                                                                                               |   |
| digit arithmetic.                                                                                                                                                                                                                                          |   |
| 3.NBT.1 Use place value understanding to round whole numbers to the nearest 10                                                                                                                                                                             |   |
| or 100.                                                                                                                                                                                                                                                    | 1 |
| 3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms                                                                                                                                                                              |   |
|                                                                                                                                                                                                                                                            | 1 |
| based on place value, properties of operations, and/or the relationship between                                                                                                                                                                            | 1 |
| addition and subtraction.                                                                                                                                                                                                                                  |   |
| 3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10–90                                                                                                                                                                             | 1 |
| (e.g., $9 \times 80$ , $5 \times 60$ ) using strategies based on place value and properties of                                                                                                                                                             | 1 |
| operations.                                                                                                                                                                                                                                                |   |
| Number and Operations—Fractions 3.NF                                                                                                                                                                                                                       |   |
| Develop understanding of fractions as numbers.                                                                                                                                                                                                             |   |
| 3.NF.1 Understand a fraction 1/b as the quantity formed by 1 part when a whole is                                                                                                                                                                          |   |
| partitioned into b equal parts; understand a fraction a/b as the quantity formed by a                                                                                                                                                                      | 1 |
| parts of size 1/b.                                                                                                                                                                                                                                         |   |
| 3.NF.2 Understand a fraction as a number on the number line; represent fractions                                                                                                                                                                           | 2 |
| on a number line diagram.                                                                                                                                                                                                                                  | 2 |
| 3.NF.2.a Represent a fraction 1/b on a number line diagram by defining the interval                                                                                                                                                                        |   |
| from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/h$ and that the and part has not because the number $1/h$                                                                                            | 2 |
| part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b                                                                                                                                                                      |   |
| on the number line.                                                                                                                                                                                                                                        |   |
| 3.NF.2.b Represent a fraction a/b on a number line diagram by marking off a                                                                                                                                                                                | 2 |
| lengths 1/b from 0. Recognize that the resulting interval has size a/b and that its                                                                                                                                                                        | Z |
| endpoint locates the number a/b on the number line.                                                                                                                                                                                                        |   |
| 3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by                                                                                                                                                                         | 2 |
| reasoning about their size.<br>3.NF.3.a Understand two fractions as equivalent (equal) if they are the same size, or                                                                                                                                       |   |
| the same point on a number line.                                                                                                                                                                                                                           | 1 |
| 3.NF.3.b Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$ , $4/6 =$                                                                                                                                                                   |   |
| 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction                                                                                                                                                                           | 2 |
| model.                                                                                                                                                                                                                                                     | - |
| 3.NF.3.c Express whole numbers as fractions, and recognize fractions that are                                                                                                                                                                              |   |
| equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$ ; recognize                                                                                                                                                                         | 1 |
| that $6/1 = 6$ ; locate $4/4$ and 1 at the same point of a number line diagram.                                                                                                                                                                            | ĩ |
| that 0/1 – 0, iocate 4/4 and 1 at the same point of a number line thagrail.                                                                                                                                                                                | L |

| by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$ , =, or <, and justify the conclusions, e.g., by using a visual fraction model. | 3 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|                                                                                                                                                                                                                                                                 |   |
| Measurement and Data 3.MD                                                                                                                                                                                                                                       |   |
| Solve problems involving measurement and estimation of intervals of time,<br>liquid volumes, and masses of objects.                                                                                                                                             |   |
| 3.MD.1 Tell and write time to the nearest minute and measure time intervals in                                                                                                                                                                                  |   |
| minutes. Solve word problems involving addition and subtraction of time intervals                                                                                                                                                                               | 2 |
| in minutes, e.g., by representing the problem on a number line diagram.                                                                                                                                                                                         | 2 |
| 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard                                                                                                                                                                                 |   |
| units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide                                                                                                                                                                          |   |
| to solve one-step word problems involving masses or volumes that are given in the                                                                                                                                                                               | 2 |
| same units, e.g., by using drawings (such as a beaker with a measurement scale) to                                                                                                                                                                              | 2 |
| represent the problem.                                                                                                                                                                                                                                          |   |
| Represent and interpret data.                                                                                                                                                                                                                                   |   |
| 3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set                                                                                                                                                                               |   |
| with several categories. Solve one- and two-step "how many more" and "how many                                                                                                                                                                                  |   |
| less" problems using information presented in scaled bar graphs. For example, draw                                                                                                                                                                              | 2 |
| a bar graph in which each square in the bar graph might represent 5 pets.                                                                                                                                                                                       |   |
| 3.MD.4 Generate measurement data by measuring lengths using rulers marked with                                                                                                                                                                                  |   |
| halves and fourths of an inch. Show the data by making a line plot, where the                                                                                                                                                                                   | • |
| horizontal scale is marked off in appropriate units— whole numbers, halves, or                                                                                                                                                                                  | 2 |
| quarters.                                                                                                                                                                                                                                                       |   |
| Geometric measurement: understand concepts of area and relate area to                                                                                                                                                                                           |   |
| multiplication and to addition.                                                                                                                                                                                                                                 |   |
| 3.MD.5 Recognize area as an attribute of plane figures and understand concepts of                                                                                                                                                                               | 1 |
| area measurement.                                                                                                                                                                                                                                               | 1 |
| 3.MD.5.a A square with side length 1 unit, called "a unit square," is said to have                                                                                                                                                                              | 1 |
| "one square unit" of area, and can be used to measure area.                                                                                                                                                                                                     | 1 |
| 3.MD.5.b A plane figure which can be covered without gaps or overlaps by n unit                                                                                                                                                                                 | 1 |
| squares is said to have an area of n square units.                                                                                                                                                                                                              | 1 |
| 3.MD.6 Measure areas by counting unit squares (square cm, square m, square in,                                                                                                                                                                                  | 1 |
| square ft, and improvised units).                                                                                                                                                                                                                               | 1 |
| 3.MD.7 Relate area to the operations of multiplication and addition.                                                                                                                                                                                            | 2 |
| 3.MD.7.a Find the area of a rectangle with whole-number side lengths by tiling it,                                                                                                                                                                              |   |
| and show that the area is the same as would be found by multiplying the side                                                                                                                                                                                    | 2 |
| lengths.                                                                                                                                                                                                                                                        |   |

| 3.MD.7.b Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole number products as rectangular areas in mathematical reasoning.                                                                                                                                                        | 2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 3.MD.7.c Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$ . Use area models to represent the distributive property in mathematical reasoning.                                                                                                                                             | 2 |
| 3.MD.7.d Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.                                                                                                                                                                  | 2 |
| Geometric measurement: recognize perimeter as an attribute of plane figures                                                                                                                                                                                                                                                                                                                          |   |
| and distinguish between linear and area measures.                                                                                                                                                                                                                                                                                                                                                    |   |
| 3.MD.8 Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.                                                                                                    | 3 |
| Geometry 3.G                                                                                                                                                                                                                                                                                                                                                                                         |   |
| Reason with shapes and their attributes.                                                                                                                                                                                                                                                                                                                                                             |   |
| 3.G.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. | 2 |
| 3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $1/4$ of the area of the shape.                                                                                                                                                | 2 |

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| Operations and Algebraic Thinking 4.0A                                                                                                                                                                                                                                                                                                                                                                                    |           |
| Use the four operations with whole numbers to solve problems.                                                                                                                                                                                                                                                                                                                                                             |           |
| 4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.                                                                                                                                                             | 1         |
| 4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.                                                                                                                                                             | 2         |
| 4.OA.3 Solve multistep word problems posed with whole numbers and having<br>whole-number answers using the four operations, including problems in which<br>remainders must be interpreted. Represent these problems using equations with a<br>letter standing for the unknown quantity. Assess the reasonableness of answers<br>using mental computation and estimation strategies including rounding.                    | 2         |
| Gain familiarity with factors and multiples.                                                                                                                                                                                                                                                                                                                                                                              |           |
| 4.OA.4 Find all factor pairs for a whole number in the range $1-100$ . Recognize that<br>a whole number is a multiple of each of its factors. Determine whether a given<br>whole number in the range $1-100$ is a multiple of a given one-digit number.<br>Determine whether a given whole number in the range $1-100$ is prime or<br>composite.                                                                          | 2         |
| Generate and analyze patterns.                                                                                                                                                                                                                                                                                                                                                                                            |           |
| 4.OA.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way. | 2         |
| Numbers and Operations in Base Ten 4.NBT                                                                                                                                                                                                                                                                                                                                                                                  |           |
| Generalize place value understanding for multi-digit whole numbers.                                                                                                                                                                                                                                                                                                                                                       |           |
| 4.NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.                                                                                                                                                                            | 1         |
| 4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$ , =, and $<$ symbols to record the results of comparisons.                                                                                                                                                            | 1         |
| 4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place.                                                                                                                                                                                                                                                                                                                                    | 1         |

| Use place value understanding and properties of operations to perform multi-<br>digit arithmetic.                                                                                                                                                                                                                                                                                                                         |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.                                                                                                                                                                                                                                                                                                                                 | 1 |
| 4.NBT.5 Multiply a whole number of up to four digits by a one-digit whole<br>number, and multiply two two-digit numbers, using strategies based on place value<br>and the properties of operations. Illustrate and explain the calculation by using<br>equations, rectangular arrays, and/or area models.                                                                                                                 | 2 |
| 4.NBT.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.                                                                           | 2 |
| Numbers and Operations—Fractions 4.NF                                                                                                                                                                                                                                                                                                                                                                                     |   |
| Extend understanding of fraction equivalence and ordering.                                                                                                                                                                                                                                                                                                                                                                |   |
| 4.NF.1 Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.                                                                                                   | 2 |
| 4.NF.2 Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model. | 2 |
| Build fractions from unit fraction by applying and extending previous<br>understandings of operations on whole numbers.                                                                                                                                                                                                                                                                                                   |   |
| 4.NF.3 Understand a fraction $a/b$ with $a > 1$ as a sum of fractions $1/b$ .                                                                                                                                                                                                                                                                                                                                             | 1 |
| 4.NF.3.a Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.                                                                                                                                                                                                                                                                                                    | 1 |
| 4.NF.3.b Decompose a fraction into a sum of fractions with the same denominator<br>in more than one way, recording each decomposition by an equation. Justify<br>decompositions, e.g., by using a visual fraction model. Examples: $3/8 = 1/8 + 1/8 + 1/8 + 3/8 = 1/8 + 2/8$ ; $2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$ .                                                                                                  | 2 |
| 4.NF.3.c Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.                                                                                                                                                                                         | 2 |
| 4.NF.3.d Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.                                                                                                                                                                                                      | 2 |

| 4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.                                                                                                                                                                                                                                                                                                                                                                                                   | 1 |
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| 4.NF.4.a Understand a fraction a/b as a multiple of 1/b. For example, use a visual fraction model to represent 5/4 as the product $5 \times (1/4)$ , recording the conclusion by the equation $5/4 = 5 \times (1/4)$ .                                                                                                                                                                                                                                                                                        | 1 |
| 4.NF.4.b Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times (2/5)$ as $6 \times (1/5)$ , recognizing this product as $6/5$ . (In general, $n \times (a/b) = (n \times a)/b$ .)                                                                                                                                                                                             | 2 |
| 4.NF.4.c Solve word problems involving multiplication of a fraction by a whole<br>number, e.g., by using visual fraction models and equations to represent the<br>problem. For example, if each person at a party will eat 3/8 of a pound of roast<br>beef, and there will be 5 people at the party, how many pounds of roast beef will be<br>needed? Between what two whole numbers does your answer lie?                                                                                                    | 2 |
| Understand decimal notation for fractions, and compare decimal fractions.                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| 4.NF.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express $3/10$ as $30/100$ , and add $3/10 + 4/100 = 34/100$ .                                                                                                                                                                                                                                                | 1 |
| 4.NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.                                                                                                                                                                                                                                                                                                                           | 1 |
| 4.NF.7 Compare two decimals to hundredths by reasoning about their size.<br>Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$ , =, or <, and justify the conclusions, e.g., by using a visual model.                                                                                                                                                                                                            | 2 |
| Measurement and Data 4.MD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.                                                                                                                                                                                                                                                                                                                                                                                                     |   |
| 4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), | 1 |

| 4.MD.2 Use the four operations to solve word problems involving distances,<br>intervals of time, liquid volumes, masses of objects, and money, including problems<br>involving simple fractions or decimals, and problems that require expressing<br>measurements given in a larger unit in terms of a smaller unit. Represent<br>measurement quantities using diagrams such as number line diagrams that feature a<br>measurement scale. | 2 |
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| 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.                                                                                                                                                    | 2 |
| Represent and interpret data.                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| 4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit $(1/2, 1/4, 1/8)$ . Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.                                                                       | 2 |
| Geometric measurement: understand concepts of angle and measure angles.                                                                                                                                                                                                                                                                                                                                                                   |   |
| 4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:                                                                                                                                                                                                                                                                                      | 1 |
| 4.MD.5.a An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles.                                                                                                 | 1 |
| 4.MD.5.b An angle that turns through n one-degree angles is said to have an angle measure of n degrees.                                                                                                                                                                                                                                                                                                                                   | 1 |
| 4.MD.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.                                                                                                                                                                                                                                                                                                                                     | 1 |
| 4.MD.7 Recognize angle measure as additive. When an angle is decomposed into<br>non-overlapping parts, the angle measure of the whole is the sum of the angle<br>measures of the parts. Solve addition and subtraction problems to find unknown<br>angles on a diagram in real world and mathematical problems, e.g., by using an<br>equation with a symbol for the unknown angle measure.                                                | 2 |

| Geometry 4.G                                                                        |   |
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| Draw and identify lines and angles, and classify shapes by properties of their      |   |
| lines and angles.                                                                   |   |
| 4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and   | 1 |
| perpendicular and parallel lines. Identify these in two-dimensional figures.        | 1 |
| 4.G.2 Classify two-dimensional figures based on the presence or absence of parallel |   |
| or perpendicular lines, or the presence or absence of angles of a specified size.   | 2 |
| Recognize right triangles as a category, and identify right triangles.              |   |
| 4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across    |   |
| the figure such that the figure can be folded along the line into matching parts.   | 2 |
| Identify line-symmetric figures and draw lines of symmetry.                         |   |

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| <b>Operations and Algebraic Thinking 5.0A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
| Write and interpret numerical expressions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |
| 5.OA.1 Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1         |
| 5.OA.2 Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$ . Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$ , without having to calculate the indicated sum or product.                                                                                                                                                                                  | 1         |
| Analyze patterns and relationships.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |           |
| 5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so. | 2         |
| Numbers and Operations in Base Ten 5.NBT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
| Understand the place value system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |
| 5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.                                                                                                                                                                                                                                                                                                                                                             | 1         |
| 5.NBT.2 Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.                                                                                                                                                                                                                                                                                | 2         |
| 5.NBT.3 Read, write, and compare decimals to thousandths.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1         |
| 5.NBT.3.a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .                                                                                                                                                                                                                                                                                                                                  | 1         |
| 5.NBT.3.b Compare two decimals to thousandths based on meanings of the digits in each place, using $>$ , =, and $<$ symbols to record the results of comparisons.                                                                                                                                                                                                                                                                                                                                                                                                | 1         |
| 5.NBT.4 Use place value understanding to round decimals to any place.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1         |

| Perform operations with multi-digit whole numbers and with decimals to hundredths.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |   |
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| 5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1 |
| 5.NBT.6 Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.                                                                                                                                                                                                                                                                                                                                   | 2 |
| 5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.                                                                                                                                                                                                                                                                                                                                                                              | 2 |
| Numbers and Operations—Fractions 5.NF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |
| Use equivalent fractions as a strategy to add and subtract fractions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |
| 5.NF.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $2/3 + 5/4 = 8/12 + 15/12 = 23/12$ . (In general, $a/b + c/d = (ad + bc)/bd$ .)                                                                                                                                                                                                                                                                                                                                           | 2 |
| 5.NF.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $2/5 + 1/2 = 3/7$ , by observing that $3/7 < 1/2$ .                                                                                                                                                                                                                                    | 2 |
| Apply and extend previous understandings of multiplication and division to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| multiply and divide fractions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 5.NF.3 Interpret a fraction as division of the numerator by the denominator ( $a/b = a \div b$ ). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie? | 2 |
| 5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 |

| 5.NF.4.a Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts;<br>equivalently, as the result of a sequence of operations $a \times q \div b$ . For example, use a<br>visual fraction model to show $(2/3) \times 4 = 8/3$ , and create a story context for this<br>equation. Do the same with $(2/3) \times (4/5) = 8/15$ . (In general, $(a/b) \times (c/d) = ac/bd$ .)                                                           | 2 |
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| 5.NF.4.b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.                                                                                                              | 2 |
| 5.NF.5 Interpret multiplication as scaling (resizing), by:                                                                                                                                                                                                                                                                                                                                                                                                              | 1 |
| 5.NF.5.a Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.                                                                                                                                                                                                                                                                                                       | 2 |
| 5.NF.5.b Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1. | 2 |
| 5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.                                                                                                                                                                                                                                                                                                  | 2 |
| 5.NF.7 Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.                                                                                                                                                                                                                                                                                                                              | 1 |
| 5.NF.7.a Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$ .                                                                                                                  | 2 |
| 5.NF.7.b Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$ .                                                                                                                               | 2 |
| 5.NF.7.c Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?                                                                                | 2 |

| Measurement and Data 5.MD                                                                            |   |
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| Convert like measurement units within a given measurement system.                                    |   |
| 5.MD.1 Convert among different-sized standard measurement units within a given                       |   |
| measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in                      | 2 |
| solving multi-step, real world problems.                                                             |   |
| Represent and interpret data.                                                                        |   |
| 5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit                 |   |
| (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve                                 |   |
| problems involving information presented in line plots. For example, given different                 | 2 |
| measurements of liquid in identical beakers, find the amount of liquid each beaker                   |   |
| would contain if the total amount in all the beakers were redistributed equally.                     |   |
| Geometric measurement: understand concepts of volume and relate volume to                            |   |
| multiplication and to addition.                                                                      |   |
| 5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of                  | 1 |
| volume measurement.                                                                                  | _ |
| 5.MD.3.a A cube with side length 1 unit, called a "unit cube," is said to have "one                  | 1 |
| cubic unit" of volume, and can be used to measure volume.                                            | - |
| 5.MD.3.b A solid figure which can be packed without gaps or overlaps using n unit                    | 1 |
| cubes is said to have a volume of n cubic units.                                                     | 1 |
| 5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft,                   | 1 |
| and improvised units.                                                                                | 1 |
| 5.MD.5 Relate volume to the operations of multiplication and addition and solve real                 | 2 |
| world and mathematical problems involving volume.                                                    | 2 |
| 5.MD.5.a Find the volume of a right rectangular prism with whole-number side                         |   |
| lengths by packing it with unit cubes, and show that the volume is the same as would                 |   |
| be found by multiplying the edge lengths, equivalently by multiplying the height by                  | 2 |
| the area of the base. Represent threefold whole-number products as volumes,                          |   |
| e.g., to represent the associative property of multiplication.                                       |   |
| 5.MD.5.b Apply the formulas $V = 1 \times w \times h$ and $V = b \times h$ for rectangular prisms to |   |
| find volumes of right rectangular prisms with whole number edge lengths in the                       | 2 |
| context of solving real world and mathematical problems.                                             |   |
| 5.MD.5.c Recognize volume as additive. Find volumes of solid figures composed of                     |   |
| two non-overlapping right rectangular prisms by adding the volumes of the non-                       | 2 |
| overlapping parts, applying this technique to solve real world problems.                             |   |

| Geometry 5.G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |   |
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| Graph points on the coordinate plane to solve real-world and mathematical problems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |   |
| 5.G.1 Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel from travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). | 1 |
| 5.G.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2 |
| Classify two-dimensional figures into categories based on their properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| <ul><li>5.G.3 Understand that attributes belonging to a category of two dimensional figures also belong to all subcategories of that category.</li><li>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</li></ul>                                                                                                                                                                                                                                                                                                                                                                 | 2 |
| 5.G.4 Classify two-dimensional figures in a hierarchy based on properties.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2 |

| Ratios and Proportional Relationships 6.RP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Consensus |
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| Understand ratio concepts and use ratio reasoning to solve problems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |
| 6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. For example, "The ratio of wings to beaks in the bird house at the zoo was 2:1, because for every 2 wings there was 1 beak." "For every vote candidate A received, candidate C received nearly three votes."                                                                                                                                                                                                                                                                                                                                                                                                                       | 2         |
| 6.RP.2 Understand the concept of a unit rate a/b associated with a ratio a:b with $b \neq 0$ , and use rate language in the context of a ratio relationship. For example, "This recipe has a ratio of 3 cups of flour to 4 cups of sugar, so there is 3/4 cup of flour for each cup of sugar." "We paid \$75 for 15 hamburgers, which is a rate of \$5 per hamburger."                                                                                                                                                                                                                                                                                                                                                                                      | 2         |
| 6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3         |
| 6.RP.3a Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2         |
| 6.RP.3b Solve unit rate problems including those involving unit pricing and constant speed. For example, if it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were lawns being mowed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2         |
| 6.RP.3c Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole, given a part and the percent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1         |
| 6.RP.3d Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities.<br>The Number System 6.NS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2         |
| Apply and extend previous understandings of multiplication and division to divide fractions by fractions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |
| 6.NS.1 Interpret and compute quotients of fractions, and solve word problems<br>involving division of fractions by fractions, e.g., by using visual fraction models<br>and equations to represent the problem. For example, create a story context for (2/3)<br>$\div$ (3/4) and use a visual fraction model to show the quotient; use the relationship<br>between multiplication and division to explain that (2/3) $\div$ (3/4) = 8/9 because 3/4<br>of 8/9 is 2/3. (In general, (a/b) $\div$ (c/d) = ad/bc.) How much chocolate will each<br>person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup<br>servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with<br>length 3/4 mi and area 1/2 square mi? | 3         |

| Compute fluently with multi-digit numbers and find common factors and multiples.                                                                                                                                                                                                                                                                                                     |   |
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| 6.NS.2 Fluently divide multi-digit numbers using the standard algorithm.                                                                                                                                                                                                                                                                                                             | 1 |
| 6.NS.3 Fluently add, subtract, multiply, and divide multi-digit decimals using the standard algorithm for each operation.                                                                                                                                                                                                                                                            | 1 |
| 6.NS.4 Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers $1-100$ with a common factor as a multiple of a sum of two whole numbers with no common factor. For example, express $36 + 8$ as $4(9 + 2)$ . | 2 |
| Apply and extend previous understandings of numbers to the system of                                                                                                                                                                                                                                                                                                                 |   |
| rational numbers.         6.NS.5 Understand that positive and negative numbers are used together                                                                                                                                                                                                                                                                                     |   |
| to describe quantities having opposite directions or values (e.g., temperature<br>above/below zero, elevation above/below sea level, credits/debits, positive/negative<br>electric charge); use positive and negative numbers to represent quantities in real-                                                                                                                       | 2 |
| <ul><li>world contexts, explaining the meaning of 0 in each situation.</li><li>6.NS.6 Understand a rational number as a point on the number line. Extend number</li></ul>                                                                                                                                                                                                            |   |
| line diagrams and coordinate axes familiar from previous grades to represent points<br>on the line and in the plane with negative number coordinates.                                                                                                                                                                                                                                | 1 |
| 6.NS.6a Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., $-(-3) = 3$ , and that 0 is its own opposite.                                                                                                                                     | 1 |
| 6.NS.6b Understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane; recognize that when two ordered pairs differ only by signs, the locations of the points are related by reflections across one or both axes.                                                                                                                       | 1 |
| 6.NS.6c Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.                                                                                                                                                                                 | 1 |
| 6.NS.7 Understand ordering and absolute value of rational numbers.                                                                                                                                                                                                                                                                                                                   | 2 |
| 6.NS.7a Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram. For example, interpret $-3 > -7$ as a statement that $-3$ is located to the right of $-7$ on a number line oriented from left to right.                                                                                                                | 1 |
| 6.NS.7b Write, interpret, and explain statements of order for rational numbers in real-world contexts. For example, write $-3 ^{\circ}\text{C} > -7 ^{\circ}\text{C}$ to express the fact that $-3 ^{\circ}\text{C}$ is warmer than $-7 ^{\circ}\text{C}$ .                                                                                                                          | 2 |

| 6.NS.7c Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a positive or negative quantity in a real-world situation. For example, for an | 2        |
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| account balance of $-30$ dollars, write $ -30  = 30$ to describe the size of the debt in                                                                                                                                       |          |
| dollars.                                                                                                                                                                                                                       |          |
| 6.NS.7d Distinguish comparisons of absolute value from statements about order.                                                                                                                                                 | <u> </u> |
| For example, recognize that an account balance less than $-30$ dollars represents a                                                                                                                                            | 2        |
| debt greater than 30 dollars.                                                                                                                                                                                                  | -        |
| 6.NS.8 Solve real-world and mathematical problems by graphing points in all four                                                                                                                                               | <u> </u> |
| quadrants of the coordinate plane. Include use of coordinates and absolute value to                                                                                                                                            |          |
| find distances between points with the same first coordinate or the same second                                                                                                                                                | 2        |
| coordinate.                                                                                                                                                                                                                    |          |
| Expressions and Equations 6.EE                                                                                                                                                                                                 |          |
| Apply and extend previous understandings of arithmetic to algebraic                                                                                                                                                            |          |
| expressions.                                                                                                                                                                                                                   |          |
| 6.EE.1 Write and evaluate numerical expressions involving whole-number                                                                                                                                                         |          |
| exponents.                                                                                                                                                                                                                     | 1        |
| 6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers.                                                                                                                                               | 1        |
| 6.EE.2a Write expressions that record operations with numbers and with letters                                                                                                                                                 | <b>1</b> |
| standing for numbers. For example, express the calculation "Subtract y from 5" as 5                                                                                                                                            | 2        |
| -y.                                                                                                                                                                                                                            | 2        |
| 6.EE.2b Identify parts of an expression using mathematical terms (sum, term,                                                                                                                                                   | <br>     |
| product, factor, quotient, coefficient); view one or more parts of an expression as a                                                                                                                                          |          |
| single entity. For example, describe the expression $2(8 + 7)$ as a product of two                                                                                                                                             | 1        |
| factors; view $(8 + 7)$ as both a single entity and a sum of two terms.                                                                                                                                                        |          |
| 6.EE.2c Evaluate expressions at specific values of their variables. Include                                                                                                                                                    | <br>     |
| expressions that arise from formulas used in real-world problems. Perform                                                                                                                                                      |          |
| arithmetic operations, including those involving whole number exponents, in the                                                                                                                                                |          |
| conventional order when there are no parentheses to specify a particular order                                                                                                                                                 | 1        |
| (Order of Operations). For example, use the formulas $V = s3$ and $A = 6 s2$ to find                                                                                                                                           |          |
| the volume and surface area of a cube with sides of length $s = 1/2$ .                                                                                                                                                         |          |
| 6.EE.3 Apply the properties of operations to generate equivalent expressions. For                                                                                                                                              |          |
| example, apply the distributive property to the expression $3(2 + x)$ to produce the                                                                                                                                           |          |
| equivalent expression $6 + 3x$ ; apply the distributive property to the expression $24x$                                                                                                                                       | 2        |
| + 18y to produce the equivalent expression $6(4x + 3y)$ ; apply properties of                                                                                                                                                  | ۷        |
| + 18y to produce the equivalent expression o (4x + 5y), apply properties of operations to y + y + y to produce the equivalent expression 3y.                                                                                   |          |
| 6.EE.4 Identify when two expressions are equivalent (i.e., when the two                                                                                                                                                        |          |
| expressions name the same number regardless of which value is substituted into                                                                                                                                                 |          |
| · ·                                                                                                                                                                                                                            | 2        |
| them). For example, the expressions $y + y + y$ and 3y are equivalent because they name the same number recorders of which number y stands for                                                                                 |          |
| name the same number regardless of which number y stands for.                                                                                                                                                                  |          |

| Reason about and solve one-variable equations and inequalities.                                                                                                          |   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 6.EE.5 Understand solving an equation or inequality as a process of answering a                                                                                          |   |
| question: which values from a specified set, if any, make the equation or inequality                                                                                     | 1 |
| true? Use substitution to determine whether a given number in a specified set makes                                                                                      |   |
| an equation or inequality true.                                                                                                                                          |   |
| 6.EE.6 Use variables to represent numbers and write expressions when solving a                                                                                           |   |
| real-world or mathematical problem; understand that a variable can represent an                                                                                          | 2 |
| unknown number, or, depending on the purpose at hand, any number in a specified                                                                                          |   |
| set.                                                                                                                                                                     |   |
| 6.EE.7 Solve real-world and mathematical problems by writing and solving                                                                                                 | 2 |
| equations of the form $x + p = q$ and $px = q$ for cases in which p, q and x are all                                                                                     | 2 |
| nonnegative rational numbers.                                                                                                                                            |   |
| 6.EE.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or                                                                                   |   |
| condition in a real-world or mathematical problem. Recognize that inequalities of                                                                                        | 2 |
| the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such                                                                                  |   |
| inequalities on number line diagrams.                                                                                                                                    |   |
| Represent and analyze quantitative relationships between dependent and                                                                                                   |   |
| independent variables.                                                                                                                                                   |   |
| 6.EE.9 Use variables to represent two quantities in a real-world problem that                                                                                            |   |
| change in relationship to one another; write an equation to express one quantity,                                                                                        |   |
| thought of as the dependent variable, in terms of the other quantity, thought of as                                                                                      |   |
| the independent variable. Analyze the relationship between the dependent and independent variables, using graphs and tables, and relate these to the equation. For       | 3 |
| independent variables using graphs and tables, and relate these to the equation. For<br>example, in a problem involving motion at constant speed, list and graph ordered |   |
| pairs of distances and times, and write the equation $d = 65t$ to represent the                                                                                          |   |
| relationship between distance and time.                                                                                                                                  |   |
|                                                                                                                                                                          |   |
| Geometry 6.G<br>Solve real-world and mathematical problems involving area, surface area, and                                                                             |   |
|                                                                                                                                                                          |   |
| volume.                                                                                                                                                                  |   |
| 6.G.1 Find the area of right triangles, other triangles, special quadrilaterals, and                                                                                     |   |
| polygons by composing into rectangles or decomposing into triangles and other                                                                                            | 2 |
| shapes; apply these techniques in the context of solving real-world and                                                                                                  |   |
| mathematical problems. $6.02$ Find the volume, of a right rectangular prior with fractional edge lengths by                                                              |   |
| 6.G.2 Find the volume of a right rectangular prism with fractional edge lengths by                                                                                       |   |
| packing it with unit cubes of the appropriate unit fraction edge lengths, and show                                                                                       |   |
| that the volume is the same as would be found by multiplying the edge lengths of the prime Apply the formulae $V = 1$ when $V = h$ has the formulae of right             | 2 |
| the prism. Apply the formulas $V = 1$ wh and $V = b$ h to find volumes of right                                                                                          |   |
| rectangular prisms with fractional edge lengths in the context of solving real-world                                                                                     |   |
| and mathematical problems.                                                                                                                                               |   |

| 6.G.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.                                              | 2 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.                                                                                                  | 2 |
| Statistics and Probability 6.SP                                                                                                                                                                                                                                                                                                               |   |
| Develop understanding of statistical variability.                                                                                                                                                                                                                                                                                             |   |
| 6.SP.1 Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for it in the answers. For example, "How old am I?" is not a statistical question, but "How old are the students in my school?" is a statistical question because one anticipates variability in students' ages. | 1 |
| 6.SP.2 Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.                                                                                                                                                                           | 1 |
| 6.SP.3 Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.                                                                                                                                        | 2 |
| Summarize and describe distributions.                                                                                                                                                                                                                                                                                                         |   |
| 6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots.                                                                                                                                                                                                                                      | 2 |
| 6.SP.5 Summarize numerical data sets in relation to their context, such as by:                                                                                                                                                                                                                                                                | 3 |
| 6.SP.5a Reporting the number of observations.                                                                                                                                                                                                                                                                                                 | 1 |
| 6.SP.5b Describing the nature of the attribute under investigation, including how it was measured and its units of measurement.                                                                                                                                                                                                               | 2 |
| 6.SP.5c Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.                                       | 3 |
| 6.SP.5d Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.                                                                                                                                                                                      | 3 |

|                                                                                             | Consensus |
|---------------------------------------------------------------------------------------------|-----------|
| Ratios and Proportional Relationships 7.RP                                                  |           |
| Analyze proportional relationships and use them to solve real-world and                     |           |
| mathematical problems.                                                                      |           |
| 7.RP.1 Compute unit rates associated with ratios of fractions, including ratios of          |           |
| lengths, areas and other quantities measured in like or different units. For example,       | 1         |
| if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex           | 1         |
| fraction $1/2/1/4$ miles per hour, equivalently 2 miles per hour.                           |           |
| 7.RP.2 Recognize and represent proportional relationships between quantities.               | 2         |
| 7.RP.2a Decide whether two quantities are in a proportional relationship, e.g., by          |           |
| testing for equivalent ratios in a table or graphing on a coordinate plane and              | 2         |
| observing whether the graph is a straight line through the origin.                          |           |
| 7.RP.2b Identify the constant of proportionality (unit rate) in tables, graphs,             | 2         |
| equations, diagrams, and verbal descriptions of proportional relationships.                 | 2         |
| 7.RP.2c Represent proportional relationships by equations. For example, if total            |           |
| cost t is proportional to the number n of items purchased at a constant price p, the        | 2         |
| relationship between the total cost and the number of items can be expressed as $t =$       | 2         |
| pn.                                                                                         |           |
| 7.RP.2d Explain what a point (x, y) on the graph of a proportional relationship             |           |
| means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ | 3         |
| where r is the unit rate.                                                                   |           |
| 7.RP.3 Use proportional relationships to solve multistep ratio and percent problems.        |           |
| Examples: simple interest, tax, markups and markdowns, gratuities and                       | 2         |
| commissions, fees, percent increase and decrease, percent error.                            |           |
| The Number System 7.NS                                                                      |           |
| Apply and extend previous understandings of operations with fractions to add,               |           |
| subtract, multiply, and divide rational numbers.                                            |           |
| 7.NS.1 Apply and extend previous understandings of addition and subtraction to              |           |
| add and subtract rational numbers; represent addition and subtraction on a                  | 1         |
| horizontal or vertical number line diagram.                                                 |           |
| 7.NS.1a Describe situations in which opposite quantities combine to make 0. For             |           |
| example, a hydrogen atom has 0 charge because its two constituents are oppositely           | 2         |
| charged.                                                                                    |           |
| 7.NS.1b Understand $p + q$ as the number located a distance $ q $ from p, in the            |           |
| positive or negative direction depending on whether q is positive or negative. Show         | 2         |
| that a number and its opposite have a sum of 0 (are additive inverses). Interpret           | ~         |
| sums of rational numbers by describing real-world contexts.                                 |           |

| 7.NS.1c Understand subtraction of rational numbers as adding the additive inverse,       |          |
|------------------------------------------------------------------------------------------|----------|
| p-q = p + (-q). Show that the distance between two rational numbers on the               | 2        |
| number line is the absolute value of their difference, and apply this principle in real- | <i>L</i> |
| world contexts.                                                                          |          |
| 7.NS.1d Apply properties of operations as strategies to add and subtract rational        | 1        |
| numbers.                                                                                 | 1        |
| 7.NS.2 Apply and extend previous understandings of multiplication and division           | 1        |
| and of fractions to multiply and divide rational numbers.                                | 1        |
| 7.NS.2a Understand that multiplication is extended from fractions to rational            |          |
| numbers by requiring that operations continue to satisfy the properties of               |          |
| operations, particularly the distributive property, leading to products such as (-1)(-   | 2        |
| 1) = 1 and the rules for multiplying signed numbers. Interpret products of rational      |          |
| numbers by describing real-world contexts.                                               |          |
| 7.NS.2b Understand that integers can be divided, provided that the divisor is not        |          |
| zero, and every quotient of integers (with non-zero divisor) is a rational number. If    | 2        |
| p and q are integers, then $-(p/q) = (-p)/q = p/(-q)$ . Interpret quotients of rational  | 2        |
| numbers by describing real world contexts.                                               |          |
| 7.NS.2c Apply properties of operations as strategies to multiply and divide rational     | 1        |
| numbers.                                                                                 | 1        |
| 7.NS.2d Convert a rational number to a decimal using long division; know that the        | 1        |
| decimal form of a rational number terminates in 0s or eventually repeats.                | 1        |
| 7.NS.3 Solve real-world and mathematical problems involving the four operations          | 2        |
| with rational numbers.                                                                   | 2        |
| Expressions and Equations 7.EE                                                           |          |
| Use properties of operations to generate equivalent expressions.                         |          |
| 7.EE.1 Apply properties of operations as strategies to add, subtract, factor, and        | 1        |
| expand linear expressions with rational coefficients.                                    | 1        |
| 7.EE.2 Understand that rewriting an expression in different forms in a problem           |          |
| context can shed light on the problem and how the quantities in it are related. For      | 2        |
| example, $a + 0.05a = 1.05a$ means that "increase by 5%" is the same as "multiply by     | 2        |
| 1.05."                                                                                   |          |
| Solve real-life and mathematical problems using numerical and algebraic                  |          |
| expressions and equations.                                                               |          |
| 7.EE.3 Solve multi-step real-life and mathematical problems posed with positive          |          |
| and negative rational numbers in any form (whole numbers, fractions, and                 |          |
| decimals), using tools strategically. Apply properties of operations to calculate with   |          |
| numbers in any form; convert between forms as appropriate; and assess the                |          |
| reasonableness of answers using mental computation and estimation strategies. For        | 2        |
| example: If a woman making \$25 an hour gets a 10% raise, she will make an               | 2        |
| additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50. If you    |          |
| want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2       |          |
| inches wide, you will need to place the bar about 9 inches from each edge; this          |          |
|                                                                                          |          |

| 7.EE.4 Use variables to represent quantities in a real-world or mathematical                 |   |
|----------------------------------------------------------------------------------------------|---|
| problem, and construct simple equations and inequalities to solve problems by                | 2 |
| reasoning about the quantities.                                                              |   |
| 7.EE.4a Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ |   |
| q) = r, where p, q, and r are specific rational numbers. Solve equations of these            |   |
| forms fluently. Compare an algebraic solution to an arithmetic solution, identifying         | 2 |
| the sequence of the operations used in each approach. For example, the perimeter of          |   |
| a rectangle is 54 cm. Its length is 6 cm. What is its width?                                 |   |
| 7.EE.4b Solve word problems leading to inequalities of the form $px + q > r$ or $px + q > r$ |   |
| q < r, where p, q, and r are specific rational numbers. Graph the solution set of the        |   |
| inequality and interpret it in the context of the problem. For example: As a                 | 2 |
| salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your           | 2 |
| pay to be at least \$100. Write an inequality for the number of sales you need to            |   |
| make, and describe the solutions.                                                            |   |
| Geometry 7.G                                                                                 |   |
| Draw, construct, and describe geometrical figures and describe the                           |   |
| relationships between them.                                                                  |   |
| 7.G.1 Solve problems involving scale drawings of geometric figures, including                |   |
| computing actual lengths and areas from a scale drawing and reproducing a scale              | 2 |
| drawing at a different scale.                                                                |   |
| 7.G.2 Draw (freehand, with ruler and protractor, and with technology) geometric              |   |
| shapes with given conditions. Focus on constructing triangles from three measures            | 2 |
| of angles or sides, noticing when the conditions determine a unique triangle, more           | 2 |
| than one triangle, or no triangle.                                                           |   |
| 7.G.3 Describe the two-dimensional figures that result from slicing three                    |   |
| dimensional figures, as in plane sections of right rectangular prisms and right              | 2 |
| rectangular pyramids.                                                                        |   |
| Solve real-life and mathematical problems involving angle measure, area,                     |   |
| surface area, and volume.                                                                    |   |
| 7.G.4 Know the formulas for the area and circumference of a circle and use them to           |   |
| solve problems; give an informal derivation of the relationship between the                  | 2 |
| circumference and area of a circle.                                                          |   |
| 7.G.5 Use facts about supplementary, complementary, vertical, and adjacent angles            |   |
| in a multi-step problem to write and solve simple equations for an unknown angle             | 2 |
| in a figure.                                                                                 |   |
| 7.G.6 Solve real-world and mathematical problems involving area, volume and                  |   |
| surface area of two- and three-dimensional objects composed of triangles,                    | 2 |
| quadrilaterals, polygons, cubes, and right prisms.                                           |   |
|                                                                                              | - |

| Statistics and Probability 7.SP                                                                                                    |   |
|------------------------------------------------------------------------------------------------------------------------------------|---|
| Use random sampling to draw inferences about a population.                                                                         |   |
| 7.SP.1 Understand that statistics can be used to gain information about a population                                               |   |
| by examining a sample of the population; generalizations about a population from a                                                 | _ |
| sample are valid only if the sample is representative of that population. Understand                                               | 2 |
| that random sampling tends to produce representative samples and support valid                                                     |   |
| inferences.                                                                                                                        |   |
| 7.SP.2 Use data from a random sample to draw inferences about a population with                                                    |   |
| an unknown characteristic of interest. Generate multiple samples (or simulated                                                     |   |
| samples) of the same size to gauge the variation in estimates or predictions. For                                                  | 2 |
| example, estimate the mean word length in a book by randomly sampling words                                                        | 3 |
| from the book; predict the winner of a school election based on randomly sampled                                                   |   |
| survey data. Gauge how far off the estimate or prediction might be.                                                                |   |
| Draw informal comparative inferences about two populations.                                                                        |   |
| 7.SP.3 Informally assess the degree of visual overlap of two numerical data                                                        |   |
| distributions with similar variabilities, measuring the difference between the centers                                             |   |
| by expressing it as a multiple of a measure of variability. For example, the mean                                                  |   |
| height of players on the basketball team is 10 cm greater than the mean height of                                                  | 2 |
| players on the soccer team, about twice the variability (mean absolute deviation) on                                               | _ |
| either team; on a dot plot, the separation between the two distributions of heights is                                             |   |
| noticeable.                                                                                                                        |   |
| 7.SP.4 Use measures of center and measures of variability for numerical data from                                                  |   |
| random samples to draw informal comparative inferences about two populations.                                                      |   |
| For example, decide whether the words in a chapter of a seventh-grade science                                                      | 2 |
| book are generally longer than the words in a chapter of a fourth-grade science                                                    | 2 |
| book die generally ionger daan die words in d endper of d fourdi grade selence                                                     |   |
| Investigate chance processes and develop, use, and evaluate probability                                                            |   |
| models.                                                                                                                            |   |
| 7.SP.5 Understand that the probability of a chance event is a number between 0 and                                                 |   |
| 1 that expresses the likelihood of the event occurring. Larger numbers indicate                                                    |   |
| greater likelihood. A probability near 0 indicates an unlikely event, a probability                                                | 1 |
| around 1/2 indicates an event that is neither unlikely nor likely, and a probability                                               | 1 |
| near 1 indicates a likely event.                                                                                                   |   |
| 7.SP.6 Approximate the probability of a chance event by collecting data on the                                                     |   |
|                                                                                                                                    |   |
| chance process that produces it and observing its long-run relative frequency, and                                                 | 2 |
| predict the approximate relative frequency given the probability. For example,                                                     | 2 |
| when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably and sweethy 200 times. |   |
| 200 times, but probably not exactly 200 times.                                                                                     |   |
| 7.SP.7 Develop a probability model and use it to find probabilities of events.                                                     | 2 |
| Compare probabilities from a model to observed frequencies; if the agreement is                                                    | 3 |
| not good, explain possible sources of the discrepancy.                                                                             |   |

| 7.SP.7a Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.                                                               | 2 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 7.SP.7b Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies? | 2 |
| 7.SP.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.                                                                                                                                                                                                                                                                        | 2 |
| 7.SP.8a Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.                                                                                                                                                                                                     | 1 |
| 7.SP.8b Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.                                                                                                               | 2 |
| 7.SP.8c Design and use a simulation to generate frequencies for compound events.<br>For example, use random digits as a simulation tool to approximate the answer to<br>the question: If 40% of donors have type A blood, what is the probability that it will<br>take at least 4 donors to find one with type A blood?                                                           | 3 |

|                                                                                                     | Consensus |
|-----------------------------------------------------------------------------------------------------|-----------|
| The Number System 8.NS                                                                              |           |
| Know that there are numbers that are not rational, and approximate them by                          |           |
| rational numbers.                                                                                   |           |
| 8.NS.1 Know that numbers that are not rational are called irrational. Understand                    |           |
| informally that every number has a decimal expansion; for rational numbers show                     | 1         |
| that the decimal expansion repeats eventually, and convert a decimal expansion                      | 1         |
| which repeats eventually into a rational number.                                                    |           |
| 8.NS.2 Use rational approximations of irrational numbers to compare the size of                     |           |
| irrational numbers, locate them approximately on a number line diagram, and                         |           |
| estimate the value of expressions (e.g., $\pi 2$ ). For example, by truncating the decimal          | 2         |
| expansion of $\sqrt{2}$ , show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and    |           |
| explain how to continue on to get better approximations.                                            |           |
| Expressions and Equations 8.EE                                                                      |           |
| Work with radicals and integer exponents.                                                           |           |
| 8.EE.1 Know and apply the properties of integer exponents to generate equivalent                    |           |
| numerical expressions.                                                                              | 1         |
| For example, $32 \times 3-5 = 3-3 = 1/33 = 1/27$ .                                                  | 1         |
| 8.EE.2 Use square root and cube root symbols to represent solutions to equations of                 |           |
| the form $x^2 = p$ and $x^3 = p$ , where p is a positive rational number. Evaluate square           |           |
| roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$          | 1         |
| is irrational.                                                                                      |           |
| 8.EE.3 Use numbers expressed in the form of a single digit times an integer power                   |           |
| of 10 to estimate very large or very small quantities, and to express how many times                |           |
| as much one is than the other. For example, estimate the population of the United                   | 2         |
| States as $3 \times 108$ and the population of the world as $7 \times 109$ , and determine that the | 2         |
| world population is more than 20 times larger.                                                      |           |
| 8.EE.4 Perform operations with numbers expressed in scientific notation, including                  |           |
| problems where both decimal and scientific notation are used. Use scientific                        |           |
| notation and choose units of appropriate size for measurements of very large or very                | 2         |
| small quantities (e.g., use millimeters per year for seafloor spreading). Interpret                 | 2         |
| scientific notation that has been generated by technology.                                          |           |
| Understand the connections between proportional relationships, lines, and                           |           |
| linear equations.                                                                                   |           |
| 8.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of the             |           |
| graph. Compare two different proportional relationships represented in different                    |           |
| ways. For example, compare a distance-time graph to a distance-time equation to                     | 2         |
| determine which of two moving objects has greater speed.                                            |           |
| 8.EE.6 Use similar triangles to explain why the slope m is the same between any                     |           |
| two distinct points on a non-vertical line in the coordinate plane; derive the equation             |           |
| y = mx for a line through the origin and the equation $y = mx + b$ for a line                       | 3         |
| intercepting the vertical axis at b. $y = 100 + 0.000$                                              |           |
|                                                                                                     |           |

| Analyze and solve linear equations and pairs of simultaneous linear equations.                  |   |
|-------------------------------------------------------------------------------------------------|---|
| 8.EE.7 Solve linear equations in one variable.                                                  | 1 |
| 8.EE.7a Give examples of linear equations in one variable with one solution,                    |   |
| infinitely many solutions, or no solutions. Show which of these possibilities is the            |   |
| case by successively transforming the given equation into simpler forms, until an               | 3 |
| equivalent equation of the form $x = a$ , $a = a$ , or $a = b$ results (where a and b are       |   |
| different numbers).                                                                             |   |
| 8.EE.7b Solve linear equations with rational number coefficients, including                     |   |
| equations whose solutions require expanding expressions using the distributive                  | 2 |
| property and collecting like terms.                                                             |   |
| 8.EE.8 Analyze and solve pairs of simultaneous linear equations.                                | 2 |
| 8.EE.8a Understand that solutions to a system of two linear equations in two                    |   |
| variables correspond to points of intersection of their graphs, because points of               | 1 |
| intersection satisfy both equations simultaneously.                                             |   |
| 8.EE.8b Solve systems of two linear equations in two variables algebraically, and               |   |
| estimate solutions by graphing the equations. Solve simple cases by inspection. For             | 2 |
| example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot              |   |
| simultaneously be 5 and 6.                                                                      |   |
| 8.EE.8c Solve real-world and mathematical problems leading to two linear                        |   |
| equations in two variables. For example, given coordinates for two pairs of points,             | 2 |
| determine whether the line through the first pair of points intersects the line through         | 2 |
| the second pair.                                                                                |   |
| Functions 8.F                                                                                   |   |
| Define, evaluate, and compare functions.                                                        |   |
| 8.F.1 Understand that a function is a rule that assigns to each input exactly one               |   |
| output. The graph of a function is the set of ordered pairs consisting of an input and          | 1 |
| the corresponding output.                                                                       |   |
| 8.F.2 Compare properties of two functions each represented in a different way                   |   |
| (algebraically, graphically, numerically in tables, or by verbal descriptions). For             |   |
| example, given a linear function represented by a table of values and a linear                  | 2 |
| function represented by an algebraic expression, determine which function has the               |   |
| greater rate of change.                                                                         |   |
| 8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is         |   |
| a straight line; give examples of functions that are not linear. For example, the               |   |
| function $A = s2$ giving the area of a square as a function of its side length is not           | 2 |
| linear because its graph contains the points $(1,1)$ , $(2,4)$ and $(3,9)$ , which are not on a |   |
| straight line.                                                                                  |   |

| Use functions to model relationships between quantities.                                 |   |
|------------------------------------------------------------------------------------------|---|
| 8.F.4 Construct a function to model a linear relationship between two quantities.        |   |
| Determine the rate of change and initial value of the function from a description of     |   |
| a relationship or from two (x, y) values, including reading these from a table or        | 3 |
| from a graph. Interpret the rate of change and initial value of a linear function in     |   |
| terms of the situation it models, and in terms of its graph or a table of values.        |   |
| 8.F.5 Describe qualitatively the functional relationship between two quantities by       |   |
| analyzing a graph (e.g., where the function is increasing or decreasing, linear or       | 2 |
| nonlinear). Sketch a graph that exhibits the qualitative features of a function that     | 3 |
| has been described verbally.                                                             |   |
| Geometry 8.G                                                                             |   |
| Understand congruence and similarity using physical models, transparencies,              |   |
| or geometry software.                                                                    |   |
| 8.G.1 Verify experimentally the properties of rotations, reflections, and translations:  | 2 |
| 8.G.1a Lines are taken to lines, and line segments to line segments of the same          | 2 |
| length.                                                                                  | 2 |
| 8.G.1b Angles are taken to angles of the same measure.                                   | 2 |
| 8.G.1c Parallel lines are taken to parallel lines.                                       | 2 |
| 8.G.2 Understand that a two-dimensional figure is congruent to another if the            |   |
| second can be obtained from the first by a sequence of rotations, reflections, and       | 2 |
| translations; given two congruent figures, describe a sequence that exhibits the         | 2 |
| congruence between them.                                                                 |   |
| 8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two- | 2 |
| dimensional figures using coordinates.                                                   | Z |
| 8.G.4 Understand that a two-dimensional figure is similar to another if the second       |   |
| can be obtained from the first by a sequence of rotations, reflections, translations,    | 2 |
| and dilations; given two similar two dimensional figures, describe a sequence that       | 2 |
| exhibits the similarity between them.                                                    |   |
| 8.G.5 Use informal arguments to establish facts about the angle sum and exterior         |   |
| angle of triangles, about the angles created when parallel lines are cut by a            |   |
| transversal, and the angle-angle criterion for similarity of triangles. For example,     | 3 |
| arrange three copies of the same triangle so that the sum of the three angles appears    |   |
| to form a line, and give an argument in terms of transversals why this is so.            |   |
| Understand and apply the Pythagorean Theorem.                                            |   |
| 8.G.6 Explain a proof of the Pythagorean Theorem and its converse.                       | 3 |
| 8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right           | C |
| triangles in real-world and mathematical problems in two and three dimensions.           | 2 |
| 8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a         | 1 |
| coordinate system.                                                                       | 1 |

| Solve real-world and mathematical problems involving volume of cylinders,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| cones, and spheres.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 8.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 |
| them to solve real-world and mathematical problems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2 |
| Statistics and Probability 8.SP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |   |
| Investigate patterns of association in bivariate data.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 8.SP.1 Construct and interpret scatter plots for bivariate measurement data to<br>investigate patterns of association between two quantities. Describe patterns such as                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2 |
| clustering, outliers, positive or negative association, linear association, and nonlinear association.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |
| 8.SP.2 Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.                                                                                                                                                                                                                                                                                                                                                                | 2 |
| 8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.                                                                                                                                                                                                                                                                                             | 2 |
| 8.SP.4 Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores? | 3 |

Table B1SScience Grade 4 DOK Consensus

|                                                                                                                                                                                                                | Consensus |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Science Connections A.4 & Nature of Science B.4                                                                                                                                                                |           |
| Students in Wisconsin will understand that there are unifying themes: systems,                                                                                                                                 |           |
| order, organization, and interactions; evidence, models, and explanations;                                                                                                                                     |           |
| constancy, change, and measurement; evolution, equilibrium, and energy;                                                                                                                                        |           |
| form and function among scientific disciplines.                                                                                                                                                                |           |
| A.4.1 When conducting science investigations, ask and answer questions that will help decide the general areas of science being addressed                                                                      | 2         |
| A.4.2 When faced with a science-related problem, decide what evidence, models, or                                                                                                                              |           |
| explanations previously studied can be used to better understand what is happening<br>now                                                                                                                      | 3         |
| A.4.3 When investigating a science-related problem, decide what data can be collected to determine the most useful explanations                                                                                | 2         |
| A.4.4 When studying science-related problems, decide which of the science themes are important                                                                                                                 | 2         |
| A.4.5 When studying a science-related problem, decide what changes over time are occurring or have occurred                                                                                                    | 2         |
| Students in Wisconsin will understand that science is ongoing and inventive,<br>and that scientific understandings have changed over time as new evidence is<br>found.                                         |           |
| B.4.1 Use encyclopedias, source books, texts, computers, teachers, parents, other adults, journals, popular press, and various other sources, to help answer science-related questions and plan investigations | 2         |
| B.4.2 Acquire information about people who have contributed to the development of major ideas in the sciences and learn about the cultures in which these people lived and worked                              | 1         |
| B.4.3 Show* how the major developments of scientific knowledge in the earth and space, life and environmental, and physical sciences have changed over time                                                    | 2         |
| Science Inquiry C.4                                                                                                                                                                                            |           |
| Students in Wisconsin will investigate questions using scientific methods and                                                                                                                                  |           |
| tools, revise their personal understanding to accommodate knowledge, and                                                                                                                                       |           |
| communicate these understandings to others.                                                                                                                                                                    |           |
| C.4.1 Use the vocabulary of the unifying themes to ask questions about objects, organisms, and events being studied                                                                                            | 2         |
| C.4.2 Use the science content being learned to ask questions, plan investigations, make observations, make predictions, and offer explanations                                                                 | 3         |
| C.4.3 Select multiple sources of information to help answer questions selected for classroom investigations                                                                                                    | 2         |
| 0                                                                                                                                                                                                              | 1         |

| C.4.4 Use simple science equipment safely and effectively, including rulers, balances, graduated cylinders, hand lenses, thermometers, and computers, to collect data relevant to questions and investigations                                                                             | 1 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| C.4.5 Use data they have collected to develop explanations and answer questions generated by investigations                                                                                                                                                                                | 2 |
| C.4.6 Communicate the results of their investigations in ways their audiences will understand by using charts, graphs, drawings, written descriptions, and various other means, to display their answers                                                                                   | 2 |
| C.4.7 Support their conclusions with logical arguments                                                                                                                                                                                                                                     | 3 |
| C.4.8 Ask additional questions that might help focus or further an investigation                                                                                                                                                                                                           | 2 |
| Physical Science D.4<br>Students in Wisconsin will demonstrate an understanding of the physical and<br>chemical properties of matter, the forms and properties of energy, and the<br>ways in which matter and energy interact.                                                             |   |
| D.4.1 Understand that objects are made of more than one substance, by observing, describing and measuring the properties of earth materials, including properties of size, weight, shape, color, temperature, and the ability to react with other substances                               | 2 |
| D.4.2 Group and/or classify objects and substances based on the properties of earth materials                                                                                                                                                                                              | 2 |
| D.4.3 Understand that substances can exist in different states-solid, liquid, gas                                                                                                                                                                                                          | 1 |
| D.4.4 Observe and describe changes in form, temperature, color, speed, and direction of objects and construct explanations for the changes                                                                                                                                                 | 2 |
| D.4.5 Construct simple models of what is happening to materials and substances<br>undergoing change, using simple instruments or tools to aid observations and<br>collect data                                                                                                             | 2 |
| D.4.6 Observe and describe physical events in objects at rest or in motion                                                                                                                                                                                                                 | 1 |
| D.4.7 Observe and describe physical events involving objects and develop record-<br>keeping systems to follow these events by measuring and describing changes in<br>their properties, including:<br>position relative to another object<br>motion over time<br>and position due to forces | 3 |
| D.4.8 Ask questions and make observations to discover the differences between substances that can be touched (matter) and substances that cannot be touched (forms of energy, light, heat, electricity, sound, and magnetism)                                                              | 2 |
|                                                                                                                                                                                                                                                                                            | · |

| Earth and Space Science E.4                                                                                                                                                                                   |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Students in Wisconsin will demonstrate an understanding of the structure and systems of earth and other bodies in the universe and of their interactions.                                                     |   |
| E.4.1 Investigate that earth materials are composed of rocks and soils and correctly use the vocabulary for rocks, minerals, and soils during these investigations                                            | 2 |
| E.4.2 Show that earth materials have different physical and chemical properties, including the properties of soils found in Wisconsin                                                                         | 2 |
| E.4.3 Develop descriptions of the land and water masses of the earth and of Wisconsin's rocks and minerals, using the common vocabulary of earth and space science                                            | 2 |
| E.4.4 Identify celestial objects (stars, sun, moon, planets) in the sky, noting changes in patterns of those objects over time                                                                                | 2 |
| E.4.5 Describe the weather commonly found in Wisconsin in terms of clouds, temperature, humidity, and forms of precipitation, and the changes that occur over time, including seasonal changes                | 2 |
| E.4.6 Using the science themes, find patterns and cycles in the earth's daily, yearly, and long-term changes                                                                                                  | 2 |
| E.4.7 Using the science themes, describe resources used in the home, community, and nation as a whole                                                                                                         | 1 |
| E.4.8 Illustrate human resources use in mining, forestry, farming, and manufacturing in Wisconsin and elsewhere in the world                                                                                  | 2 |
| Life and Environmental Science F.4                                                                                                                                                                            |   |
| Students in Wisconsin will demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment. |   |
| F.4.1 Discover* how each organism meets its basic needs for water, nutrients, protection, and energy* in order to survive                                                                                     | 2 |
| F.4.2 Investigate* how organisms, especially plants, respond to both internal cues (the need for water) and external cues (changes in the environment)                                                        | 2 |
| F.4.3 Illustrate* the different ways that organisms grow through life stages and survive to produce new members of their type                                                                                 | 2 |
| F.4.4 Using the science themes*, develop explanations* for the connections among living and non-living things in various environments                                                                         | 2 |

| Science Applications G.4 & Science in Social and Personal Perspectives H.4                                                                                                                                      |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| Students in Wisconsin will demonstrate an understanding of the relationship<br>between science and technology and the ways in which that relationship<br>influences human activities.                           |   |
| G.4.1 Identify* the technology used by someone employed in a job or position in Wisconsin and explain* how the technology helps                                                                                 | 2 |
| G.4.2 Discover* what changes in technology have occurred in a career chosen by a parent, grandparent, or an adult friend over a long period of time                                                             | 2 |
| G.4.3 Determine what science discoveries have led to changes in technologies that are being used in the workplace by someone employed locally                                                                   | 2 |
| G.4.4 Identify* the combinations of simple machines in a device used in the home, the workplace, or elsewhere in the community, to make or repair things, or to move goods or people                            | 1 |
| G.4.5 Ask questions to find answers about how devices and machines were invented and produced                                                                                                                   | 2 |
| Students in Wisconsin will use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.                                                               |   |
| H.4.1 Describe* how science and technology have helped, and in some cases hindered, progress in providing better food, more rapid information, quicker and safer transportation, and more effective health care | 2 |
| H.4.2 Using the science themes*, identify* local and state issues that are helped by science and technology and explain* how science and technology can also cause a problem                                    | 3 |
| H.4.3 Show* how science has contributed to meeting personal needs, including hygiene, nutrition, exercise, safety, and health care                                                                              | 1 |
| H.4.4 Develop* a list of issues that citizens must make decisions about and describe* a strategy for becoming informed about the science behind these issues                                                    | 2 |

Table B1SScience Grade 8 DOK Consensus

| Students in Wisconsin will understand that there are unifying themes: systems, order, organization, and interactions; evidence, models, and explanations; constancy, change, and measurement; evolution, equilibrium, and energy; orm and function among scientific disciplines.         A.8.1 Develop their understanding of the science themes by using the themes to rame questions about science-related issues and problems       2         A.8.1 Develop their understanding of the science themes by using the themes to rame questions about science-related issues and problems       2         A.8.2 Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems       2         A.8.3 Defend explanations and models by collecting and organizing evidence that soufficts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new voidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)       2         A.8.6 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of rondel       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that sci             |                                                                                       | Consensus |
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| constancy, change, and measurement; evolution, equilibrium, and energy;       2         form and function among scientific disciplines.       2         A.8.1 Develop their understanding of the science themes by using the themes to rame questions about science-related issues and problems       2         A.8.2 Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems       2         A.8.3 Defend explanations and models by collecting and organizing evidence that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new voidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         3.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2                                                            | Students in Wisconsin will understand that there are unifying themes: systems,        |           |
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| imme questions about science-related issues and problems       2         A.8.2 Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems       2         A.8.3 Defend explanations and models by collecting and organizing evidence that upports them and critique explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and neasurement should all be part of these explanations)       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of neadel nordel       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and has scientific understandings have changed over time as new evidence is found.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical sciences       2         B.8.3 Explain how the general rules of science apoly to the develo                      | form and function among scientific disciplines.                                       |           |
| rame questions about science-related issues and problems       2         A.8.2 Describe limitations of science systems and give reasons why specific science themes are included in or excluded from those systems       2         A.8.3 Defend explanations and models by collecting and organizing evidence that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical sciences       2         B.8.3 Explain how the general rules of science apply to the developmen                      | A.8.1 Develop their understanding of the science themes by using the themes to        | 2         |
| accience themes are included in or excluded from those systems       2         A.8.3 Defend explanations and models by collecting and organizing evidence that supports them and critique explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and measurement should all be part of these explanations)       2         A.8.6 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in the earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual nodels and explanations in the earth and space, life and environmental, and physical sciences       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigation                      | frame questions about science-related issues and problems                             | 2         |
| Science themes are included in or excluded from those systems       3         A.8.3 Defend explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and neasurement should all be part of these explanations)       2         A.8.6 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is formed.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and onlysical sciences and identify the people, cultures, and conditions that led to these levelopments       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-maki                      | A.8.2 Describe limitations of science systems and give reasons why specific           | 2         |
| supports them and critique explanations and models by collecting and organizing evidence that conflicts with them       3         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and neasurement should all be part of these explanations)       2         A.8.6 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is formal.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in the earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical sciences and identify the people, cultures, and conditions that led to these levelopments       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2                                                          | science themes are included in or excluded from those systems                         | 2         |
| widence that conflicts with them       2         A.8.4 Collect evidence to show that models developed as explanations for events were (and are) based on the evidence available to scientists at the time       2         A.8.5 Show how models and explanations, based on systems, were changed as new evidence accumulated (the effects of constancy, evolution, change, and neasurement should all be part of these explanations)       2         A.8.5 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         3.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         3.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and physical sciences       2         3.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         3.8.4 Describe types of reasoning and evidence used outside of science to draw.       2                                                                                                                              | A.8.3 Defend explanations and models by collecting and organizing evidence that       |           |
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| A.8.6 Use models and explanations to predict actions and events in the natural world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and onlysical sciences and identify the people, cultures, and conditions that led to these levelopments       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         B.8.4 Describe types of reasoning and evidence used outside of science to draw       2                                                                                                                                                                                                                                                                                                                                                                                    | evidence accumulated (the effects of constancy, evolution, change, and                | 2         |
| world       2         A.8.7 Design real or thought investigations to test the usefulness and limitations of model       3         A.8.7 Design real or thought investigations to test the usefulness and limitations of model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         B.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         B.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and oblysical sciences and identify the people, cultures, and conditions that led to these levelopments       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         B.8.4 Describe types of reasoning and evidence used outside of science to draw.       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | measurement should all be part of these explanations)                                 |           |
| World       3         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.7 Design real or thought investigations to test the usefulness and limitations of a model       3         A.8.8 Use the themes of evolution, equilibrium, and energy to predict future events or changes in the natural world       2         Students in Wisconsin will understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.       2         3.8.1 Describe how scientific knowledge and concepts have changed over time in he earth and space, life and environmental, and physical sciences       2         3.8.2 Identify and describe major changes that have occurred over in conceptual models and explanations in the earth and space, life and environmental, and oblysical sciences and identify the people, cultures, and conditions that led to these levelopments       2         3.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         3.8.4 Describe types of reasoning and evidence used outside of science to draw       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | A.8.6 Use models and explanations to predict actions and events in the natural        | 2         |
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| models and explanations in the earth and space, life and environmental, and physical sciences and identify the people, cultures, and conditions that led to these developments       2         8.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         8.8.4 Describe types of reasoning and evidence used outside of science to draw       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | the earth and space, life and environmental, and physical sciences                    | -         |
| bysical sciences and identify the people, cultures, and conditions that led to these       2         developments       2         B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         B.8.4 Describe types of reasoning and evidence used outside of science to draw       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | B.8.2 Identify and describe major changes that have occurred over in conceptual       |           |
| by sical sciences and identify the people, cultures, and conditions that led to these developments<br>3.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications<br>3.8.4 Describe types of reasoning and evidence used outside of science to draw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                       | 2         |
| B.8.3 Explain how the general rules of science apply to the development and use of evidence in science investigations, model-making, and applications       2         B.8.4 Describe types of reasoning and evidence used outside of science to draw.       2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                       | 2         |
| evidence in science investigations, model-making, and applications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | developments                                                                          |           |
| B 8.4 Describe types of reasoning and evidence used outside of science to draw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | B.8.3 Explain how the general rules of science apply to the development and use of    | 2         |
| 3.8.4 Describe types of reasoning and evidence used outside of science to draw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | evidence in science investigations, model-making, and applications                    | -         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | B.8.4 Describe types of reasoning and evidence used outside of science to draw        | 2         |
| conclusions about the natural world                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | conclusions about the natural world                                                   | 2         |
| B.8.5 Explain ways in which science knowledge is shared, checked, and extended, 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | B.8.5 Explain ways in which science knowledge is shared, checked, and extended,       | 2         |
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| 3.8.6 Explain the ways in which scientific knowledge is useful and also limited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | B.8.6 Explain the ways in which scientific knowledge is useful and also limited       | 2         |
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| Science Inquiry C.8                                                                                                                                                       |   |
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| Students in Wisconsin will investigate questions using scientific methods and                                                                                             |   |
| tools, revise their personal understanding to accommodate knowledge, and                                                                                                  |   |
| communicate these understandings to others.                                                                                                                               |   |
| C.8.1 Identify* questions they can investigate* using resources and equipment they have available                                                                         | 2 |
| C.8.2 Identify* data and locate sources of information including their own records to answer the questions being investigated                                             | 2 |
| C.8.3 Design and safely conduct investigations* that provide reliable quantitative or qualitative data, as appropriate, to answer their questions                         | 3 |
| C.8.4 Use inferences* to help decide possible results of their investigations, use observations to check their inferences                                                 | 2 |
| C.8.5 Use accepted scientific knowledge, models*, and theories* to explain* their results and to raise further questions about their investigations*                      | 2 |
| C.8.6 State what they have learned from investigations*, relating their inferences* to scientific knowledge and to data they have collected                               | 2 |
| C.8.7 Explain* their data and conclusions in ways that allow an audience to understand the questions they selected for investigation* and the answers they have developed | 3 |
| C.8.8 Use computer software and other technologies to organize, process, and present their data                                                                           | 2 |
| C.8.9 Evaluate*, explain*, and defend the validity of questions, hypotheses, and conclusions to their investigations*                                                     | 3 |
| C.8.10 Discuss the importance of their results and implications of their work with peers, teachers, and other adults                                                      | 2 |
| C.8.11 Raise further questions which still need to be answered                                                                                                            | 2 |

| Physical Science D.8                                                                                                                                                                                                                                                                                                   |   |
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| Students in Wisconsin will demonstrate an understanding of the physical and                                                                                                                                                                                                                                            |   |
| chemical properties of matter, the forms and properties of energy, and the                                                                                                                                                                                                                                             |   |
| ways in which matter and energy interact.                                                                                                                                                                                                                                                                              |   |
| D.8.1 Observe, describe, and measure physical and chemical properties of elements<br>and other substances to identify and group them according to properties such as<br>density, melting points, boiling points, conductivity, magnetic attraction, solubility,<br>and reactions to common physical and chemical tests | 2 |
| D.8.2 Use the major ideas of atomic theory and molecular theory to describe physical and chemical interactions among substances, including solids, liquids, and gases                                                                                                                                                  | 2 |
| D.8.3 Understand how chemical interactions and behaviors lead to new substances with different properties.                                                                                                                                                                                                             | 2 |
| D.8.4 While conducting investigations, use the science themes to develop explanations of physical and chemical interactions and energy exchanges                                                                                                                                                                       | 2 |
| D.8.5 While conducting investigations, explain the motion of objects by describing the forces acting on them                                                                                                                                                                                                           | 2 |
| D.8.6 While conducting investigations, explain the motion of objects using concepts of speed, velocity, acceleration, friction, momentum, and changes over time, among others, and apply these concepts and explanations to real-life situations outside the classroom                                                 | 3 |
| D.8.7 While conducting investigations of common physical and chemical interactions occurring in the laboratory and the outside world, use commonly accepted definitions of energy and the idea of energy conservation                                                                                                  | 1 |
| D.8.8 Describe and investigate the properties of light, heat, gravity, radio waves, magnetic fields, electrical fields, and sound waves as they interact with material objects in common situations                                                                                                                    | 2 |
| D.8.9 Explain the behaviors of various forms of energy by using the models of energy transmission, both in the laboratory and in real-life situations in the outside world                                                                                                                                             | 2 |
| D.8.10 Explain how models of the atomic structure of matter have changed over<br>time, including historical models and modern atomic theory                                                                                                                                                                            | 1 |

| Earth and Space Science E.8                                                                                                                                                                                                                                                                |   |
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| Students in Wisconsin will demonstrate an understanding of the structure and systems of earth and other bodies in the universe and of their interactions.                                                                                                                                  |   |
| E.8.1 Using the science themes, explain and predict changes in major features of land, water, and atmospheric systems                                                                                                                                                                      | 2 |
| E.8.2 Describe underlying structures of the earth that cause changes in the earth's surface                                                                                                                                                                                                | 1 |
| E.8.3 Using the science themes during the process of investigation, describe climate, weather, ocean currents, soil movements and changes in the forces acting on the earth                                                                                                                | 1 |
| E.8.4 Using the science themes, analyze the influence living organisms have had on<br>the earth's systems, including their impact on the composition of the atmosphere<br>and the weathering of rocks                                                                                      | 3 |
| E.8.5 Analyze the geologic and life history of the earth, including change over time, using various forms of scientific evidence                                                                                                                                                           | 2 |
| E.8.6 Describe through investigations the use of the earth's resources by humans in<br>both past and current cultures, particularly how changes in the resources used for<br>the past 100 years are the basis for efforts to conserve and recycle renewable and<br>non-renewable resources | 2 |
| E.8.7 Describe the general structure of the solar system, galaxies, and the universe, explaining the nature of the evidence used to develop current models of the universe                                                                                                                 | 2 |
| E.8.8 Using past and current models of the structure of the solar system, explain the daily, monthly, yearly, and long-term cycles of the earth, citing evidence gained from personal observation as well as evidence used by scientists                                                   | 2 |

| Life and Environmental Science F.8                                                                                                                                                                                  |   |
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| Students in Wisconsin will demonstrate an understanding of the<br>characteristics and structures of living things, the processes of life, and how<br>living things interact with one another and their environment. |   |
| F.8.1 Understand the structure and function of cells, organs, tissues, organ systems, and whole organisms                                                                                                           | 1 |
| F.8.2 Show how organisms have adapted structures to match their functions, providing means of encouraging individual and group survival within specific environments                                                | 2 |
| F.8.3 Differentiate between single-celled and multiple-celled organisms (humans) through investigation, comparing the cell functions of specialized cells for each type of organism                                 | 2 |
| F.8.4 Investigate and explain that heredity is comprised of the characteristic traits found in genes within the cell of an organism                                                                                 | 2 |
| F.8.5 Show how different structures both reproduce and pass on characteristics of their group                                                                                                                       | 2 |
| F.8.6 Understand that an organism is regulated both internally and externally                                                                                                                                       | 1 |
| F.8.7 Understand that an organism's behavior evolves through adaptation to its environment                                                                                                                          | 1 |
| F.8.8 Show through investigations how organisms both depend on and contribute to the balance or imbalance of populations and/or ecosystems, which in turn contribute to the total system of life on the planet      | 2 |
| F.8.9 Explain how some of the changes on the earth are contributing to changes in the balance of life and affecting the survival or population growth of certain species                                            | 2 |
| F.8.10 Project how current trends in human resource use and population growth will influence the natural environment, and show how current policies affect those trends.                                            | 3 |

| Science Applications G.8 & Science in Personal and Social Perspectives H.8                   |   |
|----------------------------------------------------------------------------------------------|---|
| Students in Wisconsin will demonstrate an understanding of the relationship                  |   |
| between science and technology and the ways in which that relationship                       |   |
| influences human activities.                                                                 |   |
| G.8.1 Identify* and investigate* the skills people need for a career in science or           |   |
| technology and identify the academic courses that a person pursuing such a career            | 2 |
| would need                                                                                   |   |
| G.8.2 Explain* how current scientific and technological discoveries have an                  |   |
| influence on the work people do and how some of these discoveries also lead to               | 2 |
| new careers                                                                                  |   |
| G.8.3 Illustrate* the impact that science and technology have had, both good and             | 2 |
| bad, on careers, systems, society, environment, and quality of life                          | 2 |
| G.8.4 Propose a design (or re-design) of an applied science model or a machine that          |   |
| will have an impact in the community or elsewhere in the world and show* how the             | 3 |
| design (or re-design) might work, including potential side-effects                           | 5 |
| G.8.5 Investigate* a specific local problem to which there has been a scientific or          |   |
| technological solution, including proposals for alternative courses of action, the           |   |
| choices that were made, reasons for the choices, any new problems created, and               | 3 |
| subsequent community satisfaction                                                            |   |
| G.8.6 Use current texts, encyclopedias, source books, computers, experts, the                |   |
| popular press, or other relevant sources to identify <sup>*</sup> examples of how scientific | 1 |
| discoveries have resulted in new technology                                                  | 1 |
|                                                                                              |   |
| G.8.7 Show* evidence* of how science and technology are interdependent, using                | 2 |
| some examples drawn from personally conducted investigations*                                |   |
| Students in Wisconsin will use scientific information and skills to make                     |   |
| decisions about themselves, Wisconsin, and the world in which they live.                     |   |
| H.8.1 Evaluate the scientific evidence used in various media (for example,                   |   |
| television, radio, Internet, popular press, and scientific journals) to address a social     | 3 |
| issue, using criteria of accuracy, logic, bias, relevance of data, and credibility of        |   |
| sources                                                                                      |   |
| H.8.2 Present a scientific solution to a problem involving the earth and space, life         | 2 |
| and environmental, or physical sciences and participate in a consensus-building              | 2 |
| discussion to arrive at a group decision                                                     |   |
| H.8.3 Understand the consequences of decisions affecting personal health and                 | 1 |
| safety                                                                                       |   |

Appendix C

**Summary Tables** 

|        |                      |       | Hits                  |                          |                       |                       |                       |                          |                       |             |
|--------|----------------------|-------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-------------|
|        | No of                |       |                       | U                        | nder                  |                       | At                    | Al                       | oove                  | DOK         |
| Domain | No. of<br>Standards‡ | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent<br>At | Standard<br>Deviation | Mean<br>Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 8                    | 11.75 | 5.39                  | 40%                      | 0.22                  | 35%                   | 0.18                  | 25%                      | 0.16                  | Yes         |
| RI     | 9                    | 15.00 | 10.90                 | 15%                      | 0.09                  | 70%                   | 0.18                  | 14%                      | 0.15                  | Yes         |
| W      | 18                   | 13.63 | 4.72                  | 27%                      | 0.14                  | 62%                   | 0.15                  | 12%                      | 0.13                  | Yes         |
| SL     | 2                    | 7.38  | 0.74                  | 28%                      | 0.25                  | 68%                   | 0.22                  | 4%                       | 0.10                  | Yes         |
| L      | 31                   | 5.88  | 2.30                  | 2%                       | 0.06                  | 98%                   | 0.06                  | 0%                       | 0.00                  | Yes         |
| Total  | 68                   | 10.65 | 3.89                  | 23%                      | 0.15                  | 67%                   | 67%                   | 11%                      | 0.10                  |             |

#### Table 3C1E: Summary of Depth-of-Knowledge Consistency

| Table 3C2E: | Summary | of | Categorical | Concurrence |
|-------------|---------|----|-------------|-------------|
|-------------|---------|----|-------------|-------------|

| Domain | No. of<br>Standards‡ | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                      | 1            | 1                   | 12.5%                      |               |                       |                            |
| RL     | 8                    | 2            | 4                   | 50%                        | 11.75         | 5.39                  | Yes                        |
|        |                      | 3            | 3                   | 37.5%                      |               |                       |                            |
|        |                      | 1            | 2                   | 22%                        |               |                       |                            |
| RI     | 9                    | 2            | 4                   | 45%                        | 15.00         | 10.90                 | Yes                        |
|        | _                    | 3            | 3                   | 33%                        |               |                       |                            |
| W      | 18                   | 1            | 2                   | 11%                        | 13.63         | 4.72                  | Yes                        |
|        |                      | 2            | 8                   | 44.5%                      |               |                       |                            |
|        |                      | 3            | 8                   | 44.5%                      |               |                       |                            |
|        | 2                    | 1            | 0                   | 0%                         | 7.38          | 0.74                  | Yes                        |
| SL     |                      | 2            | 2                   | 100%                       |               |                       |                            |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
|        |                      | 1            | 22                  | 71%                        |               | 2.30                  |                            |
| L      | 31                   | 2            | 9                   | 29%                        | 5.88          |                       | Yes*                       |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
|        | 68                   | 1            | 27                  | 40%                        |               |                       |                            |
| Total  |                      | 2            | 27                  | 40%                        | 10.65         | 3.88                  |                            |
|        |                      | 3            | 14                  | 20%                        |               |                       |                            |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

|                        |                        | Hits  |       |                                  |             |                            |                       |                                      |                       |              |
|------------------------|------------------------|-------|-------|----------------------------------|-------------|----------------------------|-----------------------|--------------------------------------|-----------------------|--------------|
|                        | . No. of               |       | rnus  | No. of St                        | andards Hit | % of                       | Range                 |                                      |                       |              |
| Domain                 | Standards <sup>‡</sup> |       |       | dards <sup>‡</sup> Mean Standard |             | Mean<br>Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives<br>Hit | Standard<br>Deviation | of Knowledge |
| RL                     | 8                      | 11.75 | 5.39  | 4.63                             | 1.06        | 58%                        | 0.13                  | Yes                                  |                       |              |
| RI                     | 9                      | 15.00 | 10.90 | 5.38                             | 1.51        | 60%                        | 0.17                  | Yes                                  |                       |              |
| $\mathbf{W}^{\dagger}$ | 6                      | 13.63 | 4.72  | 2.75                             | 1.16        | 46%                        | 0.10                  | Yes*                                 |                       |              |
| SL                     | 2                      | 7.38  | 0.74  | 1.88                             | 0.35        | 94%                        | 0.18                  | Yes                                  |                       |              |
| $\mathbf{L}^{\dagger}$ | 6                      | 5.88  | 2.30  | 2.50                             | 0.76        | 42%                        | 0.32                  | Yes*                                 |                       |              |
| Total                  | 31                     | 10.65 | 3.89  | 3.43                             | 0.97        | 51%                        | 0.12                  |                                      |                       |              |

#### Table 3C3E: Summary of Range-of-Knowledge Correspondence

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

<sup>†</sup>As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 3.W.2.a) which were then collapsed to the anchor-level standards (e.g., 3.W.2) for analysis of the range-of-knowledge correspondence criterion. <sup>‡</sup> Indicates number of standards within a domain to which an item could be written.

#### Table 3C4E: Summary of Balance of Representation

|        |                               | Percent | of Total Hits         |      | Index                 | Balance of     |  |
|--------|-------------------------------|---------|-----------------------|------|-----------------------|----------------|--|
| Domain | No. of Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |  |
| RL     | 8                             | 21.91%  | 5.39                  | 0.70 | 0.10                  | Yes            |  |
| RI     | 9                             | 27.97%  | 10.90                 | 0.77 | 0.06                  | Yes            |  |
| W      | 18                            | 25.41%  | 4.72                  | 0.71 | 0.04                  | Yes            |  |
| SL     | 2                             | 13.75%  | 0.74                  | 0.85 | 0.15                  | Yes            |  |
| L      | 31                            | 10.96%  | 2.30                  | 0.84 | 0.05                  | Yes            |  |
| Total  | 68                            | 20.00%  | 4.81                  | 0.77 | 0.08                  |                |  |

|        |                        |       | Hits                  |                          |                       |                    |                       |                       |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | e                     | DOK         |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 8                      | 15.50 | 6.93                  | 22%                      | 0.16                  | 69%                | 0.24                  | 9%                    | 0.17                  | Yes         |
| RI     | 9                      | 13.00 | 8.07                  | 18%                      | 0.21                  | 75%                | 0.23                  | 7%                    | 0.09                  | Yes         |
| W      | 23                     | 12.88 | 2.74                  | 12%                      | 0.09                  | 72%                | 0.19                  | 16%                   | 0.19                  | Yes         |
| SL     | 2                      | 7.88  | 3.44                  | 18%                      | 0.24                  | 82%                | 0.24                  | 0%                    | 0.00                  | Yes         |
| L      | 26                     | 10.00 | 1.93                  | 7%                       | 0.08                  | 84%                | 0.12                  | 9%                    | 0.11                  | Yes         |
| Total  | 68                     | 11.85 | 2.71                  | 16%                      | 0.15                  | 76%                | 0.20                  | 8%                    | 0.11                  |             |

#### Table 4C1E: Summary of Depth-of-Knowledge Consistency

#### Table 4C2E: Summary of Categorical Concurrence

| Domain | No. of<br>Standards‡ | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
| RL     | 8                    | 1            | 0                   | 0%                         | 15.50         | 6.93                  | Yes                        |
|        |                      | 2            | 5                   | 62.5%                      |               |                       |                            |
|        |                      | 3            | 3                   | 37.5%                      |               |                       |                            |
| RI     | 9                    | 1            | 0                   | 0%                         | 13.00         | 8.07                  | Yes                        |
|        |                      | 2            | 7                   | 78%                        |               |                       |                            |
|        |                      | 3            | 2                   | 22%                        |               |                       |                            |
| W      | 23                   | 1            | 2                   | 9%                         | 12.88         | 2.75                  | Yes                        |
|        |                      | 2            | 9                   | 39%                        |               |                       |                            |
|        |                      | 3            | 12                  | 52%                        |               |                       |                            |
| SL     | 2                    | 1            | 0                   | 0%                         | 7.88          | 3.44                  | Yes                        |
|        |                      | 2            | 2                   | 100%                       |               |                       |                            |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
| L      | 26                   | 1            | 14                  | 54%                        | 10.00         | 1.93                  | Yes                        |
|        |                      | 2            | 12                  | 46%                        |               |                       |                            |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
| Total  | 68                   | 1            | 16                  | 24%                        | 11.85         | 2.71                  |                            |
|        |                      | 2            | 35                  | 51%                        |               |                       |                            |
|        |                      | 3            | 17                  | 25%                        |               |                       |                            |

|                        |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|------------------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain                 | No. of                 | 111(5 |                       | No. of Standar          | ds Hit                | % of Tota                         | ıl                    | Range        |
| Domain                 | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| RL                     | 8                      | 15.50 | 6.93                  | 5.13                    | 0.35                  | 64%                               | 0.04                  | Yes          |
| RI                     | 9                      | 13.00 | 8.07                  | 5.13                    | 1.13                  | 57%                               | 0.13                  | Yes          |
| $\mathbf{W}^{\dagger}$ | 7                      | 12.88 | 2.75                  | 3.88                    | 1.36                  | 55%                               | 0.19                  | Yes          |
| SL                     | 2                      | 7.88  | 3.44                  | 1.88                    | 0.35                  | 94%                               | 0.18                  | Yes          |
| $\mathbf{L}^{\dagger}$ | 6                      | 10.00 | 1.93                  | 3.88                    | 1.13                  | 65%                               | 0.19                  | Yes          |
| Total                  | 32                     | 11.73 | 2.63                  | 5.03                    | 1.07                  | 54%                               | 0.10                  |              |

#### Table 4C3E: Summary of Range-of-Knowledge Correspondence

†As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 4.W.2.a) which were then collapsed to the anchor-level standards (e.g., 4.W.2) for analysis of the range-of-knowledge correspondence criterion. ‡ Indicates number of standards within a domain to which an item could be written.

#### Table 4C4E: Summary of Balance of Representation

|        |                               | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|-------------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | No. of Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RL     | 8                             | 26.16%  | 6.93                  | 0.77 | 0.07                  | Yes            |
| RI     | 9                             | 21.94%  | 8.07                  | 0.86 | 0.11                  | Yes            |
| W      | 23                            | 21.73%  | 2.75                  | 0.78 | 0.10                  | Yes            |
| SL     | 2                             | 13.29%  | 3.44                  | 0.88 | 0.10                  | Yes            |
| L      | 26                            | 16.88%  | 1.93                  | 0.81 | 0.05                  | Yes            |
| Total  | 68                            | 20.00%  | 4.62                  | 0.82 | 0.09                  |                |

|        |                        |       | Hits                  |                          | l                     | Percent of Que     | stions at DO          | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | e                     | DOK         |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 8                      | 16.50 | 6.44                  | 11%                      | 0.11                  | 76%                | 0.08                  | 14%                   | 0.07                  | Yes         |
| RI     | 9                      | 14.88 | 6.79                  | 15%                      | 0.16                  | 79%                | 0.14                  | 6%                    | 0.08                  | Yes         |
| W      | 23                     | 16.25 | 2.19                  | 26%                      | 0.09                  | 63%                | 0.11                  | 11%                   | 0.16                  | Yes         |
| SL     | 2                      | 8.88  | 1.46                  | 9%                       | 0.20                  | 88%                | 0.20                  | 3%                    | 0.09                  | Yes         |
| L      | 24                     | 9.88  | 4.58                  | 18%                      | 0.10                  | 66%                | 0.13                  | 16%                   | 0.16                  | Yes         |
| Total  | 66                     | 13.28 | 2.42                  | 16%                      | 0.13                  | 74%                | 74%                   | 10%                   | 0.11                  |             |

## Table 5C1E: Summary of Depth-of-Knowledge Consistency

## Table 5C2E: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation                                                      | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|----------------------------------------------------------------------------|----------------------------|
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| RL     | 8                                | 2            | 5                   | 62.5%                      | 16.50         | 6.44                                                                       | Yes                        |
|        |                                  | 3            | 3                   | 37.5%                      |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| RI     | 9                                | 2            | 5                   | 56%                        | 14.88         | 6.79                                                                       | Yes                        |
|        |                                  | 3            | 4                   | 44%                        |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| W      | 23                               | 2            | 11                  | 48%                        | 16.25         | 2.19                                                                       | Yes                        |
|        |                                  | 3            | 12                  | 52%                        |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| SL     | 2                                | 2            | 2                   | 100%                       | 8.88          | 1.46                                                                       | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                                                                            |                            |
|        |                                  | 1            | 11                  | 46%                        |               |                                                                            |                            |
| L      | 24                               | 2            | 12                  | 50%                        | 9.88          | 4.58                                                                       | Yes                        |
|        |                                  | 3            | 1                   | 4%                         |               |                                                                            |                            |
|        |                                  | 1            | 11                  | 17%                        |               |                                                                            |                            |
| Total  | 66                               | 2            | 35                  | 53%                        | 13.28         | 2.42                                                                       |                            |
|        |                                  | 3            | 20                  | 30%                        |               | Deviation         6.44         6.79         2.19         1.46         4.58 |                            |

|                        |                        |                         | Hits |                         | Range of              | Standards                         |                       |              |  |
|------------------------|------------------------|-------------------------|------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|--|
| Domain                 | No. of                 | 11165                   |      | No. of Standar          | ds Hit                | % of Tota                         | % of Total            |              |  |
| Domani                 | Standards <sup>‡</sup> | Mean Standard Deviation |      | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |  |
| RL                     | 8                      | 16.50                   | 6.44 | 5.88                    | 0.83                  | 73%                               | 0.10                  | Yes          |  |
| RI                     | 9                      | 14.88                   | 6.79 | 6.00                    | 1.41                  | 67%                               | 0.16                  | Yes          |  |
| $\mathbf{W}^{\dagger}$ | 7                      | 16.25                   | 2.19 | 4.63                    | 1.30                  | 66%                               | 0.19                  | Yes          |  |
| SL                     | 2                      | 8.88                    | 1.46 | 2.00                    | 0.00                  | 100%                              | 0.00                  | Yes          |  |
| $\mathbf{L}^{\dagger}$ | 6                      | 9.88                    | 4.58 | 3.88                    | 0.99                  | 65%                               | 0.17                  | Yes          |  |
| Total                  | 32                     | 13.28                   | 2.42 | 6.00                    | 1.22                  | 62%                               | 0.08                  |              |  |

#### Table 5C3E: Summary of Range-of-Knowledge Correspondence

†As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 5.W.2.a) which were then collapsed to the anchor-level standards (e.g., 5.W.2) for analysis of the range-of-knowledge correspondence criterion. ‡ Indicates number of standards within a domain to which an item could be written.

#### Table 5C4E: Summary of Balance of Representation

|        |                               | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|-------------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | No. of Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RL     | 8                             | 24.86%  | 6.44                  | 0.78 | 0.06                  | Yes            |
| RI     | 9                             | 22.41%  | 6.79                  | 0.78 | 0.05                  | Yes            |
| W      | 23                            | 24.48%  | 2.19                  | 0.74 | 0.06                  | Yes            |
| SL     | 2                             | 13.37%  | 1.46                  | 0.86 | 0.13                  | Yes            |
| L      | 24                            | 14.88%  | 4.58                  | 0.84 | 0.03                  | Yes            |
| Total  | 66                            | 20.00%  | 4.29                  | 0.80 | 0.07                  |                |

|        |                        |       | Hits                  |                          | ]                     | Percent of Que     | estions at DO         | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | DOK                   |             |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 7                      | 11.00 | 1.85                  | 47%                      | 0.10                  | 49%                | 0.10                  | 4%                    | 0.07                  | Yes         |
| RI     | 8                      | 15.00 | 4.96                  | 49%                      | 0.09                  | 42%                | 0.11                  | 8%                    | 0.05                  | Yes         |
| W      | 25                     | 18.25 | 4.20                  | 38%                      | 0.24                  | 57%                | 0.26                  | 5%                    | 0.07                  | Yes         |
| SL     | 2                      | 10.00 | 3.93                  | 70%                      | 0.27                  | 30%                | 0.27                  | 0%                    | 0.00                  | Weak        |
| L      | 22                     | 14.50 | 1.77                  | 16%                      | 0.12                  | 66%                | 0.11                  | 18%                   | 0.09                  | Yes         |
| Total  | 64                     | 13.75 | 1.45                  | 44%                      | 0.16                  | 49%                | 49%                   | 7%                    | 0.06                  |             |

## Table 6C1E: Summary of Depth-of-Knowledge Consistency

## Table 6C2E: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation                                                      | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|----------------------------------------------------------------------------|----------------------------|
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| RL     | 7                                | 2            | 3                   | 43%                        | 11.00         | 1.85                                                                       | Yes                        |
|        |                                  | 3            | 4                   | 57%                        |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| RI     | 8                                | 2            | 2                   | 25%                        | 15.00         | 4.96                                                                       | Yes                        |
|        |                                  | 3            | 6                   | 75%                        |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| W      | 25                               | 2            | 4                   | 16%                        | 18.25         | 4.20                                                                       | Yes                        |
|        |                                  | 3            | 21                  | 84%                        |               |                                                                            |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                            |                            |
| SL     | 2                                | 2            | 0                   | 0%                         | 10.00         | 3.93                                                                       | Yes                        |
|        |                                  | 3            | 2                   | 100%                       |               |                                                                            |                            |
|        |                                  | 1            | 7                   | 32%                        |               |                                                                            |                            |
| L      | 22                               | 2            | 12                  | 54.5%                      | 14.50         | 1.77                                                                       | Yes                        |
|        |                                  | 3            | 3                   | 13.5%                      |               |                                                                            |                            |
|        |                                  | 1            | 7                   | 11%                        |               |                                                                            |                            |
| Total  | 64                               | 2            | 21                  | 33%                        | 13.75         | 1.45                                                                       |                            |
|        |                                  | 3            | 36                  | 56%                        | 1             | Deviation         1.85         4.96         4.20         3.93         1.77 |                            |

|                        |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|------------------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain                 | No. of                 | 11115 |                       | No. of Standar          | ds Hit                | % of Tota                         | al                    | Range        |
| Domain                 | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| RL                     | 7                      | 11.00 | 1.85                  | 5.38                    | 1.06                  | 77%                               | 0.15                  | Yes          |
| RI                     | 8                      | 15.00 | 4.96                  | 7.13                    | 0.99                  | 89%                               | 0.12                  | Yes          |
| $\mathbf{W}^{\dagger}$ | 7                      | 18.25 | 4.20                  | 5.88                    | 0.35                  | 84%                               | 0.05                  | Yes          |
| SL                     | 2                      | 10.00 | 3.93                  | 2.00                    | 0.00                  | 100%                              | 0.00                  | Yes          |
| $\mathbf{L}^{\dagger}$ | 7                      | 14.50 | 1.77                  | 4.50                    | 1.20                  | 75%                               | 0.20                  | Yes          |
| Total                  | 31                     | 13.75 | 1.45                  | 4.98                    | 0.72                  | 85%                               | 0.11                  |              |

#### Table 6C3E: Summary of Range-of-Knowledge Correspondence

\*As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 6.W.2.a) which were then collapsed to the anchor-level standards (e.g., 6.W.2) for analysis of the range-of-knowledge correspondence criterion. ‡ Indicates number of standards within a domain to which an item could be written.

#### Table 6C4E: Summary of Balance of Representation

|        |                   | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|-------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | No. of Standards‡ | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RL     | 7                 | 16.00%  | 1.85                  | 0.84 | 0.05                  | Yes            |
| RI     | 8                 | 21.82%  | 4.96                  | 0.79 | 0.05                  | Yes            |
| W      | 25                | 26.55%  | 4.20                  | 0.74 | 0.03                  | Yes            |
| SL     | 2                 | 14.55%  | 3.93                  | 0.88 | 0.07                  | Yes            |
| L      | 22                | 21.09%  | 1.77                  | 0.82 | 0.03                  | Yes            |
| Total  | 64                | 20.00%  | 3.34                  | 0.81 | 0.04                  |                |

|        |                        |       | Hits                  |                          | l                     | Percent of Que     | stions at DO          | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | DOK                   |             |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 7                      | 10.25 | 1.58                  | 54%                      | 0.28                  | 46%                | 0.28                  | 0%                    | 0.00                  | Yes*        |
| RI     | 8                      | 12.63 | 3.70                  | 60%                      | 0.22                  | 38%                | 0.19                  | 2%                    | 0.05                  | Yes*        |
| W      | 25                     | 21.00 | 4.31                  | 36%                      | 0.28                  | 64%                | 0.28                  | 0%                    | 0.00                  | Yes         |
| SL     | 2                      | 8.25  | 2.05                  | 59%                      | 0.32                  | 41%                | 0.32                  | 0%                    | 0.00                  | Yes*        |
| L      | 19                     | 11.13 | 5.19                  | 29%                      | 0.24                  | 52%                | 0.16                  | 19%                   | 0.14                  | Yes         |
| Total  | 61                     | 12.65 | 1.52                  | 48%                      | 0.27                  | 48%                | 48%                   | 4%                    | 0.04                  |             |

## Table 7C1E: Summary of Depth-of-Knowledge Consistency

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

## Table 7C2E: Summary of Categorical Concurrence

| Domain       | No. of<br>Standards‡ | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation                                    | Categorical<br>Concurrence |
|--------------|----------------------|--------------|---------------------|----------------------------|---------------|----------------------------------------------------------|----------------------------|
|              |                      | 1            | 0                   | 0%                         |               |                                                          |                            |
| RL           | 7                    | 2            | 1                   | 14%                        | 10.25         | 1.58                                                     | Yes                        |
|              |                      | 3            | 6                   | 86%                        |               |                                                          |                            |
|              |                      | 1            | 0                   | 0%                         |               |                                                          |                            |
| RI           | 8                    | 2            | 1                   | 12.5%                      | 12.63         | 3.70                                                     | Yes                        |
|              |                      | 3            | 7                   | 87.5%                      |               |                                                          |                            |
|              |                      | 1            | 0                   | 0%                         |               |                                                          |                            |
| $\mathbf{W}$ | 25                   | 2            | 0                   | 0%                         | 21.00         | 4.31                                                     | Yes                        |
|              |                      | 3            | 25                  | 100%                       |               |                                                          |                            |
|              |                      | 1            | 0                   | 0%                         |               |                                                          |                            |
| SL           | 2                    | 2            | 0                   | 0%                         | 8.25          | 2.05                                                     | Yes                        |
|              |                      | 3            | 2                   | 100%                       |               |                                                          |                            |
|              |                      | 1            | 4                   | 21%                        |               |                                                          |                            |
| L            | 19                   | 2            | 12                  | 63%                        | 11.13         | 5.19                                                     | Yes                        |
|              |                      | 3            | 3                   | 16%                        |               |                                                          |                            |
|              |                      | 1            | 4                   | 6.5%                       |               |                                                          |                            |
| Total        | 61                   | 2            | 14                  | 23%                        | 12.65         | 1.52                                                     |                            |
|              |                      | 3            | 43                  | 70.5%                      |               | 1.58         3.70         4.31         2.05         5.19 |                            |

|                        |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|------------------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain                 | Domain No. of          |       | 11115                 | No. of Standards Hit    |                       | % of Tota                         | Range                 |              |
| Domain                 | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| RL                     | 7                      | 10.25 | 1.58                  | 5.00                    | 0.00                  | 71%                               | 0.00                  | Yes          |
| RI                     | 8                      | 12.63 | 3.70                  | 6.00                    | 0.53                  | 75%                               | 0.07                  | Yes          |
| $\mathbf{W}^{\dagger}$ | 7                      | 21.00 | 4.31                  | 6.13                    | 0.83                  | 88%                               | 0.12                  | Yes          |
| SL                     | 2                      | 8.25  | 2.05                  | 1.88                    | 0.35                  | 94%                               | 0.18                  | Yes          |
| L†                     | 6                      | 11.13 | 5.19                  | 4.00                    | 1.69                  | 67%                               | 0.28                  | Yes          |
| Total                  | 30                     | 12.65 | 1.52                  | 6.20                    | 0.98                  | 64%                               | 0.09                  |              |

#### Table 7C3E: Summary of Range-of-Knowledge Correspondence

\*As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 7.W.2.a) which were then collapsed to the anchor-level standards (e.g., 7.W.2) for analysis of the range-of-knowledge correspondence criterion. ‡ Indicates number of standards within a domain to which an item could be written.

#### Table 7C4E: Summary of Balance of Representation

|        |                   | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|-------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | No. of Standards‡ | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RL     | 7                 | 16.21%  | 1.58                  | 0.82 | 0.07                  | Yes            |
| RI     | 8                 | 19.96%  | 3.70                  | 0.78 | 0.04                  | Yes            |
| W      | 25                | 33.20%  | 4.31                  | 0.76 | 0.03                  | Yes            |
| SL     | 2                 | 13.04%  | 2.05                  | 0.86 | 0.13                  | Yes            |
| L      | 19                | 17.59%  | 5.19                  | 0.79 | 0.09                  | Yes            |
| Total  | 61                | 20.00%  | 3.37                  | 0.80 | 0.07                  |                |

|        |                        |       | Hits                  |                          | l                     | Percent of Que     | stions at DO          | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | Α                  | t                     | Abov                  | e                     | DOK         |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RL     | 7                      | 9.38  | 1.41                  | 59%                      | 0.27                  | 41%                | 0.27                  | 0%                    | 0.00                  | Yes*        |
| RI     | 8                      | 14.13 | 2.64                  | 60%                      | 0.24                  | 40%                | 0.24                  | 0%                    | 0.00                  | Yes*        |
| W      | 25                     | 20.13 | 3.64                  | 37%                      | 0.19                  | 63%                | 0.19                  | 0%                    | 0.00                  | Yes         |
| SL     | 2                      | 5.25  | 2.38                  | 48%                      | 0.30                  | 52%                | 0.30                  | 0%                    | 0.00                  | Yes         |
| L      | 21                     | 8.50  | 3.42                  | 12%                      | 0.18                  | 76%                | 0.17                  | 12%                   | 0.11                  | Yes         |
| Total  | 63                     | 11.48 | 0.89                  | 43%                      | 0.24                  | 54%                | 54%                   | 2%                    | 0.02                  |             |

## Table 8C1E: Summary of Depth-of-Knowledge Consistency

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

## Table 8C2E: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation                                    | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|----------------------------------------------------------|----------------------------|
|        |                                  | 1            | 0                   | 0%                         |               |                                                          |                            |
| RL     | 7                                | 2            | 0                   | 0%                         | 9.38          | 1.41                                                     | Yes                        |
|        |                                  | 3            | 7                   | 100%                       |               |                                                          |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                          |                            |
| RI     | 8                                | 2            | 0                   | 0%                         | 14.13         | 2.64                                                     | Yes                        |
|        |                                  | 3            | 8                   | 100%                       |               |                                                          |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                          |                            |
| W      | 25                               | 2            | 0                   | 0%                         | 20.13         | 3.64                                                     | Yes                        |
|        |                                  | 3            | 25                  | 100%                       |               | <b>Deviation</b> 1.41 2.64                               |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                                                          |                            |
| SL     | 2                                | 2            | 0                   | 0%                         | 5.25          | 2.38                                                     | Yes*                       |
|        |                                  | 3            | 2                   | 100%                       |               |                                                          |                            |
|        |                                  | 1            | 5                   | 24%                        |               |                                                          |                            |
| L      | 21                               | 2            | 14                  | 66.5%                      | 8.50          | 3.42                                                     | Yes                        |
|        |                                  | 3            | 2                   | 9.5%                       |               |                                                          |                            |
|        |                                  | 1            | 5                   | 8%                         |               |                                                          |                            |
| Total  | 63                               | 2            | 14                  | 22%                        | 11.48         | 0.89                                                     |                            |
|        |                                  | 3            | 44                  | 70%                        |               | 1.41         2.64         3.64         2.38         3.42 |                            |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

|                        |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|------------------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain                 | Domain No. of          |       | 11115                 | No. of Standards Hit    |                       | % of Tota                         | Range                 |              |
| Domain                 | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| RL                     | 7                      | 9.38  | 1.41                  | 4.75                    | 0.89                  | 68%                               | 0.13                  | Yes          |
| RI                     | 8                      | 14.13 | 2.64                  | 6.13                    | 0.83                  | 77%                               | 0.10                  | Yes          |
| $\mathbf{W}^{\dagger}$ | 7                      | 20.13 | 3.64                  | 5.13                    | 0.64                  | 73%                               | 0.09                  | Yes          |
| SL                     | 2                      | 5.25  | 2.38                  | 1.75                    | 0.46                  | 88%                               | 0.23                  | Yes          |
| $\mathbf{L}^{\dagger}$ | 6                      | 8.50  | 3.42                  | 3.63                    | 1.92                  | 60%                               | 0.32                  | Yes          |
| Total                  | 31                     | 11.48 | 0.89                  | 6.08                    | 1.20                  | 62%                               | 0.13                  |              |

#### Table 8C3E: Summary of Range-of-Knowledge Correspondence

\*As stated earlier in the description of the alignment study procedure for this study, for these two ELA domains, data were collected at the most detailed standard level (e.g., 8.W.2.a) which were then collapsed to the anchor-level standards (e.g., 8.W.2) for analysis of the range-of-knowledge correspondence criterion. ‡ Indicates number of standards within a domain to which an item could be written.

#### Table 8C4E: Summary of Balance of Representation

|        |                               | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|-------------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | No. of Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RL     | 7                             | 16.34%  | 1.41                  | 0.79 | 0.09                  | Yes            |
| RI     | 8                             | 24.62%  | 2.64                  | 0.78 | 0.03                  | Yes            |
| W      | 25                            | 35.08%  | 3.64                  | 0.71 | 0.04                  | Yes            |
| SL     | 2                             | 9.15%   | 2.38                  | 0.95 | 0.06                  | Yes            |
| L      | 21                            | 14.81%  | 3.42                  | 0.84 | 0.08                  | Yes            |
| Total  | 63                            | 20.00%  | 2.70                  | 0.81 | 0.06                  |                |

|        |                        |       | Hits                  |                          | I                     | Percent of Que     | estions at DO         | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | DOK                   |             |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| OA     | 9                      | 14.63 | 3.42                  | 14%                      | 0.12                  | 59%                | 0.15                  | 27%                   | 0.21                  | Yes         |
| NBT    | 3                      | 7.75  | 1.58                  | 0%                       | 0.00                  | 60%                | 0.23                  | 40%                   | 0.23                  | Yes         |
| NF     | 9                      | 12.75 | 2.49                  | 30%                      | 0.20                  | 52%                | 0.15                  | 18%                   | 0.16                  | Yes         |
| MD     | 14                     | 9.63  | 2.50                  | 23%                      | 0.12                  | 65%                | 0.19                  | 12%                   | 0.19                  | Yes         |
| G      | 2                      | 5.63  | 1.30                  | 62%                      | 0.26                  | 36%                | 0.26                  | 2%                    | 0.06                  | Weak        |
| Total  | 37                     | 10.08 | 0.84                  | 26%                      | 0.14                  | 54%                | 54%                   | 20%                   | 0.17                  |             |

## Table 3C1M: Summary of Depth-of-Knowledge Consistency

Table 3C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                                  | 1            | 5                   | 56%                        |               |                       |                            |
| OA     | 9                                | 2            | 4                   | 44%                        | 14.63         | 3.42                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 3                   | 100%                       |               |                       |                            |
| NBT    | 3                                | 2            | 0                   | 0%                         | 7.75          | 1.58                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 3                   | 33%                        |               |                       |                            |
| NF     | 9                                | 2            | 5                   | 56%                        | 12.75         | 2.49                  | Yes                        |
|        |                                  | 3            | 1                   | 11%                        |               |                       |                            |
|        |                                  | 1            | 4                   | 29%                        |               |                       |                            |
| MD     | 14                               | 2            | 9                   | 64%                        | 9.63          | 2.50                  | Yes                        |
|        |                                  | 3            | 1                   | 7%                         |               |                       |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                       |                            |
| G      | 2                                | 2            | 2                   | 100%                       | 5.63          | 1.30                  | Yes*                       |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 15                  | 41%                        |               |                       |                            |
| Total  | 37                               | 2            | 20                  | 54%                        | 10.08         | 0.84                  |                            |
|        |                                  | 3            | 2                   | 5%                         |               |                       |                            |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

|               |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|---------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain No. of |                        | 11115 |                       | No. of Standards Hit    |                       | % of Tota                         | Range                 |              |
| Domain        | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| OA            | 9                      | 14.63 | 3.42                  | 7.63                    | 0.92                  | 85%                               | 0.10                  | Yes          |
| NBT           | 3                      | 7.75  | 1.58                  | 2.63                    | 0.52                  | 88%                               | 0.17                  | Yes          |
| NF            | 9                      | 12.75 | 2.49                  | 5.00                    | 0.76                  | 56%                               | 0.08                  | Yes          |
| MD            | 14                     | 9.63  | 2.50                  | 7.38                    | 1.77                  | 53%                               | 0.13                  | Yes          |
| G             | 2                      | 5.63  | 1.30                  | 1.75                    | 0.46                  | 88%                               | 0.23                  | Yes          |
| Total         | 37                     | 10.08 | 0.84                  | 4.88                    | 0.88                  | 74%                               | 0.14                  |              |

#### Table 3C3M: Summary of Range-of-Knowledge Correspondence

‡ Indicates number of standards within a domain to which an item could be written.

#### Table 3C4M: Summary of Balance of Representation

|        | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| OA     | 9                      | 29.03%  | 3.42                  | 0.74 | 0.07                  | Yes            |
| NBT    | 3                      | 15.38%  | 1.58                  | 0.87 | 0.10                  | Yes            |
| NF     | 9                      | 25.31%  | 2.49                  | 0.68 | 0.03                  | Yes*           |
| MD     | 14                     | 19.11%  | 2.50                  | 0.84 | 0.02                  | Yes            |
| G      | 2                      | 11.17%  | 1.30                  | 0.90 | 0.10                  | Yes            |
| Total  | 37                     | 20.00%  | 2.26                  | 0.81 | 0.06                  |                |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

|        |                        |       | Hits                  |                          | Percent of Questions at DOK Level |                    |                       |                       |                       |             |  |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|--|
|        | No. of                 |       |                       | U                        | nder                              | А                  | t                     | Abov                  | DOK                   |             |  |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation             | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |  |
| OA     | 5                      | 12.25 | 1.75                  | 7%                       | 0.05                              | 84%                | 0.13                  | 9%                    | 0.10                  | Yes         |  |
| NBT    | 6                      | 11.13 | 1.89                  | 5%                       | 0.07                              | 74%                | 0.08                  | 21%                   | 0.08                  | Yes         |  |
| NF     | 14                     | 12.38 | 2.26                  | 32%                      | 0.18                              | 54%                | 0.13                  | 13%                   | 0.13                  | Yes         |  |
| MD     | 9                      | 11.00 | 1.85                  | 5%                       | 0.05                              | 87%                | 0.14                  | 8%                    | 0.12                  | Yes         |  |
| G      | 3                      | 7.13  | 0.64                  | 26%                      | 0.14                              | 67%                | 0.12                  | 7%                    | 0.08                  | Yes         |  |
| Total  | 37                     | 10.78 | 0.61                  | 15%                      | 0.10                              | 73%                | 73%                   | 12%                   | 0.10                  |             |  |

## Table 4C1M: Summary of Depth-of-Knowledge Consistency

 Table 4C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                                  | 1            | 1                   | 20%                        |               |                       |                            |
| OA     | 5                                | 2            | 4                   | 80%                        | 12.25         | 1.75                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 4                   | 67%                        |               |                       |                            |
| NBT    | 6                                | 2            | 2                   | 33%                        | 11.13         | 1.89                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 6                   | 43%                        |               |                       |                            |
| NF     | 14                               | 2            | 8                   | 57%                        | 12.38         | 2.26                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 5                   | 56%                        |               |                       |                            |
| MD     | 9                                | 2            | 4                   | 44%                        | 11.00         | 1.85                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 1                   | 33%                        |               |                       |                            |
| G      | 3                                | 2            | 2                   | 67%                        | 7.13          | 0.64                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         | 7             |                       |                            |
|        |                                  | 1            | 17                  | 46%                        |               |                       |                            |
| Total  | 37                               | 2            | 20                  | 54%                        | 10.78         | 0.61                  |                            |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |

|               |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|---------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain No. of |                        | 11115 |                       | No. of Standards Hit    |                       | % of Tota                         | Range                 |              |
| Domani        | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| OA            | 5                      | 12.25 | 1.75                  | 4.875                   | 0.35                  | 98%                               | 0.07                  | Yes          |
| NBT           | 6                      | 11.13 | 1.89                  | 6                       | 0.00                  | 100%                              | 0.00                  | Yes          |
| NF            | 14                     | 12.38 | 2.26                  | 8.625                   | 1.06                  | 62%                               | 0.08                  | Yes          |
| MD            | 9                      | 11.00 | 1.85                  | 7                       | 0.76                  | 78%                               | 0.08                  | Yes          |
| G             | 3                      | 7.13  | 0.64                  | 3                       | 0.00                  | 100%                              | 0.00                  | Yes          |
| Total         | 37                     | 10.78 | 0.61                  | 5.9                     | 0.43                  | 87%                               | 0.05                  |              |

#### Table 4C3M: Summary of Range-of-Knowledge Correspondence

‡ Indicates number of standards within a domain to which an item could be written.

### Table 4C4M: Summary of Balance of Representation

|        | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| OA     | 5                      | 22.74%  | 1.75                  | 0.84 | 0.06                  | Yes            |
| NBT    | 6                      | 20.65%  | 1.89                  | 0.84 | 0.06                  | Yes            |
| NF     | 14                     | 22.97%  | 2.26                  | 0.83 | 0.02                  | Yes            |
| MD     | 9                      | 20.42%  | 1.85                  | 0.82 | 0.04                  | Yes            |
| G      | 3                      | 13.23%  | 0.64                  | 0.78 | 0.03                  | Yes            |
| Total  | 37                     | 20.00%  | 1.68                  | 0.82 | 0.04                  |                |

|        |                        |       | Hits                  |                          | I                     | Percent of Que     | estions at DO         | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | А                  | t                     | Abov                  | DOK                   |             |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| OA     | 3                      | 10.88 | 2.47                  | 3%                       | 0.05                  | 58%                | 0.26                  | 40%                   | 0.25                  | Yes         |
| NBT    | 9                      | 10.13 | 1.25                  | 14%                      | 0.15                  | 75%                | 0.14                  | 11%                   | 0.10                  | Yes         |
| NF     | 14                     | 12.25 | 1.98                  | 19%                      | 0.11                  | 69%                | 0.11                  | 12%                   | 0.09                  | Yes         |
| MD     | 10                     | 11.13 | 2.47                  | 9%                       | 0.19                  | 87%                | 0.18                  | 4%                    | 0.07                  | Yes         |
| G      | 4                      | 12.63 | 3.42                  | 25%                      | 0.15                  | 59%                | 0.11                  | 16%                   | 0.06                  | Yes         |
| Total  | 40                     | 11.40 | 0.79                  | 14%                      | 0.13                  | 69%                | 69%                   | 17%                   | 0.12                  |             |

## Table 5C1M: Summary of Depth-of-Knowledge Consistency

Table 5C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                                  | 1            | 2                   | 67%                        |               |                       |                            |
| OA     | 3                                | 2            | 1                   | 33%                        | 10.88         | 2.47                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 6                   | 67%                        |               |                       |                            |
| NBT    | 9                                | 2            | 3                   | 33%                        | 10.13         | 1.25                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 3                   | 21%                        |               |                       |                            |
| NF     | 14                               | 2            | 11                  | 79%                        | 12.25         | 1.98                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 4                   | 40%                        |               |                       |                            |
| MD     | 10                               | 2            | 6                   | 60%                        | 11.13         | 2.47                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 1                   | 25%                        |               |                       |                            |
| G      | 4                                | 2            | 3                   | 75%                        | 12.63         | 3.42                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 16                  | 40%                        |               |                       |                            |
| Total  | 40                               | 2            | 24                  | 60%                        | 11.40         | 0.79                  |                            |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |

|               |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|---------------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain No. of |                        | 11113 |                       | No. of Standards Hit    |                       | % of Tota                         | Range                 |              |
| Domain        | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| OA            | 3                      | 10.88 | 2.47                  | 3.00                    | 0.00                  | 100%                              | 0.00                  | Yes          |
| NBT           | 9                      | 10.13 | 1.25                  | 7.13                    | 0.35                  | 79%                               | 0.04                  | Yes          |
| NF            | 14                     | 12.25 | 1.98                  | 7.13                    | 0.83                  | 51%                               | 0.06                  | Yes          |
| MD            | 10                     | 11.13 | 2.47                  | 6.75                    | 1.28                  | 68%                               | 0.13                  | Yes          |
| G             | 4                      | 12.63 | 3.42                  | 3.88                    | 0.35                  | 97%                               | 0.09                  | Yes          |
| Total         | 40                     | 11.40 | 0.79                  | 5.58                    | 0.56                  | 79%                               | 0.06                  |              |

#### Table 5C3M: Summary of Range-of-Knowledge Correspondence

‡ Indicates number of standards within a domain to which an item could be written.

### Table 5C4M: Summary of Balance of Representation

|        | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| OA     | 3                      | 19.08%  | 2.47                  | 0.82 | 0.06                  | Yes            |
| NBT    | 9                      | 17.76%  | 1.25                  | 0.83 | 0.03                  | Yes            |
| NF     | 14                     | 21.49%  | 1.98                  | 0.83 | 0.00                  | Yes            |
| MD     | 10                     | 19.52%  | 2.47                  | 0.81 | 0.03                  | Yes            |
| G      | 4                      | 22.15%  | 3.42                  | 0.75 | 0.05                  | Yes            |
| Total  | 40                     | 20.00%  | 2.32                  | 0.81 | 0.03                  |                |

|        |                        |       | Hits                  |                          | l                     | Percent of Que     | stions at DO          | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | U                        | nder                  | Α                  | t                     | Above                 |                       | DOK         |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RP     | 7                      | 9.00  | 4.28                  | 38%                      | 0.15                  | 47%                | 0.14                  | 14%                   | 0.12                  | Yes         |
| NS     | 15                     | 10.14 | 3.24                  | 17%                      | 0.14                  | 56%                | 0.25                  | 27%                   | 0.25                  | Yes         |
| EE     | 12                     | 9.29  | 2.36                  | 28%                      | 0.21                  | 57%                | 0.16                  | 15%                   | 0.09                  | Yes         |
| G      | 4                      | 8.57  | 1.90                  | 28%                      | 0.15                  | 70%                | 0.13                  | 2%                    | 0.05                  | Yes         |
| SP     | 9                      | 10.57 | 2.07                  | 43%                      | 0.28                  | 38%                | 0.19                  | 19%                   | 0.15                  | Yes         |
| Total  | 47                     | 9.51  | 0.99                  | 31%                      | 0.19                  | 54%                | 54%                   | 16%                   | 0.13                  |             |

## Table 6C1M: Summary of Depth-of-Knowledge Consistency

Table 6C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation                                                                | Categorical<br>Concurrence |  |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|--------------------------------------------------------------------------------------|----------------------------|--|
|        |                                  | 1            | 1                   | 14%                        |               |                                                                                      |                            |  |
| RP     | 7                                | 2            | 5                   | 72%                        | 9.00          | 4.28                                                                                 | Yes                        |  |
|        |                                  | 3            | 1                   | 14%                        |               | Deviation                                                                            |                            |  |
|        |                                  | 1            | 7                   | 46.5%                      |               |                                                                                      |                            |  |
| NS     | 15                               | 2            | 7                   | 46.5%                      | 10.14         | 3.24                                                                                 | Yes                        |  |
|        |                                  | 3            | 1                   | 7%                         |               |                                                                                      |                            |  |
|        |                                  | 1            | 5                   | 42%                        |               |                                                                                      |                            |  |
| EE     | 12                               | 2            | 6                   | 50%                        | 9.29          | 2.36                                                                                 | Yes                        |  |
|        |                                  | 3            | 1                   | 8%                         |               | Deviation           4.28           3.24           2.36           1.90           2.07 |                            |  |
|        |                                  | 1            | 0                   | 0%                         |               |                                                                                      |                            |  |
| G      | 4                                | 2            | 4                   | 100%                       | 8.57          | 1.90                                                                                 | Yes                        |  |
|        |                                  | 3            | 0                   | 0%                         |               |                                                                                      |                            |  |
|        |                                  | 1            | 3                   | 33.33%                     |               |                                                                                      |                            |  |
| SP     | 9                                | 2            | 3                   | 33.33%                     | 10.57         | 2.07                                                                                 | Yes                        |  |
|        |                                  | 3            | 3                   | 33.33%                     |               |                                                                                      |                            |  |
|        |                                  | 1            | 16                  | 34%                        |               |                                                                                      |                            |  |
| Total  | 47                               | 2            | 25                  | 53%                        | 9.51          | 0.99                                                                                 |                            |  |
|        |                                  | 3            | 6                   | 13%                        |               |                                                                                      |                            |  |

|        |                        |       | Hits                  |                         | Range of              | Standards                         |                       |              |
|--------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain | No. of                 | 11105 |                       | No. of Standar          | ds Hit                | % of Tota                         | ıl                    | Range        |
| Domani | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| RP     | 7                      | 9.00  | 4.28                  | 3.75                    | 1.91                  | 54%                               | 0.27                  | Yes          |
| NS     | 15                     | 10.14 | 3.24                  | 6.38                    | 3.20                  | 43%                               | 0.21                  | Yes*         |
| EE     | 12                     | 9.29  | 2.36                  | 5.63                    | 2.88                  | 47%                               | 0.24                  | Yes*         |
| G      | 4                      | 8.57  | 1.90                  | 3.25                    | 1.39                  | 81%                               | 0.35                  | Yes          |
| SP     | 9                      | 10.57 | 2.07                  | 5.00                    | 2.51                  | 56%                               | 0.28                  | Yes          |
| Total  | 47                     | 9.51  | 0.99                  | 4.80                    | 2.38                  | 56%                               | 0.27                  |              |

#### Table 6C3M: Summary of Range-of-Knowledge Correspondence

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

‡ Indicates number of standards within a domain to which an item could be written.

#### Table 6C4M: Summary of Balance of Representation

|        | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| RP     | 7                      | 18.92%  | 4.28                  | 0.82 | 0.05                  | Yes            |
| NS     | 15                     | 21.32%  | 3.24                  | 0.82 | 0.04                  | Yes            |
| EE     | 12                     | 19.52%  | 2.36                  | 0.82 | 0.05                  | Yes            |
| G      | 4                      | 18.02%  | 1.90                  | 0.84 | 0.05                  | Yes            |
| SP     | 9                      | 22.22%  | 2.07                  | 0.77 | 0.07                  | Yes            |
| Total  | 47                     | 20.00%  | 2.77                  | 0.81 | 0.05                  |                |

|        |                        |       | Hits                  |                          | l                     | Percent of Que     | estions at DO         | K Level               |                       |             |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|
|        | No. of                 |       |                       | Under At                 |                       |                    | Abov                  | DOK                   |                       |             |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |
| RP     | 7                      | 8.86  | 2.61                  | 23%                      | 0.13                  | 63%                | 0.13                  | 14%                   | 0.09                  | Yes         |
| NS     | 11                     | 11.00 | 3.11                  | 26%                      | 0.11                  | 65%                | 0.07                  | 9%                    | 0.10                  | Yes         |
| EE     | 6                      | 8.43  | 3.26                  | 18%                      | 0.15                  | 74%                | 0.12                  | 8%                    | 0.14                  | Yes         |
| G      | 6                      | 11.71 | 2.14                  | 27%                      | 0.12                  | 65%                | 0.11                  | 9%                    | 0.11                  | Yes         |
| SP     | 13                     | 9.86  | 2.79                  | 32%                      | 0.26                  | 39%                | 0.23                  | 29%                   | 0.20                  | Yes         |
| Total  | 43                     | 9.97  | 0.44                  | 25%                      | 0.15                  | 61%                | 61%                   | 14%                   | 0.13                  |             |

## Table 7C1M: Summary of Depth-of-Knowledge Consistency

Table 7C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards‡ | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                      | 1            | 1                   | 14%                        |               |                       |                            |
| RP     | 7                    | 2            | 5                   | 72%                        | 8.86          | 2.61                  | Yes                        |
|        |                      | 3            | 1                   | 14%                        |               |                       |                            |
|        |                      | 1            | 5                   | 45%                        |               |                       |                            |
| NS     | 11                   | 2            | 6                   | 55%                        | 11.00         | 3.11                  | Yes                        |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
|        |                      | 1            | 1                   | 17%                        |               |                       |                            |
| EE     | 6                    | 2            | 5                   | 83%                        | 8.43          | 3.26                  | Yes                        |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
|        |                      | 1            | 0                   | 0%                         |               |                       |                            |
| G      | 6                    | 2            | 6                   | 100%                       | 11.71         | 2.14                  | Yes                        |
|        |                      | 3            | 0                   | 0%                         |               |                       |                            |
|        |                      | 1            | 2                   | 15%                        |               |                       |                            |
| SP     | 13                   | 2            | 8                   | 62%                        | 9.86          | 2.79                  | Yes                        |
|        |                      | 3            | 3                   | 23%                        |               |                       |                            |
|        |                      | 1            | 9                   | 21%                        |               |                       |                            |
| Total  | 43                   | 2            | 30                  | 70%                        | 9.97          | 0.44                  |                            |
|        |                      | 3            | 4                   | 9%                         |               |                       |                            |

|        |                        |       | Hits      |                 | Range of  | Standards         |           |              |
|--------|------------------------|-------|-----------|-----------------|-----------|-------------------|-----------|--------------|
| Domain | No. of                 |       | 11115     | No. of Standar  | ds Hit    | % of Tota         | ıl        | Range        |
| Domain | Standards <sup>‡</sup> | Mean  | Standard  | Mean Objectives | Standard  | Avg. Percent      | Standard  | of Knowledge |
|        |                        | wream | Deviation | Hits            | Deviation | of Objectives Hit | Deviation |              |
| RP     | 7                      | 8.86  | 2.61      | 4               | 1.69      | 57%               | 0.24      | Yes          |
| NS     | 11                     | 11.00 | 3.11      | 5.75            | 2.43      | 52%               | 0.22      | Yes          |
| EE     | 6                      | 8.43  | 3.26      | 4               | 2.07      | 67%               | 0.35      | Yes          |
| G      | 6                      | 11.71 | 2.14      | 5               | 2.07      | 83%               | 0.35      | Yes          |
| SP     | 13                     | 9.86  | 2.79      | 5.5             | 2.88      | 42%               | 0.22      | Yes*         |
| Total  | 43                     | 9.97  | 0.44      | 4.85            | 2.23      | 60%               | 0.27      |              |

#### Table 7C3M: Summary of Range-of-Knowledge Correspondence

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

### Table 7C4M: Summary of Balance of Representation

|        | No. of               | Percent | of Total Hits         |      | Index                 | Polones of                   |
|--------|----------------------|---------|-----------------------|------|-----------------------|------------------------------|
| Domain | No. of<br>Standards‡ | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Balance of<br>Representation |
| RP     | 7                    | 17.77%  | 2.61                  | 0.75 | 0.05                  | Yes                          |
| NS     | 11                   | 22.06%  | 3.11                  | 0.76 | 0.10                  | Yes                          |
| EE     | 6                    | 16.91%  | 3.26                  | 0.76 | 0.07                  | Yes                          |
| G      | 6                    | 23.50%  | 2.14                  | 0.78 | 0.02                  | Yes                          |
| SP     | 13                   | 19.77%  | 2.79                  | 0.82 | 0.04                  | Yes                          |
| Total  | 43                   | 20.00%  | 2.78                  | 0.77 | 0.06                  |                              |

|        |                        |       | Hits                  |                          | Percent of Questions at DOK Level |                    |                       |                       |                       |             |  |  |
|--------|------------------------|-------|-----------------------|--------------------------|-----------------------------------|--------------------|-----------------------|-----------------------|-----------------------|-------------|--|--|
|        | No. of                 |       |                       | U                        | nder                              | Α                  | t                     | Abov                  | DOK                   |             |  |  |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation             | Mean<br>Percent At | Standard<br>Deviation | Mean Percent<br>Above | Standard<br>Deviation | Consistency |  |  |
| NS     | 2                      | 7.71  | 0.76                  | 21%                      | 0.13                              | 73%                | 0.15                  | 6%                    | 0.08                  | Yes         |  |  |
| EE     | 13                     | 12.00 | 4.47                  | 20%                      | 0.18                              | 68%                | 0.27                  | 12%                   | 0.12                  | Yes         |  |  |
| F      | 5                      | 13.00 | 2.71                  | 60%                      | 0.21                              | 27%                | 0.16                  | 13%                   | 0.14                  | Weak        |  |  |
| G      | 12                     | 10.71 | 1.38                  | 34%                      | 0.22                              | 54%                | 0.22                  | 12%                   | 0.13                  | Yes         |  |  |
| SP     | 4                      | 4.57  | 0.98                  | 50%                      | 0.34                              | 50%                | 0.34                  | 0%                    | 0.00                  | Yes         |  |  |
| Total  | 36                     | 9.60  | 1.55                  | 37%                      | 0.22                              | 54%                | 54%                   | 9%                    | 0.09                  |             |  |  |

## Table 8C1M: Summary of Depth-of-Knowledge Consistency

Table 8C2M: Summary of Categorical Concurrence

| Domain | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|--------|----------------------------------|--------------|---------------------|----------------------------|---------------|-----------------------|----------------------------|
|        |                                  | 1            | 1                   | 50%                        |               |                       |                            |
| NS     | 2                                | 2            | 1                   | 50%                        | 7.71          | 0.76                  | Yes                        |
|        |                                  | 3            | 0                   | 0%                         |               |                       |                            |
|        |                                  | 1            | 4                   | 31%                        |               |                       |                            |
| EE     | 13                               | 2            | 7                   | 54%                        | 12.00         | 4.47                  | Yes                        |
|        |                                  | 3            | 2                   | 15%                        |               |                       |                            |
|        |                                  | 1            | 1                   | 20%                        |               |                       |                            |
| F      | 5                                | 2            | 2                   | 40%                        | 13.00         | 2.71                  | Yes                        |
|        |                                  | 3            | 2                   | 40%                        |               |                       |                            |
|        |                                  | 1            | 1                   | 8%                         |               |                       |                            |
| G      | 12                               | 2            | 9                   | 75%                        | 10.71         | 1.38                  | Yes                        |
|        |                                  | 3            | 2                   | 17%                        |               |                       |                            |
|        |                                  | 1            | 0                   | 0%                         |               |                       |                            |
| SP     | 4                                | 2            | 3                   | 75%                        | 4.57          | 0.98                  | Weak                       |
|        |                                  | 3            | 1                   | 25%                        |               |                       |                            |
|        |                                  | 1            | 7                   | 19.5%                      |               |                       |                            |
| Total  | 36                               | 2            | 22                  | 61%                        | 9.60          | 1.55                  |                            |
|        |                                  | 3            | 7                   | 19.5%                      | 7             |                       |                            |

|        |                        |       | Hits                  |                         |                       |                                   |                       |              |
|--------|------------------------|-------|-----------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|--------------|
| Domain | No. of                 | IIIts |                       | No. of Standar          | ds Hit                | % of Tota                         | ıl                    | Range        |
| Domain | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives Hit | Standard<br>Deviation | of Knowledge |
| NS     | 2                      | 7.71  | 0.76                  | 2.00                    | 0.00                  | 100%                              | 0.00                  | Yes          |
| EE     | 13                     | 12.00 | 4.47                  | 6.71                    | 2.06                  | 52%                               | 0.16                  | Yes          |
| F      | 5                      | 13.00 | 2.71                  | 4.71                    | 0.49                  | 94%                               | 0.10                  | Yes          |
| G      | 12                     | 10.71 | 1.38                  | 7.43                    | 0.79                  | 62%                               | 0.07                  | Yes          |
| SP     | 4                      | 4.57  | 0.98                  | 3.14                    | 0.38                  | 79%                               | 0.09                  | Yes          |
| Total  | 36                     | 9.60  | 1.55                  | 4.80                    | 0.74                  | 77%                               | 0.08                  |              |

#### Table 8C3M: Summary of Range-of-Knowledge Correspondence

‡ Indicates number of standards within a domain to which an item could be written.

### Table 8C4M: Summary of Balance of Representation

|        | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|--------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| NS     | 2                      | 16.07%  | 0.76                  | 0.89 | 0.05                  | Yes            |
| EE     | 13                     | 25.00%  | 4.47                  | 0.81 | 0.03                  | Yes            |
| F      | 5                      | 27.08%  | 2.71                  | 0.77 | 0.06                  | Yes            |
| G      | 12                     | 22.32%  | 1.38                  | 0.81 | 0.05                  | Yes            |
| SP     | 4                      | 9.52%   | 0.98                  | 0.87 | 0.06                  | Yes            |
| Total  | 36                     | 20.00%  | 2.06                  | 0.83 | 0.05                  |                |

# Science Grade 4

## Table 4C1S: Summary of Depth-of-Knowledge Consistency

|                                                                               |                        |       | Hits                  |                          | Percen                | t of Questi           | ions at DOK           | Level                    |                       |             |
|-------------------------------------------------------------------------------|------------------------|-------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-------------|
|                                                                               | No. of                 |       |                       | Under                    |                       |                       | At                    | Al                       | oove                  | DOK         |
| Domain                                                                        | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent<br>At | Standard<br>Deviation | Mean<br>Percent<br>Above | Standard<br>Deviation | Consistency |
| A-B. Science Connections<br>& Nature of Science                               | 8                      | 5.88  | 3.87                  | 49%                      | 0.33                  | 46%                   | 0.37                  | 5%                       | 0.12                  | Yes         |
| C. Science Inquiry                                                            | 8                      | 9.88  | 3.94                  | 47%                      | 0.10                  | 47%                   | 0.12                  | 6%                       | 0.07                  | Yes         |
| D. Physical Science                                                           | 8                      | 7.25  | 2.19                  | 33%                      | 0.16                  | 61%                   | 0.15                  | 6%                       | 0.07                  | Yes         |
| E. Earth and Space Science                                                    | 8                      | 4.50  | 1.20                  | 48%                      | 0.17                  | 45%                   | 0.11                  | 7%                       | 0.13                  | Yes         |
| F. Life and Environmental<br>Science                                          | 4                      | 10.25 | 2.19                  | 47%                      | 0.14                  | 52%                   | 0.15                  | 1%                       | 0.04                  | Yes         |
| G-H. Science Applications<br>& Science in Personal and<br>Social Perspectives | 9                      | 5.25  | 1.28                  | 47%                      | 0.28                  | 49%                   | 0.25                  | 4%                       | 0.07                  | Yes         |
| Total                                                                         | 45                     | 7.17  | 1.21                  | 45%                      | 0.20                  | 50%                   | 50%                   | 5%                       | 0.08                  |             |

## Science Grade 4

## Table 4C2S: Summary of Categorical Concurrence

| Domain                                              | No. of<br>Standards <sup>‡</sup> | DOK<br>Level | No. of<br>Standards | Percentage<br>of<br>Standards | Coded<br>Mean | Standard<br>Deviation | Categorical<br>Concurrence |
|-----------------------------------------------------|----------------------------------|--------------|---------------------|-------------------------------|---------------|-----------------------|----------------------------|
|                                                     |                                  | 1            | 1                   | 12.5%                         |               |                       |                            |
| A-B. Science Connections & Nature of Science        | 8                                | 2            | 6                   | 75%                           | 5.88          | 3.87                  | Yes*                       |
|                                                     |                                  | 3            | 1                   | 12.5%                         |               |                       |                            |
|                                                     |                                  | 1            | 1                   | 12.5%                         |               |                       |                            |
| C. Science Inquiry                                  | 8                                | 2            | 5                   | 62.5%                         | 9.88          | 3.94                  | Yes                        |
|                                                     |                                  | 3            | 2                   | 25%                           |               |                       |                            |
|                                                     |                                  | 1            | 2                   | 25%                           |               |                       |                            |
| D. Physical Science                                 | 8                                | 2            | 5                   | 62.5%                         | 7.25          | 2.19                  | Yes                        |
|                                                     |                                  | 3            | 1                   | 12.5%                         |               |                       |                            |
|                                                     |                                  | 1            | 1                   | 12.5%                         |               | 1.00                  |                            |
| E. Earth and Space Science                          | 8                                | 2            | 7                   | 87.5%                         | 4.50          | 1.20                  | Weak                       |
|                                                     |                                  | 3            | 0                   | 0%                            |               |                       |                            |
|                                                     |                                  | 1            | 0                   | 0%                            |               |                       |                            |
| F. Life and Environmental Science                   | 4                                | 2            | 4                   | 100%                          | 10.25         | 2.19                  | Yes                        |
|                                                     |                                  | 3            | 0                   | 0%                            |               |                       |                            |
| G-H. Science Applications & Science in Personal and |                                  | 1            | 2                   | 22%                           |               |                       |                            |
| Social Perspectives                                 | 9                                | 2            | 6                   | 67%                           | 5.25          | 1.28                  | Yes*                       |
|                                                     |                                  | 3            | 1                   | 11%                           |               |                       |                            |
|                                                     |                                  | 1            | 7                   | 16%                           |               |                       |                            |
| Total                                               | 45                               | 2            | 33                  | 73%                           | 7.17          | 1.21                  |                            |
|                                                     | , X                              | 3            | 5                   | 11%                           |               |                       |                            |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

#### Science Grade 4 Table 4C3S: Summary of Range-of-Knowledge Correspondence

|                                                                            |                      | 1     | Hits                  |                            | Range of              | Standards                                  |                       |                          |
|----------------------------------------------------------------------------|----------------------|-------|-----------------------|----------------------------|-----------------------|--------------------------------------------|-----------------------|--------------------------|
|                                                                            |                      |       | mus                   | No. of Star                | ndards Hit            | % of '                                     | Total                 |                          |
| Domain                                                                     | No. of<br>Standards‡ | Mean  | Standard<br>Deviation | Mean<br>Objectives<br>Hits | Standard<br>Deviation | Avg.<br>Percent<br>of<br>Objectives<br>Hit | Standard<br>Deviation | Range<br>of<br>Knowledge |
| A-B. Science Connections & Nature of<br>Science                            | 8                    | 5.88  | 3.87                  | 4.00                       | 1.51                  | 50%                                        | 0.19                  | Yes                      |
| C. Science Inquiry                                                         | 8                    | 9.88  | 3.94                  | 4.50                       | 1.51                  | 56%                                        | 0.19                  | Yes                      |
| D. Physical Science                                                        | 8                    | 7.25  | 2.19                  | 4.25                       | 1.04                  | 53%                                        | 0.13                  | Yes                      |
| E. Earth and Space Science                                                 | 8                    | 4.50  | 1.20                  | 4.00                       | 0.93                  | 50%                                        | 0.12                  | Yes                      |
| F. Life and Environmental Science                                          | 4                    | 10.25 | 2.19                  | 3.63                       | 0.52                  | 91%                                        | 0.13                  | Yes                      |
| G-H. Science Applications & Science<br>in Personal and Social Perspectives | 9                    | 5.25  | 1.28                  | 3.75                       | 1.83                  | 42%                                        | 0.20                  | Yes*                     |
| Total                                                                      | 45                   | 7.17  | 1.21                  | 4.02                       | 1.22                  | 57%                                        | 0.16                  |                          |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

### Table 4C4S: Summary of Balance of Representation

|                                                                            | No. of                 | Percent of | Total Hits            | In   | dex                   | Balance of     |
|----------------------------------------------------------------------------|------------------------|------------|-----------------------|------|-----------------------|----------------|
| Domain                                                                     | Standards <sup>‡</sup> | Mean       | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| A-B. Science Connections & Nature of                                       |                        |            |                       |      |                       |                |
| Science                                                                    | 8                      | 13.66%     | 3.87                  | 0.87 | 0.15                  | Yes            |
| C. Science Inquiry                                                         | 8                      | 22.97%     | 3.94                  | 0.79 | 0.11                  | Yes            |
| D. Physical Science                                                        | 8                      | 16.86%     | 2.19                  | 0.82 | 0.04                  | Yes            |
| E. Earth and Space Science                                                 | 8                      | 10.47%     | 1.20                  | 0.94 | 0.08                  | Yes            |
| F. Life and Environmental Science                                          | 4                      | 23.84%     | 2.19                  | 0.77 | 0.06                  | Yes            |
| G-H. Science Applications & Science in<br>Personal and Social Perspectives | 9                      | 12.21%     | 1.28                  | 0.88 | 0.09                  | Yes            |
| Total                                                                      | 45                     | 16.67%     | 2.44                  | 0.85 | 0.09                  |                |

### Science Grade 8

## Table 8C1S: Summary of Depth-of-Knowledge Consistency

|                                                                               |                        |       | Hits                  |                          | Percen                | t of Quest            | ions at DOK           | Level                    |                       |             |
|-------------------------------------------------------------------------------|------------------------|-------|-----------------------|--------------------------|-----------------------|-----------------------|-----------------------|--------------------------|-----------------------|-------------|
|                                                                               | No. of                 |       |                       | Ur                       | nder                  |                       | At                    | Al                       | oove                  | DOK         |
| Domain                                                                        | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Percent<br>Below | Standard<br>Deviation | Mean<br>Percent<br>At | Standard<br>Deviation | Mean<br>Percent<br>Above | Standard<br>Deviation | Consistency |
| A-B. Science Connections                                                      | 14                     | 5.88  | 4.88                  | 50%                      | 0.32                  | 48%                   | 0.30                  | 2%                       | 0.06                  | Yes*        |
| & Nature of Science                                                           | 14                     | 5.88  | 4.00                  | 30%                      | 0.32                  | 4070                  | 0.30                  | 270                      | 0.00                  | 105         |
| C. Science Inquiry                                                            | 11                     | 10.50 | 4.99                  | 33%                      | 0.24                  | 65%                   | 0.24                  | 3%                       | 0.05                  | Yes         |
| D. Physical Science                                                           | 10                     | 9.75  | 2.38                  | 58%                      | 0.08                  | 39%                   | 0.12                  | 3%                       | 0.06                  | Yes*        |
| E. Earth and Space Science                                                    | 8                      | 6.75  | 1.28                  | 22%                      | 0.15                  | 53%                   | 0.24                  | 25%                      | 0.16                  | Yes         |
| F. Life and Environmental Science                                             | 10                     | 7.00  | 1.41                  | 22%                      | 0.24                  | 68%                   | 0.25                  | 11%                      | 0.12                  | Yes         |
| G-H. Science Applications<br>& Science in Personal and<br>Social Perspectives | 10                     | 5.63  | 2.97                  | 37%                      | 0.34                  | 49%                   | 0.29                  | 14%                      | 0.19                  | Yes         |
| Total                                                                         | 63                     | 7.58  | 1.63                  | 37%                      | 0.23                  | 54%                   | 54%                   | 10%                      | 0.11                  |             |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

## Science Grade 8

## Table 8C2S: Summary of Categorical Concurrence

| Domain                                                                     | No. of<br>Standards‡ | DOK<br>Level | No. of<br>Standards | Percentage<br>of<br>Standards | Coded<br>Mean | Standar<br>d<br>Deviatio<br>n | Categorical<br>Concurrence |
|----------------------------------------------------------------------------|----------------------|--------------|---------------------|-------------------------------|---------------|-------------------------------|----------------------------|
| A-B. Science Connections & Nature of                                       |                      | 1            | 0                   | 0%                            |               |                               |                            |
| Science                                                                    | 14                   | 2            | 12                  | 86%                           | 5.88          | 4.88                          | Yes*                       |
|                                                                            |                      | 3            | 2                   | 14%                           |               |                               |                            |
|                                                                            |                      | 1            | 0                   | 0%                            |               |                               |                            |
| C. Science Inquiry                                                         | 11                   | 2            | 8                   | 73%                           | 10.50         | 4.99                          | Yes                        |
|                                                                            |                      | 3            | 3                   | 27%                           |               |                               |                            |
|                                                                            |                      | 1            | 2                   | 20%                           |               |                               |                            |
| D. Physical Science                                                        | 10                   | 2            | 7                   | 70%                           | 9.75          | 2.38                          | Yes                        |
|                                                                            |                      | 3            | 1                   | 10%                           |               |                               |                            |
|                                                                            |                      | 1            | 2                   | 25%                           | 6.75          | 1.28                          |                            |
| E. Earth and Space Science                                                 | 8                    | 2            | 5                   | 62.5%                         |               |                               | Yes                        |
|                                                                            |                      | 3            | 1                   | 12.5%                         |               |                               |                            |
|                                                                            |                      | 1            | 3                   | 30%                           |               |                               |                            |
| F. Life and Environmental Science                                          | 10                   | 2            | 6                   | 60%                           | 7.00          | 1.41                          | Yes                        |
|                                                                            |                      | 3            | 1                   | 10%                           |               |                               |                            |
| CH Science Applications & Science in                                       |                      | 1            | 2                   | 20%                           |               |                               |                            |
| G-H. Science Applications & Science in<br>Personal and Social Perspectives | 10                   | 2            | 5                   | 50%                           | 5.63          | 2.97                          | Yes*                       |
| Personal and Social Perspectives                                           |                      | 3            | 3                   | 30%                           |               |                               |                            |
|                                                                            |                      | 1            | 9                   | 14.25%                        |               |                               |                            |
| Total                                                                      | 63                   | 2            | 43                  | 68.25%                        | 7.58          | 3 1.63                        |                            |
|                                                                            |                      | 3            | 11                  | 17.5%                         |               |                               |                            |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes. ‡ Indicates number of standards within a domain to which an item could be written.

#### Science Grade 8 Table 8C3S: Summary of Range-of-Knowledge Correspondence

|                                                                            |                        |       | Hits                  |                            | Range o               | f Standards                          |                       |                 |
|----------------------------------------------------------------------------|------------------------|-------|-----------------------|----------------------------|-----------------------|--------------------------------------|-----------------------|-----------------|
|                                                                            | No. of                 |       | mus                   | No. of Star                | ndards Hit            | % of T                               | otal                  | Range           |
| Domain                                                                     | Standards <sup>‡</sup> | Mean  | Standard<br>Deviation | Mean<br>Objectives<br>Hits | Standard<br>Deviation | Avg. Percent<br>of Objectives<br>Hit | Standard<br>Deviation | of<br>Knowledge |
| A-B. Science Connections & Nature<br>of Science                            | 14                     | 5.88  | 4.88                  | 4.25                       | 2.76                  | 30%                                  | 0.20                  | Weak            |
| C. Science Inquiry                                                         | 11                     | 10.50 | 4.99                  | 4.50                       | 1.60                  | 41%                                  | 0.15                  | Yes*            |
| D. Physical Science                                                        | 10                     | 9.75  | 2.38                  | 6.00                       | 1.51                  | 60%                                  | 0.15                  | Yes             |
| E. Earth and Space Science                                                 | 8                      | 6.75  | 1.28                  | 3.88                       | 0.99                  | 48%                                  | 0.12                  | Yes*            |
| F. Life and Environmental Science                                          | 10                     | 7.00  | 1.41                  | 4.25                       | 0.71                  | 43%                                  | 0.07                  | Yes*            |
| G-H. Science Applications & Science<br>in Personal and Social Perspectives | 10                     | 5.63  | 2.97                  | 3.88                       | 2.03                  | 39%                                  | 0.20                  | Weak            |
| Total                                                                      | 63                     | 7.58  | 1.63                  | 4.46                       | 1.60                  | 43%                                  | 0.15                  |                 |

\*Indicates acceptable alignment; however, the alignment is not as strong as Yes.

‡ Indicates number of standards within a domain to which an item could be written.

#### Table 8C4S: Summary of Balance of Representation

|                                             | No. of                 | Percent | of Total Hits         |      | Index                 | Balance of     |
|---------------------------------------------|------------------------|---------|-----------------------|------|-----------------------|----------------|
| Domain                                      | Standards <sup>‡</sup> | Mean    | Standard<br>Deviation | Mean | Standard<br>Deviation | Representation |
| A-B. Science Connections &                  | 14                     | 12.91%  | 4.88                  | 0.90 | 0.09                  | Yes            |
| Nature of Science                           | 17                     | 12.7170 | <b>-</b> .00          | 0.70 | 0.07                  | 103            |
| C. Science Inquiry                          | 11                     | 23.08%  | 4.99                  | 0.78 | 0.12                  | Yes            |
| D. Physical Science                         | 10                     | 21.43%  | 2.38                  | 0.81 | 0.04                  | Yes            |
| E. Earth and Space Science                  | 8                      | 14.84%  | 1.28                  | 0.80 | 0.09                  | Yes            |
| F. Life and Environmental Science           | 10                     | 15.38%  | 1.41                  | 0.77 | 0.06                  | Yes            |
| G-H. Science Applications &                 | 10                     | 12.36%  | 2.97                  | 0.85 | 0.13                  | Yes            |
| Science in Personal and Social Perspectives | 10                     | 12.30%  | 2.91                  | 0.05 | 0.13                  | 168            |
| Total                                       | 63                     | 16.67%  | 2.99                  | 0.82 | 0.09                  |                |

‡ Indicates number of standards within a domain to which an item could be written.

# Appendix D

# Depth-of-Knowledge Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      | 1      | I      |        | Session | 1      |        |        |        |
| 1    | 2      | 1      | 1      | 2       | 2      | 1      | 2      | 1      |
| 2    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 4    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 1       | 1      | 1      | 1      | 1      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 3    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 4    | 2      | 2      | 2      | 1       | 2      | 1      | 1      | 2      |
| 6    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 7    | 2      | 2      | 3      | 2       | 2      | 2      | 2      | 3      |
| 8    | 2      | 2      | 2      | 1       | 2      | 2      | 2      | 2      |
| 9    | 2      | 2      | 3      | 2       | 2      | 2      | 2      | 2      |
| 10   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 11   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 12   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
|      |        |        |        | Session | 3      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 1      | 1      | 2      | 1      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 2      | 1      | 2      | 2       | 2      | 2      | 1      | 2      |
| 7    | 2      | 1      | 2      | 3       | 2      | 2      | 2      | 2      |
| 8    | 2      | 1      | 2      | 2       | 1      | 1      | 1      | 1      |
|      | T      | 1      |        | Session |        |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 2      | 2      | 3       | 3      | 3      | 3      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 1      | 2      |
| 4    | 2      | 1      | 2      | 2       | 1      | 2      | 2      | 1      |
| 5    | 2      | 1      | 2      | 2       | 2      | 2      | 2      | 1      |
| 6    | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 7    | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 3       | 3      | 3      | 2      | 3      |
| 9    | 2      | 2      | 3      | 2       | 1      | 2      | 2      | 1      |
| 14   | 2      | 1      | 2      | 1       | 1      | 1      | 1      | 1      |
| 15   | 2      | 2      | 2      | 1       | 2      | 2      | 2      | 1      |
| 16   | 2      | 1      | 2      | 2       | 3      | 2      | 2      | 1      |
| 17   | 2      | 3      | 3      | 3       | 2      | 3      | 3      | 2      |

# Table 3D1E DOK Levels by Item and Reviewers

# Table 4D1E DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
| -    |        |        |        | Session | 1      | L      |        |        |
| 1    | 2      | 1      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 3    | 2      | 2      | 2      | 2       | 1      | 2      | 1      | 1      |
| 4    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 5    | 2      | 2      | 3      | 2       | 2      | 2      | 2      | 2      |
| 6    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 1      | 1      | 2      |
| 4    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 6    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 7    | 2      | 2      | 2      | 3       | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 3      |
| 9    | 2      | 2      | 3      | 2       | 2      | 2      | 3      | 3      |
| 10   | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 3      |
| 11   | 2      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 12   | 2      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 13   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 14   | 2      | 2      | 1      | 1       | 1      | 1      | 1      | 1      |
|      |        |        |        | Session | 3      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 1      | 2      | 1      | 1      |
| 2    | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 1      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 7    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 9    | 2      | 2      | 2      | 2       | 1      | 2      | 1      | 2      |

| Item | DOK R1    | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 | DOK R8 |  |  |  |
|------|-----------|--------|--------|--------|--------|--------|--------|--------|--|--|--|
|      | Session 4 |        |        |        |        |        |        |        |  |  |  |
| 1    | 3         | 2      | 2      | 2      | 2      | 2      | 1      | 3      |  |  |  |
| 2    | 2         | 2      | 2      | 2      | 2      | 2      | 2      | 1      |  |  |  |
| 3    | 2         | 2      | 2      | 1      | 1      | 2      | 1      | 1      |  |  |  |
| 4    | 3         | 2      | 2      | 2      | 2      | 2      | 2      | 2      |  |  |  |
| 5    | 2         | 1      | 2      | 2      | 2      | 2      | 2      | 2      |  |  |  |
| 6    | 3         | 2      | 3      | 3      | 2      | 3      | 3      | 2      |  |  |  |
| 7    | 2         | 2      | 2      | 2      | 2      | 2      | 3      | 2      |  |  |  |
| 8    | 2         | 2      | 2      | 2      | 2      | 2      | 3      | 2      |  |  |  |
| 13   | 2         | 2      | 2      | 2      | 2      | 2      | 2      | 1      |  |  |  |
| 14   | 2         | 2      | 2      | 2      | 1      | 2      | 2      | 3      |  |  |  |
| 15   | 2         | 2      | 2      | 2      | 1      | 2      | 1      | 2      |  |  |  |
| 16   | 2         | 2      | 2      | 1      | 2      | 2      | 1      | 2      |  |  |  |

# Table 4D1E DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 2      | 3      | 3       | 3      | 3      | 3      | 2      |
| 3    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
| 4    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 4    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 6    | 2      | 2      | 3      | 2       | 3      | 2      | 2      | 3      |
| 7    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 9    | 2      | 2      | 3      | 2       | 3      | 2      | 2      | 3      |
| 10   | 2      | 2      | 2      | 1       | 2      | 2      | 2      | 3      |
| 11   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 12   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 13   | 2      | 2      | 2      | 2       | 2      | 1      | 1      | 2      |
| 14   | 2      | 1      | 2      | 2       | 1      | 1      | 1      | 2      |
| 15   | 3      | 1      | 1      | 2       | 1      | 1      | 1      | 2      |
|      |        |        |        | Session |        |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 3    | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 7    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 9    | 2      | 2      | 2      | 3       | 1      | 2      | 1      | 2      |

# Table 5D1E DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 4      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 2    | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 4    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 5    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
| 7    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
| 8    | 3      | 3      | 3      | 3       | 3      | 3      | 2      | 2      |
| 13   | 3      | 3      | 3      | 2       | 2      | 2      | 2      | 2      |
| 14   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 15   | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 16   | 2      | 3      | 3      | 3       | 3      | 2      | 3      | 2      |
| 17   | 3      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |

# Table 5D1E DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 2      | 2      | 2      | 1       | 2      | 2      | 1      | 2      |
| 2    | 2      | 2      | 2      | 2       | 1      | 1      | 1      | 1      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 4    | 3      | 3      | 3      | 2       | 3      | 3      | 3      | 2      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 2      | 2      | 2       | 3      | 1      | 2      | 2      |
| 3    | 2      | 2      | 2      | 3       | 3      | 2      | 3      | 2      |
| 4    | 3      | 3      | 2      | 3       | 3      | 3      | 3      | 2      |
| 6    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
| 7    | 2      | 1      | 1      | 2       | 2      | 2      | 2      | 2      |
| 8    | 2      | 3      | 3      | 3       | 2      | 2      | 2      | 2      |
| 9    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 10   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 2      |
| 11   | 3      | 3      | 3      | 3       | 3      | 2      | 2      | 2      |
| 12   | 3      | 3      | 3      | 3       | 1      | 2      | 2      | 1      |
| 13   | 3      | 3      | 3      | 3       | 2      | 2      | 3      | 2      |
|      |        |        |        | Session | 3      |        |        |        |
| 1    | 1      | 1      | 1      | 2       | 1      | 2      | 1      | 1      |
| 2    | 2      | 1      | 2      | 2       | 2      | 3      | 1      | 1      |
| 3    | 3      | 3      | 3      | 3       | 2      | 3      | 2      | 2      |
| 7    | 2      | 2      | 2      | 2       | 2      | 3      | 2      | 2      |
| 8    | 3      | 3      | 2      | 3       | 3      | 3      | 2      | 2      |
| 9    | 2      | 2      | 2      | 3       | 2      | 2      | 0      | 3      |

# Table 6D1E DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 4      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 2    | 2      | 3      | 3      | 2       | 2      | 2      | 1      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 1      | 2      |
| 4    | 3      | 3      | 3      | 3       | 3      | 3      | 2      | 3      |
| 5    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 3      | 2      | 2      | 3       | 3      | 2      | 2      | 2      |
| 7    | 2      | 3      | 3      | 3       | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 3      |
| 13   | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 14   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 15   | 3      | 3      | 2      | 3       | 3      | 2      | 3      | 2      |
| 16   | 2      | 2      | 2      | 2       | 2      | 3      | 3      | 2      |
| 17   | 2      | 3      | 3      | 3       | 2      | 2      | 3      | 3      |

### Table 6D1E DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 2      | 2      | 2      | 3       | 2      | 2      | 3      | 1      |
| 2    | 3      | 2      | 3      | 3       | 2      | 3      | 3      | 2      |
| 3    | 3      | 2      | 3      | 2       | 2      | 2      | 3      | 2      |
| 4    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 3      | 2      | 3      | 2       | 3      | 2      | 3      | 2      |
| 2    | 3      | 3      | 2      | 3       | 3      | 2      | 2      | 2      |
| 3    | 3      | 3      | 3      | 3       | 2      | 2      | 3      | 2      |
| 4    | 3      | 3      | 3      | 2       | 3      | 2      | 2      | 2      |
| 6    | 3      | 2      | 3      | 3       | 2      | 3      | 2      | 2      |
| U    | 3      | 3      | 3      | 3       | 2      | 3      | 2      | 2      |
| 7    | 3      | 2      | 2      | 3       | 2      | 2      | 2      | 2      |
| 8    | 3      | 2      | 2      | 3       | 1      | 2      | 3      | 1      |
| 9    | 2      | 1      | 1      | 2       | 1      | 1      | 2      | 1      |
| 10   | 3      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 11   | 3      | 3      | 3      | 3       | 2      | 2      | 2      | 2      |
| 12   | 3      | 3      | 3      | 3       | 2      | 2      | 2      | 2      |
| 13   | 3      | 2      | 3      | 3       | 3      | 2      | 3      | 2      |
|      |        |        |        | Session | 0      |        |        |        |
| 1    | 3      | 2      | 2      | 3       | 3      | 2      | 3      | 2      |
| 2    | 2      | 2      | 2      | 3       | 1      | 2      | 2      | 2      |
| 6    | 3      | 3      | 2      | 3       | 3      | 2      | 2      | 2      |
| 7    | 3      | 2      | 2      | 3       | 2      | 2      | 3      | 2      |
| 8    | 3      | 2      | 3      | 3       | 2      | 3      | 2      | 2      |

# Table 7D1E DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 4      |        |        |        |
| 1    | 3      | 3      | 2      | 3       | 2      | 2      | 2      | 2      |
| 2    | 2      | 2      | 1      | 2       | 2      | 3      | 2      | 2      |
| 3    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 4    | 3      | 2      | 3      | 2       | 3      | 3      | 2      | 2      |
| 5    | 3      | 3      | 3      | 3       | 2      | 3      | 3      | 2      |
| 6    | 3      | 3      | 2      | 3       | 2      | 2      | 2      | 2      |
| 7    | 2      | 3      | 2      | 3       | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 9    | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 10   | 3      | 3      | 3      | 2       | 2      | 2      | 2      | 2      |
| 15   | 3      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 16   | 3      | 3      | 3      | 2       | 2      | 3      | 3      | 3      |
| 17   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 18   | 3      | 3      | 3      | 2       | 2      | 3      | 2      | 2      |
| 19   | 3      | 2      | 3      | 2       | 2      | 2      | 3      | 2      |

# Table 7D1E DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 2      | 3      | 2      | 2       | 2      | 2      | 2      | 2      |
| 2    | 3      | 3      | 2      | 2       | 3      | 3      | 2      | 2      |
| 3    | 3      | 3      | 3      | 3       | 2      | 3      | 2      | 2      |
| 4    | 2      | 2      | 2      | 3       | 2      | 2      | 3      | 2      |
| 5    | 3      | 3      | 3      | 3       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 3      | 2      | 3      | 2      |
| 2    | 3      | 3      | 2      | 2       | 2      | 2      | 2      | 2      |
| 3    | 2      | 3      | 3      | 2       | 3      | 3      | 3      | 2      |
| 4    | 2      | 3      | 3      | 2       | 2      | 2      | 2      | 2      |
| 6    | 2      | 2      | 2      | 2       | 3      | 2      | 1      | 2      |
| 7    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 8    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 9    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 10   | 3      | 2      | 3      | 3       | 1      | 2      | 2      | 2      |
| 11   | 3      | 3      | 3      | 2       | 3      | 2      | 3      | 2      |
| 12   | 3      | 3      | 3      | 3       | 2      | 2      | 2      | 2      |
| 13   | 3      | 3      | 3      | 2       | 3      | 2      | 2      | 2      |
| 14   | 3      | 3      | 3      | 1       | 3      | 3      | 3      | 3      |
|      |        |        |        | Session |        |        |        |        |
| 1    | 2      | 3      | 3      | 3       | 3      | 2      | 2      | 2      |
| 2    | 3      | 3      | 3      | 3       | 3      | 3      | 2      | 2      |
| 3    | 3      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 7    | 3      | 3      | 2      | 2       | 2      | 3      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 3      | 3      | 2      | 2      |
| 9    | 3      | 3      | 2      | 3       | 3      | 2      | 2      | 2      |

# Table 8D1E DOK Levels by Item and Reviewers

| Item | DOK R1    | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 | DOK R8 |  |  |  |  |
|------|-----------|--------|--------|--------|--------|--------|--------|--------|--|--|--|--|
|      | Session 4 |        |        |        |        |        |        |        |  |  |  |  |
| 1    | 2         | 2      | 2      | 2      | 2      | 2      | 1      | 2      |  |  |  |  |
| 2    | 2         | 3      | 2      | 2      | 3      | 1      | 2      | 2      |  |  |  |  |
| 3    | 3         | 3      | 2      | 3      | 3      | 3      | 3      | 2      |  |  |  |  |
| 4    | 3         | 3      | 2      | 3      | 3      | 2      | 3      | 2      |  |  |  |  |
| 5    | 2         | 3      | 2      | 2      | 3      | 2      | 3      | 2      |  |  |  |  |
| 6    | 2         | 2      | 2      | 3      | 3      | 2      | 2      | 2      |  |  |  |  |
| 7    | 3         | 3      | 3      | 2      | 3      | 2      | 3      | 2      |  |  |  |  |
| 8    | 3         | 1      | 2      | 2      | 2      | 2      | 1      | 2      |  |  |  |  |
| 13   | 2         | 1      | 2      | 2      | 2      | 2      | 2      | 2      |  |  |  |  |
| 14   | 3         | 2      | 3      | 2      | 3      | 2      | 2      | 2      |  |  |  |  |
| 15   | 2         | 3      | 2      | 3      | 3      | 2      | 3      | 2      |  |  |  |  |
| 16   | 3         | 2      | 2      | 3      | 3      | 2      | 3      | 2      |  |  |  |  |

# Table 8D1E DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 2    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 3    | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 2      |
| 4    | 2      | 1      | 1      | 2       | 1      | 1      | 2      | 1      |
| 6    | 2      | 2      | 2      | 2       | 2      | 1      | 2      | 2      |
| 7    | 1      | 2      | 2      | 1       | 2      | 1      | 2      | 1      |
| 8    | 1      | 1      | 1      | 1       | 1      | 1      | 2      | 2      |
| 9    | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 11   | 1      | 2      | 1      | 1       | 1      | 1      | 1      | 2      |
| 12   | 1      | 2      | 1      | 2       | 2      | 1      | 2      | 1      |
| 13   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 14   | 2      | 2      | 2      | 2       | 2      | 1      | 2      | 2      |
| 16   | 2      | 2      | 2      | 2       | 3      | 1      | 2      | 2      |
| 17   | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 18   | 1      | 1      | 2      | 1       | 2      | 1      | 2      | 1      |
| 19   | 2      | 3      | 2      | 3       | 2      | 2      | 2      | 2      |
| 20   | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 21   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 22   | 2      | 2      | 2      | 2       | 2      | 1      | 2      | 2      |
| 23   | 2      | 1      | 2      | 2       | 2      | 1      | 2      | 1      |
| 24   | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 25   | 1      | 1      | 2      | 2       | 2      | 1      | 2      | 2      |

### Table 3D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 2      |        |        |        |
| 2    | 2      | 1      | 2      | 2       | 3      | 2      | 2      | 2      |
| 3    | 2      | 2      | 1      | 1       | 1      | 1      | 2      | 2      |
| 4    | 2      | 2      | 2      | 2       | 3      | 1      | 2      | 1      |
| 6    | 1      | 1      | 1      | 1       | 2      | 1      | 1      | 1      |
| 7    | 2      | 1      | 2      | 2       | 1      | 1      | 2      | 1      |
| 8    | 1      | 2      | 2      | 1       | 1      | 2      | 2      | 1      |
| 9    | 1      | 1      | 1      | 2       | 2      | 1      | 2      | 1      |
| 11   | 2      | 1      | 2      | 2       | 2      | 1      | 2      | 1      |
| 12   | 2      | 1      | 2      | 1       | 2      | 1      | 2      | 1      |
| 13   | 2      | 2      | 2      | 3       | 2      | 1      | 2      | 3      |
| 14   | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 3      |
| 16   | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 17   | 1      | 1      | 1      | 2       | 2      | 1      | 1      | 1      |
| 18   | 1      | 1      | 1      | 2       | 2      | 1      | 2      | 1      |
| 19   | 1      | 1      | 1      | 2       | 1      | 1      | 2      | 1      |
| 20   | 2      | 1      | 2      | 2       | 1      | 1      | 1      | 2      |
| 21   | 1      | 1      | 2      | 2       | 2      | 1      | 1      | 1      |
| 22   | 2      | 1      | 2      | 2       | 2      | 1      | 2      | 1      |
| 23   | 1      | 1      | 2      | 1       | 2      | 1      | 1      | 2      |
| 24   | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 2      |
| 25   | 3      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |

### Table 3D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4    | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|-----------|--------|--------|--------|--------|
|      |        |        |        | Session 1 |        |        |        |        |
| 2    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 3    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 4    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 6    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 7    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 8    | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 1      |
| 9    | 2      | 2      | 2      | 1         | 2      | 2      | 2      | 2      |
| 11   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 12   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 13   | 2      | 2      | 2      | 3         | 2      | 2      | 2      | 3      |
| 14   | 2      | 2      | 2      | 2         | 2      | 1      | 2      | 2      |
| 16   | 1      | 1      | 1      | 1         | 2      | 1      | 2      | 1      |
| 17   | 1      | 3      | 2      | 2         | 2      | 1      | 2      | 1      |
| 18   | 2      | 2      | 2      | 2         | 3      | 2      | 2      | 2      |
| 19   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 20   | 1      | 2      | 1      | 1         | 2      | 2      | 1      | 1      |
| 21   | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 22   | 1      | 2      | 2      | 1         | 3      | 2      | 2      | 2      |
| 23   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 24   | 1      | 2      | 1      | 1         | 3      | 2      | 2      | 1      |
| 25   | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 26   | 1      | 1      | 1      | 2         | 1      | 1      | 1      | 2      |
| 27   | 1      | 1      | 1      | 1         | 2      | 2      | 2      | 1      |

### Table 4D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4    | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|-----------|--------|--------|--------|--------|
|      |        |        |        | Session 2 |        |        |        |        |
| 2    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 3    | 1      | 2      | 2      | 1         | 1      | 2      | 2      | 2      |
| 4    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 6    | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 1      |
| 7    | 1      | 2      | 1      | 1         | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 9    | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 11   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 12   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 13   | 1      | 2      | 1      | 2         | 1      | 2      | 2      | 1      |
| 14   | 1      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 16   | 2      | 2      | 2      | 1         | 3      | 2      | 2      | 2      |
| 17   | 1      | 1      | 2      | 1         | 1      | 1      | 2      | 1      |
| 18   | 1      | 1      | 2      | 2         | 2      | 2      | 2      | 1      |
| 19   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 20   | 1      | 1      | 1      | 1         | 1      | 1      | 1      | 1      |
| 21   | 1      | 1      | 1      | 1         | 1      | 2      | 1      | 2      |
| 22   | 1      | 1      | 2      | 2         | 2      | 2      | 2      | 2      |
| 23   | 1      | 1      | 2      | 2         | 2      | 2      | 2      | 2      |
| 24   | 2      | 2      | 3      | 2         | 2      | 2      | 2      | 3      |
| 25   | 1      | 1      | 1      | 1         | 2      | 1      | 1      | 1      |
| 26   | 1      | 2      | 2      | 1         | 2      | 2      | 2      | 1      |
| 27   | 1      | 2      | 2      | 2         | 2      | 2      | 2      | 1      |

### Table 4D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 2    | 1      | 2      | 1      | 1       | 1      | 1      | 1      | 1      |
| 3    | 1      | 2      | 2      | 2       | 1      | 2      | 2      | 1      |
| 4    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 1      | 2      | 1      | 2       | 2      | 1      | 2      | 2      |
| 7    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 8    | 2      | 2      | 2      | 2       | 3      | 2      | 2      | 1      |
| 9    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 11   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 12   | 1      | 2      | 2      | 2       | 1      | 2      | 2      | 1      |
| 13   | 2      | 2      | 2      | 1       | 1      | 2      | 2      | 1      |
| 14   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 16   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 17   | 1      | 2      | 1      | 2       | 2      | 2      | 2      | 1      |
| 18   | 1      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 19   | 2      | 1      | 2      | 2       | 1      | 2      | 2      | 1      |
| 20   | 1      | 1      | 2      | 2       | 1      | 2      | 2      | 1      |
| 21   | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 22   | 1      | 1      | 2      | 2       | 1      | 2      | 1      | 1      |
| 23   | 1      | 1      | 1      | 2       | 2      | 2      | 2      | 1      |
| 24   | 1      | 1      | 2      | 1       | 1      | 2      | 1      | 1      |
| 25   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 26   | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 27   | 1      | 1      | 1      | 1       | 1      | 2      | 1      | 1      |

### Table 5D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4    | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|-----------|--------|--------|--------|--------|
|      |        |        |        | Session 2 |        |        |        |        |
| 2    | 1      | 2      | 2      | 1         | 2      | 2      | 2      | 2      |
| 3    | 2      | 3      | 2      | 2         | 2      | 2      | 2      | 2      |
| 4    | 2      | 1      | 2      | 1         | 2      | 1      | 1      | 1      |
| 6    | 1      | 1      | 1      | 2         | 1      | 1      | 1      | 1      |
| 7    | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |
| 8    | 2      | 1      | 1      | 2         | 1      | 1      | 2      | 1      |
| 9    | 1      | 1      | 1      | 1         | 1      | 2      | 1      | 1      |
| 11   | 2      | 2      | 2      | 1         | 2      | 2      | 2      | 2      |
| 12   | 1      | 1      | 1      | 2         | 1      | 1      | 2      | 1      |
| 13   | 1      | 1      | 2      | 2         | 2      | 2      | 2      | 1      |
| 14   | 1      | 2      | 1      | 1         | 2      | 2      | 1      | 2      |
| 16   | 2      | 2      | 2      | 2         | 2      | 3      | 2      | 2      |
| 17   | 2      | 2      | 1      | 3         | 2      | 2      | 2      | 2      |
| 18   | 2      | 1      | 2      | 2         | 2      | 2      | 2      | 2      |
| 19   | 2      | 2      | 2      | 2         | 1      | 2      | 1      | 2      |
| 20   | 2      | 2      | 2      | 2         | 3      | 2      | 2      | 2      |
| 21   | 1      | 2      | 2      | 2         | 2      | 2      | 2      | 1      |
| 22   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 1      |
| 23   | 1      | 1      | 1      | 1         | 1      | 1      | 2      | 1      |
| 24   | 2      | 2      | 2      | 2         | 1      | 1      | 2      | 1      |
| 25   | 1      | 1      | 1      | 2         | 1      | 1      | 1      | 1      |
| 26   | 1      | 1      | 2      | 2         | 2      | 2      | 2      | 1      |
| 27   | 2      | 2      | 2      | 2         | 2      | 2      | 2      | 2      |

### Table 5D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 |
|------|--------|--------|--------|---------|--------|--------|--------|
|      |        |        | Se     | ssion 1 |        |        |        |
| 2    | 1      | 2      | 2      | 2       | 2      | 2      | 1      |
| 3    | 1      | 1      | 1      | 2       | 1      | 1      | 1      |
| 4    | 1      | 2      | 2      | 2       | 1      | 2      | 1      |
| 6    | 2      | 2      | 2      | 2       | 3      | 3      | 2      |
| 7    | 2      | 2      | 2      | 2       | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2       | 3      | 2      | 2      |
| 9    | 1      | 1      | 1      | 1       | 1      | 1      | 1      |
| 11   | 1      | 2      | 1      | 2       | 1      | 2      | 1      |
| 12   | 2      | 1      | 2      | 2       | 2      | 1      | 2      |
| 13   | 2      | 2      | 2      | 2       | 2      | 2      | 2      |
| 14   | 1      | 2      | 2      | 2       | 2      | 2      | 2      |
| 16   | 2      | 1      | 1      | 1       | 1      | 1      | 2      |
| 17   | 2      | 1      | 1      | 1       | 1      | 2      | 2      |
| 18   | 2      | 2      | 1      | 1       | 2      | 2      | 2      |
| 19   | 2      | 1      | 2      | 2       | 2      | 2      | 2      |
| 20   | 1      | 2      | 1      | 1       | 1      | 1      | 1      |

### Table 6D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4   | DOK R5 | DOK R6 | DOK R7 |
|------|--------|--------|--------|----------|--------|--------|--------|
|      |        |        | Se     | ession 2 |        |        |        |
| 2    | 3      | 1      | 1      | 1        | 2      | 2      | 3      |
| 3    | 1      | 1      | 1      | 1        | 2      | 1      | 1      |
| 4    | 1      | 1      | 2      | 1        | 1      | 1      | 1      |
| 6    | 2      | 2      | 2      | 1        | 2      | 2      | 2      |
| 7    | 1      | 1      | 1      | 2        | 1      | 2      | 2      |
| 8    | 1      | 1      | 2      | 2        | 1      | 2      | 2      |
| 9    | 2      | 2      | 1      | 1        | 2      | 1      | 2      |
| 11   | 2      | 2      | 2      | 2        | 2      | 2      | 1      |
| 12   | 2      | 1      | 1      | 2        | 2      | 2      | 2      |
| 13   | 2      | 2      | 2      | 1        | 2      | 2      | 2      |
| 14   | 2      | 2      | 1      | 2        | 1      | 3      | 1      |
| 16   | 1      | 1      | 2      | 2        | 2      | 2      | 2      |
| 17   | 3      | 2      | 2      | 2        | 3      | 3      | 3      |
| 18   | 3      | 1      | 2      | 2        | 2      | 2      | 2      |
| 19   | 1      | 1      | 1      | 2        | 1      | 1      | 1      |
| 20   | 2      | 1      | 1      | 2        | 1      | 1      | 1      |
| 21   | 2      | 2      | 2      | 2        | 2      | 2      | 1      |
| 22   | 2      | 1      | 2      | 2        | 2      | 2      | 2      |
| 23   | 1      | 1      | 2      | 1        | 1      | 2      | 2      |
| 24   | 1      | 1      | 1      | 1        | 1      | 1      | 1      |
| 25   | 1      | 2      | 1      | 1        | 2      | 2      | 2      |
| 26   | 1      | 2      | 2      | 2        | 2      | 1      | 2      |
| 27   | 3      | 2      | 1      | 2        | 2      | 2      | 2      |
| 28   | 2      | 2      | 2      | 2        | 2      | 2      | 2      |
| 29   | 1      | 2      | 1      | 2        | 1      | 2      | 3      |
| 30   | 1      | 2      | 2      | 2        | 2      | 3      | 2      |
| 31   | 2      | 2      | 2      | 2        | 2      | 2      | 1      |
| 32   | 2      | 2      | 2      | 2        | 2      | 3      | 2      |
| 33   | 1      | 1      | 1      | 2        | 1      | 1      | 1      |
| 34   | 1      | 1      | 1      | 2        | 1      | 1      | 1      |

### Table 6D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1    | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 |  |  |  |  |  |  |
|------|-----------|--------|--------|--------|--------|--------|--------|--|--|--|--|--|--|
|      | Session 1 |        |        |        |        |        |        |  |  |  |  |  |  |
| 2    | 1         | 2      | 2      | 1      | 2      | 2      | 2      |  |  |  |  |  |  |
| 3    | 2         | 2      | 1      | 1      | 3      | 1      | 2      |  |  |  |  |  |  |
| 4    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 6    | 1         | 1      | 1      | 2      | 2      | 1      | 1      |  |  |  |  |  |  |
| 7    | 2         | 1      | 2      | 1      | 2      | 2      | 2      |  |  |  |  |  |  |
| 8    | 2         | 2      | 2      | 1      | 2      | 2      | 2      |  |  |  |  |  |  |
| 9    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 10   | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 11   | 1         | 1      | 1      | 2      | 1      | 2      | 2      |  |  |  |  |  |  |
| 12   | 2         | 2      | 2      | 1      | 1      | 2      | 1      |  |  |  |  |  |  |
| 13   | 2         | 2      | 2      | 1      | 1      | 2      | 1      |  |  |  |  |  |  |

### Table 7D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 |
|------|--------|--------|--------|--------|--------|--------|--------|
|      |        | •      | Sess   | ion 2  |        |        |        |
| 2    | 1      | 1      | 2      | 2      | 2      | 1      | 2      |
| 3    | 2      | 2      | 1      | 2      | 2      | 2      | 3      |
| 4    | 1      | 1      | 1      | 1      | 1      | 2      | 2      |
| 6    | 2      | 2      | 2      | 1      | 1      | 1      | 3      |
| 7    | 2      | 2      | 2      | 2      | 2      | 2      | 0      |
| 8    | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 9    | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 11   | 1      | 1      | 2      | 2      | 2      | 2      | 1      |
| 12   | 2      | 1      | 3      | 2      | 2      | 2      | 2      |
| 13   | 2      | 1      | 2      | 3      | 1      | 2      | 2      |
| 14   | 2      | 2      | 2      | 2      | 1      | 2      | 2      |
| 16   | 2      | 1      | 2      | 2      | 2      | 2      | 3      |
| 17   | 1      | 1      | 2      | 1      | 3      | 2      | 2      |
| 18   | 2      | 1      | 2      | 1      | 2      | 2      | 2      |
| 19   | 1      | 2      | 2      | 2      | 2      | 2      | 1      |
| 21   | 3      | 2      | 2      | 2      | 2      | 3      | 2      |
| 22   | 2      | 2      | 2      | 2      | 1      | 3      | 2      |
| 23   | 1      | 2      | 1      | 2      | 1      | 2      | 2      |
| 24   | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 26   | 1      | 1      | 2      | 1      | 3      | 1      | 2      |
| 27   | 2      | 1      | 2      | 2      | 2      | 2      | 2      |
| 28   | 3      | 1      | 2      | 1      | 3      | 3      | 3      |
| 29   | 2      | 1      | 2      | 1      | 2      | 2      | 2      |
| 30   | 2      | 2      | 2      | 1      | 2      | 2      | 2      |
| 31   | 2      | 2      | 2      | 2      | 1      | 1      | 2      |
| 32   | 3      | 2      | 3      | 2      | 1      | 3      | 2      |
| 33   | 1      | 1      | 1      | 2      | 1      | 2      | 2      |
| 34   | 3      | 2      | 1      | 1      | 2      | 2      | 2      |
| 35   | 2      | 2      | 2      | 2      | 2      | 3      | 3      |
| 36   | 1      | 1      | 1      | 2      | 2      | 1      | 2      |
| 37   | 2      | 2      | 2      | 1      | 1      | 2      | 2      |
| 38   | 1      | 1      | 2      | 2      | 2      | 2      | 2      |
| 39   | 2      | 2      | 1      | 2      | 3      | 2      | 2      |
| 40   | 3      | 2      | 2      | 2      | 2      | 1      | 2      |
| 41   | 3      | 2      | 2      | 3      | 2      | 3      | 3      |

### Table 7D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1    | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 |  |  |  |  |  |  |
|------|-----------|--------|--------|--------|--------|--------|--------|--|--|--|--|--|--|
|      | Session 1 |        |        |        |        |        |        |  |  |  |  |  |  |
| 2    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 3    | 1         | 1      | 1      | 1      | 1      | 2      | 1      |  |  |  |  |  |  |
| 4    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 6    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 7    | 1         | 1      | 2      | 1      | 1      | 2      | 2      |  |  |  |  |  |  |
| 8    | 2         | 2      | 2      | 2      | 2      | 2      | 1      |  |  |  |  |  |  |
| 9    | 1         | 1      | 1      | 1      | 1      | 1      | 1      |  |  |  |  |  |  |
| 10   | 1         | 2      | 1      | 2      | 2      | 2      | 2      |  |  |  |  |  |  |
| 11   | 1         | 1      | 1      | 2      | 1      | 1      | 1      |  |  |  |  |  |  |
| 12   | 1         | 1      | 1      | 2      | 1      | 2      | 2      |  |  |  |  |  |  |
| 13   | 2         | 1      | 1      | 2      | 1      | 1      | 1      |  |  |  |  |  |  |
| 14   | 2         | 2      | 2      | 2      | 2      | 2      | 1      |  |  |  |  |  |  |
| 15   | 1         | 2      | 2      | 2      | 1      | 2      | 2      |  |  |  |  |  |  |

### Table 8D1M DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4 | DOK R5 | DOK R6 | DOK R7 |
|------|--------|--------|--------|--------|--------|--------|--------|
|      |        | •      | Sess   | ion 2  |        |        |        |
| 2    | 2      | 1      | 2      | 2      | 1      | 2      | 1      |
| 3    | 2      | 2      | 2      | 2      | 2      | 3      | 2      |
| 4    | 2      | 2      | 2      | 2      | 1      | 2      | 2      |
| 6    | 2      | 1      | 2      | 1      | 1      | 2      | 2      |
| 7    | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 8    | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 9    | 2      | 1      | 2      | 2      | 2      | 2      | 2      |
| 11   | 3      | 2      | 2      | 2      | 2      | 3      | 3      |
| 12   | 1      | 1      | 2      | 2      | 1      | 2      | 2      |
| 13   | 1      | 1      | 1      | 2      | 1      | 2      | 3      |
| 14   | 2      | 2      | 2      | 2      | 3      | 2      | 3      |
| 16   | 2      | 2      | 2      | 2      | 1      | 2      | 1      |
| 17   | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 18   | 1      | 2      | 2      | 1      | 2      | 2      | 1      |
| 19   | 2      | 1      | 2      | 1      | 2      | 3      | 3      |
| 21   | 1      | 2      | 2      | 2      | 3      | 3      | 2      |
| 22   | 1      | 1      | 2      | 2      | 1      | 2      | 2      |
| 23   | 2      | 2      | 2      | 2      | 2      | 2      | 2      |
| 24   | 1      | 1      | 1      | 2      | 2      | 2      | 1      |
| 26   | 1      | 1      | 2      | 2      | 1      | 2      | 2      |
| 27   | 1      | 1      | 2      | 2      | 2      | 2      | 2      |
| 28   | 2      | 1      | 2      | 2      | 2      | 2      | 2      |
| 29   | 1      | 1      | 1      | 2      | 1      | 2      | 2      |
| 30   | 3      | 2      | 2      | 2      | 1      | 3      | 2      |
| 31   | 2      | 1      | 1      | 2      | 1      | 2      | 2      |
| 32   | 2      | 1      | 1      | 2      | 2      | 2      | 2      |
| 33   | 3      | 1      | 1      | 2      | 2      | 2      | 2      |
| 34   | 1      | 1      | 1      | 1      | 2      | 2      | 1      |
| 35   | 2      | 1      | 2      | 2      | 2      | 2      | 2      |
| 36   | 1      | 1      | 2      | 2      | 2      | 2      | 2      |
| 37   | 2      | 2      | 1      | 2      | 1      | 2      | 1      |
| 38   | 2      | 1      | 2      | 2      | 2      | 2      | 3      |
| 39   | 1      | 2      | 2      | 2      | 2      | 2      | 2      |

### Table 8D1M DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 2    | 1      | 2      | 1      | 1       | 1      | 1      | 2      | 1      |
| 3    | 1      | 2      | 1      | 1       | 1      | 1      | 2      | 1      |
| 4    | 2      | 2      | 1      | 2       | 2      | 1      | 2      | 1      |
| 5    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 1      | 2      | 1      | 2       | 1      | 1      | 2      | 1      |
| 7    | 2      | 2      | 2      | 1       | 2      | 2      | 2      | 2      |
| 8    | 2      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 9    | 2      | 2      | 3      | 2       | 2      | 2      | 2      | 2      |
| 10   | 2      | 2      | 2      | 2       | 1      | 1      | 1      | 2      |
| 11   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 12   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 13   | 1      | 2      | 1      | 1       | 2      | 1      | 1      | 1      |
| 14   | 1      | 1      | 2      | 2       | 2      | 2      | 2      | 2      |
| 15   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 16   | 1      | 1      | 2      | 2       | 1      | 2      | 2      | 2      |
| 17   | 2      | 2      | 2      | 2       | 2      | 1      | 2      | 1      |
| 18   | 2      | 2      | 2      | 1       | 2      | 1      | 1      | 2      |
| 19   | 2      | 1      | 1      | 1       | 1      | 1      | 2      | 1      |
| 20   | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 21   | 2      | 1      | 1      | 1       | 1      | 1      | 2      | 1      |

### Table 4D1S DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 1      | 2       | 2      | 1      | 2      | 1      |
| 2    | 1      | 2      | 1      | 1       | 2      | 2      | 2      | 1      |
| 3    | 2      | 1      | 1      | 1       | 1      | 1      | 1      | 2      |
| 4    | 1      | 3      | 2      | 1       | 2      | 2      | 2      | 2      |
| 5    | 2      | 2      | 1      | 1       | 1      | 2      | 1      | 1      |
| 6    | 2      | 2      | 2      | 2       | 1      | 1      | 2      | 2      |
| 7    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 8    | 1      | 1      | 1      | 1       | 1      | 1      | 2      | 1      |
| 9    | 1      | 2      | 1      | 1       | 1      | 2      | 2      | 1      |
| 10   | 2      | 2      | 3      | 2       | 1      | 2      | 2      | 2      |
| 11   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 12   | 2      | 2      | 2      | 2       | 1      | 2      | 1      | 1      |
| 13   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 14   | 1      | 2      | 2      | 1       | 2      | 2      | 1      | 1      |
| 15   | 1      | 2      | 2      | 1       | 2      | 2      | 2      | 2      |
| 16   | 1      | 3      | 2      | 1       | 2      | 1      | 1      | 1      |
| 17   | 1      | 2      | 1      | 2       | 2      | 2      | 1      | 1      |
| 18   | 2      | 2      | 2      | 2       | 2      | 2      | 1      | 1      |
| 19   | 1      | 2      | 2      | 1       | 1      | 2      | 2      | 1      |

### Table 4D1S DOK Levels by Item and Reviewers continued

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 1      |        |        |        |
| 1    | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 2    | 2      | 1      | 1      | 2       | 2      | 1      | 1      | 2      |
| 3    | 1      | 2      | 1      | 2       | 1      | 1      | 1      | 1      |
| 4    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 5    | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 6    | 1      | 1      | 1      | 2       | 1      | 2      | 1      | 1      |
| 7    | 2      | 2      | 1      | 2       | 1      | 2      | 2      | 1      |
| 8    | 1      | 2      | 1      | 2       | 2      | 2      | 1      | 2      |
| 9    | 2      | 3      | 2      | 2       | 2      | 2      | 2      | 2      |
| 10   | 2      | 2      | 2      | 2       | 1      | 2      | 3      | 2      |
| 11   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 12   | 3      | 3      | 2      | 2       | 2      | 2      | 2      | 2      |
| 13   | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 2      |
| 14   | 2      | 2      | 2      | 2       | 2      | 1      | 2      | 1      |
| 15   | 1      | 1      | 1      | 1       | 2      | 2      | 2      | 1      |
| 16   | 1      | 1      | 1      | 1       | 2      | 1      | 1      | 2      |
| 17   | 2      | 1      | 1      | 1       | 2      | 1      | 1      | 1      |
| 18   | 1      | 1      | 2      | 1       | 1      | 1      | 1      | 1      |
| 19   | 2      | 2      | 3      | 2       | 1      | 2      | 2      | 2      |
| 20   | 2      | 2      | 2      | 1       | 2      | 2      | 2      | 1      |
| 21   | 1      | 1      | 2      | 2       | 2      | 2      | 2      | 1      |

### Table 8D1S DOK Levels by Item and Reviewers

| Item | DOK R1 | DOK R2 | DOK R3 | DOK R4  | DOK R5 | DOK R6 | DOK R7 | DOK R8 |
|------|--------|--------|--------|---------|--------|--------|--------|--------|
|      |        |        |        | Session | 2      |        |        |        |
| 1    | 2      | 2      | 2      | 1       | 2      | 1      | 1      | 1      |
| 2    | 2      | 2      | 1      | 2       | 2      | 2      | 2      | 2      |
| 3    | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |
| 4    | 1      | 1      | 1      | 1       | 1      | 1      | 1      | 1      |
| 5    | 1      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 6    | 1      | 2      | 2      | 2       | 2      | 2      | 1      | 2      |
| 7    | 1      | 1      | 1      | 1       | 2      | 1      | 1      | 1      |
| 8    | 2      | 3      | 2      | 2       | 2      | 2      | 2      | 2      |
| 9    | 2      | 2      | 2      | 2       | 2      | 2      | 3      | 2      |
| 10   | 2      | 2      | 3      | 2       | 1      | 2      | 2      | 2      |
| 11   | 3      | 3      | 2      | 2       | 2      | 2      | 3      | 2      |
| 12   | 2      | 3      | 3      | 2       | 2      | 2      | 2      | 2      |
| 13   | 2      | 2      | 2      | 2       | 1      | 2      | 2      | 2      |
| 14   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 15   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 2      |
| 16   | 2      | 2      | 2      | 2       | 2      | 1      | 1      | 2      |
| 17   | 2      | 2      | 1      | 2       | 1      | 2      | 2      | 1      |
| 18   | 2      | 2      | 2      | 2       | 2      | 2      | 2      | 1      |
| 19   | 1      | 1      | 1      | 2       | 1      | 1      | 1      | 1      |

### Table 8D1S DOK Levels by Item and Reviewers continued

# Table 3D2E DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S | DOK R2 | R2P     | R2S     | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|-----|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         |     |        |         | Session | n 1    |         |         |        |         |         |
| 1    | 2      | 3.RI.4  |     | 1      | 3.RI.4  |         | 1      | 3.RI.1  |         | 2      | 3.RI.4  | 3.L.4.a |
| 2    | 1      | 3.RI.1  |     | 1      | 3.RI.1  |         | 1      | 3.RI.1  |         | 1      | 3.RI.1  |         |
| 3    | 2      | 3.RI.2  |     | 2      | 3.RI.2  |         | 2      | 3.RI.2  |         | 2      | 3.RI.2  |         |
|      | 3      | 3.W.2   |     | 3      | 3.RI.7  | 3.W.2   | 3      | 3.W.1   | 3.RI.3  | 3      | 3.W.1   |         |
| 4    | 3      | 3.W.2   |     | 3      | 3.RI.7  | 3.W.2   | 3      | 3.W.1   | 3.RI.3  | 3      | 3.W.1   |         |
| 4    | 3      | 3.W.2   |     | 3      | 3.RI.7  | 3.W.2   | 3      | 3.W.1   | 3.RI.3  | 3      | 3.W.1   |         |
|      | 3      | 3.W.2   |     | 3      | 3.RI.7  | 3.W.2   | 3      | 3.W.1   | 3.RI.3  | 3      | 3.W.1   |         |
|      |        |         |     |        |         | Session | n 2    |         |         |        |         |         |
| 1    | 2      | 3.W.1.c |     | 2      | 3.L.1.i |         | 2      | 3.RI.8  | 3.RI.3  | 1      | 3.W.1.c |         |
| 2    | 2      | 3.RL.3  |     | 2      | 3.RL.3  |         | 2      | 3.RI.1  | 3.RI.2  | 2      | 3.W.3.b | 3.RL.3  |
| 3    | 2      | 3.W.2.b |     | 2      | 3.W.2.b |         | 2      | 3.RI.2  | 3.RI.1  | 2      | 3.W.2.b |         |
| 5    | 2      | 3.W.2.b |     | 2      | 3.W.2.b |         | 2      | 3.RI.2  | 3.RI.1  | 2      | 3.W.2.b |         |
| 4    | 2      | 3.W.2.c |     | 2      | 3.W.3.c |         | 2      | 3.RI.8  | 3.RI.3  | 1      | 3.W.2.c |         |
| 6    | 2      | 3.W.2.a |     | 2      | 3.RI.5  |         | 2      | 3.RI.5  | 3.RI.2  | 2      | 3.W.8   | 3.RI.5  |
| 7    | 2      | 3.W.2.b |     | 2      | 3.RI.5  |         | 3      | 3.RI.5  | 3.RI.9  | 2      | 3.W.8   |         |
| /    | 2      | 3.W.2.b |     | 2      | 3.RI.5  |         | 3      | 3.RI.5  | 3.RI.9  | 2      | 3.W.8   |         |
| 8    | 2      | 3.W.2.b |     | 2      | 3.W.2.b |         | 2      | 3.RI.5  | 3.RI.2  | 1      | 3.W.8   |         |
| 9    | 2      | 3.W.1.b |     | 2      | 3.W.2.b |         | 3      | 3.W.1.b | 3.RI.6  | 2      | 3.W.1.b |         |
| 10   | 1      | 3.L.1.g |     | 1      | 3.L.1.g |         | 1      | 3.L.1   | 3.L.1.g | 1      | 3.L.1.g |         |
| 11   | 1      | 3.L.2.d |     | 1      | 3.L.2.g |         | 1      | 3.L.2.d |         | 1      | 3.L.2.d |         |
| 12   | 1      | 3.L.2.a |     | 1      | 3.L.2.g |         | 1      | 3.L.2.a |         | 1      | 3.L.2.a |         |
| 14   | 1      | 3.L.2.a |     | 1      | 3.L.2.g |         | 1      | 3.L.2.a |         | 1      | 3.L.2.a |         |

### Table 3D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S    | DOK R2 | R2P    | R2S       | DOK R3 | R3P    | R3S    | DOK R4 | R4P     | R4S     |
|------|--------|---------|--------|--------|--------|-----------|--------|--------|--------|--------|---------|---------|
|      |        |         |        |        |        | Session . | 3      |        |        |        |         |         |
| 1    | 2      | 3.SL.2  |        | 2      | 3.RL.3 | 3.SL.3    | 2      | 3.RL.3 | 3.RL.1 | 2      | 3.SL.3  |         |
| 1    | 2      | 3.SL.2  |        | 2      | 3.RL.3 | 3.SL.3    | 2      | 3.RL.3 | 3.RL.1 | 2      | 3.SL.3  |         |
| 2    | 2      | 3.SL.2  |        | 2      | 3.RI.2 | 3.SL.2    | 2      | 3.RL.2 |        | 2      | 3.SL.2  |         |
| 6    | 2      | 3.SL.2  |        | 1      | 3.RI.1 | 3.SL.3    | 2      | 3.SL.2 | 3.SL.3 | 2      | 3.SL.3  |         |
| 7    | 2      | 3.SL.2  |        | 1      | 3.RI.1 | 3.SL.2    | 2      | 3.SL.2 | 3.SL.3 | 3      | 3.SL.2  |         |
| /    | 2      | 3.SL.2  |        | 1      | 3.RI.1 | 3.SL.2    | 2      | 3.SL.2 | 3.SL.3 | 3      | 3.SL.2  |         |
| 8    | 2      | 3.SL.2  |        | 1      | 3.RI.1 | 3.SL.3    | 2      | 3.SL.2 | 3.SL.3 | 2      | 3.SL.3  |         |
|      |        |         |        |        |        | Session 4 | 4      |        |        |        |         |         |
| 1    | 2      | 3.RI.4  |        | 2      | 3.RI.4 |           | 2      | 3.RI.2 | 3.RL.4 | 2      | 3.RI.4  | 3.L.4.a |
| 2    | 2      | 3.RI.6  |        | 2      | 3.RI.6 |           | 2      | 3.RI.6 | 3.RL.6 | 3      | 3.RI.2  |         |
| 2    | 2      | 3.RI.6  |        | 2      | 3.RI.6 |           | 2      | 3.RI.6 | 3.RL.6 | 3      | 3.RI.2  |         |
| 3    | 2      | 3.RI.8  |        | 2      | 3.RI.3 |           | 2      | 3.RI.2 | 3.RI.1 | 2      | 3.RI.8  |         |
| 5    | 2      | 3.RI.8  |        | 2      | 3.RI.3 |           | 2      | 3.RI.2 | 3.RI.1 | 2      | 3.RI.8  |         |
| 4    | 2      | 3.L.5.a |        | 1      | 3.RI.3 |           | 2      | 3.RI.2 | 3.RI.3 | 2      | 3.RI.3  |         |
| 5    | 2      | 3.RL.1  |        | 1      | 3.RL.4 |           | 2      | 3.RL.4 |        | 2      | 3.L.5.a |         |
| 6    | 2      | 3.RL.1  | 3.RL.7 | 2      | 3.RL.3 |           | 2      | 3.RL.3 | 3.RL.2 | 2      | 3.RL.3  |         |
| U    | 2      | 3.RL.3  |        | 2      | 3.RL.3 |           | 2      | 3.RL.3 | 3.RL.2 | 2      | 3.RL.3  |         |
| 7    | 2      | 3.RL.2  |        | 2      | 3.RL.2 |           | 2      | 3.RL.3 |        | 2      | 3.RL.3  |         |
| 8    | 2      | 3.RL.1  |        | 2      | 3.RL.2 |           | 2      | 3.RL.3 |        | 3      | 3.RL.2  |         |
| 9    | 2      | 3.RL.1  |        | 2      | 3.RL.6 |           | 3      | 3.RL.3 | 3.RL.6 | 2      |         |         |
| 14   | 2      | 3.RI.2  |        | 1      | 3.RI.1 |           | 2      | 3.RL.1 | 3.RI.1 | 1      | 3.RL.1  |         |
| 14   | 2      | 3.RI.2  |        | 1      | 3.RI.1 |           | 2      | 3.RL.1 | 3.RI.1 | 1      | 3.RL.1  |         |
| 15   | 2      | 3.RI.8  |        | 2      | 3.RI.2 |           | 2      | 3.RL.1 | 3.RL.2 | 1      |         |         |
| 16   | 2      | 3.RI.9  |        | 1      | 3.RI.1 |           | 2      | 3.RL.3 |        | 2      | 3.RL.3  |         |
| 17   | 2      | 3.RI.9  |        | 3      | 3.RI.2 |           | 3      | 3.RL.2 | 3.RL.9 | 3      |         |         |

### Table 3D2E DOK Levels and Standards Coded by Reviewers 5-8

| Item | DOK R5 | R5P    | R5S     | DOK R6 | R6P     | R6S      | DOK R7 | R7P     | R7S | DOK R8 | R8P     | R8S   |
|------|--------|--------|---------|--------|---------|----------|--------|---------|-----|--------|---------|-------|
|      |        |        |         |        | S       | ession 1 |        |         |     |        |         |       |
| 1    | 2      | 3.RI.4 |         | 1      | 3.W.8   |          | 2      | 3.RI.4  |     | 1      | 3.W.2.b |       |
| 2    | 1      | 3.RI.1 |         | 1      | 3.W.8   |          | 1      | 3.RI.1  |     | 1      | 3.W.2.b |       |
| 3    | 2      | 3.RI.2 |         | 2      | 3.W.8   |          | 2      | 3.RL.2  |     | 2      | 3.W.1.b |       |
|      | 3      | 3.W.2  |         | 3      | 3.W.2   |          | 3      | 3.W.2   |     | 3      | 3.W.2   | 3.W.8 |
| 4    | 3      | 3.W.2  |         | 3      | 3.W.2   |          | 3      | 3.W.2   |     | 3      | 3.W.2   | 3.W.8 |
| 4    | 3      | 3.W.2  |         | 3      | 3.W.2   |          | 3      | 3.W.2   |     | 3      | 3.W.2   | 3.W.8 |
|      | 3      | 3.W.2  |         | 3      | 3.W.2   |          | 3      | 3.W.2   |     | 3      | 3.W.2   | 3.W.8 |
|      |        |        |         |        | S       | ession 2 | 2      |         |     |        |         |       |
| 1    | 1      | 3.W.2  |         | 1      | 3.W.1.c |          | 1      | 3.W.2.c |     | 1      | 3.L.5   |       |
| 2    | 2      | 3.RL.4 |         | 2      | 3.W.3.b |          | 2      | 3.W.5   |     | 2      | 3.L.5   |       |
| 3    | 3      | 3.W.2  | 3.W.2.c | 2      | 3.W.1.b |          | 2      | 3.W.2.b |     | 2      | 3.W.2.b |       |
| 3    | 3      | 3.W.2  | 3.W.2.c | 2      | 3.W.1.b |          | 2      | 3.W.2.b |     | 2      | 3.W.2.b |       |
| 4    | 2      | 3.W.2  | 3.W.2.c | 1      | 3.W.2.c |          | 1      | 3.W.2.c |     | 2      | 3.W.2.c |       |
| 6    | 2      | 3.W.8  |         | 2      | 3.W.8   |          | 2      | 3.W.8   |     | 2      | 3.W.2.a |       |
| 7    | 2      | 3.W.8  |         | 2      | 3.W.8   |          | 2      | 3.W.8   |     | 3      | 3.W.2.a |       |
| ,    | 2      | 3.W.8  |         | 2      | 3.W.8   |          | 2      | 3.W.8   |     | 3      | 3.W.2.a |       |
| 8    | 2      | 3.W.8  |         | 2      | 3.W.8   |          | 2      | 3.W.8   |     | 2      | 3.W.2.a |       |
| 9    | 2      | 3.W.2  | 3.W.2.b | 2      | 3.W.1.b |          | 2      | 3.W.1.b |     | 2      | 3.W.1.a |       |
| 10   | 1      | 3.W.2  | 3.L.1   | 1      | 3.L.1.g |          | 1      | 3.L.1.g |     | 1      | 3.L.1   |       |
| 11   | 1      | 3.L.2  | 3.L.2.d | 1      | 3.L.2.d |          | 1      | 3.L.2.d |     | 1      | 3.L.2.d |       |
| 12   | 1      | 3.L.2  | 3.L.1.a | 1      | 3.L.2.a |          | 1      | 3.L.2.a |     | 1      | 3.L.2.a |       |
| 14   | 1      | 3.L.2  | 3.L.1.a | 1      | 3.L.2.a |          | 1      | 3.L.2.a |     | 1      | 3.L.2.a |       |

# Table 3D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P    | R5S     | DOK R6 | R6P    | R6S       | DOK R7 | R7P    | R7S | DOK R8 | R8P    | R8S |
|------|--------|--------|---------|--------|--------|-----------|--------|--------|-----|--------|--------|-----|
|      |        | •      |         |        | S      | Session 3 |        |        |     |        |        |     |
| 1    | 1      | 3.SL.2 | 3.SL.3  | 1      | 3.SL.3 |           | 2      | 3.SL.2 |     | 1      | 3.SL.2 |     |
| 1    | 1      | 3.SL.2 | 3.SL.3  | 1      | 3.SL.3 |           | 2      | 3.SL.2 |     | 1      | 3.SL.2 |     |
| 2    | 2      | 3.SL.2 |         | 2      | 3.SL.2 |           | 2      | 3.SL.2 |     | 2      | 3.SL.3 |     |
| 6    | 2      | 3.SL.2 |         | 2      | 3.SL.3 |           | 1      | 3.SL.2 |     | 2      | 3.SL.3 |     |
| 7    | 2      | 3.SL.2 |         | 2      | 3.SL.3 |           | 2      | 3.SL.2 |     | 2      | 3.SL.3 |     |
| /    | 2      | 3.SL.3 |         | 2      | 3.SL.3 |           | 2      | 3.SL.2 |     | 2      | 3.SL.3 |     |
| 8    | 1      | 3.SL.2 |         | 1      | 3.SL.3 |           | 1      | 3.SL.3 |     | 1      | 3.SL.3 |     |
|      |        |        |         |        | S      | Session 4 |        |        |     |        |        |     |
| 1    | 2      | 3.L.4  | 3.L.4.a | 2      | 3.RI.4 |           | 2      | 3.RL.4 |     | 1      | 3.RI.4 |     |
| 2    | 3      | 3.RL.7 |         | 3      | 3.RI.6 | 3.RI.1    | 3      | 3.RI.6 |     | 2      | 3.RI.2 |     |
| 2    | 3      | 3.RL.7 |         | 3      | 3.RI.6 | 3.RI.1    | 3      | 3.RI.6 |     | 2      | 3.RI.2 |     |
| 3    | 2      | 3.RI.8 |         | 2      | 3.RI.2 |           | 1      | 3.RI.1 |     | 2      | 3.RI.2 |     |
| 5    | 2      | 3.RI.8 |         | 2      | 3.RI.2 |           | 1      | 3.RI.1 |     | 2      | 3.RI.2 |     |
| 4    | 1      | 3.RI.1 |         | 2      | 3.RI.3 |           | 2      | 3.RI.3 |     | 1      | 3.RI.1 |     |
| 5    | 2      | 3.L.4  | 3.L.4.a | 2      | 3.RL.4 |           | 2      | 3.RL.4 |     | 1      | 3.RL.4 |     |
| 6    | 2      | 3.RL.3 | 3.RL.2  | 2      | 3.RL.3 | 3.RL.1    | 3      | 3.RL.3 |     | 2      | 3.RL.1 |     |
| U    | 2      | 3.RL.3 | 3.RL.2  | 2      | 3.RL.3 | 3.RL.1    | 3      | 3.RL.3 |     | 2      | 3.RL.1 |     |
| 7    | 1      | 3.RL.1 |         | 2      | 3.RL.3 |           | 2      | 3.RL.3 |     | 2      | 3.RL.1 |     |
| 8    | 3      | 3.RL.2 |         | 3      | 3.RL.2 |           | 2      | 3.RL.2 |     | 3      | 3.RL.3 |     |
| 9    | 1      | 3.RL.1 |         | 2      | 3.RL.6 |           | 2      | 3.RL.1 |     | 1      | 3.RL.1 |     |
| 14   | 1      | 3.RI.1 |         | 1      | 3.RI.1 |           | 1      | 3.RL.1 |     | 1      | 3.RL.1 |     |
| 17   | 1      | 3.RI.1 |         | 1      | 3.RI.1 |           | 1      | 3.RL.1 |     | 1      | 3.RL.1 |     |
| 15   | 2      | 3.RL.7 |         | 2      | 3.RI.1 |           | 2      | 3.RL.5 |     | 1      | 3.RL.1 |     |
| 16   | 3      | 3.RL.7 |         | 2      | 3.RI.3 |           | 2      | 3.RL.3 |     | 1      | 3.RL.3 |     |
| 17   | 2      | 3.RL.9 |         | 3      | 3.RI.9 |           | 3      | 3.RL.1 |     | 2      | 3.RL.9 |     |

### Table 4D2E DOK Levels and Standards Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S    | DOK R2 | R2P     | R2S    | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|--------|--------|---------|--------|--------|---------|---------|--------|---------|---------|
|      |        |         |        |        |         | Sessio | n 1    |         |         |        |         |         |
| 1    | 2      | 4.RL.4  |        | 1      | 4.RL.4  |        | 2      | 4.RL.4  | 4.RL.1  | 2      | 4.RL.4  | 4.L.4.a |
| 2    | 2      | 4.RL.3  |        | 2      | 4.RL.1  |        | 2      | 4.RL.3  | 4.RL.1  | 2      | 4.RL.1  |         |
| 3    | 2      | 4.RL.1  |        | 2      | 4.RL.1  |        | 2      | 4.RL.3  | 4.RL.2  | 2      | 4.RL.3  |         |
| 5    | 2      | 4.RL.1  |        | 2      | 4.RL.1  |        | 2      | 4.RL.3  | 4.RL.1  | 2      | 4.RL.3  |         |
| 4    | 2      | 4.RL.1  |        | 2      | 4.RL.1  |        | 2      | 4.RL.1  | 4.RL.3  | 2      | 4.RL.1  |         |
| 5    | 2      | 4.RL.2  |        | 2      | 4.RL.2  |        | 3      | 4.RL.2  | 4.RL.3  | 2      | 4.RL.2  |         |
|      | 3      | 4.W.9   | 4.RL.2 | 3      | 4.W.1   |        | 3      | 4.W.1   | 4.W.1.a | 3      | 4.W.1   | 4.W.9.a |
| 6    | 3      | 4.W.9   | 4.RL.2 | 3      | 4.W.1   |        | 3      | 4.W.1   | 4.W.1.a | 3      | 4.W.1   | 4.W.9.a |
| U    | 3      | 4.W.9   | 4.RL.2 | 3      | 4.W.1   |        | 3      | 4.W.1   | 4.W.1.a | 3      | 4.W.1   | 4.W.9.a |
|      | 3      | 4.W.9   | 4.RL.2 | 3      | 4.W.1   |        | 3      | 4.W.1   | 4.W.1.a | 3      | 4.W.1   | 4.W.9.a |
|      |        |         |        |        |         | Sessio | n 2    |         |         |        |         |         |
| 1    | 2      | 4.W.2.e |        | 2      | 4.W.2.e |        | 2      | 4.RI.2  | 4.RI.1  | 2      | 4.W.2.e |         |
| 2    | 2      | 4.W.3.e |        | 2      | 4.W.2.e |        | 2      | 4.RL.2  | 4.RL.1  | 2      | 4.W.3.e |         |
| 3    | 2      | 4.W.2.d |        | 2      | 4.L.3.a |        | 2      | 4.RI.4  | 4.RL.1  | 2      | 4.W.2.d | 4.L.3.a |
| 4    | 2      | 4.W.1.d |        | 2      | 4.W.2.e |        | 2      | 4.RL.2  | 4.RL.1  | 2      | 4.W.1.d |         |
| 6    | 2      | 4.W.3.a |        | 2      | 4.W.3.e |        | 2      | 4.RL.1  | 4.RL.3  | 2      | 4.W.3.a |         |
| 7    | 2      | 4.W.2.a |        | 2      | 4.W.2.b |        | 2      | 4.RI.2  | 4.RI.1  | 3      | 4.W.2.b |         |
| 8    | 2      | 4.W.8   |        | 2      | 4.W.8   |        | 2      | 4.RI.7  | 4.RI.1  | 2      | 4.W.8   |         |
| 9    | 2      | 4.W.8   |        | 2      | 4.W.8   |        | 3      | 4.RI.9  | 4.RI.3  | 2      | 4.W.8   |         |
| 9    | 2      | 4.W.8   |        | 2      | 4.W.8   |        | 3      | 4.RI.9  | 4.RI.3  | 2      | 4.W.8   |         |
| 10   | 2      | 4.W.8   |        | 2      | 4.W.8   |        | 2      | 4.RI.7  | 4.RL.2  | 2      | 4.W.8   |         |
| 11   | 2      | 4.L.4.b |        | 1      | 4.L.2   |        | 1      | 4.L.2.b | 4.L.2   | 1      | 4.L.2.b |         |
| 12   | 2      | 4.L.2.a |        | 1      | 4.L.2.a |        | 1      | 4.L.2.a | 4.L.2   | 1      | 4.L.2.a |         |
| 13   | 1      | 4.L.1.a |        | 1      | 4.L.1.b |        | 1      | 4.L.1.b | 4.L.1   | 1      | 4.L.2.b |         |
| 15   | 1      | 4.L.1.a |        | 1      | 4.L.1.b |        | 1      | 4.L.1.b | 4.L.1   | 1      | 4.L.2.b |         |
| 14   | 2      | 4.L.3.b |        | 2      | 4.L.3.b |        | 1      | 4.L.2   | 4.L.2.b | 1      | 4.L.3.b |         |
| 14   | 2      | 4.L.3.b |        | 2      | 4.L.3.b |        | 1      | 4.L.2   | 4.L.2.b | 1      | 4.L.3.b |         |

### Table 4D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S    | DOK R2 | R2P     | R2S     | DOK R3 | R3P    | R3S    | DOK R4 | R4P     | R4S     |
|------|--------|---------|--------|--------|---------|---------|--------|--------|--------|--------|---------|---------|
|      |        |         |        |        |         | Session | 3      | l      | l      |        |         |         |
| 1    | 2      | 4.SL.3  |        | 2      | 4.RI.1  |         | 2      | 4.SL.3 | 4.SL.2 | 2      | 4.SL.3  |         |
| 1    | 2      | 4.SL.3  |        | 2      | 4.RI.1  |         | 2      | 4.SL.3 | 4.SL.2 | 2      | 4.SL.3  |         |
| 2    | 2      | 4.SL.3  |        | 2      | 4.RI.2  |         | 2      | 4.SL.3 | 4.SL.2 | 2      | 4.SL.3  |         |
| 3    | 2      | 4.SL.2  |        | 2      | 4.RI.2  |         | 2      | 4.SL.2 | 4.SL.3 | 2      | 4.SL.2  |         |
| 7    | 2      | 4.SL.2  |        | 2      | 4.RI.2  |         | 2      | 4.SL.3 | 4.RI.2 | 2      | 4.SL.3  |         |
| /    | 2      | 4.SL.2  |        | 2      | 4.RI.2  |         | 2      | 4.SL.3 | 4.RI.2 | 2      | 4.SL.3  |         |
| 8    | 2      | 4.SL.2  |        | 2      | 4.RI.3  | 4.SL.2  | 2      | 4.SL.2 | 4.RI.2 | 2      | 4.SL.2  |         |
| 9    | 2      | 4.SL.3  |        | 2      | 4.RI.8  |         | 2      | 4.SL.3 | 4.RI.1 | 2      | 4.SL.3  |         |
|      |        | •<br>•  |        |        |         | Session | 4      |        |        |        |         |         |
| 1    | 3      | 4.RI.5  | 4.RI.8 | 2      | 4.RI.5  |         | 2      | 4.RI.8 | 4.RI.3 | 2      | 4.RI.5  |         |
| 2    | 2      | 4.RI.4  |        | 2      | 4.RI.4  | 4.L.4.a | 2      | 4.RI.4 | 4.RI.1 | 2      | 4.RI.4  |         |
| 3    | 2      | 4.RI.1  |        | 2      | 4.RI.3  |         | 2      | 4.RI.1 | 4.RI.3 | 1      | 4.RI.1  |         |
| 4    | 3      | 4.L.5.b |        | 2      | 4.RL.4  |         | 2      | 4.RL.4 | 4.RL.1 | 2      | 4.L.5.b |         |
| 5    | 2      | 4.L.4.a |        | 1      | 4.RL.6  |         | 2      | 4.RL.4 | 4.RL.1 | 2      | 4.L.4.c |         |
| 6    | 3      | 4.RL.2  |        | 2      | 4.RL.2  |         | 3      | 4.RL.2 | 4.RL.1 | 3      | 4.RL.2  |         |
| 7    | 2      | 4.RL.3  |        | 2      | 4.RL.3  |         | 2      | 4.RL.3 | 4.RL.1 | 2      | 4.RL.3  |         |
| /    | 2      | 4.RL.3  |        | 2      | 4.RL.3  |         | 2      | 4.RL.3 | 4.RL.1 | 2      | 4.RL.3  |         |
| 8    | 2      | 4.RL.6  |        | 2      | 4.RL.6  |         | 2      | 4.RL.6 | 4.RL.1 | 2      | 4.RL.6  |         |
| 13   | 2      | 4.RI.4  |        | 2      | 4.L.4.a |         | 2      | 4.RI.4 | 4.RI.1 | 2      | 4.RI.4  | 4.L.4.a |
| 14   | 2      | 4.RI.1  |        | 2      | 4.RI.2  |         | 2      | 4.RI.1 | 4.RI.3 | 2      | 4.RI.1  |         |
| 15   | 2      | 4.RI.1  | 4.RI.2 | 2      | 4.RI.1  |         | 2      | 4.RI.8 | 4.RI.3 | 2      | 4.RI.3  |         |
| 15   | 2      | 4.RI.1  |        | 2      | 4.RI.1  |         | 2      | 4.RI.8 | 4.RI.3 | 2      | 4.RI.3  |         |

| Item | DOK R5 | R5P    | R5S     | DOK R6 | R6P    | R6S       | DOK R7 | R7P     | R7S    | DOK R8 | R8P    | R8S |
|------|--------|--------|---------|--------|--------|-----------|--------|---------|--------|--------|--------|-----|
|      |        |        |         |        |        | Session 1 |        |         |        |        |        |     |
| 1    | 2      | 4.RL.4 | 4.L.4.a | 2      | 4.RL.4 |           | 2      | 4.L.1.a |        | 1      | 4.RL.4 |     |
| 2    | 2      | 4.RL.3 |         | 2      | 4.RL.1 | 4.RL.3    | 2      | 4.RL.1  |        | 1      | 4.RL.1 |     |
| 3    | 1      | 4.RL.2 |         | 2      | 4.RL.3 |           | 1      | 4.RL.3  |        | 1      | 4.RL.3 |     |
| 3    | 2      | 4.W.2  | 4.W.2.b | 2      | 4.RL.3 |           | 1      | 4.RL.3  |        | 1      | 4.RL.3 |     |
| 4    | 2      | 4.RL.1 |         | 2      | 4.RL.1 |           | 2      | 4.RL.1  |        | 2      | 4.RL.1 |     |
| 5    | 2      | 4.RL.2 | 4.RL.3  | 2      | 4.RL.2 |           | 2      | 4.RL.2  |        | 2      | 4.RL.2 |     |
|      | 3      | 4.W.1  | 4.W.1.a | 3      | 4.W.2  |           | 3      | 4.W.4   | 4.RL.5 | 3      | 4.W.2  |     |
| 6    | 3      | 4.RL.1 | 4.W.1.b | 3      | 4.W.4  |           | 3      | 4.W.4   | 4.RL.5 | 3      | 4.W.2  |     |
| U    | 3      | 4.RL.1 | 4.W.1.c | 2      | 4.L.3  |           | 3      | 4.W.4   | 4.RL.5 | 3      | 4.W.2  |     |
|      | 3      | 4.RL.1 | 4.W.1.d | 1      | 4.L.2  | 4.L.1     | 3      | 4.W.4   | 4.RL.5 | 3      | 4.W.2  |     |

### Table 4D2E DOK Levels and Standards Coded by Reviewers 5-8

# Table 4D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P     | R6S       | DOK R7 | R7P     | R7S | DOK R8 | R8P     | R8S |
|------|--------|---------|---------|--------|---------|-----------|--------|---------|-----|--------|---------|-----|
|      |        |         |         |        | S       | Session 2 |        |         |     |        |         | ·   |
| 1    | 2      | 4.RI.2  | 4.W.2.e | 2      | 4.W.2.e |           | 2      | 4.W.2.e |     | 2      | 4.W.2.e |     |
| 2    | 2      | 4.RL.2  | 4.W.3.e | 2      | 4.W.3.e |           | 2      | 4.W.2.e |     | 2      | 4.W.3.e |     |
| 3    | 2      | 4.L.3.a |         | 1      | 4.W.2.d | 4.L.3.a   | 1      | 4.L.3.a |     | 2      | 4.W.2.d |     |
| 4    | 3      | 4.RI.2  |         | 2      | 4.W.1.d |           | 2      | 4.W.2.e |     | 2      | 4.W.2.e |     |
| 6    | 2      | 4.RL.2  |         | 2      | 4.W.3.a |           | 2      | 4.W.3.a |     | 2      | 4.W.3.d |     |
| 7    | 2      | 4.RI.2  |         | 2      | 4.W.2.b |           | 2      | 4.W.2.b |     | 2      | 4.W.2.b |     |
| 8    | 2      | 4.W.8   | 4.W.2.b | 2      | 4.W.8   |           | 3      | 4.W.8   |     | 3      | 4.W.8   |     |
| 9    | 2      | 4.W.8   |         | 2      | 4.W.8   |           | 3      | 4.W.8   |     | 3      | 4.L.4.c |     |
| 9    | 2      | 4.W.8   |         | 2      | 4.W.8   |           | 3      | 4.W.8   |     | 3      | 4.L.4.c |     |
| 10   | 2      | 4.RI.8  |         | 2      | 4.W.8   |           | 3      | 4.W.8   |     | 3      | 4.W.8   |     |
| 11   | 1      | 4.L.2.b |         | 1      | 4.L.2   |           | 1      | 4.L.2.b |     | 1      | 4.L.2.b |     |
| 12   | 1      | 4.L.2.a |         | 1      | 4.L.2   |           | 1      | 4.L.2.a |     | 1      | 4.L.2.a |     |
| 13   | 1      | 4.L.1.b |         | 1      | 4.L.1.b |           | 1      | 4.L.1.b |     | 1      | 4.L.1.b |     |
| 15   | 1      | 4.L.1.b |         | 1      | 4.L.1.b |           | 1      | 4.L.1.b |     | 1      | 4.L.1.b |     |
| 14   | 1      | 4.L.3.b |         | 1      | 4.L.2   |           | 1      | 4.L.2   |     | 1      | 4.L.2   |     |
|      | 1      | 4.L.3.b |         | 1      | 4.L.2   |           | 1      | 4.L.2   |     | 1      | 4.L.2   |     |

#### Table 4D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P    | R6S       | DOK R7 | R7P    | R7S | DOK R8 | R8P    | R8S |
|------|--------|---------|---------|--------|--------|-----------|--------|--------|-----|--------|--------|-----|
|      |        |         |         |        | S      | Session 3 |        |        |     |        |        |     |
| 1    | 1      | 4.SL.3  |         | 2      | 4.SL.3 |           | 1      | 4.SL.3 |     | 1      | 4.SL.3 |     |
| 1    | 1      | 4.SL.3  |         | 2      | 4.SL.3 |           | 1      | 4.SL.3 |     | 1      | 4.SL.3 |     |
| 2    | 1      | 4.SL.3  |         | 2      | 4.SL.3 |           | 2      | 4.SL.3 |     | 1      | 4.SL.3 |     |
| 3    | 2      | 4.RL.2  |         | 2      | 4.SL.2 |           | 2      | 4.SL.2 |     | 2      | 4.SL.2 |     |
| 7    | 2      | 4.SL.2  |         | 2      | 4.SL.3 |           | 2      | 4.SL.2 |     | 2      | 4.SL.2 |     |
| /    | 2      | 4.SL.3  |         | 2      | 4.SL.3 |           | 2      | 4.SL.3 |     | 2      | 4.RI.2 |     |
| 8    | 2      | 4.SL.2  |         | 2      | 4.SL.2 |           | 2      | 4.SL.2 |     | 2      | 4.SL.2 |     |
| 9    | 1      | 4.SL.3  |         | 2      | 4.SL.3 |           | 1      | 4.SL.3 |     | 2      | 4.SL.3 |     |
|      |        |         |         |        | S      | Session 4 |        |        |     |        |        |     |
| 1    | 2      | 4.RI.7  |         | 2      | 4.RI.5 |           | 1      | 4.RI.5 |     | 3      | 4.RI.5 |     |
| 2    | 2      | 4.RI.4  | 4.L.3.a | 2      | 4.RI.4 |           | 2      | 4.RI.4 |     | 1      | 4.RI.4 |     |
| 3    | 1      | 4.RI.1  | 4.RI.7  | 2      | 4.RI.1 |           | 1      | 4.RI.1 |     | 1      | 4.RI.1 |     |
| 4    | 2      | 4.L.5.a |         | 2      | 4.RL.4 | 4.L.5.b   | 2      | 4.RL.4 |     | 2      | 4.RL.4 |     |
| 5    | 2      | 4.L.4.a |         | 2      | 4.RL.4 | 4.L.4     | 2      | 4.RL.4 |     | 2      | 4.RL.4 |     |
| 6    | 2      | 4.RL.2  |         | 3      | 4.RL.2 |           | 3      | 4.RL.2 |     | 2      | 4.RL.2 |     |
| 7    | 2      | 4.RL.1  |         | 2      | 4.RL.3 |           | 3      | 4.RL.3 |     | 2      | 4.RL.1 |     |
|      | 2      | 4.RL.1  |         | 2      | 4.RL.3 |           | 3      | 4.RL.3 |     | 2      | 4.RL.1 |     |
| 8    | 2      | 4.RL.6  |         | 2      | 4.RL.6 |           | 3      | 4.RL.6 |     | 2      | 4.RL.6 |     |
| 13   | 2      | 4.L.4.a | 4.RI.4  | 2      | 4.RI.4 |           | 2      | 4.RI.4 |     | 1      | 4.RI.4 |     |
| 14   | 1      | 4.RI.2  |         | 2      | 4.RI.1 |           | 2      | 4.RI.8 |     | 3      | 4.RI.2 |     |
| 15   | 1      | 4.RI.1  |         | 2      | 4.RI.8 |           | 1      | 4.RI.1 |     | 2      | 4.RI.8 |     |
| 15   | 1      | 4.RI.6  |         | 2      | 4.RI.1 | 4.RI.8    | 2      | 4.RI.8 |     | 2      | 4.RI.8 |     |
| 16   | 2      | 4.RI.7  |         | 2      | 4.RI.5 |           | 1      | 4.RI.5 |     | 2      | 4.RI.5 |     |

## Table 5D2E DOK Levels and Standards Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S    | DOK R2 | R2P     | R2S     | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|--------|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      | •      |         |        |        |         | Session | n 1    |         |         |        |         |         |
| 1    | 2      | 5.RI.4  |        | 2      | 5.RI.4  | 5.L.4.a | 2      | 5.RI.4  | 5.RL.4  | 2      | 5.RI.4  | 5.L.4.a |
| 2    | 2      | 5.RI.7  |        | 2      | 5.RI.3  | 5.RI.7  | 3      | 5.RI.9  | 5.RL.9  | 3      | 5.RI.6  |         |
| 3    | 3      | 5.RI.6  |        | 3      | 5.RI.6  | 5.RI.3  | 3      | 5.RI.6  | 5.RL.6  | 3      | 5.RI.6  |         |
|      | 3      | 5.W.1   | 5.RI.9 | 3      | 5.W.1   | 5.RI.9  | 3      | 5.W.1   | 5.W.1.a | 3      | 5.W.1   | 5.RI.9  |
| 4    | 3      | 5.W.1   | 5.RI.9 | 3      | 5.W.1   | 5.RI.9  | 3      | 5.W.1   | 5.W.1.a | 3      | 5.W.1   | 5.RI.9  |
| -    | 3      | 5.W.1   | 5.RI.9 | 3      | 5.W.1   | 5.RI.9  | 3      | 5.W.1   | 5.W.1.a | 3      | 5.W.1   | 5.RI.9  |
|      | 3      | 5.W.1   | 5.RI.9 | 3      | 5.W.1   | 5.RI.9  | 3      | 5.W.1   | 5.W.1.a | 3      | 5.W.1   | 5.RI.9  |
|      |        |         |        |        |         | Session | n 2    |         |         |        |         |         |
| 1    | 2      | 5.W.1.c |        | 2      | 5.W.1.c |         | 2      | 5.W.1.c | 5.W.3.c | 2      | 5.W.2.c | 5.W.1.c |
| 2    | 2      | 5.W.1.b |        | 2      | 5.W.2.b |         | 2      | 5.W.2.b | 5.W.2.a | 2      | 5.W.2.b |         |
| 3    | 2      | 5.L.4.a |        | 2      | 5.W.2.d |         | 2      | 5.RI.1  | 5.L.4   | 2      | 5.W.2.d |         |
| 4    | 2      | 5.W.1.d |        | 2      | 5.W.1.d |         | 2      | 5.W.1.d | 5.W.1.a | 2      | 5.W.1.d |         |
| 6    | 2      | 5.W.3.b |        | 2      | 5.RL.5  | 5.W.3   | 3      | 5.W.3.b | 5.RL.2  | 2      | 5.W.3.b |         |
| 7    | 2      | 5.W.3.e |        | 2      | 5.W.3.e |         | 2      | 5.W.3.e | 5.RL.2  | 2      | 5.W.3.e |         |
| 8    | 2      | 5.W.2.a |        | 2      | 5.W.2.b |         | 2      | 5.W.2.b | 5.W.2.a | 2      | 5.W.2.b |         |
| 9    | 2      | 5.W.8   | 5.W.9  | 2      | 5.W.2.b | 5.RI.7  | 3      | 5.RI.9  | 5.RI.7  | 2      | 5.W.8   |         |
| ,    | 2      | 5.W.8   | 5.W.9  | 2      | 5.W.2.b | 5.RI.7  | 3      | 5.RI.9  | 5.RI.7  | 2      | 5.W.8   |         |
| 10   | 2      | 5.W.9   |        | 2      | 5.W.2.b | 5.RI.7  | 2      | 5.RI.7  | 5.RI.9  | 1      | 5.W.8   |         |
| 11   | 1      | 5.L.2.d |        | 1      | 5.L.2   |         | 1      | 5.L.2.d | 5.L.2   | 1      | 5.L.2   |         |
| 12   | 1      | 5.RI.2  |        | 1      | 5.L.2.b |         | 1      | 5.L.2.b | 5.L.2   | 1      | 5.L.2.b |         |
| 13   | 2      | 5.L.3.a |        | 2      | 5.L.3.a | 5.L.2.b | 2      | 5.L.3.a | 5.L.3   | 2      | 5.L.3.a |         |
| 14   | 2      | 5.L.5.c |        | 1      | 5.L.1   | 5.L.3   | 2      | 5.L.1.a | 5.L.1   | 2      |         |         |
| 15   | 3      | 5.L.1.c |        | 1      | 5.L.1.b | 5.L.1.d | 1      | 5.L.1.c | 5.L.1.b | 2      | 5.L.1.b |         |
| 13   | 3      | 5.L.1.c |        | 1      | 5.L.1.b | 5.L.1.d | 1      | 5.L.1.c | 5.L.1.d | 2      | 5.L.1.b |         |

## Table 5D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item     | DOK R1 | R1P    | R1S    | DOK R2 | R2P     | R2S       | DOK R3 | R3P    | R3S    | DOK R4 | R4P    | R4S |
|----------|--------|--------|--------|--------|---------|-----------|--------|--------|--------|--------|--------|-----|
|          |        |        |        |        |         | Session 3 |        |        |        |        |        |     |
| 1        | 2      | 5.SL.2 | 5.SL.3 | 2      | 5.SL.3  | 5.RI.1    | 2      | 5.SL.3 | 5.SL.2 | 2      | 5.SL.2 |     |
| 1        | 2      | 5.SL.2 | 5.SL.3 | 2      | 5.SL.3  | 5.RI.1    | 2      | 5.SL.3 | 5.SL.2 | 2      | 5.SL.2 |     |
| 2        | 2      | 5.SL.3 |        | 2      | 5.SL.2  | 5.RI.1    | 2      | 5.SL.2 | 5.SL.3 | 2      | 5.SL.2 |     |
| 3        | 2      | 5.SL.3 |        | 2      | 5.SL.2  | 5.RI.1    | 2      | 5.SL.3 | 5.SL.2 | 2      | 5.SL.3 |     |
| 7        | 2      | 5.SL.3 |        | 2      | 5.SL.3  | 5.RI.3    | 2      | 5.SL.3 | 5.RI.3 | 2      | 5.SL.3 |     |
| 8        | 2      | 5.SL.2 |        | 2      | 5.SL.2  |           | 2      | 5.SL.2 | 5.RI.2 | 2      | 5.SL.2 |     |
| 9        | 2      | 5.SL.3 |        | 2      | 5.SL.3  | 5.RI.1    | 2      | 5.SL.3 | 5.RI.2 | 3      | 5.SL.3 |     |
| 9        | 2      | 5.SL.3 |        | 2      | 5.SL.3  | 5.RI.1    | 2      | 5.SL.2 | 5.RI.1 | 3      | 5.SL.3 |     |
|          |        | •      |        |        |         | Session 4 |        |        |        |        |        |     |
| 1        | 2      | 5.RI.2 |        | 2      | 5.RI.2  |           | 2      | 5.RI.3 | 5.RI.2 | 2      | 5.RI.2 |     |
| <b>I</b> | 2      | 5.RI.2 |        | 2      | 5.RI.2  |           | 2      | 5.RI.3 | 5.RI.2 | 2      | 5.RI.2 |     |
| 2        | 2      | 5.RI.1 |        | 2      | 5.RI.1  |           | 2      | 5.RI.1 | 5.RI.8 | 2      | 5.RI.8 |     |
| 3        | 2      | 5.RI.1 |        | 2      | 5.RI.1  |           | 2      | 5.RI.1 | 5.RI.8 | 2      | 5.RI.1 |     |
| 4        | 2      | 5.RI.4 |        | 2      | 5.L.4.a |           | 2      | 5.RI.4 | 5.RI.1 | 2      | 5.RI.4 |     |
| 5        | 2      | 5.RL.3 |        | 2      | 5.RL.3  |           | 2      | 5.RL.3 | 5.RL.2 | 2      | 5.RL.1 |     |
| 3        | 2      | 5.RL.3 |        | 2      | 5.RL.3  |           | 2      | 5.RL.1 | 5.RL.3 | 2      | 5.RL.1 |     |
| 6        | 3      | 5.RL.9 |        | 3      | 5.RL.3  |           | 3      | 5.RL.9 | 5.RL.3 | 3      | 5.RL.3 |     |
| 7        | 3      | 5.RL.9 |        | 3      | 5.RL.3  |           | 3      | 5.RL.9 | 5.RL.3 | 3      | 5.RL.9 |     |
| 8        | 3      | 5.RL.9 |        | 3      | 5.RL.2  |           | 3      | 5.RL.9 | 5.RL.2 | 3      | 5.RL.2 |     |
| 0        | 3      | 5.RL.9 |        | 3      | 5.RL.2  |           | 2      | 5.RL.1 | 5.RL.3 | 3      | 5.RL.2 |     |
| 13       | 3      | 5.RL.5 |        | 3      | 5.RL.5  |           | 3      | 5.RL.5 | 5.RL.2 | 2      | 5.RL.5 |     |
| 14       | 2      | 5.RL.1 |        | 2      | 5.RL.1  |           | 2      | 5.RL.1 | 5.RL.3 | 2      | 5.RL.1 |     |
| 15       | 2      | 5.RL.1 |        | 2      | 5.RL.1  |           | 2      | 5.RL.1 | 5.RL.2 | 2      | 5.RL.1 |     |
| 15       | 2      | 5.RL.1 |        | 2      | 5.RL.1  |           | 2      | 5.RL.1 | 5.RL.2 | 2      | 5.RL.1 |     |
| 16       | 2      | 5.RL.6 |        | 3      | 5.RL.6  |           | 3      | 5.RL.6 | 5.RL.3 | 3      | 5.RL.6 |     |
| 17       | 3      | 5.RL.5 |        | 2      | 5.RL.5  |           | 2      | 5.RL.5 | 5.RL.2 | 2      | 5.RL.5 |     |

## Table 5D2E DOK Levels and Standards Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P     | R6S       | DOK R7 | R7P     | R7S    | DOK R8 | R8P     | R8S     |
|------|--------|---------|---------|--------|---------|-----------|--------|---------|--------|--------|---------|---------|
|      |        |         |         |        |         | Session 1 |        |         |        |        |         |         |
| 1    | 2      | 5.L.4.a | 5.RI.6  | 2      | 5.RI.4  | 5.L.4.a   | 2      | 5.RI.4  |        | 1      | 5.RL.4  |         |
| 2    | 3      | 5.RI.6  | 5.RL.1  | 3      | 5.RI.9  | 5.RI.6    | 3      | 5.RI.1  | 5.RI.7 | 2      | 5.RL.9  |         |
| 3    | 3      | 5.RI.2  | 5.RI.8  | 3      | 5.RI.6  |           | 3      | 5.RI.6  |        | 3      | 5.RL.6  |         |
|      | 3      | 5.W.4   | 5.W.1.a | 3      | 5.W.1   | 5.W.4     | 3      | 5.W.1   | 5.W.4  | 3      | 5.W.1   | 5.W.1.a |
| 4    | 3      | 5.W.8   | 5.W.1.b | 3      | 5.RI.9  | 5.RI.6    | 3      | 5.W.1   | 5.W.4  | 3      | 5.W.1   |         |
| 4    | 3      | 5.W.4   | 5.W.1.c | 1      | 5.L.1   | 5.L.2     | 3      | 5.W.1   | 5.W.4  | 3      | 5.W.1   |         |
|      | 3      | 5.W.1   | 5.W.1.d | 1      | 5.L.3   |           | 3      | 5.W.1   | 5.W.4  | 3      | 5.W.1   |         |
|      |        |         |         |        |         | Session 2 | 2      |         |        |        |         |         |
| 1    | 2      | 5.W.1.c | 5.L.3   | 2      | 5.W.1.c | 5.L.3     | 2      | 5.W.1.c |        | 1      | 5.W.1.c |         |
| 2    | 2      | 5.RI.2  | 5.W.2.b | 2      | 5.W.2.b |           | 2      | 5.W.2.b |        | 2      | 5.W.2.b |         |
| 3    | 2      | 5.L.5.c |         | 2      | 5.W.2.d |           | 2      | 5.W.2.d |        | 1      | 5.W.2.d |         |
| 4    | 3      | 5.W.1.d | 5.W.1   | 2      | 5.W.1.d | 5.W.1.b   | 2      | 5.W.1.d |        | 2      | 5.W.1.d |         |
| 6    | 3      | 5.W.3.b | 5.W.3   | 2      | 5.W.3.b |           | 2      | 5.W.3.b |        | 3      | 5.W.3.b |         |
| 7    | 3      | 5.RL.2  | 5.RL.3  | 2      | 5.W.3.e |           | 2      | 5.W.3.e |        | 2      | 5.W.3.e |         |
| 8    | 3      | 5.RI.8  | 5.RI.3  | 2      | 5.W.2.b | 5.W.9     | 2      | 5.W.2.b |        | 2      | 5.W.2.b |         |
| 9    | 3      | 5.W.8   | 5.W.9   | 2      | 5.W.8   |           | 2      | 5.W.8   |        | 3      | 5.W.8   |         |
| ,    | 3      | 5.W.9.b | 5.W.8   | 2      | 5.W.8   |           | 2      | 5.W.8   |        | 3      | 5.W.8   |         |
| 10   | 2      | 5.W.8   | 5.W.9   | 2      | 5.W.8   |           | 2      | 5.W.9   |        | 3      | 5.W.8   |         |
| 11   | 1      | 5.L.2   |         | 1      | 5.L.2   | 5.L.3     | 1      | 5.L.2   |        | 1      | 5.L.2   |         |
| 12   | 1      | 5.L.2.b | 5.L.2   | 1      | 5.L.2.b | 5.L.3     | 1      | 5.L.2.b |        | 1      | 5.L.2.b |         |
| 13   | 2      | 5.L.3.a | 5.L.2   | 1      | 5.L.2   | 5.L.3     | 1      | 5.L.3.a |        | 2      | 5.W.3.c |         |
| 14   | 1      | 5.L.1   | 5.L.3   | 1      | 5.L.1   | 5.L.3     | 1      | 5.L.1   |        | 2      | 5.L.1.a |         |
| 15   | 1      | 5.L.1   | 5.L.1.b | 1      | 5.L.1.b |           | 1      | 5.L.1.b |        | 2      | 5.L.1.c |         |
| 13   | 1      | 5.L.1   | 5.L.1.b | 1      | 5.L.1.b |           | 1      | 5.L.1.b |        | 2      | 5.L.1.c |         |

# Table 5D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P    | R5S     | DOK R6 | R6P    | R6S       | DOK R7 | R7P    | R7S | DOK R8 | R8P    | R8S |
|------|--------|--------|---------|--------|--------|-----------|--------|--------|-----|--------|--------|-----|
|      |        |        |         |        | S      | Session 3 |        |        |     |        |        |     |
| 1    | 2      | 5.SL.2 | 5.RL.2  | 2      | 5.SL.3 | 5.RI.8    | 2      | 5.SL.3 |     | 2      | 5.SL.3 |     |
| 1    | 2      | 5.SL.2 | 5.RL.2  | 2      | 5.SL.3 | 5.RI.8    | 2      | 5.SL.2 |     | 2      | 5.SL.3 |     |
| 2    | 2      | 5.SL.2 | 5.RL.1  | 2      | 5.SL.2 |           | 2      | 5.SL.3 |     | 2      | 5.SL.3 |     |
| 3    | 1      | 5.SL.3 | 5.RL.1  | 2      | 5.SL.3 | 5.RI.8    | 2      | 5.SL.3 |     | 2      | 5.SL.3 |     |
| 7    | 2      | 5.SL.3 |         | 2      | 5.SL.3 | 5.RI.8    | 2      | 5.SL.3 |     | 2      | 5.SL.3 |     |
| 8    | 1      | 5.SL.2 |         | 2      | 5.SL.2 | 5.RI.2    | 2      | 5.SL.2 |     | 2      | 5.SL.2 |     |
| 9    | 1      | 5.SL.3 |         | 2      | 5.SL.3 | 5.RI.8    | 1      | 5.SL.2 |     | 2      | 5.SL.3 |     |
| 9    | 1      | 5.SL.2 | 5.SL.3  | 2      | 5.SL.3 | 5.RI.8    | 2      | 5.SL.3 |     | 2      | 5.SL.3 |     |
|      |        |        |         |        | S      | Session 4 |        |        |     |        |        |     |
| 1    | 2      | 5.RI.2 |         | 2      | 5.RI.8 | 5.RI.2    | 2      | 5.RI.3 |     | 2      | 5.RI.1 |     |
| L    | 2      | 5.RI.2 |         | 2      | 5.RI.8 | 5.RI.2    | 2      | 5.RI.3 |     | 2      | 5.RI.1 |     |
| 2    | 2      | 5.RI.2 |         | 2      | 5.RI.1 |           | 3      | 5.RI.8 |     | 2      | 5.RI.8 |     |
| 3    | 2      | 5.RI.1 | 5.RI.2  | 2      | 5.RI.1 |           | 2      | 5.RI.1 |     | 2      | 5.RI.1 |     |
| 4    | 2      | 5.RI.4 | 5.L.4.a | 2      | 5.RI.4 | 5.L.4.a   | 2      | 5.RI.4 |     | 1      | 5.RI.4 |     |
| 5    | 2      | 5.RL.3 |         | 2      | 5.RL.3 |           | 2      | 5.RL.1 |     | 2      | 5.RL.3 |     |
| 5    | 2      | 5.RL.1 |         | 2      | 5.RL.1 |           | 2      | 5.RL.1 |     | 2      | 5.RL.3 |     |
| 6    | 3      | 5.RL.9 | 5.RL.3  | 3      | 5.RL.9 | 5.RL.3    | 3      | 5.RL.3 |     | 3      | 5.RL.9 |     |
| 7    | 3      | 5.RL.9 | 5.RL.3  | 3      | 5.RL.9 | 5.RL.3    | 3      | 5.RL.9 |     | 3      | 5.RL.9 |     |
| 8    | 3      | 5.RL.2 | 5.RL.9  | 3      | 5.RL.9 | 5.RL.2    | 2      | 5.RL.9 |     | 2      | 5.RL.2 |     |
| o    | 2      | 5.RL.3 |         | 2      | 5.RL.1 |           | 3      | 5.RL.1 |     | 2      | 5.RL.2 |     |
| 13   | 2      | 5.RL.5 |         | 2      | 5.RL.5 |           | 2      | 5.RL.5 |     | 2      | 5.RL.5 |     |
| 14   | 2      | 5.RL.3 |         | 2      | 5.RL.1 |           | 2      | 5.RL.1 |     | 2      | 5.RL.1 |     |
| 15   | 3      | 5.RL.2 |         | 2      | 5.RL.1 |           | 2      | 5.RL.1 |     | 2      | 5.RL.1 |     |
| 15   | 3      | 5.RL.2 |         | 2      | 5.RL.1 |           | 2      | 5.RL.1 |     | 2      | 5.RL.1 |     |
| 16   | 3      | 5.RL.6 | 5.RL.2  | 2      | 5.RL.6 |           | 3      | 5.RL.6 |     | 2      | 5.RL.6 |     |
| 17   | 2      | 5.RL.5 | 5.RL.1  | 2      | 5.RL.5 |           | 2      | 5.RL.5 |     | 2      | 5.RL.5 |     |

#### Table 6D2E DOK Levels and Standards Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S    | DOK R2 | R2P     | R2S     | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|--------|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         |        | ·      |         | Session | 1      |         |         |        |         |         |
| 1    | 2      | 6.RL.1  | 6.RL.3 | 2      | 6.RL.3  | 6.RL.1  | 2      | 6.RL.1  | 6.RL.3  | 1      | 6.RL.1  | 6.RL.3  |
| 1    | 2      | 6.RL.1  | 6.RL.3 | 2      | 6.RL.3  | 6.RL.1  | 2      | 6.RL.1  | 6.RL.3  | 1      | 6.RL.1  | 6.RL.3  |
| 2    | 2      | 6.RL.1  |        | 2      | 6.RL.1  | 6.L.5   | 2      | 6.RL.1  |         | 2      | 6.RL.1  | 6.RL.5  |
| 3    | 2      | 6.RL.5  |        | 2      | 6.RL.5  |         | 2      | 6.RL.5  |         | 2      | 6.RL.5  | 6.RL.4  |
|      | 3      | 6.W.2   | 6.W.4  | 3      | 6.W.2   | 6.W.2.a | 3      | 6.W.2   | 6.W.4   | 2      | 6.W.1   | 6.W.1.b |
| 4    | 3      | 6.L.1   | 6.W.9  | 3      | 6.W.2.b | 6.W.2.e | 3      | 6.W.2.a | 6.W.2.d | 3      | 6.W.2.c | 6.W.2.e |
| -    | 3      | 6.L.2   | 6.L.6  | 3      | 6.W.2.c | 6.L.2   | 3      | 6.W.2.b | 6.L.1   | 2      | 6.W.2.f | 6.W.4   |
|      | 3      | 6.L.3   |        | 3      | 6.W.2.d | 6.L.1   | 3      | 6.W.2.c | 6.L.2   | 1      | 6.SL.2  | 6.L.3   |
|      |        |         |        |        |         | Session | 2      |         |         |        |         |         |
| 1    | 2      | 6.W.1.c |        | 2      | 6.W.1.c |         | 2      | 6.W.1.c |         | 2      | 6.W.2.c |         |
| 2    | 2      | 6.W.2.d |        | 2      | 6.W.2.c | 6.L.4   | 2      | 6.W.2.d |         | 2      | 6.W.2.d |         |
| 3    | 2      | 6.W.2.e |        | 2      | 6.L.3.b | 6.L.5.c | 2      | 6.W.2.e | 6.L.3.b | 3      | 6.W.2.e |         |
| 4    | 3      | 6.W.3.b |        | 3      | 6.W.3   | 6.W.3.b | 2      | 6.W.3.b |         | 3      | 6.W.3.e |         |
| 6    | 3      | 6.L.3.a |        | 3      | 6.L.3.a |         | 3      | 6.L.3.a |         | 3      | 6.L.3.a | 6.L.3.b |
| 7    | 2      | 6.L.1.d |        | 1      | 6.L.1.c | 6.L.1.a | 1      | 6.L.1.d |         | 2      | 6.L.1   | 6.L.1.a |
| /    | 2      | 6.L.1.d |        | 1      | 6.L.1.c | 6.L.1.a | 1      | 6.L.1.d |         | 2      | 6.L.1   | 6.L.1.a |
| 8    | 2      | 6.L.3.b |        | 3      | 6.L.3.b | 6.L.1.e | 3      | 6.W.1.d | 6.L.3.b | 3      | 6.L.3.b |         |
| 9    | 1      | 6.L.2.b |        | 1      | 6.L.2.b |         | 1      | 6.L.2.b | 6.L.2   | 1      | 6.L.2.b | 6.L.2   |
| 9    | 1      | 6.L.2.b |        | 1      | 6.L.2.b |         | 1      | 6.L.2.b | 6.L.2   | 1      | 6.L.2.b | 6.L.2   |
| 10   | 1      | 6.L.2.a |        | 1      | 6.L.2.a |         | 1      | 6.L.2.a | 6.SL.2  | 1      | 6.L.2.a | 6.L.2   |
| 11   | 3      | 6.W.8   |        | 3      | 6.W.2.b | 6.W.2   | 3      | 6.W.8   | 6.W.9   | 3      | 6.W.8   | 6.W.9   |
| 11   | 3      | 6.W.8   |        | 3      | 6.W.2.b | 6.W.2   | 3      | 6.W.8   | 6.W.9   | 3      | 6.W.8   | 6.W.9   |
| 12   | 3      | 6.W.8   |        | 3      | 6.W.8   |         | 3      | 6.W.8   |         | 3      | 6.W.8   |         |
| 14   | 3      | 6.W.8   |        | 3      | 6.W.8   |         | 3      | 6.W.8   |         | 3      | 6.W.8   |         |
| 13   | 3      | 6.W.8   |        | 3      | 6.W.8   | 6.W.9   | 3      | 6.W.8   |         | 3      | 6.W.8   | 6.W.9   |

#### Table 6D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P    | R1S     | DOK R2 | R2P    | R2S       | DOK R3 | R3P    | R3S     | DOK R4 | R4P    | R4S     |
|------|--------|--------|---------|--------|--------|-----------|--------|--------|---------|--------|--------|---------|
|      |        |        |         |        |        | Session 3 | 3      |        |         |        |        |         |
| 1    | 1      | 6.SL.2 |         | 1      | 6.SL.2 |           | 1      | 6.SL.2 |         | 2      | 6.SL.3 | 6.SL.2  |
| 2    | 2      | 6.SL.3 |         | 1      | 6.SL.3 |           | 2      | 6.SL.3 | 6.SL.2  | 2      | 6.SL.3 | 6.SL.2  |
| 3    | 3      | 6.SL.3 |         | 3      | 6.SL.3 | 6.SL.2    | 3      | 6.SL.2 | 6.SL.3  | 3      | 6.SL.2 |         |
| 3    | 3      | 6.SL.3 |         | 3      | 6.SL.3 | 6.SL.2    | 3      | 6.SL.2 | 6.SL.3  | 3      | 6.SL.2 |         |
| 7    | 2      | 6.SL.2 | 6.SL.3  | 2      | 6.SL.2 | 6.SL.3    | 2      | 6.SL.2 | 6.SL.3  | 2      | 6.SL.3 | 6.SL.2  |
| /    | 2      | 6.SL.2 | 6.SL.3  | 2      | 6.SL.2 | 6.SL.3    | 2      | 6.SL.2 | 6.SL.3  | 2      | 6.SL.3 | 6.SL.2  |
| 8    | 3      | 6.SL.2 | 6.SL.3  | 3      | 6.SL.2 |           | 2      | 6.SL.2 |         | 3      | 6.SL.3 | 6.SL.2  |
| 9    | 2      | 6.SL.3 |         | 2      | 6.SL.2 |           | 2      | 6.SL.2 |         | 3      | 6.SL.2 |         |
|      |        |        |         |        |        | Session   | 4      |        |         |        |        |         |
| 1    | 2      | 6.RI.4 | 6.L.5.c | 2      | 6.RI.2 | 6.RI.4    | 2      | 6.RI.1 | 6.RI.6  | 2      | 6.RI.4 |         |
| 1    | 2      | 6.RI.4 | 6.L.5.c | 2      | 6.RI.2 | 6.RI.4    | 2      | 6.RI.1 | 6.RI.6  | 2      | 6.RI.4 |         |
| 2    | 2      | 6.RI.1 |         | 3      | 6.RI.1 | 6.RI.4    | 3      | 6.RI.8 | 6.RI.1  | 2      | 6.RI.8 |         |
| 3    | 2      | 6.RI.3 |         | 2      | 6.RI.2 | 6.RI.8    | 2      | 6.RI.8 | 6.RI.2  | 2      | 6.RI.3 |         |
| 4    | 3      | 6.RI.9 |         | 3      | 6.RI.9 | 6.RI.8    | 3      | 6.RI.9 |         | 3      | 6.RI.9 |         |
| 5    | 2      | 6.RL.4 | 6.L.4   | 2      | 6.RL.4 |           | 2      | 6.L.5  | 6.L.5.b | 2      | 6.RL.4 | 6.L.4.a |
| 6    | 3      | 6.RL.5 | 6.RL.4  | 2      | 6.RL.4 |           | 2      | 6.RL.4 | 6.L.5.a | 3      | 6.RL.5 |         |
| 7    | 2      | 6.RL.6 |         | 3      | 6.RL.6 | 6.RL.2    | 3      | 6.RL.6 |         | 3      | 6.RL.6 |         |
| 8    | 2      | 6.RL.2 |         | 2      | 6.RL.2 |           | 2      | 6.RL.2 |         | 2      | 6.RL.2 |         |
| 0    | 2      | 6.RL.2 |         | 2      | 6.RL.2 |           | 2      | 6.RL.2 |         | 2      | 6.RL.2 |         |
| 13   | 2      | 6.RI.1 |         | 2      | 6.RI.1 |           | 2      | 6.RI.1 |         | 2      | 6.RI.1 |         |
| 14   | 2      | 6.RI.4 |         | 2      | 6.RI.4 | 6.L.5.a   | 2      | 6.RI.4 |         | 2      | 6.RI.4 |         |
| 15   | 3      | 6.RI.6 |         | 3      | 6.RI.6 |           | 2      | 6.RI.6 |         | 3      | 6.RI.6 |         |
| 15   | 3      | 6.RI.6 |         | 3      | 6.RI.6 |           | 2      | 6.RI.6 |         | 3      | 6.RI.6 |         |
| 16   | 2      | 6.RI.2 |         | 2      | 6.RI.2 |           | 2      | 6.RI.3 | 6.RI.1  | 2      | 6.RI.5 | 6.RI.1  |
| 17   | 2      | 6.RI.5 |         | 3      | 6.RI.5 |           | 3      | 6.RI.5 |         | 3      | 6.RI.2 | 6.RI.5  |

#### Table 6D2E DOK Levels and Standards Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P     | R6S     | DOK R7 | R7P     | R7S     | DOK R8 | R8P     | R8S     |
|------|--------|---------|---------|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         |         |        |         | Session | 1      |         |         |        |         |         |
| 1    | 2      | 6.RL.1  |         | 2      | 6.RL.1  | 6.RL.3  | 1      | 6.RL.1  |         | 2      | 6.RL.1  | 6.RL.3  |
| L    | 2      | 6.RL.1  |         | 2      | 6.RL.1  | 6.RL.3  | 1      | 6.RL.1  |         | 2      | 6.RL.1  | 6.RL.3  |
| 2    | 1      | 6.RL.1  |         |
| 3    | 2      | 6.RL.5  | 6.RL.4  | 2      | 6.RL.5  | 6.RL.4  | 2      | 6.RL.5  | 6.RL.4  | 2      | 6.RL.5  |         |
|      | 3      | 6.RL.1  | 6.RL.2  | 3      | 6.W.1.a | 6.RL.1  | 3      | 6.W.2   | 6.W.2.a | 2      | 6.W.2   | 6.W.2.a |
| 4    | 3      | 6.W.1.a | 6.W.1.b | 3      | 6.W.1.b | 6.L.1   | 3      | 6.W.2.b | 6.W.1.c | 2      | 6.W.2.b | 6.W.2.c |
| 4    | 3      | 6.W.1.e | 6.L.1   | 3      | 6.W.1.c | 6.L.2   | 3      | 6.W.2.f | 6.RL.1  | 2      | 6.W.2.d |         |
|      | 3      | 6.L.3   | 6.L.2   | 3      | 6.W.4   | 6.L.6   | 3      |         |         | 2      | 6.W.2.e | 6.W.2.f |
|      |        |         |         |        |         | Session | 2      |         |         |        |         |         |
| 1    | 2      | 6.W.1.c |         | 2      | 6.W.1.c | 6.W.2.c | 2      | 6.RL.4  | 6.L.5.b | 1      | 6.L.6   | 6.W.4   |
| 2    | 3      | 6.W.2.d |         | 1      | 6.W.2.d | 6.L.6   | 2      | 6.L.6   | 6.W.3.d | 2      | 6.L.6   |         |
| 3    | 3      | 6.W.2.e |         | 2      | 6.W.2.e | 6.W.1.e | 3      | 6.W.1.d | 6.W.2.e | 2      | 6.L.3.b |         |
| 4    | 3      | 6.W.3.b | 6.W.3.e | 3      | 6.W.3.b | 6.W.3.e | 3      | 6.RL.5  | 6.W.3.b | 2      | 6.W.3.d |         |
| 6    | 3      | 6.W.5   | 6.L.3.a | 3      | 6.W.3.a |         | 3      | 6.L.3.a | 6.W.5   | 3      | 6.L.3.a | 6.W.5   |
| 7    | 2      | 6.L.1.d | 6.W.2.e | 2      | 6.L.1.d | 6.L.1.c | 2      | 6.L.3.a | 6.L.1.e | 2      | 6.W.5   |         |
| '    | 2      | 6.L.1.d |         | 2      | 6.L.1.d | 6.L.1.c | 2      | 6.L.3.a | 6.L.1.e | 2      | 6.W.5   |         |
| 8    | 2      | 6.W.2.e |         | 2      | 6.W.1.d |         | 2      | 6.L.3.b |         | 2      | 6.L.3.b | 6.W.2.e |
| 9    | 1      | 6.L.2.b | 6.L.1.e | 1      | 6.L.2.b | 6.L.2   | 1      | 6.L.2.b |         | 1      | 6.L.2   |         |
| ,    | 1      | 6.L.2.b | 6.L.1.e | 1      | 6.L.2.b | 6.L.2   | 1      | 6.L.2.b |         | 1      | 6.L.2   |         |
| 10   | 1      | 6.L.2.a |         | 1      | 6.L.2.a | 6.L.2   | 1      | 6.L.2.a |         | 2      | 6.L.2.a |         |
| 11   | 3      | 6.W.8   |         | 2      | 6.W.8   | 6.W.9   | 2      | 6.RI.1  |         | 2      | 6.W.1   | 6.W.2   |
| 11   | 3      | 6.W.8   |         | 2      | 6.W.8   | 6.W.9   | 2      | 6.RI.1  |         | 2      | 6.W.1   | 6.W.2   |
| 12   | 1      | 6.W.8   |         | 2      | 6.W.8   | 6.W.9   | 2      | 6.W.8   |         | 1      | 6.W.8   |         |
| 14   | 1      | 6.W.8   |         | 2      | 6.W.8   | 6.W.9   | 2      | 6.W.8   |         | 1      | 6.W.8   |         |
| 13   | 2      | 6.W.9   |         | 2      | 6.W.8   |         | 3      | 6.W.8   | 6.W.9   | 2      | 6.W.8   |         |

# Table 6D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P    | R6S     | DOK R7 | R7P     | R7S     | DOK R8 | R8P     | R8S     |
|------|--------|---------|---------|--------|--------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         |         |        |        | Session | n 3    |         |         |        |         |         |
| 1    | 1      | 6.RI.1  |         | 2      | 6.SL.2 |         | 1      | 6.SL.3  | 6.RI.1  | 1      | 6.SL.2  |         |
| 2    | 2      | 6.SL.3  |         | 3      | 6.SL.2 |         | 1      | 6.SL.3  | 6.RI.1  | 1      | 6.SL.3  |         |
| 3    | 2      | 6.SL.2  |         | 3      | 6.SL.3 | 6.SL.2  | 2      | 6.SL.2  | 6.RI.5  | 2      | 6.SL.3  |         |
| 5    | 2      | 6.SL.2  |         | 3      | 6.SL.3 | 6.SL.2  | 2      | 6.SL.2  | 6.RI.5  | 2      | 6.SL.3  |         |
| 7    | 2      | 6.RI.2  | 6.RI.3  | 3      | 6.SL.3 | 6.SL.2  | 2      | 6.SL.3  | 6.RI.2  | 2      | 6.SL.2  |         |
| /    | 2      | 6.RI.2  | 6.RI.3  | 3      | 6.SL.3 | 6.SL.2  | 2      | 6.SL.3  | 6.RI.2  | 2      | 6.SL.2  |         |
| 8    | 3      | 6.RI.6  |         | 3      | 6.SL.3 |         | 2      | 6.SL.3  | 6.RI.6  | 2      | 6.L.2   |         |
| 9    | 2      | 6.RI.3  |         | 2      | 6.SL.3 |         |        | 6.L.3   |         | 3      | 6.SL.2  |         |
|      |        |         | -       |        |        | Session | n 4    |         | -       |        |         |         |
| 1    | 2      | 6.RI.6  |         | 2      | 6.RI.4 |         | 2      | 6.RI.4  |         | 1      | 6.W.1.b | 6.L.2   |
| 1    | 2      | 6.RI.6  |         | 2      | 6.RI.4 |         | 2      | 6.RI.4  |         | 1      | 6.W.1.b | 6.L.2   |
| 2    | 2      | 6.RI.8  | 6.RI.1  | 2      | 6.RI.1 |         | 1      | 6.RI.1  |         | 2      | 6.W.1.b |         |
| 3    | 2      | 6.RI.3  |         | 2      | 6.RI.2 | 6.RI.5  | 1      | 6.RI.1  |         | 2      | 6.W.1.b |         |
| 4    | 3      | 6.RI.9  |         | 3      | 6.RI.9 |         | 2      | 6.RI.9  |         | 3      | 6.W.1.b | 6.W.1.c |
| 5    | 2      | 6.L.4.a |         | 2      | 6.RL.4 |         | 2      | 6.L.4   | 6.L.4.a | 2      | 6.RL.4  |         |
| 6    | 3      | 6.L.5.a | 6.RL.4  | 2      | 6.RL.5 |         | 2      | 6.L.5   | 6.L.5.a | 2      | 6.RL.5  |         |
| 7    | 2      | 6.RL.6  |         | 2      | 6.RL.6 |         | 2      | 6.RI.6  |         | 2      | 6.RL.6  |         |
| 8    | 2      | 6.RL.2  |         | 2      | 6.RL.2 |         | 2      | 6.W.2.a | 6.RI.2  | 3      | 6.RI.2  |         |
| o    | 2      | 6.RL.2  |         | 2      | 6.RL.2 |         | 2      | 6.W.2.a | 6.RI.2  | 3      | 6.RI.2  |         |
| 13   | 2      | 6.RI.1  |         | 2      | 6.RI.1 |         | 3      | 6.RI.3  |         | 2      | 6.RI.1  |         |
| 14   | 2      | 6.RI.4  | 6.L.5.a | 2      | 6.RI.4 |         | 2      | 6.RI.4  |         | 2      | 6.RI.4  |         |
| 15   | 3      | 6.RI.8  |         | 2      | 6.RI.6 |         | 3      | 6.RI.6  |         | 2      | 6.RI.6  |         |
| 13   | 3      | 6.RI.8  |         | 2      | 6.RI.6 |         | 3      | 6.RI.6  |         | 2      | 6.RI.6  |         |
| 16   | 2      | 6.RI.1  |         | 3      | 6.RI.3 | 6.RI.5  | 3      | 6.RI.5  | 6.RI.4  | 2      | 6.RI.5  |         |
| 17   | 2      | 6.RI.5  |         | 2      | 6.RI.5 |         | 3      | 6.RI.5  |         | 3      | 6.RI.5  |         |

## Table 7D2E DOK Levels and Standards Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S     | DOK R2 | R2P     | R2S     | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|---------|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         | •       |        |         | Session | 1      |         |         |        |         |         |
| 1    | 2      | 7.RL.1  |         | 2      | 7.RL.1  | 7.RL.6  | 2      | 7.RL.5  | 7.RL.1  | 3      | 7.RL.3  |         |
| 2    | 3      | 7.RL.6  | 7.RL.2  | 2      | 7.RL.6  | 7.RL.3  | 3      |         |         | 3      | 7.RL.6  | 7.RL.1  |
| 3    | 3      | 7.RL.2  |         | 2      | 7.RL.2  |         | 3      | 7.RL.3  |         | 2      | 7.RL.2  |         |
|      | 3      | 7.W.2   | 7.W.9   | 3      | 7.W.2   | 7.W.2.b | 3      | 7.W.2   | 7.W.2.b | 3      | 7.W.2   | 7.W.2.a |
| 4    | 3      | 7.W.4   | 7.L.6   | 3      | 7.W.2.a | 7.L.1   | 3      | 7.W.9   | 7.W.2.c | 3      | 7.W.2.b | 7.W.2.c |
| 4    | 3      | 7.L.1   | 7.L.3   | 3      | 7.L.2   | 7.W.4   | 3      | 7.W.4   | 7.W.2.d | 3      | 7.W.2.e | 7.W.2.f |
|      | 3      | 7.L.2   |         | 3      | 7.L.3   |         | 3      | 7.W.2.a | 7.W.2.e | 3      | 7.W.4   | 7.L.1   |
|      |        |         |         |        |         | Session | 2      |         |         |        |         |         |
| 1    | 3      | 7.W.3.e |         | 2      | 7.W.3.e |         | 3      | 7.W.2.f |         | 2      | 7.W.3.e |         |
| 2    | 3      | 7.W.2.e |         | 3      | 7.W.2.e | 7.L.3.a | 2      | 7.W.2.e |         | 3      | 7.W.2.e |         |
| 3    | 3      | 7.W.1.b |         | 3      | 7.W.1.b | 7.W.8   | 3      | 7.W.1.b | 7.W.8   | 3      | 7.W.1.b |         |
| 4    | 3      | 7.W.1.e |         | 3      | 7.W.1.e |         | 3      | 7.W.1.e |         | 2      | 7.W.2.f |         |
| 6    | 3      | 7.L.3.a | 7.W.2.b | 2      | 7.W.2.b | 7.W.2.e | 3      | 7.W.2.b |         | 3      | 7.W.2.b | 7.W.5   |
| U    | 3      | 7.L.3.a | 7.W.2.b | 3      | 7.W.2.a | 7.L.3.a | 3      | 7.W.2.b |         | 3      | 7.W.5   |         |
| 7    | 3      | 7.L.3.a |         | 2      | 7.L.3.a | 7.W.5   | 2      | 7.L.3.a |         | 3      | 7.L.3.a |         |
| /    | 3      | 7.L.3.a |         | 2      | 7.L.3.a | 7.W.5   | 2      | 7.L.3.a |         | 3      | 7.W.4   |         |
| 8    | 3      | 7.L.3.a |         | 2      | 7.L.3.a | 7.W.4   | 2      | 7.L.3.a | 7.W.2.d | 3      | 7.L.3.a |         |
| o    | 3      | 7.L.3.a |         | 2      | 7.L.3.a | 7.W.4   | 2      | 7.L.3.a | 7.W.2.d | 3      | 7.L.3   |         |
| 9    | 2      | 7.L.2   |         | 1      | 7.L.2   | 7.L.1   | 1      | 7.L.2   | 7.L.1   | 2      | 7.L.1   | 7.L.2   |
| 10   | 3      | 7.W.2.c | 7.L.3   | 2      | 7.L.1.b | 7.L.1.c | 2      | 7.W.2.c | 7.L.1   | 2      | 7.L.1.b | 7.L.1.a |
| 11   | 3      | 7.W.8   |         | 3      | 7.W.8   | 7.W.1.b | 3      | 7.W.8   |         | 3      | 7.W.8   |         |
| 12   | 3      | 7.W.8   |         | 3      | 7.W.8   | 7.W.1.b | 3      | 7.W.8   |         | 3      | 7.W.8   |         |
| 13   | 3      | 7.W.9   |         | 2      | 7.W.8   | 7.W.1.b | 3      | 7.W.8   | 7.W.9   | 3      | 7.W.9   | 7.W.9.b |
| 13   | 3      | 7.W.9   |         | 3      | 7.W.1.b | 7.W.9   | 3      | 7.W.8   | 7.W.9   | 3      | 7.W.2.b | 7.W.4   |

## Table 7D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S     | DOK R2 | R2P     | R2S       | DOK R3 | R3P     | R3S    | DOK R4 | R4P     | R4S     |
|------|--------|---------|---------|--------|---------|-----------|--------|---------|--------|--------|---------|---------|
|      |        |         |         |        |         | Session 3 | 6      |         |        |        |         |         |
| 1    | 3      | 7.SL.2  |         | 2      | 7.SL.2  |           | 2      | 7.SL.2  |        | 3      | 7.SL.3  |         |
| 2    | 2      | 7.SL.2  |         | 2      | 7.SL.2  |           | 2      | 7.SL.2  |        | 3      | 7.SL.2  |         |
| 2    | 2      | 7.SL.2  | 7.RI.1  | 3      | 7.SL.3  | 7.SL.2    | 2      | 7.SL.2  |        | 3      | 7.SL.2  |         |
| 6    | 3      | 7.SL.2  |         | 3      | 7.SL.3  | 7.SL.2    | 2      | 7.SL.2  |        | 3      | 7.SL.3  |         |
| 7    | 3      | 7.SL.2  |         | 2      | 7.SL.2  |           | 2      | 7.SL.2  |        | 3      | 7.SL.2  |         |
| /    | 3      | 7.SL.2  | 7.RI.1  | 3      | 7.SL.3  |           | 2      | 7.SL.2  |        | 3      | 7.SL.2  |         |
| 8    | 3      | 7.SL.3  |         | 2      | 7.SL.2  | 7.SL.3    | 3      | 7.SL.3  |        | 3      | 7.SL.3  |         |
| 0    | 3      | 7.SL.3  |         | 2      | 7.SL.2  | 7.SL.3    | 3      | 7.SL.3  |        | 3      | 7.SL.3  |         |
|      |        |         |         |        |         | Session 4 | ļ      |         |        |        |         |         |
| 1    | 3      | 7.RI.5  |         | 3      | 7.RI.5  |           | 2      | 7.RI.5  |        | 3      | 7.RI.5  |         |
| 2    | 2      | 7.L.4.b | 7.RI.4  | 2      | 7.L.4.b |           | 1      | 7.L.4.b |        | 2      | 7.L.4.b | 7.L.4.a |
| 3    | 2      | 7.RI.4  | 7.L.4.a | 2      | 7.RI.4  | 7.L.4.a   | 2      | 7.L.4.a | 7.L.4  | 2      | 7.RI.4  | 7.L.4.a |
| 4    | 3      | 7.RI.6  |         | 2      | 7.RI.6  |           | 3      | 7.RI.6  |        | 2      | 7.RI.6  |         |
| -    | 3      | 7.RI.6  | 7.RI.1  | 3      | 7.RI.6  | 7.RI.3    | 2      | 7.RI.1  |        | 2      | 7.RI.6  |         |
| 5    | 3      | 7.RI.5  |         | 3      | 7.RI.5  | 7.RI.6    | 3      | 7.RI.5  |        | 3      | 7.RI.6  |         |
| 6    | 3      | 7.RI.1  |         | 3      | 7.RI.3  | 7.RI.1    | 2      | 7.RI.1  |        | 3      |         | 7.RI.1  |
| 7    | 2      | 7.RI.2  |         | 3      | 7.RI.2  | 7.RI.1    | 2      |         |        | 3      |         | 7.RI.2  |
| 8    | 2      | 7.L.4.c | 7.RI.4  | 2      | 7.L.4.c | 7.L.4.a   | 2      | 7.L.4   | 7.RI.4 | 2      | 7.RI.4  | 7.L.4.a |
| 9    | 2      | 7.RI.1  |         | 2      | 7.RI.1  | 7.RI.3    | 2      | 7.RI.3  |        | 2      | 7.RI.1  |         |
| 10   | 3      | 7.RI.8  | 7.RI.1  | 3      | 7.RI.8  |           | 3      | 7.RI.8  |        | 2      | 7.RI.8  | 7.RI.1  |
| 15   | 3      | 7.RL.1  |         | 2      | 7.RL.1  |           | 2      | 7.RL.1  |        | 2      | 7.RL.1  |         |
| 15   | 3      | 7.RL.1  |         | 3      | 7.RL.1  |           | 2      | 7.RL.1  |        | 2      | 7.RL.1  |         |
| 16   | 3      | 7.RL.3  |         | 3      | 7.RL.3  |           | 3      | 7.RL.3  |        | 2      | 7.RL.3  |         |
| 17   | 2      | 7.RL.4  |         | 2      | 7.RL.4  | 7.L.5     | 2      | 7.RL.4  |        | 2      | 7.RL.4  |         |
| 18   | 3      |         |         | 3      | 7.RL.2  | 7.RL.6    | 3      |         |        | 2      | 7.RL.6  |         |
| 19   | 3      | 7.RL.2  |         | 2      | 7.RL.2  |           | 3      | 7.RL.2  |        | 2      | 7.RL.2  |         |

## Table 7D2E DOK Levels and Standards Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P     | R6S     | DOK R7 | R7P     | R7S     | DOK R8 | R8P     | R8S     |
|------|--------|---------|---------|--------|---------|---------|--------|---------|---------|--------|---------|---------|
|      |        |         |         |        |         | Sessi   | on 1   |         |         |        |         |         |
| 1    | 2      | 7.RL.1  |         | 2      | 7.RL.5  | 7.RL.1  | 3      | 7.RL.5  | 7.RL.1  | 1      | 7.RL.1  |         |
| 2    | 2      | 7.RL.6  | 7.RL.3  | 3      | 7.RL.6  |         | 3      | 7.RL.6  | 7.RL.3  | 2      | 7.RL.6  |         |
| 3    | 2      | 7.RL.2  |         | 2      | 7.RL.2  |         | 3      | 7.RL.2  | 7.RL.5  | 2      | 7.RL.2  |         |
|      | 3      | 7.W.2   | 7.W.4   | 3      | 7.W.2   | 7.W.9   | 3      | 7.W.9   | 7.W.2.a | 3      | 7.W.1   | 7.W.1.a |
| 4    | 3      | 7.W.2.a | 7.L.1   | 3      | 7.L.6   | 7.W.2.b | 3      | 7.W.2   | 7.W.1.b | 3      | 7.W.1.b | 7.W.1.c |
| -    | 3      | 7.W.2.b | 7.L.2   | 3      | 7.W.2.c | 7.W.4   | 3      | 7.W.4   | 7.W.2.e | 3      | 7.W.1.d | 7.W.1.e |
|      | 3      | 7.W.2.c | 7.L.3   | 3      | 7.L.1   | 7.L.2   | 3      | 7.RL.3  | 7.W.2.f | 3      |         |         |
|      |        |         |         |        |         | Sessi   | on 2   |         |         |        |         |         |
| 1    | 3      | 7.W.3   |         | 2      | 7.W.3.e |         | 3      | 7.W.1.e | 7.W.3   | 2      | 7.W.3.e |         |
| 2    | 3      | 7.W.5   | 7.W.2.e | 2      | 7.W.2.e |         | 2      | 7.RI.4  | 7.W.2.e | 2      | 7.W.2.c |         |
| 3    | 2      | 7.W.8   |         | 2      | 7.W.8   |         | 3      | 7.RI.1  | 7.W.1.b | 2      | 7.W.1   | 7.W.1.b |
| 4    | 3      | 7.W.1.e |         | 2      | 7.W.1.e |         | 2      | 7.RI.4  | 7.W.1.e | 2      | 7.W.1   | 7.W.1.e |
| 6    | 2      | 7.W.2.b |         | 3      | 7.W.4   |         | 2      | 7.RI.4  | 7.L.3.a | 2      | 7.W.2   | 7.W.2.b |
| U    | 2      | 7.W.5   |         | 3      | 7.W.4   |         | 2      | 7.RI.4  |         | 2      | 7.W.2.b |         |
| 7    | 2      | 7.L.3.a |         | 2      | 7.L.3.a |         | 2      | 7.L.3.a |         | 2      | 7.W.4   |         |
| /    | 2      | 7.L.3.a |         | 2      | 7.L.3.a |         | 2      | 7.RI.4  |         | 2      | 7.W.5   |         |
| 8    | 1      | 7.L.3.a |         | 2      | 7.L.3.a |         | 3      | 7.RI.4  |         | 1      |         |         |
| 0    | 1      | 7.W.3.d |         | 2      | 7.W.3.a |         | 3      | 7.L.3.a |         | 1      | 7.W.4   | 7.W.5   |
| 9    | 1      | 7.L.1.a | 7.L.2   | 1      | 7.L.2   |         | 2      | 7.L.1   |         | 1      | 7.W.4   | 7.W.5   |
| 10   | 2      | 7.W.2.c | 7.W.5   | 2      | 7.W.2.c |         | 2      | 7.L.1   | 7.W.2.d | 2      | 7.W.4   | 7.W.5   |
| 11   | 2      | 7.W.8   |         | 2      | 7.W.8   |         | 2      | 7.W.8   |         | 2      | 7.W.2.b |         |
| 12   | 2      | 7.W.8   | 7.W.9   | 2      | 7.W.8   |         | 2      | 7.W.8   |         | 2      | 7.W.2.b |         |
| 13   | 3      | 7.W.8   | 7.RI.1  | 2      | 7.W.9   | 7.W.8   | 3      | 7.W.8   |         | 2      | 7.W.2   | 7.W.2.b |
| 13   | 2      | 7.W.9   |         | 3      | 7.W.9   | 7.W.8   | 3      | 7.W.1.b | 7.W.9   | 2      | 7.W.4   |         |

# Table 7D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S    | DOK R6 | R6P     | R6S       | DOK R7 | R7P     | R7S     | DOK R8 | R8P    | R8S    |
|------|--------|---------|--------|--------|---------|-----------|--------|---------|---------|--------|--------|--------|
|      |        |         |        |        |         | Session 3 | 3      |         |         |        |        |        |
| 1    | 3      | 7.SL.2  |        | 2      | 7.SL.2  |           | 3      | 7.SL.2  | 7.L.1.a | 2      | 7.SL.3 |        |
| 2    | 1      | 7.RI.1  |        | 2      | 7.SL.2  |           | 2      | 7.SL.2  |         | 2      | 7.SL.2 |        |
| 2    | 2      | 7.SL.2  |        | 2      | 7.SL.2  |           | 2      | 7.SL.2  |         | 2      | 7.SL.2 |        |
| 6    | 3      | 7.SL.3  | 7.RI.5 | 2      | 7.SL.2  |           | 2      | 7.SL.2  | 7.RI.6  | 2      | 7.SL.3 |        |
| 7    | 2      | 7.SL.2  |        | 2      | 7.SL.2  |           | 3      | 7.RI.6  |         | 2      | 7.SL.2 |        |
| /    | 2      | 7.SL.2  |        | 2      | 7.SL.2  |           | 3      | 7.RI.1  | 7.RI.5  | 2      | 7.SL.2 |        |
| 8    | 2      | 7.SL.2  |        | 3      | 7.SL.2  | 7.SL.3    | 2      | 7.SL.2  |         | 2      | 7.SL.3 |        |
| 0    | 2      | 7.SL.3  |        | 3      | 7.SL.2  | 7.SL.3    | 2      | 7.RI.5  |         | 2      | 7.SL.3 |        |
|      |        |         |        |        |         | Session 4 | 4      |         |         |        |        |        |
| 1    | 2      | 7.RI.5  |        | 2      | 7.RI.5  |           | 2      | 7.RI.5  |         | 2      | 7.RI.5 |        |
| 2    | 2      | 7.L.4.b |        | 3      | 7.RI.4  | 7.L.4.b   | 2      | 7.L.4.b |         | 2      | 7.RI.4 |        |
| 3    | 2      | 7.L.4.a |        | 2      | 7.L.4.a | 7.RI.4    | 2      | 7.L.4.a | 7.L.6   | 2      | 7.RI.5 |        |
| 4    | 3      | 7.RI.6  |        | 3      | 7.RI.6  |           | 2      | 7.RI.9  |         | 2      | 7.RI.6 |        |
| -    | 2      | 7.RI.1  |        | 2      | 7.RI.1  |           | 2      | 7.RI.8  |         | 2      | 7.RI.6 |        |
| 5    | 2      | 7.RI.5  |        | 3      | 7.RI.5  |           | 3      | 7.RI.5  |         | 2      | 7.RI.5 |        |
| 6    | 2      | 7.RI.1  |        | 2      | 7.RI.1  |           | 2      | 7.RI.8  |         | 2      | 7.RI.1 |        |
| 7    | 2      | 7.RI.2  |        | 2      | 7.RI.2  |           | 2      | 7.RI.5  |         | 2      | 7.RI.2 |        |
| 8    | 2      | 7.L.4.c |        | 2      | 7.L.4   |           | 3      | 7.L.6   |         | 2      | 7.RI.4 |        |
| 9    | 1      | 7.RI.1  |        | 2      | 7.RI.8  |           | 2      | 7.RI.8  |         | 2      | 7.RI.3 |        |
| 10   | 2      | 7.RI.8  | 7.RI.2 | 2      | 7.RI.1  |           | 2      | 7.RI.8  |         | 2      | 7.RI.1 |        |
| 15   | 2      | 7.RL.1  | 7.RL.3 | 2      | 7.RL.2  |           | 3      | 7.RL.1  |         | 2      | 7.RL.1 | 7.RL.6 |
| 15   | 2      | 7.RL.1  |        | 2      | 7.RL.1  |           | 2      | 7.RL.1  |         | 2      | 7.RL.1 |        |
| 16   | 2      | 7.RL.3  |        | 3      | 7.RL.6  |           | 3      | 7.RL.3  |         | 3      | 7.RL.3 |        |
| 17   | 2      | 7.RL.4  |        | 2      | 7.RL.4  |           | 2      | 7.L.5   |         | 2      | 7.RL.4 |        |
| 18   | 2      | 7.RL.3  | 7.RL.1 | 3      |         |           | 2      | 7.RL.3  |         | 2      | 7.RL.3 |        |
| 19   | 2      | 7.RL.2  |        | 2      | 7.RL.2  |           | 3      | 7.L.3.a | 7.RL.2  | 2      | 7.RL.2 |        |

## Table 8D2E DOK Levels and Standards Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S     | DOK R2 | R2P     | R2S       | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S     |
|------|--------|---------|---------|--------|---------|-----------|--------|---------|---------|--------|---------|---------|
|      |        |         |         |        |         | Session 1 |        |         |         |        |         |         |
| 1    | 2      | 8.RI.1  |         | 3      | 8.RI.1  |           | 2      | 8.RI.1  | 8.RI.5  | 2      | 8.RI.1  |         |
| 2    | 3      | 8.RI.2  |         | 3      | 8.RI.2  |           | 2      | 8.RI.2  |         | 2      | 8.RI.2  |         |
| 4    | 3      | 8.RI.1  | 8.RI.2  | 3      | 8.RI.3  |           | 2      | 8.RI.1  |         | 2      | 8.RI.2  |         |
| 3    | 3      | 8.RI.3  |         | 3      | 8.RI.3  |           | 3      | 8.RI.3  |         | 3      | 8.RI.3  | 8.RI.5  |
| 4    | 2      | 8.RI.2  | 8.RI.1  | 2      | 8.RI.1  |           | 2      | 8.RI.8  |         | 3      | 8.RI.3  |         |
|      | 3      | 8.W.2   | 8.L.2   | 3      | 8.W.2   | 8.W.2.b   | 3      | 8.W.2   | 8.W.2.b | 3      | 8.W.2   | 8.W.2.b |
| 5    | 3      | 8.W.4   | 8.L.3   | 3      | 8.W.2.e |           | 3      | 8.W.9   | 8.W.2.c | 3      | 8.W.2.c | 8.W.2.e |
| 5    | 3      | 8.W.9   | 8.L.6   | 1      | 8.L.1   | 8.L.2     | 3      | 8.W.9.b | 8.W.2.d | 3      | 8.W.2.f | 8.W.4   |
|      | 3      | 8.L.1   |         | 1      | 8.L.3   |           | 3      | 8.W.2.a | 8.W.2.f | 3      | 8.L.1   | 8.L.6   |
|      |        |         |         |        |         | Session 2 | 1      |         |         |        |         |         |
| 1    | 2      | 8.W.3.c |         | 2      | 8.W.3.c |           | 2      | 8.W.3.c |         | 2      | 8.W.2.c |         |
| 2    | 3      | 8.W.3.b | 8.W.3.d | 3      | 8.W.3.b | 8.W.3.d   | 2      | 8.W.3.d |         | 2      | 8.W.3.b | 8.L.3   |
| 3    | 2      | 8.W.1.e |         | 3      | 8.W.1.e |           | 3      | 8.W.1.e |         | 2      | 8.W.1.e |         |
| 4    | 2      | 8.W.2.b |         | 3      | 8.W.2.a | 8.W.2.b   | 3      | 8.W.2.b |         | 2      | 8.W.2.c |         |
| 6    | 2      | 8.W.1.c |         | 2      | 8.W.1.c |           | 2      | 8.W.1.c |         | 2      | 8.W.1.a |         |
| 7    | 1      | 8.L.2.c |         | 1      | 8.L.2.c |           | 1      | 8.L.2.c |         | 1      | 8.L.2.c |         |
| /    | 1      | 8.L.2.c |         | 1      | 8.L.2.c |           | 1      | 8.L.2   |         | 1      | 8.L.2   |         |
| 8    | 1      | 8.L.2.a |         | 1      | 8.L.2.a |           | 1      | 8.L.2.a | 8.L.2   | 1      | 8.L.2.a |         |
| 9    | 1      | 8.L.2.b |         | 1      | 8.L.2.b |           | 1      |         |         | 1      | 8.L.2.b |         |
| 10   | 3      | 8.W.2.b |         | 2      | 8.W.2.b | 8.W.8     | 3      | 8.W.2.b |         | 3      | 8.W.9   |         |
| 10   | 3      | 8.W.2.b |         | 2      | 8.W.2.b | 8.W.8     | 3      | 8.W.2.b |         | 3      | 8.W.9   |         |
| 11   | 3      | 8.W.8   |         | 3      | 8.W.8   |           | 3      | 8.W.8   | 8.W.9   | 2      | 8.W.8   |         |
| 12   | 3      | 8.W.8   | 8.W.2.b | 3      | 8.W.9.b |           | 3      | 8.W.8   |         | 3      | 8.W.9.b |         |
| 13   | 3      | 8.W.8   |         | 3      | 8.W.8   |           | 3      | 8.W.8   |         | 2      | 8.W.8   | 8.W.9.b |
| 14   | 3      | 8.W.8   |         | 3      | 8.W.8   | 8.W.9     | 3      | 8.W.8   | 8.W.9   | 1      | 8.W.8   | 8.W.9   |
| 14   | 3      | 8.W.8   |         | 3      | 8.W.8   | 8.W.9     | 3      | 8.W.8   | 8.W.9   | 1      | 8.W.8   | 8.W.9   |

## Table 8D2E DOK Levels and Standards Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S     | DOK R2 | R2P     | R2S       | DOK R3 | R3P    | R3S    | DOK R4 | R4P    | R4S    |
|------|--------|---------|---------|--------|---------|-----------|--------|--------|--------|--------|--------|--------|
|      |        |         |         |        |         | Session 3 | 3      |        |        |        |        |        |
| 1    | 2      | 8.SL.3  |         | 3      |         |           | 3      |        |        | 3      | 8.SL.3 |        |
| 2    | 3      | 8.SL.2  |         | 3      | 8.SL.2  |           | 3      | 8.SL.2 |        | 3      | 8.SL.2 |        |
| 3    | 3      | 8.SL.3  | 8.SL.2  | 2      |         |           | 2      |        |        | 2      | 8.SL.3 |        |
| 5    | 3      | 8.SL.3  |         | 3      | 8.SL.3  |           | 2      |        |        | 2      | 8.SL.3 |        |
| 7    | 3      | 8.SL.2  |         | 3      | 8.SL.2  |           | 2      | 8.SL.2 |        | 2      | 8.SL.3 |        |
| 8    | 2      | 8.SL.3  |         | 2      |         |           | 2      |        |        | 2      | 8.SL.2 |        |
| 9    | 3      | 8.SL.2  |         | 3      | 8.SL.2  |           | 2      | 8.SL.2 |        | 3      | 8.SL.2 |        |
| ,    | 3      | 8.SL.2  |         | 3      | 8.SL.3  |           | 2      |        |        | 3      | 8.SL.2 |        |
|      |        |         |         |        |         | Session 4 | 1      |        |        |        |        |        |
| 1    | 2      | 8.RL.4  |         | 2      | 8.RL.3  | 8.RL.4    | 2      | 8.RL.4 | 8.L.5  | 2      | 8.RL.4 |        |
| 2    | 2      | 8.RL.1  |         | 3      | 8.RL.1  | 8.RL.3    | 2      | 8.RL.3 | 8.RL.1 | 2      | 8.RL.1 |        |
| 3    | 3      | 8.RL.3  |         | 3      | 8.RL.3  |           | 2      | 8.RL.3 |        | 3      | 8.RL.3 |        |
| 4    | 3      | 8.RL.1  |         | 3      | 8.RL.3  | 8.RL.6    | 2      |        |        | 3      | 8.RL.6 |        |
| 5    | 2      | 8.RI.4  |         | 3      | 8.RI.3  | 8.RI.6    | 2      | 8.RI.3 |        | 2      | 8.RI.4 |        |
| 6    | 2      | 8.L.4.a | 8.L.5   | 2      | 8.RI.4  | 8.L.4.a   | 2      | 8.RI.3 |        | 3      | 8.RI.2 |        |
| 7    | 3      | 8.RI.8  | 8.RI.1  | 3      | 8.RI.8  | 8.RI.9    | 3      | 8.RI.8 | 8.RI.9 | 2      | 8.RI.8 |        |
| /    | 3      | 8.RI.8  | 8.RI.1  | 3      | 8.RI.8  | 8.RI.9    | 3      | 8.RI.8 | 8.RI.9 | 2      | 8.RI.8 |        |
| 8    | 3      | 8.RI.9  |         | 1      | 8.RI.8  | 8.RI.9    | 2      | 8.RI.9 |        | 2      | 8.RI.9 |        |
| 0    | 3      | 8.RI.9  |         | 1      | 8.RI.8  | 8.RI.9    | 2      | 8.RI.9 |        | 2      | 8.RI.9 |        |
| 13   | 2      | 8.RL.4  | 8.L.4.a | 1      | 8.L.4.a | 8.L.4.c   | 2      | 8.RL.4 | 8.L.6  | 2      | 8.RL.4 | 8.L.4  |
| 14   | 3      | 8.RL.2  |         | 2      | 8.RL.2  |           | 3      | 8.RL.2 |        | 2      | 8.RL.2 |        |
| 14   | 3      | 8.RL.2  |         | 2      | 8.RL.2  |           | 3      | 8.RL.2 |        | 2      | 8.RL.2 |        |
| 15   | 2      | 8.RL.3  |         | 3      | 8.RL.3  |           | 2      | 8.RL.3 |        | 3      | 8.RL.3 | 8.RL.9 |
| 16   | 3      | 8.RL.6  |         | 2      | 8.RL.6  |           | 2      | 8.RL.6 |        | 3      | 8.RL.6 |        |

## Table 8D2E DOK Levels and Standards Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S     | DOK R6 | R6P     | R6S     | DOK R7 | R7P     | <b>R7S</b> | DOK R8 | R8P     | R8S     |
|------|--------|---------|---------|--------|---------|---------|--------|---------|------------|--------|---------|---------|
|      |        |         |         |        |         | Session | 1      |         |            |        |         |         |
| 1    | 2      | 8.RI.1  |         | 2      | 8.RI.1  |         | 2      | 8.RI.1  |            | 2      | 8.RL.1  |         |
| 2    | 3      | 8.RI.2  |         | 3      | 8.RI.2  |         | 2      | 8.RI.3  |            | 2      | 8.RI.2  |         |
| 2    | 2      | 8.RI.1  |         | 2      | 8.RI.1  |         | 2      | 8.RI.1  | 8.RI.5     | 2      | 8.RL.1  |         |
| 3    | 2      | 8.RI.3  |         | 3      | 8.RI.3  |         | 2      | 8.RI.3  |            | 2      | 8.RI.3  |         |
| 4    | 2      | 8.RI.3  |         | 2      | 8.RI.2  |         | 3      | 8.RI.2  | 8.RI.5     | 2      | 8.RI.3  |         |
|      | 3      | 8.W.2.a | 8.W.2.d | 3      | 8.W.9   | 8.W.2.a | 3      | 8.RI.1  | 8.W.2.a    | 3      | 8.W.2   | 8.W.2.a |
| 5    | 3      | 8.W.2.b | 8.W.2.e | 3      | 8.W.2.b | 8.W.2.c | 3      | 8.W.2   | 8.W.2.d    | 3      | 8.W.2.b | 8.W.2.c |
| 5    | 3      | 8.W.2.c | 8.RI.3  | 3      | 8.W.2.d | 8.L.1   | 3      | 8.W.2.b | 8.W.2.e    | 3      | 8.W.2.d | 8.W.2.e |
|      | 3      | 8.W.2.f | 8.RI.1  | 3      | 8.L.2   |         | 3      | 8.L.1   | 8.L.2      | 3      | 8.W.2.f |         |
|      |        |         |         |        |         | Session | 2      |         |            |        |         |         |
| 1    | 3      | 8.W.3.d |         | 2      | 8.W.3.d |         | 3      | 8.L.6   | 8.W.3.d    | 2      | 8.W.2.c |         |
| 2    | 2      | 8.W.3.d | 8.W.5   | 2      | 8.W.3.b |         | 2      | 8.W.3.d | 8.L.5      | 2      | 8.W.5   | 8.W.2.d |
| 3    | 3      | 8.W.1.e |         | 3      | 8.W.2.f |         | 3      | 8.W.3.e |            | 2      | 8.W.2.f |         |
| 4    | 2      |         |         | 2      | 8.W.2.b |         | 2      | 8.W.2.d | 8.L.6      | 2      | 8.W.4   | 8.W.2.b |
| 6    | 3      | 8.W.1.c |         | 2      | 8.W.1.c |         | 1      | 8.L.6   |            | 2      | 8.W.1.c |         |
| 7    | 1      | 8.L.2.c |         | 1      | 8.L.2.c |         | 1      | 8.L.3   |            | 1      | 8.L.2.a | 8.W.4   |
| , ,  | 1      | 8.L.2.c |         | 1      | 8.L.2.c |         | 1      | 8.L.2.c |            | 1      | 8.L.2.a | 8.W.4   |
| 8    | 1      | 8.L.2.a |         | 1      | 8.L.2.a |         | 1      | 8.L.3.a |            | 1      | 8.L.2.a | 8.W.4   |
| 9    | 1      | 8.L.2.b |         | 1      | 8.L.2.b |         | 1      | 8.L.2.a | 8.L.2      | 1      | 8.L.2.b | 8.W.4   |
| 10   | 1      | 8.W.2.b |         | 2      | 8.W.2.b |         | 2      | 8.RI.1  |            | 2      | 8.W.2   | 8.W.2.b |
| 10   | 1      | 8.W.2.d |         | 2      | 8.W.2.b |         | 2      | 8.RI.1  |            | 2      | 8.W.2   |         |
| 11   | 3      | 8.W.8   | 8.L.6   | 2      | 8.W.8   |         | 3      | 8.W.8   | 8.W.9      | 2      | 8.W.8   |         |
| 12   | 2      | 8.W.8   |         | 2      | 8.RI.8  | 8.W.8   | 2      | 8.W.8   | 8.W.9      | 2      | 8.W.1.b | 8.W.1   |
| 13   | 3      | 8.W.8   |         | 2      | 8.W.8   |         | 2      | 8.W.8   |            | 2      | 8.W.8   |         |
| 14   | 3      | 8.W.8   |         | 3      | 8.W.8   |         | 3      | 8.W.8   |            | 3      | 8.W.8   | 8.W.8   |
| 14   | 3      | 8.W.8   |         | 3      | 8.W.8   |         | 3      | 8.W.9   |            | 3      |         |         |

## Table 8D2E DOK Levels and Standards Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P    | R5S | DOK R6 | R6P     | R6S     | DOK R7 | R7P    | R7S    | DOK R8 | R8P    | R8S    |
|------|--------|--------|-----|--------|---------|---------|--------|--------|--------|--------|--------|--------|
|      |        |        |     |        |         | Session | n 3    |        |        |        |        |        |
| 1    | 3      | 8.SL.3 |     | 2      | 8.RI.1  |         | 2      |        |        | 2      | 8.SL.3 |        |
| 2    | 3      | 8.SL.2 |     | 3      | 8.SL.2  |         | 2      | 8.SL.3 |        | 2      | 8.L.2  |        |
| 3    | 2      | 8.SL.2 |     | 2      | 8.SL.2  |         | 2      |        |        | 2      |        |        |
| 3    | 3      | 8.RI.1 |     | 2      | 8.RI.1  |         | 3      | 8.SL.3 |        | 2      |        |        |
| 7    | 2      | 8.SL.2 |     | 3      | 8.SL.2  |         | 2      | 8.SL.2 |        | 2      | 8.SL.2 |        |
| 8    | 3      | 8.RI.2 |     | 3      | 8.W.2.f |         | 2      |        |        | 2      |        |        |
| 9    | 3      | 8.SL.2 |     | 2      | 8.SL.2  |         | 2      | 8.SL.2 |        | 2      |        |        |
| 9    | 3      | 8.SL.3 |     | 2      | 8.RI.1  |         | 3      | 8.SL.3 |        | 2      |        |        |
|      |        |        |     |        |         | Session | n 4    |        |        |        |        |        |
| 1    | 2      | 8.RL.4 |     | 2      | 8.RL.4  |         | 1      | 8.L.4  | 8.L.6  | 2      | 8.RL.3 | 8.RI.6 |
| 2    | 3      | 8.RL.1 |     | 1      | 8.RL.1  |         | 2      | 8.L.4  | 8.L.6  | 2      | 8.RL.1 |        |
| 3    | 3      | 8.RL.3 |     | 3      | 8.RL.3  |         | 3      | 8.RL.3 |        | 2      | 8.RL.3 |        |
| 4    | 3      | 8.RL.6 |     | 2      | 8.RL.3  |         | 3      | 8.RL.3 |        | 2      | 8.RL.6 |        |
| 5    | 3      | 8.RL.4 |     | 2      | 8.RI.4  |         | 3      | 8.RI.4 |        | 2      | 8.RI.3 |        |
| 6    | 3      | 8.RI.4 |     | 2      | 8.L.4.a |         | 2      | 8.RI.4 | 8.RI.5 | 2      | 8.RI.4 |        |
| 7    | 3      | 8.RI.9 |     | 2      | 8.RI.8  |         | 3      | 8.RI.8 | 8.RI.9 | 2      | 8.RI.8 |        |
| ,    | 3      | 8.RI.9 |     | 2      | 8.RI.8  |         | 3      | 8.RI.9 | 8.RI.8 | 2      | 8.RI.8 |        |
| 8    | 2      | 8.RI.9 |     | 2      | 8.RI.9  |         | 1      | 8.RI.1 |        | 2      | 8.RI.2 |        |
| o    | 2      | 8.RI.1 |     | 2      | 8.RI.9  |         | 1      | 8.RI.1 |        | 2      | 8.RI.2 |        |
| 13   | 2      | 8.RL.4 |     | 2      | 8.L.4.a |         | 2      | 8.RL.4 |        | 2      | 8.RL.4 |        |
| 14   | 3      | 8.RL.2 |     | 2      | 8.RL.2  |         | 2      | 8.RL.3 |        | 2      | 8.RL.1 |        |
| 14   | 3      | 8.RL.2 |     | 2      | 8.RL.2  |         | 2      | 8.RL.3 |        | 2      | 8.RL.1 |        |
| 15   | 3      | 8.RL.3 |     | 2      | 8.RL.3  |         | 3      | 8.RL.3 |        | 2      | 8.RL.3 |        |
| 16   | 3      | 8.RL.3 |     | 2      | 8.RL.6  |         | 3      | 8.RL.6 |        | 2      | 8.RL.6 |        |

## Table 3D2M DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P      | R1S    | DOK R2 | R2P      | R2S     | DOK R3 | R3P      | R3S      | DOK R4 | R4P      | R4S    |
|------|--------|----------|--------|--------|----------|---------|--------|----------|----------|--------|----------|--------|
|      |        |          |        |        |          | Session | 1      |          |          |        |          |        |
| 2    | 1      | 3.NBT.1  |        | 1      | 3.NBT.1  |         | 1      | 3.NBT.1  |          | 1      | 3.NBT.1  |        |
| 3    | 1      | 3.NF.1   |        | 1      | 3.NF.1   |         | 1      | 3.NF.1   |          | 2      | 3.NF.1   |        |
| 4    | 2      | 3.OA.1   |        | 1      | 3.0A.1   |         | 1      | 3.0A.1   | 3.0A.3   | 2      | 3.OA.1   |        |
| 6    | 2      | 3.MD.1   |        | 2      | 3.MD.1   |         | 2      | 3.MD.1   | 3.NBT.2  | 2      | 3.MD.1   |        |
| 7    | 1      | 3.G.1    |        | 2      | 3.G.1    |         | 2      | 3.G.1    |          | 1      | 3.G.1    |        |
| 8    | 1      | 3.NBT.1  |        | 1      | 3.NBT.1  |         | 1      | 3.NBT.1  |          | 1      | 3.NBT.1  |        |
| 9    | 1      | 3.OA.4   | 3.OA.7 | 1      | 3.0A.4   |         | 1      | 3.0A.3   | 3.OA.4   | 2      | 3.OA.4   | 3.OA.1 |
| 11   | 1      | 3.G.1    |        | 2      | 3.G.1    |         | 1      | 3.G.1    |          | 1      | 3.G.1    |        |
| 12   | 1      | 3.NF.2.b |        | 2      | 3.NF.2.b | 3.NF.2  | 1      | 3.NF.2.b |          | 2      | 3.NF.2.b |        |
| 13   | 2      | 3.MD.3   |        | 2      | 3.MD.3   |         | 2      | 3.MD.3   | 3.NBT.2  | 2      | 3.MD.3   |        |
| 14   | 2      | 3.OA.1   | 3.OA.7 | 2      | 3.0A.3   | 3.OA.4  | 2      | 3.0A.6   | 3.OA.3   | 2      | 3.OA.4   | 3.OA.2 |
| 16   | 2      | 3.MD.1   |        | 2      | 3.MD.1   |         | 2      | 3.MD.1   | 3.NBT.2  | 2      | 3.MD.1   |        |
| 17   | 1      | 3.NBT.2  |        | 1      | 3.NBT.2  |         | 1      | 3.NBT.2  |          | 2      | 3.NBT.2  | 3.OA.8 |
| 18   | 1      | 3.MD.5   |        | 1      |          |         | 2      | 3.MD.5   | 3.MD.5.b | 1      | 3.MD.5.b |        |
| 19   | 2      | 3.NF.3.d |        | 3      | 3.NF.3.d | 3.NF.3  | 2      | 3.NF.3.d |          | 3      | 3.NF.3.d |        |
| 20   | 2      | 3.MD.7.d |        | 2      | 3.MD.7.d |         | 2      | 3.MD.7.d |          | 2      | 3.MD.7.d |        |
| 21   | 2      | 3.OA.8   |        | 2      | 3.0A.8   |         | 2      | 3.0A.8   |          | 2      | 3.OA.8   |        |
| 22   | 2      | 3.NF.3.a |        | 2      | 3.NF.3.b | 3.NF.1  | 2      | 3.NF.3.b |          | 2      | 3.NF.3   |        |
| 23   | 2      | 3.OA.3   | 3.OA.7 | 1      | 3.0A.7   |         | 2      | 3.0A.3   |          | 2      | 3.NBT.3  |        |
| 24   | 1      | 3.NF.3.b |        | 1      | 3.NF.1   |         | 1      | 3.NF.1   |          | 2      | 3.NF.1   |        |
| 25   | 1      | 3.G.2    |        | 1      | 3.NF.1   |         | 2      | 3.G.2    |          | 2      | 3.NF.1   |        |

## Table 3D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P      | R1S      | DOK R2 | R2P      | R2S     | DOK R3 | R3P      | R3S      | DOK R4 | R4P      | R4S    |
|------|--------|----------|----------|--------|----------|---------|--------|----------|----------|--------|----------|--------|
|      |        |          |          |        |          | Session | 2      |          |          |        |          |        |
| 2    | 2      | 3.MD.8   |          | 1      |          |         | 2      | 3.MD.8   |          | 2      | 3.MD.8   |        |
| 3    | 2      | 3.NBT.1  |          | 2      | 3.NBT.1  |         | 1      | 3.NBT.1  |          | 1      | 3.NBT.1  |        |
| 4    | 2      | 3.OA.2   |          | 2      | 3.0A.3   |         | 2      | 3.OA.2   | 3.0A.3   | 2      | 3.0A.3   |        |
| 6    | 1      | 3.G.1    |          | 1      | 3.G.1    |         | 1      | 3.G.1    |          | 1      | 3.G.1    |        |
| 7    | 2      | 3.OA.2   | 3.0A.7   | 1      | 3.OA.2   | 3.OA.3  | 2      | 3.0A.3   | 3.OA.7   | 2      | 3.0A.3   |        |
| 8    | 1      | 3.G.1    |          | 2      | 3.G.1    |         | 2      | 3.G.1    |          | 1      | 3.G.1    |        |
| 9    | 1      | 3.NF.2.b |          | 1      | 3.NF.2.b | 3.NF.2  | 1      | 3.NF.2.b | 3.NF.1   | 2      | 3.NF.2.b |        |
| 11   | 2      | 3.NBT.2  |          | 1      | 3.NBT.2  |         | 2      | 3.NBT.2  |          | 2      | 3.NBT.2  |        |
| 12   | 2      | 3.MD.2   |          | 1      | 3.MD.2   |         | 2      | 3.MD.2   |          | 1      | 3.MD.2   |        |
| 13   | 2      | 3.NF.1   |          | 2      | 3.G.2    | 3.NF.1  | 2      | 3.G.2    |          | 3      | 3.NF.1   |        |
| 14   | 2      | 3.OA.5   | 3.0A.1   | 2      | 3.0A.5   |         | 2      | 3.0A.3   | 3.OA.7   | 2      | 3.0A.5   | 3.OA.8 |
| 16   | 1      | 3.NF.1   |          | 1      | 3.NF.1   | 3.G.2   | 1      | 3.MD.1   | 3.NBT.2  | 2      | 3.NF.1   |        |
| 17   | 1      | 3.NF.1   |          | 1      | 3.NF.1   | 3.G.2   | 1      | 3.G.2    |          | 2      | 3.NF.1   |        |
| 18   | 1      | 3.NF.2.b |          | 1      | 3.NF.2.b |         | 1      | 3.NF.2.b | 3.NF.1   | 2      | 3.NF.2.b |        |
| 19   | 1      | 3.MD.4   | 3.NF.2.b | 1      | 3.NF.2.b | 3.NF.2  | 1      | 3.MD.4   | 3.NF.1   | 2      | 3.NF.2.b |        |
| 20   | 2      | 3.OA.7   |          | 1      | 3.0A.1   |         | 2      | 3.0A.7   |          | 2      | 3.0A.7   |        |
| 21   | 1      | 3.NBT.3  |          | 1      | 3.0A.1   | 3.OA.3  | 2      | 3.0A.3   |          | 2      | 3.NBT.3  | 3.OA.1 |
| 22   | 2      | 3.NBT.2  |          | 1      | 3.NBT.2  |         | 2      | 3.NBT.2  |          | 2      | 3.NBT.2  | 3.OA.8 |
| 23   | 1      | 3.MD.6   | 3.MD.5.b | 1      |          |         | 2      | 3.MD.5.b | 3.MD.5.a | 1      | 3.MD.5.a |        |
| 24   | 2      | 3.MD.3   |          | 2      |          |         | 2      | 3.MD.3   |          | 2      | 3.MD.3   |        |
| 25   | 3      | 3.OA.9   |          | 2      |          |         | 2      | 3.OA.9   |          | 2      | 3.0A.9   |        |

## Table 3D2M DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P      | R5S    | DOK R6 | R6P      | R6S    | DOK R7 | R7P      | <b>R7S</b> | DOK R8 | R8P      | R8S      |
|------|--------|----------|--------|--------|----------|--------|--------|----------|------------|--------|----------|----------|
|      |        |          |        |        |          | Sessio | on 1   | I        |            |        |          |          |
| 2    | 1      | 3.OA.5   |        | 1      | 3.NBT.1  |        | 1      | 3.NBT.1  |            | 1      | 3.NBT.1  |          |
| 3    | 1      | 3.NF.1   |        | 1      | 3.NF.1   |        | 1      | 3.NF.1   |            | 2      | 3.NF.1   | 3.NF.2.b |
| 4    | 1      | 3.OA.7   |        | 1      |          |        | 2      | 3.0A.3   | 3.OA.1     | 1      | 3.OA.3   | 3.OA.1   |
| 6    | 2      | 3.NBT.2  |        | 1      | 3.MD.1   |        | 2      | 3.MD.1   |            | 2      | 3.MD.1   |          |
| 7    | 2      | 3.G.1    |        | 1      | 3.G.1    |        | 2      | 3.G.1    |            | 1      | 3.G.1    |          |
| 8    | 1      | 3.NBT.1  |        | 1      | 3.NBT.1  |        | 2      | 3.NBT.1  |            | 2      | 3.NBT.1  |          |
| 9    | 1      | 3.OA.4   |        | 1      | 3.OA.4   |        | 1      | 3.OA.4   | 3.OA.3     | 1      | 3.OA.4   | 3.OA.2   |
| 11   | 1      | 3.G.1    |        | 1      | 3.G.1    |        | 1      | 3.G.1    |            | 2      | 3.G.1    |          |
| 12   | 2      | 3.NF.2.b |        | 1      | 3.NF.2.a |        | 2      | 3.NF.2   | 3.NF.2.b   | 1      | 3.NF.2.b |          |
| 13   | 2      | 3.MD.3   |        | 2      | 3.MD.3   |        | 2      | 3.MD.3   |            | 2      | 3.MD.3   |          |
| 14   | 2      | 3.NBT.3  | 3.OA.8 | 1      | 3.OA.4   |        | 2      | 3.0A.3   | 3.OA.2     | 2      | 3.OA.4   | 3.OA.6   |
| 16   | 3      | 3.MD.1   |        | 1      | 3.MD.1   |        | 2      | 3.MD.1   |            | 2      | 3.MD.1   |          |
| 17   | 1      | 3.NBT.2  |        | 1      | 3.NBT.2  |        | 1      | 3.NBT.2  |            | 1      | 3.NBT.2  |          |
| 18   | 2      | 3.MD.8   |        | 1      | 3.MD.5   |        | 2      |          |            | 1      | 3.MD.5   |          |
| 19   | 2      | 3.NF.3.d |        | 2      | 3.NF.3.d |        | 2      | 3.NF.3.d | 3.NF.1     | 2      | 3.NF.3.d |          |
| 20   | 3      | 3.MD.7.d |        | 2      | 3.MD.7.d |        | 2      | 3.MD.7.c | 3.MD.7.b   | 2      | 3.MD.7.d | 3.MD.7.b |
| 21   | 2      | 3.NBT.2  |        | 2      | 3.OA.8   |        | 2      | 3.OA.8   |            | 2      | 3.OA.8   |          |
| 22   | 2      | 3.NF.3.b |        | 1      | 3.NF.3.b |        | 2      | 3.NF.3.b | 3.NF.1     | 2      | 3.NF.3.b | 3.NF.3.a |
| 23   | 2      | 3.OA.3   |        | 1      | 3.0A.3   |        | 2      | 3.NBT.3  |            | 1      | 3.NBT.3  | 3.OA.3   |
| 24   | 1      | 3.NF.1   |        | 1      | 3.NF.1   |        | 1      | 3.NF.1   |            | 1      | 3.NF.1   |          |
| 25   | 2      | 3.G.2    |        | 1      | 3.NF.1   |        | 2      | 3.G.2    |            | 2      | 3.NF.1   | 3.G.2    |

## Table 3D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P      | R5S    | DOK R6 | R6P      | R6S    | DOK R7 | R7P      | R7S      | DOK R8 | R8P      | R8S      |
|------|--------|----------|--------|--------|----------|--------|--------|----------|----------|--------|----------|----------|
|      |        |          |        |        |          | Sessio | on 2   |          |          |        |          |          |
| 2    | 3      | 3.MD.8   |        | 2      | 3.MD.8   |        | 2      | 3.MD.8   |          | 2      | 3.MD.8   |          |
| 3    | 1      | 3.NBT.1  |        | 1      | 3.NBT.1  |        | 2      | 3.NBT.1  |          | 2      | 3.NBT.1  |          |
| 4    | 3      | 3.OA.5   |        | 1      | 3.OA.2   |        | 2      | 3.OA.2   |          | 1      | 3.OA.2   | 3.0A.6   |
| 6    | 2      | 3.G.2    |        | 1      | 3.G.1    |        | 1      | 3.G.1    |          | 1      | 3.G.1    |          |
| 7    | 1      | 3.NBT.3  | 3.OA.2 | 1      | 3.OA.3   |        | 2      | 3.0A.3   | 3.OA.2   | 1      | 3.OA.3   |          |
| 8    | 1      | 3.G.1    |        | 2      | 3.G.1    |        | 2      | 3.G.1    |          | 1      | 3.G.1    |          |
| 9    | 2      | 3.NF.2   |        | 1      | 3.NF.2.b |        | 2      | 3.NF.2   | 3.NF.2.b | 1      | 3.NF.2.b |          |
| 11   | 2      | 3.NBT.2  |        | 1      | 3.NBT.2  |        | 2      | 3.OA.8   | 3.NBT.2  | 1      | 3.NBT.2  | 3.0A.3   |
| 12   | 2      | 3.MD.2   |        | 1      | 3.MD.2   |        | 2      | 3.MD.2   |          | 1      | 3.MD.2   |          |
| 13   | 2      | 3.NF.1   |        | 1      | 3.NF.1   |        | 2      | 3.NF.1   | 3.G.2    | 3      | 3.G.2    |          |
| 14   | 3      | 3.OA.8   |        | 2      | 3.OA.5   |        | 2      | 3.0A.5   | 3.0A.3   | 3      | 3.OA.5   | 3.OA.7   |
| 16   | 1      | 3.NF.1   |        | 1      | 3.NF.1   |        | 1      | 3.NF.1   |          | 1      | 3.NF.1   |          |
| 17   | 2      | 3.NF.1   |        | 1      | 3.NF.1   |        | 1      | 3.NF.1   | 3.G.2    | 1      | 3.NF.1   |          |
| 18   | 2      | 3.NF.2.a |        | 1      | 3.NF.2.b |        | 2      | 3.NF.2   | 3.NF.2.b | 1      | 3.NF.2.b |          |
| 19   | 1      | 3.NF.2.a |        | 1      | 3.NF.2.b | 3.MD.4 | 2      | 3.NF.2.b |          | 1      | 3.MD.4   | 3.NF.2.b |
| 20   | 1      | 3.OA.7   |        | 1      | 3.OA.7   |        | 1      | 3.0A.7   | 3.0A.1   | 2      | 3.OA.7   |          |
| 21   | 2      | 3.OA.8   |        | 1      | 3.OA.3   |        | 1      | 3.NBT.3  | 3.OA.8   | 1      | 3.0A.3   | 3.0A.1   |
| 22   | 2      | 3.NBT.2  |        | 1      | 3.NBT.2  |        | 2      | 3.OA.8   | 3.NBT.2  | 1      | 3.NBT.2  | 3.OA.8   |
| 23   | 2      | 3.MD.6   |        | 1      | 3.MD.6   |        | 1      | 3.MD.6   |          | 2      | 3.MD.5   | 3.MD.6   |
| 24   | 3      | 3.MD.1   |        | 2      | 3.MD.3   |        | 2      | 3.MD.3   |          | 2      | 3.MD.3   |          |
| 25   | 2      | 3.NBT.2  |        | 2      | 3.OA.9   |        | 2      | 3.0A.9   |          | 2      | 3.OA.9   |          |

## Table 4D2M DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P      | R1S      | DOK R2 | R2P      | R2S      | DOK R3 | R3P      | R3S      | DOK R4 | R4P      | R4S      |
|------|--------|----------|----------|--------|----------|----------|--------|----------|----------|--------|----------|----------|
|      |        |          |          |        |          | Session  | 1      |          |          |        |          |          |
| 2    | 1      | 4.NBT.1  |          |
| 3    | 1      | 4.OA.1   |          | 1      | 4.OA.1   |          | 1      | 4.0A.1   |          | 1      | 4.OA.1   |          |
| 4    | 1      | 4.G.1    |          |
| 6    | 1      | 4.NF.1   |          | 1      | 4.NF.1   |          | 1      | 4.NF.1   | 4.NF.2   | 1      | 4.NF.1   |          |
| 7    | 1      | 4.NBT.3  |          |
| 8    | 2      | 4.MD.3   |          |
| 9    | 2      | 4.OA.1   |          | 2      | 4.MD.2   |          | 2      | 4.OA.2   | 4.OA.1   | 1      | 4.OA.1   |          |
| 11   | 2      | 4.MD.2   |          | 2      | 4.MD.2   |          | 2      | 4.MD.2   |          | 2      | 4.MD.2   | 4.OA.3   |
| 12   | 2      | 4.OA.3   |          | 2      | 4.OA.3   |          | 2      | 4.OA.3   | 4.NBT.5  | 2      | 4.OA.2   |          |
| 13   | 2      | 4.G.2    |          | 2      | 4.G.2    |          | 2      | 4.G.2    | 4.G.1    | 3      | 4.G.1    |          |
| 14   | 2      | 4.OA.4   |          | 2      | 4.OA.2   |          | 2      | 4.NBT.6  |          | 2      | 4.OA.4   |          |
| 16   | 1      | 4.NBT.1  |          | 1      | 4.NBT.1  |          | 1      | 4.NBT.2  |          | 1      | 4.NBT.1  | 4.NBT.2  |
| 17   | 1      | 4.NF.3.b |          | 3      |          |          | 2      | 4.NF.3.b |          | 2      | 4.NF.3.b | 4.NF.4.b |
| 18   | 2      | 4.MD.4   |          | 2      | 4.MD.4   | 4.NF.3.c | 2      | 4.MD.4   | 4.NF.3.c | 2      | 4.MD.4   | 4.NF.3.c |
| 19   | 2      | 4.NBT.5  |          | 2      | 4.NBT.5  | 4.OA.2   | 2      | 4.NBT.5  |          | 2      | 4.NBT.5  |          |
| 20   | 1      | 4.OA.4   |          | 2      | 4.OA.4   |          | 1      | 4.OA.4   |          | 1      | 4.OA.4   |          |
| 21   | 1      | 4.MD.5.b | 4.MD.5.a | 1      | 4.MD.5   |          | 1      | 4.MD.5.a | 4.MD.5.b | 1      | 4.MD.6   |          |
| 22   | 1      | 4.NF.4.c |          | 2      | 4.NF.4.c |          | 2      | 4.NF.4.c |          | 1      | 4.NF.4   | 4.NF.4.a |
| 23   | 2      | 4.OA.5   |          |
| 24   | 1      | 4.NF.6   |          | 2      | 4.NF.6   |          | 1      | 4.NF.6   | 4.NF.5   | 1      | 4.NF.6   |          |
| 25   | 1      | 4.MD.6   |          |
| 26   | 1      | 4.G.3    |          | 1      | 4.G.3    |          | 1      | 4.G.3    |          | 2      | 4.G.3    |          |
| 27   | 1      | 4.NF.7   |          |

## Table 4D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P      | R1S     | DOK R2 | R2P      | R2S     | DOK R3 | R3P      | R3S      | DOK R4 | R4P      | R4S     |
|------|--------|----------|---------|--------|----------|---------|--------|----------|----------|--------|----------|---------|
|      |        |          |         |        |          | Session | 2      |          |          |        |          |         |
| 2    | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |          | 1      | 4.NBT.2  |         |
| 3    | 1      | 4.OA.1   |         | 2      | 4.OA.2   |         | 2      | 4.OA.1   | 4.OA.2   | 1      | 4.OA.1   |         |
| 4    | 1      | 4.G.1    |         | 1      | 4.G.1    |         | 1      | 4.G.1    |          | 1      | 4.G.1    |         |
| 6    | 2      | 4.MD.2   | 4.OA.3  | 2      | 4.MD.2   |         | 2      | 4.MD.2   | 4.NBT.4  | 2      | 4.MD.2   |         |
| 7    | 1      | 4.NF.1   |         | 2      | 4.NF.1   |         | 1      | 4.NF.1   |          | 1      | 4.NF.1   |         |
| 8    | 2      | 4.NBT.4  |         | 2      | 4.OA.3   | 4.NBT.4 | 2      | 4.NBT.4  |          | 2      | 4.NBT.4  |         |
| 9    | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |          | 1      | 4.NBT.2  |         |
| 11   | 2      | 4.MD.3   |         | 2      | 4.MD.3   |         | 2      | 4.MD.3   |          | 2      | 4.MD.3   |         |
| 12   | 2      | 4.OA.3   | 4.NBT.6 | 2      | 4.OA.3   |         | 2      | 4.0A.3   | 4.NBT.6  | 2      | 4.OA.3   | 4.NBT.6 |
| 13   | 1      | 4.NF.2   |         | 2      | 4.NF.2   |         | 1      | 4.NF.2   |          | 2      | 4.NF.2   |         |
| 14   | 1      | 4.G.2    |         | 2      | 4.G.2    |         | 2      | 4.G.2    |          | 2      | 4.G.2    |         |
| 16   | 2      | 4.MD.7   |         | 2      | 4.MD.7   |         | 2      | 4.MD.7   |          | 1      | 4.MD.1   |         |
| 17   | 1      | 4.NF.3.b |         | 1      | 4.NF.3.b |         | 2      | 4.NF.3.b |          | 1      | 4.NF.3.b |         |
| 18   | 1      | 4.NBT.5  |         | 1      |          |         | 2      | 4.NBT.5  |          | 2      | 4.OA.3   |         |
| 19   | 2      | 4.OA.5   |         | 2      | 4.OA.5   |         | 2      | 4.OA.5   |          | 2      | 4.OA.5   |         |
| 20   | 1      | 4.MD.5.a |         | 1      | 4.MD.5.a |         | 1      | 4.MD.5.a |          | 1      | 4.MD.5.a |         |
| 21   | 1      | 4.G.2    |         | 1      | 4.G.2    |         | 1      | 4.G.2    |          | 1      | 4.G.2    |         |
| 22   | 1      | 4.NF.5   |         | 1      | 4.NF.5   |         | 2      | 4.NF.1   | 4.NF.3.d | 2      | 4.NF.5   |         |
| 23   | 1      | 4.NBT.6  |         | 1      | 4.NBT.6  |         | 2      | 4.NBT.6  |          | 2      | 4.OA.3   |         |
| 24   | 2      | 4.0A.5   |         | 2      | 4.OA.5   |         | 3      | 4.OA.5   |          | 2      | 4.OA.5   |         |
| 25   | 1      | 4.NF.5   |         | 1      | 4.NF.6   |         | 1      | 4.NF.6   |          | 1      | 4.NF.6   |         |
| 26   | 1      | 4.MD.7   |         | 2      | 4.MD.7   | 4.NBT.4 | 2      | 4.MD.7   |          | 1      | 4.MD.7   |         |
| 27   | 1      | 4.G.2    |         | 2      | 4.G.2    |         | 2      | 4.G.2    |          | 2      | 4.G.2    |         |

## Table 4D2M DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P      | R5S      | DOK R6 | R6P      | R6S      | DOK R7 | R7P     | R7S      | DOK R8 | R8P      | R8S      |
|------|--------|----------|----------|--------|----------|----------|--------|---------|----------|--------|----------|----------|
|      |        |          |          |        |          | Session  | 1      |         |          |        |          |          |
| 2    | 1      | 4.NBT.1  |          | 1      | 4.NBT.1  |          | 1      | 4.NBT.1 |          | 1      | 4.NBT.1  |          |
| 3    | 1      | 4.OA.1   |          | 1      | 4.0A.1   |          | 1      | 4.OA.1  |          | 1      | 4.OA.1   |          |
| 4    | 1      | 4.G.1    |          | 1      | 4.G.1    |          | 1      | 4.G.1   |          | 1      | 4.G.1    |          |
| 6    | 1      | 4.NF.1   |          | 1      | 4.NF.5   |          | 1      | 4.NF.1  |          | 1      | 4.NF.1   |          |
| 7    | 1      | 4.NBT.3  |          | 1      | 4.NBT.3  |          | 1      | 4.NBT.3 |          | 1      | 4.NBT.3  |          |
| 8    | 2      | 4.MD.3   |          | 2      | 4.MD.3   | 4.OA.2   | 2      | 4.MD.3  | 4.NBT.6  | 1      | 4.MD.3   |          |
| 9    | 2      | 4.OA.2   |          | 2      | 4.OA.1   |          | 2      | 4.OA.1  |          | 2      | 4.OA.1   |          |
| 11   | 2      | 4.MD.1   |          | 2      | 4.MD.2   | 4.MD.1   | 2      | 4.MD.2  |          | 2      | 4.MD.2   | 4.OA.2   |
| 12   | 2      | 4.OA.3   |          | 2      | 4.OA.3   |          | 2      | 4.OA.3  |          | 2      | 4.OA.3   | 4.NBT.4  |
| 13   | 2      | 4.G.2    |          | 2      | 4.G.2    |          | 2      | 4.G.2   |          | 3      | 4.G.2    |          |
| 14   | 2      | 4.OA.2   |          | 1      | 4.OA.4   |          | 2      | 4.OA.3  |          | 2      | 4.OA.2   |          |
| 16   | 2      | 4.NBT.2  |          | 1      | 4.NBT.1  |          | 2      | 4.NBT.1 |          | 1      | 4.NBT.1  | 4.NBT.2  |
| 17   | 2      | 4.NF.2   |          | 1      | 4.NF.3.b |          | 2      | 4.NF.1  | 4.NF.3   | 1      | 4.NF.3.b | 4.NF.3.c |
| 18   | 3      | 4.NF.3.c |          | 2      | 4.MD.4   | 4.NF.3.c | 2      | 4.MD.4  | 4.NF.3.c | 2      | 4.NF.3.c | 4.NF.3.d |
| 19   | 2      | 4.OA.3   |          | 2      | 4.NBT.5  |          | 2      | 4.NBT.5 |          | 2      | 4.OA.4   |          |
| 20   | 2      | 4.OA.4   |          | 2      | 4.OA.4   |          | 1      | 4.OA.4  |          | 1      | 4.OA.4   |          |
| 21   | 1      | 4.MD.5   | 4.MD.5.b | 1      | 4.MD.5.a |          | 1      | 4.MD.5  | 4.G.1    | 1      | 4.MD.5   |          |
| 22   | 3      | 4.NF.4.c |          | 2      | 4.NF.4.c |          | 2      | 4.NF.4  | 4.NF.4.c | 2      | 4.NF.4.c | 4.NF.4.b |
| 23   | 2      | 4.OA.5   |          | 2      | 4.OA.5   |          | 2      | 4.OA.5  |          | 2      | 4.OA.5   |          |
| 24   | 3      | 4.NF.6   | 4.MD.2   | 2      | 4.NF.6   | 4.MD.4   | 2      | 4.NF.6  |          | 1      | 4.NF.6   | 4.NF.5   |
| 25   | 1      | 4.MD.6   |          | 1      | 4.MD.6   | 4.MD.5   | 1      | 4.MD.6  |          | 1      | 4.MD.6   |          |
| 26   | 1      | 4.G.3    |          | 1      | 4.G.3    |          | 1      | 4.G.3   |          | 2      | 4.G.3    |          |
| 27   | 2      | 4.NF.7   |          | 2      | 4.NF.7   |          | 2      | 4.NF.7  |          | 1      | 4.NF.7   |          |

## Table 4D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P      | R5S     | DOK R6 | R6P      | R6S      | DOK R7 | R7P      | R7S     | DOK R8 | R8P      | R8S     |
|------|--------|----------|---------|--------|----------|----------|--------|----------|---------|--------|----------|---------|
|      |        |          |         |        |          | Session  | 2      |          |         |        |          |         |
| 2    | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |          | 1      | 4.NBT.3  |         | 1      | 4.NBT.2  |         |
| 3    | 1      | 4.MD.1   | 4.MD.7  | 2      | 4.OA.2   |          | 2      | 4.0A.1   | 4.OA.2  | 2      | 4.OA.2   |         |
| 4    | 1      | 4.G.1    |         | 1      | 4.G.1    |          | 1      | 4.G.1    |         | 1      | 4.G.1    |         |
| 6    | 2      | 4.MD.1   |         | 2      | 4.MD.2   | 4.OA.3   | 2      | 4.MD.2   | 4.NBT.4 | 1      | 4.OA.3   | 4.NBT.4 |
| 7    | 2      | 4.NF.2   |         | 2      | 4.NF.2   |          | 2      | 4.NF.1   | 4.NF.2  | 2      | 4.NF.1   |         |
| 8    | 2      | 4.NBT.4  | 4.NBT.1 | 2      | 4.NBT.4  | 4.OA.2   | 2      | 4.NBT.4  |         | 2      | 4.NBT.4  |         |
| 9    | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |          | 1      | 4.NBT.2  |         | 1      | 4.NBT.2  |         |
| 11   | 2      | 4.MD.3   |         | 2      | 4.MD.3   | 4.OA.2   | 2      | 4.MD.3   |         | 2      | 4.MD.3   |         |
| 12   | 2      | 4.OA.2   |         | 2      | 4.OA.3   | 4.NBT.6  | 2      | 4.OA.3   |         | 2      | 4.NBT.6  | 4.OA.2  |
| 13   | 1      | 4.NF.2   |         | 2      | 4.NF.2   |          | 2      | 4.NF.2   |         | 1      | 4.NF.2   |         |
| 14   | 2      | 4.G.2    |         | 2      | 4.G.2    |          | 2      | 4.G.2    |         | 2      | 4.G.2    |         |
| 16   | 3      | 4.MD.7   |         | 2      | 4.MD.7   | 4.NBT.4  | 2      |          | 4.NBT.4 | 2      | 4.MD.7   | 4.NBT.4 |
| 17   | 1      | 4.NF.3.b |         | 1      | 4.NF.3.b |          | 2      | 4.NF.3   |         | 1      | 4.NF.3.b |         |
| 18   | 2      | 4.NBT.5  |         | 2      | 4.NBT.5  | 4.OA.2   | 2      | 4.OA.3   | 4.NBT.5 | 1      | 4.NBT.5  |         |
| 19   | 2      | 4.OA.5   |         | 2      | 4.OA.5   |          | 2      | 4.OA.5   |         | 2      | 4.OA.5   |         |
| 20   | 1      | 4.MD.5.a |         | 1      | 4.MD.5.a |          | 1      | 4.MD.5.a |         | 1      | 4.MD.5.a |         |
| 21   | 1      | 4.G.2    |         | 2      | 4.G.2    | 4.MD.5   | 1      | 4.G.2    |         | 2      | 4.MD.5   | 4.MD.6  |
| 22   | 2      | 4.NF.3.d |         | 2      | 4.NF.5   | 4.NF.3.d | 2      | 4.NF.5   |         | 2      | 4.NF.3.d | 4.NF.5  |
| 23   | 2      | 4.NBT.5  |         | 2      | 4.NBT.6  |          | 2      | 4.OA.3   | 4.NBT.6 | 2      | 4.OA.3   | 4.NBT.6 |
| 24   | 2      | 4.OA.5   |         | 2      | 4.OA.5   |          | 2      | 4.0A.5   |         | 3      | 4.OA.5   |         |
| 25   | 2      | 4.NBT.6  |         | 1      | 4.NF.6   |          | 1      | 4.NF.6   |         | 1      | 4.NF.6   |         |
| 26   | 2      | 4.MD.7   |         | 2      | 4.MD.7   | 4.NBT.4  | 2      |          |         | 1      | 4.MD.5   | 4.NBT.4 |
| 27   | 2      | 4.G.2    |         | 2      | 4.G.2    |          | 2      | 4.G.1    |         | 1      | 4.G.2    |         |

## Table 5D2M DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P      | R1S | DOK R2 | R2P      | R2S    | DOK R3 | R3P      | R3S    | DOK R4 | R4P      | R4S    |
|------|--------|----------|-----|--------|----------|--------|--------|----------|--------|--------|----------|--------|
|      |        |          |     |        |          | Sessi  | ion 1  |          |        |        |          |        |
| 2    | 1      | 5.NBT.1  |     | 2      | 5.NBT.1  |        | 1      | 5.NBT.1  |        | 1      | 5.NBT.1  |        |
| 3    | 1      | 5.NF.1   |     | 2      | 5.NF.2   |        | 2      | 5.NF.2   | 5.NF.1 | 2      | 5.NF.2   | 5.NF.1 |
| 4    | 2      | 5.MD.1   |     | 2      | 5.NBT.7  |        | 2      | 5.MD.1   | 5.OA.2 | 2      | 5.MD.1   |        |
| 6    | 1      | 5.G.1    |     | 2      | 5.G.2    |        | 1      | 5.G.2    | 5.G.1  | 2      | 5.G.2    | 5.G.1  |
| 7    | 1      | 5.NBT.4  |     | 1      | 5.NBT.4  |        | 1      | 5.NBT.4  |        | 1      | 5.NBT.4  |        |
| 8    | 2      | 5.NF.1   |     | 2      | 5.NF.2   |        | 2      | 5.NF.2   | 5.NF.1 | 2      | 5.NF.2   | 5.NF.1 |
| 9    | 1      | 5.OA.1   |     | 1      | 5.OA.1   |        | 1      | 5.OA.1   |        | 1      | 5.OA.2   | 5.0A.1 |
| 11   | 2      | 5.MD.2   |     | 2      | 5.MD.2   |        | 2      | 5.MD.2   |        | 2      | 5.MD.2   | 5.NF.1 |
| 12   | 1      | 5.NBT.5  |     | 2      | 5.NBT.5  |        | 2      | 5.NBT.5  | 5.OA.2 | 2      | 5.NBT.5  |        |
| 13   | 2      | 5.OA.2   |     | 2      | 5.OA.2   |        | 2      | 5.OA.2   | 5.OA.1 | 1      | 5.OA.2   | 5.0A.1 |
| 14   | 1      | 5.NF.3   |     | 1      | 5.NF.3   |        | 1      | 5.NF.3   |        | 1      | 5.NF.3   |        |
| 16   | 2      | 5.OA.3   |     | 2      | 5.OA.2   | 5.G.1  | 2      | 5.OA.3   | 5.G.2  | 2      | 5.G.2    | 5.G.1  |
| 17   | 1      | 5.MD.5.b |     | 2      | 5.MD.5.b |        | 1      | 5.MD.5.b |        | 2      | 5.MD.5.b |        |
| 18   | 1      | 5.NBT.6  |     | 2      | 5.NBT.6  |        | 2      | 5.NBT.6  |        | 2      | 5.NBT.6  |        |
| 19   | 2      | 5.G.2    |     | 1      | 5.G.2    |        | 2      | 5.G.2    |        | 2      | 5.G.2    | 5.G.1  |
| 20   | 1      | 5.OA.1   |     | 1      | 5.OA.1   |        | 2      | 5.OA.2   |        | 2      | 5.OA.2   | 5.OA.1 |
| 21   | 2      | 5.NF.4.a |     | 2      | 5.NF.6   |        | 2      | 5.NF.6   |        | 2      | 5.NF.6   |        |
| 22   | 1      | 5.G.2    |     | 1      | 5.G.1    | 5.G.2  | 2      | 5.G.1    |        | 2      | 5.G.2    | 5.G.1  |
| 23   | 1      | 5.OA.1   |     | 1      | 5.OA.1   |        | 1      | 5.OA.1   |        | 2      | 5.OA.2   | 5.0A.1 |
| 24   | 1      | 5.NBT.5  |     | 1      | 5.NBT.5  |        | 2      | 5.NBT.5  |        | 1      | 5.NBT.5  |        |
| 25   | 2      | 5.MD.5.b |     | 2      | 5.MD.5.a | 5.MD.5 | 2      | 5.MD.5.b | 5.MD.3 | 2      | 5.MD.5.b |        |
| 26   | 2      | 5.NF.7.b |     | 2      | 5.NF.7.c | 5.NF.7 | 2      | 5.NF.7.b |        | 2      | 5.NF.7.c |        |
| 27   | 1      | 5.G.1    |     | 1      | 5.G.2    |        | 1      | 5.G.2    | 5.G.1  | 1      | 5.G.2    | 5.G.1  |

#### Table 5D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P       | R1S | DOK R2 | R2P       | R2S      | DOK R3 | R3P       | R3S      | DOK R4 | R4P       | R4S      |
|------|--------|-----------|-----|--------|-----------|----------|--------|-----------|----------|--------|-----------|----------|
|      |        |           |     |        |           | Sessi    | ion 2  |           |          |        |           |          |
| 2    | 1      | 5.NBT.2   |     | 2      | 5.NBT.2   |          | 2      | 5.NBT.2   |          | 1      | 5.NBT.2   | 5.NBT.1  |
| 3    | 2      | 5.MD.1    |     | 3      |           | 5.NBT.7  | 2      | 5.MD.1    | 5.OA.2   | 2      | 5.NBT.7   |          |
| 4    | 2      | 5.G.1     |     | 1      | 5.G.1     |          | 2      | 5.G.1     |          | 1      | 5.G.1     |          |
| 6    | 1      | 5.NBT.3.a |     | 1      | 5.NBT.3.a | 5.NBT.3  | 1      | 5.NBT.3.a |          | 2      | 5.NBT.3.a |          |
| 7    | 2      | 5.MD.1    |     | 2      | 5.MD.1    |          | 2      | 5.MD.1    | 5.NBT.7  | 2      | 5.NBT.7   |          |
| 8    | 2      | 5.OA.1    |     | 1      | 5.0A.1    |          | 1      | 5.OA.1    |          | 2      | 5.OA.2    | 5.OA.1   |
| 9    | 1      | 5.G.2     |     | 1      | 5.G.2     |          | 1      | 5.G.2     |          | 1      | 5.G.2     | 5.G.1    |
| 11   | 2      | 5.NF.3    |     | 2      | 5.NF.3    |          | 2      | 5.NF.3    |          | 1      | 5.NF.3    |          |
| 12   | 1      | 5.OA.2    |     | 1      | 5.OA.2    |          | 1      | 5.OA.2    |          | 2      | 5.OA.2    | 5.OA.1   |
| 13   | 1      | 5.NF.6    |     | 1      | 5.NF.6    |          | 2      | 5.NF.4    |          | 2      | 5.NF.4    |          |
| 14   | 1      | 5.G.2     |     | 2      | 5.G.1     |          | 1      | 5.G.1     | 5.G.2    | 1      | 5.G.2     | 5.G.1    |
| 16   | 2      | 5.MD.2    |     | 2      | 5.MD.2    | 5.NF.2   | 2      | 5.MD.2    | 5.NF.2   | 2      | 5.MD.2    | 5.NF.1   |
| 17   | 2      | 5.NF.5.b  |     | 2      | 5.NF.5.a  | 5.NF.5.b | 1      | 5.NF.4    | 5.NF.5.b | 3      | 5.NF.5.b  |          |
| 18   | 2      | 5.G.4     |     | 1      | 5.G.3     | 5.G.4    | 2      | 5.G.4     | 5.G.3    | 2      | 5.G.4     | 5.G.3    |
| 19   | 2      | 5.OA.3    |     | 2      | 5.OA.3    |          | 2      | 5.OA.3    |          | 2      | 5.OA.3    |          |
| 20   | 2      | 5.NF.6    |     | 2      | 5.NF.6    | 5.NF.1   | 2      | 5.NF.6    |          | 2      | 5.NF.6    |          |
| 21   | 1      | 5.NBT.7   |     | 2      | 5.NBT.6   |          | 2      | 5.NBT.7   |          | 2      | 5.NBT.7   |          |
| 22   | 2      | 5.MD.5.c  |     | 2      | 5.MD.5.c  | 5.MD.5   | 2      | 5.MD.5.c  | 5.MD.5.b | 2      | 5.MD.5.c  | 5.MD.5.b |
| 23   | 1      | 5.MD.3    |     | 1      | 5.MD.3.b  | 5.MD.3   | 1      | 5.MD.3    |          | 1      | 5.MD.3    |          |
| 24   | 2      | 5.OA.2    |     | 2      | 5.OA.2    |          | 2      | 5.OA.2    | 5.OA.1   | 2      | 5.OA.2    | 5.OA.1   |
| 25   | 1      | 5.MD.4    |     | 1      | 5.MD.4    |          | 1      | 5.MD.4    | 5.MD.3.b | 2      | 5.NF.5.b  |          |
| 26   | 1      | 5.NBT.7   |     | 1      | 5.NBT.7   |          | 2      | 5.NF.7.c  | 5.NF.7.b | 2      | 5.NBT.7   |          |
| 27   | 2      | 5.G.3     |     | 2      | 5.G.4     | 5.G.3    | 2      | 5.G.3     | 5.G.4    | 2      | 5.G.4     | 5.G.3    |

#### Table 5D2M DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S   | DOK R6 | R6P      | R6S      | DOK R7 | R7P      | R7S    | DOK R8 | R8P      | R8S      |
|------|--------|---------|-------|--------|----------|----------|--------|----------|--------|--------|----------|----------|
|      |        |         |       |        |          | Session  | 1      |          |        |        |          |          |
| 2    | 1      | 5.NBT.1 |       | 1      | 5.NBT.2  | 5.NBT.1  | 1      | 5.NBT.1  |        | 1      | 5.NBT.1  |          |
| 3    | 1      | 5.NF.1  |       | 2      | 5.NF.2   |          | 2      | 5.NF.1   |        | 1      | 5.NF.1   |          |
| 4    | 2      | 5.MD.1  |       | 2      | 5.MD.1   |          | 2      | 5.MD.1   |        | 2      | 5.MD.1   |          |
| 6    | 2      | 5.G.1   |       | 1      | 5.G.1    |          | 2      | 5.G.1    |        | 2      | 5.G.1    |          |
| 7    | 1      | 5.NBT.4 |       | 1      | 5.NBT.4  |          | 1      | 5.NBT.4  |        | 1      | 5.NBT.4  |          |
| 8    | 3      | 5.NF.2  |       | 2      | 5.NF.2   |          | 2      | 5.NF.1   |        | 1      | 5.NF.1   |          |
| 9    | 1      | 5.OA.1  |       | 1      | 5.OA.1   |          | 1      | 5.OA.1   |        | 1      | 5.OA.1   |          |
| 11   | 2      | 5.NF.2  |       | 2      | 5.NF.2   | 5.MD.2   | 2      | 5.MD.2   |        | 1      | 5.NF.2   | 5.MD.2   |
| 12   | 1      | 5.NBT.5 |       | 2      | 5.NBT.5  |          | 2      | 5.NBT.5  |        | 1      | 5.NBT.5  |          |
| 13   | 1      | 5.OA.2  |       | 2      | 5.OA.2   | 5.OA.1   | 2      | 5.OA.2   |        | 1      | 5.OA.2   |          |
| 14   | 1      | 5.NF.3  |       | 1      | 5.NF.3   |          | 1      | 5.NF.3   |        | 1      | 5.NF.3   |          |
| 16   | 2      | 5.OA.3  | 5.G.2 | 2      | 5.G.2    | 5.G.1    | 2      | 5.OA.3   |        | 2      | 5.OA.3   | 5.G.2    |
| 17   | 2      | 5.MD.5  |       | 2      | 5.MD.5.b | 5.MD.3   | 2      | 5.MD.5.b |        | 1      | 5.MD.5.b |          |
| 18   | 2      | 5.NBT.6 |       | 2      | 5.NBT.6  |          | 2      | 5.NBT.6  |        | 1      | 5.NBT.6  |          |
| 19   | 1      | 5.G.1   |       | 2      | 5.G.2    | 5.G.1    | 2      | 5.G.2    |        | 1      | 5.G.2    |          |
| 20   | 1      | 5.OA.1  |       | 2      | 5.OA.2   | 5.OA.1   | 2      | 5.OA.2   |        | 1      | 5.OA.2   |          |
| 21   | 1      | 5.NF.4  |       | 2      | 5.NF.4   |          | 2      | 5.NF.6   | 5.NF.4 | 2      | 5.NF.6   |          |
| 22   | 1      | 5.G.1   |       | 2      | 5.MD.2   | 5.MD.1   | 1      | 5.G.2    |        | 1      | 5.G.2    |          |
| 23   | 2      | 5.OA.1  |       | 2      | 5.OA.2   | 5.OA.1   | 2      | 5.OA.1   |        | 1      | 5.OA.1   |          |
| 24   | 1      | 5.NBT.6 |       | 2      | 5.NBT.5  |          | 1      | 5.NBT.5  |        | 1      | 5.NBT.5  |          |
| 25   | 2      | 5.MD.5  |       | 2      | 5.MD.3.b | 5.MD.5.b | 2      | 5.MD.5.b |        | 1      | 5.MD.5.b | 5.MD.5.a |
| 26   | 1      | 5.NF.4  |       | 2      | 5.NF.7.c | 5.NF.7.b | 2      | 5.NF.7.c |        | 2      | 5.NF.4.a |          |
| 27   | 1      | 5.G.2   |       | 2      | 5.G.2    | 5.G.1    | 1      | 5.G.1    |        | 1      | 5.G.2    |          |

#### Table 5D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P       | R5S     | DOK R6 | R6P       | R6S      | DOK R7 | R7P       | R7S    | DOK R8 | R8P       | R8S       |
|------|--------|-----------|---------|--------|-----------|----------|--------|-----------|--------|--------|-----------|-----------|
|      |        |           |         |        |           | Session  | 2      |           |        |        |           |           |
| 2    | 2      | 5.NBT.2   |         | 2      | 5.NBT.2   | 5.NBT.1  | 2      | 5.NBT.2   |        | 2      | 5.NBT.2   |           |
| 3    | 2      | 5.MD.1    | 5.NBT.2 | 2      | 5.MD.1    | 5.NBT.7  | 2      | 5.MD.1    |        | 2      | 5.NF.2    | 5.NBT.3.a |
| 4    | 2      | 5.G.1     |         | 1      | 5.G.1     |          | 1      | 5.G.1     |        | 1      | 5.G.1     |           |
| 6    | 1      | 5.NBT.3.a |         | 1      | 5.NBT.3.a | 5.OA.1   | 1      | 5.NBT.3.a |        | 1      | 5.NBT.3.a |           |
| 7    | 2      | 5.MD.1    |         | 2      | 5.MD.1    | 5.NBT.6  | 2      | 5.MD.1    |        | 2      | 5.MD.1    |           |
| 8    | 1      | 5.OA.2    |         | 1      | 5.OA.1    |          | 2      | 5.OA.1    |        | 1      | 5.OA.1    |           |
| 9    | 1      | 5.G.2     |         | 2      | 5.G.2     |          | 1      | 5.G.1     |        | 1      | 5.G.2     |           |
| 11   | 2      | 5.NF.4.a  |         | 2      | 5.NF.3    |          | 2      | 5.NF.3    |        | 2      | 5.NF.3    |           |
| 12   | 1      | 5.OA.2    | 5.OA.1  | 1      | 5.OA.2    |          | 2      | 5.OA.2    |        | 1      | 5.OA.2    |           |
| 13   | 2      | 5.NF.4    |         | 2      | 5.NF.4.a  |          | 2      | 5.NF.4.a  |        | 1      | 5.NF.4.a  |           |
| 14   | 2      | 5.G.2     |         | 2      | 5.G.2     | 5.G.1    | 1      | 5.G.2     |        | 2      | 5.G.2     |           |
| 16   | 2      | 5.MD.2    |         | 3      | 5.MD.2    | 5.NF.6   | 2      | 5.MD.2    | 5.NF.1 | 2      | 5.MD.2    | 5.NF.2    |
| 17   | 2      | 5.NF.6    |         | 2      | 5.NF.5.b  |          | 2      | 5.NF.5.a  |        | 2      | 5.NF.5.b  |           |
| 18   | 2      | 5.G.3     | 5.G.4   | 2      | 5.G.4     | 5.G.3    | 2      | 5.G.3     |        | 2      | 5.G.3     |           |
| 19   | 1      | 5.OA.3    |         | 2      | 5.OA.3    |          | 1      | 5.OA.3    |        | 2      | 5.OA.3    |           |
| 20   | 3      | 5.NF.4.a  |         | 2      | 5.NF.6    |          | 2      | 5.NF.6    | 5.NF.4 | 2      | 5.NF.6    | 5.NF.4    |
| 21   | 2      | 5.NBT.7   |         | 2      | 5.NBT.7   |          | 2      | 5.NBT.7   |        | 1      | 5.NBT.7   |           |
| 22   | 2      | 5.MD.5.c  |         | 2      | 5.MD.5.c  | 5.MD.5.a | 2      | 5.MD.5.c  |        | 1      | 5.MD.5.c  | 5.MD.5.b  |
| 23   | 1      | 5.MD.3    |         | 1      | 5.MD.3.b  | 5.MD.3   | 2      | 5.MD.3    |        | 1      | 5.MD.3    |           |
| 24   | 1      | 5.OA.1    |         | 1      | 5.OA.2    |          | 2      | 5.OA.2    |        | 1      | 5.OA.2    |           |
| 25   | 1      | 5.MD.3.a  |         | 1      | 5.MD.4    |          | 1      | 5.MD.4    | 5.MD.3 | 1      | 5.MD.4    |           |
| 26   | 2      | 5.NBT.7   |         | 2      | 5.NBT.7   |          | 2      | 5.NBT.7   |        | 1      | 5.NBT.7   |           |
| 27   | 2      | 5.G.3     | 5.G.4   | 2      | 5.G.3     |          | 2      | 5.G.4     |        | 2      | 5.G.3     |           |

## Table 6D2M DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S | DOK R2 | R2P     | R2S       | DOK R3 | R3P     | R3S | DOK R4 | R4P    | R4S |
|------|--------|---------|-----|--------|---------|-----------|--------|---------|-----|--------|--------|-----|
|      |        |         |     |        |         | Session 1 | •      |         | •   | •      |        | -   |
| 2    | 1      | 6.EE.1  |     | 2      | 6.EE.1  |           | 2      | 6.EE.1  |     | 2      | 6.RP.2 |     |
| 3    | 1      | 6.RP.1  |     | 1      | 6.RP.1  |           | 1      | 6.RP.3a |     | 2      | 6.RP.2 |     |
| 4    | 1      | 6.NS.2  |     | 2      | 6.NS.2  |           | 2      | 6.RP.3b |     | 2      | 6.RP.2 |     |
| 6    | 2      | 6.NS.6c |     | 2      | 6.RP.3  | 6.NS.6c   | 2      | 6.RP.3a |     | 2      | 6.RP.2 |     |
| 7    | 2      | 6.RP.3a |     | 2      | 6.RP.3  | 6.NS.1    | 2      | 6.RP.3b |     | 2      | 6.RP.2 |     |
| 8    | 2      | 6.NS.1  |     | 2      | 6.NS.1  |           | 2      | 6.RP.3b |     | 2      | 6.RP.2 |     |
| 9    | 1      | 6.NS.2  |     | 1      | 6.NS.2  |           | 1      | 6.RP.2  |     | 1      | 6.RP.1 |     |
| 11   | 1      | 6.NS.3  |     | 2      | 6.NS.3  |           | 1      | 6.NS.3  |     | 2      | 6.RP.2 |     |
| 12   | 2      | 6.EE.4  |     | 1      | 6.EE.4  |           | 2      | 6.EE.4  |     | 2      | 6.RP.2 |     |
| 13   | 2      | 6.RP.3c |     | 2      | 6.RP.3c |           | 2      | 6.RP.3c |     | 2      | 6.RP.2 |     |
| 14   | 1      | 6.NS.4  |     | 2      | 6.NS.4  |           | 2      | 6.NS.4  |     | 2      | 6.RP.2 |     |
| 16   | 2      | 6.EE.2c |     | 1      | 6.EE.2  | 6.EE.2c   | 1      | 6.EE.2c |     | 1      | 6.RP.1 |     |
| 17   | 2      | 6.RP.1  |     | 1      | 6.RP.1  |           | 1      | 6.RP.1  |     | 1      | 6.RP.1 |     |
| 18   | 2      | 6.RP.3b |     | 2      | 6.RP.2  |           | 1      | 6.RP.2  |     | 1      | 6.RP.1 |     |
| 19   | 2      | 6.EE.2a |     | 1      | 6.EE.2a |           | 2      | 6.EE.2  |     | 2      | 6.EE.2 |     |
| 20   | 1      | 6.NS.3  |     | 2      | 6.NS.3  |           | 1      | 6.NS.3  |     | 1      | 6.EE.1 |     |

## Table 6D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S | DOK R2 | R2P     | R2S       | DOK R3 | R3P     | R3S | DOK R4 | R4P     | R4S |
|------|--------|---------|-----|--------|---------|-----------|--------|---------|-----|--------|---------|-----|
|      |        |         |     |        |         | Session 2 |        |         |     |        |         |     |
| 2    | 3      | 6.SP.1  |     | 1      | 6.SP.1  | 6.SP.2    | 1      | 6.SP.1  |     | 1      | 6.SP.1  |     |
| 3    | 1      | 6.NS.5  |     | 1      | 6.NS.5  |           | 1      | 6.NS.7c |     | 1      | 6.SP.1  |     |
| 4    | 1      | 6.EE.7  |     | 1      | 6.EE.7  |           | 2      | 6.EE.7  |     | 1      | 6.EE.1  |     |
| 6    | 2      | 6.G.1   |     | 2      | 6.G.1   |           | 2      | 6.G.1   |     | 1      | 6.G.1   |     |
| 7    | 1      | 6.SP.2  |     | 1      | 6.SP.4  | 6.SP.5c   | 1      | 6.SP.5c |     | 2      | 6.SP.2  |     |
| 8    | 1      | 6.EE.2a |     | 1      | 6.EE.6  |           | 2      | 6.EE.6  |     | 2      | 6.EE.3  |     |
| 9    | 2      | 6.NS.8  |     | 2      | 6.G.3   |           | 1      | 6.G.3   |     | 1      | 6.NS.6b |     |
| 11   | 2      | 6.G.1   |     | 2      | 6.G.1   |           | 2      | 6.G.1   |     | 2      | 6.G.3   |     |
| 12   | 2      | 6.SP.4  |     | 1      | 6.SP.4  |           | 1      | 6.SP.4  |     | 2      | 6.SP.2  |     |
| 13   | 2      | 6.G.3   |     | 2      | 6.G.3   |           | 2      | 6.G.3   |     | 1      | 6.G.1   |     |
| 14   | 2      | 6.NS.7d |     | 2      | 6.NS.6c | 6.NS.7d   | 1      | 6.NS.6c |     | 2      | 6.NS.6c |     |
| 16   | 1      | 6.EE.8  |     | 1      | 6.EE.8  |           | 2      | 6.NS.7a |     | 2      | 6.SP.1  |     |
| 17   | 3      | 6.SP.5c |     | 2      | 6.SP.4  | 6.SP.5c   | 2      | 6.SP.4  |     | 2      | 6.SP.3  |     |
| 18   | 3      | 6.G.4   |     | 1      | 6.G.4   |           | 2      | 6.G.4   |     | 2      | 6.G.4   |     |
| 19   | 1      | 6.EE.7  |     | 1      | 6.EE.7  |           | 1      | 6.EE.7  |     | 2      | 6.NS.3  |     |
| 20   | 2      | 6.NS.8  |     | 1      | 6.G.3   |           | 1      | 6.G.3   |     | 2      | 6.RP.2  |     |
| 21   | 2      | 6.G.2   |     | 2      | 6.G.2   |           | 2      | 6.G.2   |     | 2      | 6.RP.2  |     |
| 22   | 2      | 6.SP.5  |     | 1      | 6.SP.4  |           | 2      | 6.SP.4  |     | 2      | 6.SP.4  |     |
| 23   | 1      | 6.EE.1  |     | 1      | 6.EE.2a |           | 2      | 6.EE.2a |     | 1      | 6.EE.1  |     |
| 24   | 1      | 6.SP.5c |     | 1      | 6.SP.5c |           | 1      | 6.SP.5c |     | 1      | 6.SP.1  |     |
| 25   | 1      | 6.NS.6b |     | 2      | 6.NS.6b | 6.NS.6c   | 1      | 6.NS.6b |     | 1      | 6.RP.1  |     |
| 26   | 1      | 6.EE.5  |     | 2      | 6.EE.8  |           | 2      | 6.EE.8  |     | 2      | 6.RP.1  |     |
| 27   | 3      | 6.SP.5b |     | 2      | 6.SP.3  | 6.SP.2    | 1      | 6.SP.5c |     | 2      | 6.SP.1  |     |
| 28   | 2      | 6.NS.6b |     | 2      | 6.G.3   |           | 2      | 6.G.3   |     | 2      | 6.NS.6b |     |
| 29   | 1      | 6.SP.5a |     | 2      | 6.SP.5d |           | 1      | 6.SP.3  |     | 2      | 6.NS.7  |     |
| 30   | 1      | 6.EE.9  |     | 2      | 6.EE.6  | 6.RP.2    | 2      | 6.RP.3  |     | 2      | 6.NS.6b |     |
| 31   | 2      | 6.G.4   |     | 2      | 6.G.4   |           | 2      | 6.G.4   |     | 2      | 6.G.4   |     |
| 32   | 2      | 6.SP.5d |     | 2      | 6.SP.5  | 6.SP.4    | 2      | 6.SP.5c |     | 2      | 6.G.4   |     |
| 33   | 1      | 6.G.2   |     | 1      | 6.G.2   |           | 1      | 6.G.2   |     | 2      | 6.SP.4  |     |
| 34   | 1      | 6.SP.2  |     | 1      | 6.SP.5c |           | 1      | 6.SP.5b |     | 2      | 6.SP.4  |     |

## Table 6D2M DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P     | R5S | DOK R6 | R6P     | R6S | DOK R7 | R7P     | R7S |
|------|--------|---------|-----|--------|---------|-----|--------|---------|-----|
|      |        |         |     | Sess   | ion 1   |     | •      |         |     |
| 2    | 2      | 6.EE.1  |     | 2      | 6.G.1   |     | 1      | 6.G.1   |     |
| 3    | 1      | 6.RP.1  |     | 1      | 6.RP.1  |     | 1      | 6.RP.3a |     |
| 4    | 1      | 6.NS.2  |     | 2      | 6.NS.2  |     | 1      | 6.NS.2  |     |
| 6    | 3      | 6.RP.3b |     | 3      | 6.RP.3a |     | 2      | 6.RP.3a |     |
| 7    | 2      | 6.RP.3b |     | 2      | 6.RP.3b |     | 2      | 6.RP.3a |     |
| 8    | 3      | 6.NS.1  |     | 2      | 6.NS.1  |     | 2      | 6.NS.1  |     |
| 9    | 1      | 6.NS.2  |     | 1      | 6.RP.2  |     | 1      | 6.RP.3b |     |
| 11   | 1      | 6.NS.3  |     | 2      | 6.NS.1  |     | 1      | 6.RP.3b |     |
| 12   | 2      | 6.EE.1  |     | 1      | 6.EE.4  |     | 2      | 6.EE.4  |     |
| 13   | 2      | 6.RP.3c |     | 2      | 6.RP.3c |     | 2      | 6.RP.3  |     |
| 14   | 2      | 6.NS.4  |     | 2      | 6.NS.4  |     | 2      | 6.NS.4  |     |
| 16   | 1      | 6.EE.4  |     | 1      | 6.EE.2c |     | 2      | 6.EE.5  |     |
| 17   | 1      | 6.RP.1  |     | 2      | 6.RP.1  |     | 2      | 6.RP.1  |     |
| 18   | 2      | 6.RP.2  |     | 2      | 6.RP.3b |     | 2      | 6.RP.2  |     |
| 19   | 2      | 6.EE.6  |     | 2      | 6.EE.2a |     | 2      | 6.EE.2a |     |
| 20   | 1      | 6.NS.3  |     | 1      | 6.NS.3  |     | 1      | 6.NS.3  |     |

#### Mathematics Grade 6 Table 6D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S | DOK R6 | R6P     | R6S | DOK R7 | R7P     | R7S |
|------|--------|---------|-----|--------|---------|-----|--------|---------|-----|
|      |        |         |     | Sess   | ion 2   |     |        |         |     |
| 2    | 2      | 6.RP.1  |     | 2      | 6.SP.2  |     | 3      | 6.SP.1  |     |
| 3    | 2      | 6.NS.5  |     | 1      | 6.NS.6a |     | 1      | 6.NS.5  |     |
| 4    | 1      | 6.EE.7  |     | 1      | 6.EE.7  |     | 1      | 6.EE.5  |     |
| 6    | 2      | 6.G.2   |     | 2      | 6.G.1   |     | 2      | 6.G.1   |     |
| 7    | 1      | 6.SP.5c |     | 2      | 6.SP.5c |     | 2      | 6.SP.5c |     |
| 8    | 1      | 6.EE.7  |     | 2      | 6.EE.6  |     | 2      | 6.EE.7  |     |
| 9    | 2      | 6.G.3   |     | 1      | 6.NS.6b |     | 2      | 6.G.3   |     |
| 11   | 2      | 6.G.1   |     | 2      | 6.G.1   |     | 1      | 6.G.1   |     |
| 12   | 2      | 6.SP.5a |     | 2      | 6.SP.4  |     | 2      | 6.SP.5  |     |
| 13   | 2      | 6.G.3   |     | 2      | 6.NS.8  |     | 2      | 6.G.3   |     |
| 14   | 1      | 6.NS.6c |     | 3      | 6.NS.6c |     | 1      | 6.NS.7  |     |
| 16   | 2      | 6.EE.8  |     | 2      | 6.NS.7b |     | 2      | 6.SP.2  |     |
| 17   | 3      | 6.SP.5c |     | 3      | 6.NS.7c |     | 3      | 6.NS.7a |     |
| 18   | 2      | 6.G.4   |     | 2      | 6.G.4   |     | 2      | 6.G.4   |     |
| 19   | 1      | 6.EE.5  |     | 1      | 6.EE.7  |     | 1      | 6.RP.3b |     |
| 20   | 1      | 6.G.3   |     | 1      | 6.NS.8  |     | 1      | 6.NS.8  |     |
| 21   | 2      | 6.G.2   |     | 2      | 6.G.2   |     | 1      | 6.G.2   |     |
| 22   | 2      | 6.SP.5d |     | 2      | 6.SP.5a |     | 2      | 6.SP.5  |     |
| 23   | 1      | 6.EE.7  |     | 2      | 6.EE.2a |     | 2      | 6.EE.2a |     |
| 24   | 1      | 6.SP.5c |     | 1      | 6.SP.3  |     | 1      | 6.SP.3  |     |
| 25   | 2      | 6.G.3   |     | 2      | 6.NS.6b |     | 2      | 6.NS.8  |     |
| 26   | 2      | 6.EE.8  |     | 1      | 6.EE.5  |     | 2      | 6.EE.5  |     |
| 27   | 2      | 6.SP.5d |     | 2      | 6.SP.5b |     | 2      | 6.SP.3  |     |
| 28   | 2      | 6.G.3   |     | 2      | 6.NS.8  |     | 2      | 6.NS.8  |     |
| 29   | 1      | 6.SP.3  |     | 2      | 6.SP.3  |     | 3      | 6.SP.3  |     |
| 30   | 2      | 6.EE.6  |     | 3      | 6.EE.9  |     | 2      | 6.EE.9  |     |
| 31   | 2      | 6.G.4   |     | 2      | 6.G.4   |     | 1      | 6.G.1   |     |
| 32   | 2      | 6.SP.5c |     | 3      | 6.SP.5d |     | 2      | 6.SP.2  | 1   |
| 33   | 1      | 6.G.2   |     | 1      | 6.G.2   |     | 1      | 6.G.2   | 1   |

| <b>34</b> 1 6.SP.5d 1 6.SP.2 1 6.SP.2 |
|---------------------------------------|
|---------------------------------------|

## Table 7D2M DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P     | R1S     | DOK R2 | R2P     | R2S       | DOK R3 | R3P     | R3S     | DOK R4 | R4P     | R4S |
|------|--------|---------|---------|--------|---------|-----------|--------|---------|---------|--------|---------|-----|
|      |        |         |         |        |         | Session 1 |        |         |         |        |         |     |
| 2    | 1      | 7.EE.1  |         | 2      | 7.EE.4  |           | 2      | 7.EE.4a |         | 1      | 7.RP.1  |     |
| 3    | 2      | 7.NS.3  |         | 2      | 7.NS.3  |           | 1      | 7.NS.3  |         | 1      | 7.RP.1  |     |
| 4    | 1      | 7.NS.2d |         | 1      | 7.NS.2d |           | 1      | 7.NS.2d |         | 1      | 7.NS.2d |     |
| 6    | 1      | 7.NS.2a | 7.NS.2b | 1      | 7.NS.2b |           | 1      | 7.NS.1b |         | 2      | 7.NS.2a |     |
| 7    | 2      | 7.EE.4a |         | 1      | 7.EE.1  |           | 2      | 7.EE.4a |         | 1      | 7.NS.2a |     |
| 8    | 2      | 7.EE.4a | 7.EE.2  | 2      | 7.EE.2  |           | 2      | 7.NS.1c |         | 1      | 7.EE.3  |     |
| 9    | 1      | 7.NS.3  |         | 1      | 7.NS.1d |           | 1      | 7.NS.1d |         | 1      | 7.NS.1d |     |
| 10   | 1      | 7.NS.1c |         | 1      | 7.NS.1  |           | 1      | 7.NS.1b |         | 1      | 7.NS.1d |     |
| 11   | 1      | 7.EE.1  |         | 1      | 7.EE.1  |           | 1      | 7.EE.2  |         | 2      | 7.EE.4a |     |
| 12   | 2      | 7.NS.3  |         | 2      | 7.NS.3  |           | 2      | 7.NS.1d | 7.NS.2c | 1      | 7.NS.2b |     |
| 13   | 2      | 7.EE.4a |         | 2      | 7.G.6   | 7.EE.1    | 2      | 7.EE.4a |         | 1      | 7.G.1   |     |

#### Mathematics Grade 7 Table 7D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item      | DOK R1 | R1P     | R1S    | DOK R2 | R2P     | R2S     | DOK R3 | R3P     | R3S | DOK R4 | R4P     | R4S |
|-----------|--------|---------|--------|--------|---------|---------|--------|---------|-----|--------|---------|-----|
| Session 2 |        |         |        |        |         |         |        |         |     |        |         |     |
| 2         | 1      | 7.NS.3  |        | 1      | 7.NS.1d |         | 2      | 7.NS.3  |     | 2      | 7.NS.3  |     |
| 3         | 2      | 7.RP.2c |        | 2      | 7.RP.2b |         | 1      | 7.RP.2b |     | 2      | 7.RP.2b |     |
| 4         | 1      | 7.G.5   |        | 1      | 7.G.5   |         | 1      | 7.G.5   |     | 1      | 7.G.5   |     |
| 6         | 2      | 7.EE.4b |        | 2      | 7.EE.4b |         | 2      | 7.EE.4b |     | 1      | 7.NS.1  |     |
| 7         | 2      | 7.EE.4a | 7.G.5  | 2      | 7.EE.4b |         | 2      | 7.NS.3  |     | 2      | 7.NS.2c |     |
| 8         | 2      | 7.G.1   |        | 2      | 7.G.1   |         | 2      | 7.G.1   |     | 2      | 7.G.6   |     |
| 9         | 2      | 7.EE.3  | 7.NS.3 | 2      | 7.EE.3  | 7.RP.3  | 2      | 7.NS.3  |     | 2      | 7.NS.1a |     |
| 11        | 1      | 7.G.5   |        | 1      | 7.G.5   |         | 2      | 7.G.5   |     | 2      | 7.G.5   |     |
| 12        | 2      | 7.G.2   |        | 1      | 7.G.2   |         | 3      | 7.G.2   |     | 2      | 7.G.6   |     |
| 13        | 2      | 7.SP.8b |        | 1      | 7.SP.8a | 7.SP.8b | 2      | 7.SP.8b |     | 3      | 7.SP.8b |     |
| 14        | 2      | 7.G.4   |        | 2      | 7.G.4   |         | 2      | 7.G.4   |     | 2      | 7.EE.3  |     |
| 16        | 2      | 7.SP.2  |        | 1      | 7.SP.2  | 7.SP.1  | 2      | 7.SP.1  |     | 2      | 7.SP.2  |     |
| 17        | 1      | 7.RP.2d |        | 1      | 7.RP.2d |         | 2      | 7.RP.2d |     | 1      | 7.RP.2d |     |
| 18        | 2      | 7.SP.8  | 7.SP.5 | 1      | 7.SP.5  |         | 2      | 7.SP.5  |     | 1      | 7.RP.2a |     |
| 19        | 1      | 7.RP.1  |        | 2      | 7.RP.1  | 7.RP.2b | 2      | 7.RP.3  |     | 2      | 7.RP.1  |     |
| 21        | 3      | 7.G.6   |        | 2      | 7.G.4   | 7.G.6   | 2      | 7.G.6   |     | 2      | 7.G.1   |     |
| 22        | 2      | 7.SP.1  |        | 2      | 7.SP.2  | 7.SP.1  | 2      | 7.SP.1  |     | 2      | 7.G.1   |     |
| 23        | 1      | 7.RP.3  | 7.EE.3 | 2      | 7.RP.3  | 7.EE.3  | 1      | 7.RP.3  |     | 2      | 7.NS.3  |     |
| 24        | 2      | 7.RP.2c |        | 2      | 7.RP.2c | 7.SP.2  | 2      | 7.SP.7b |     | 2      | 7.NS.3  |     |
| 26        | 1      | 7.NS.2c |        | 1      | 7.RP.1  |         | 2      | 7.RP.1  |     | 1      | 7.NS.1d |     |
| 27        | 2      | 7.G.3   |        | 1      | 7.G.3   |         | 2      | 7.G.3   |     | 2      | 7.G.6   |     |
| 28        | 3      | 7.SP.2  |        | 1      | 7.SP.2  |         | 2      | 7.SP.2  |     | 1      | 7.SP.1  |     |
| 29        | 2      | 7.RP.1  |        | 1      | 7.RP.3  |         | 2      | 7.RP.3  |     | 1      | 7.G.3   |     |
| 30        | 2      | 7.EE.4a |        | 2      | 7.EE.4  | 7.EE.4a | 2      | 7.EE.3  |     | 1      | 7.G.3   |     |
| 31        | 2      | 7.G.6   |        | 2      | 7.G.6   |         | 2      | 7.G.6   |     | 2      | 7.G.1   |     |
| 32        | 3      | 7.SP.7  |        | 2      | 7.G.6   |         | 3      | 7.SP.7b |     | 2      | 7.G.1   |     |
| 33        | 1      | 7.SP.4  |        | 1      | 7.SP.4  |         | 1      | 7.SP.3  |     | 2      | 7.G.4   |     |
| 34        | 3      | 7.G.4   |        | 2      | 7.G.1   |         | 1      | 7.G.4   |     | 1      | 7.G.1   |     |
| 35        | 2      | 7.SP.7b |        | 2      | 7.SP.6  | 7.SP.7b | 2      | 7.SP.6  |     | 2      | 7.SP.2  |     |

| 36 | 1 | 7.EE.2 |        | 1 | 7.RP.1 | 7.RP.2c | 1 | 7.RP.1 | 2 | 7.NS.2c |  |
|----|---|--------|--------|---|--------|---------|---|--------|---|---------|--|
| 37 | 2 | 7.NS.3 |        | 2 | 7.EE.3 |         | 2 | 7.NS.3 | 1 | 7.SP.1  |  |
| 38 | 1 | 7.RP.1 |        | 1 | 7.RP.3 |         | 2 | 7.SP.6 | 2 | 7.NS.2d |  |
| 39 | 2 | 7.RP.2 | 7.NS.3 | 2 | 7.RP.3 | 7.NS.2c | 1 | 7.RP.1 | 2 | 7.NS.2d |  |
| 40 | 3 | 7.G.6  |        | 2 | 7.G.6  |         | 2 | 7.G.6  | 2 | 7.G.1   |  |
| 41 | 3 | 7.SP.4 |        | 2 | 7.SP.3 | 7.SP.4  | 2 | 7.SP.3 | 3 | 7.G.4   |  |

# Table 7D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Table 7D2M DOK Levels and Indicator | r Coded by Reviewers 5-8 |
|-------------------------------------|--------------------------|
|-------------------------------------|--------------------------|

| Item | DOK R5 | R5P     | R5S | DOK R6 | R6P       | R6S     | DOK R7 | R7P     | R7S |
|------|--------|---------|-----|--------|-----------|---------|--------|---------|-----|
|      | ·      |         |     | S      | Session 1 | ·       | •      |         |     |
| 2    | 2      | 7.EE.4a |     | 2      | 7.EE.4    |         | 2      | 7.NS.1a |     |
| 3    | 3      | 7.NS.2c |     | 1      | 7.EE.3    | 7.NS.2c | 2      | 7.EE.3  |     |
| 4    | 1      | 7.NS.2d |     | 1      | 7.NS.2d   |         | 1      | 7.NS.2d |     |
| 6    | 2      | 7.NS.2b |     | 1      | 7.NS.2b   | 7.NS.2a | 1      | 7.NS.2  |     |
| 7    | 2      | 7.EE.4a |     | 2      | 7.EE.2    |         | 2      | 7.EE.1  |     |
| 8    | 2      | 7.EE.4a |     | 2      | 7.EE.4a   |         | 2      | 7.EE.1  |     |
| 9    | 1      | 7.NS.1c |     | 1      | 7.NS.1d   |         | 1      | 7.NS.1d |     |
| 10   | 1      | 7.NS.1b |     | 1      | 7.NS.1b   |         | 1      | 7.NS.1c |     |
| 11   | 1      | 7.EE.2  |     | 2      | 7.EE.1    |         | 2      | 7.EE.4  |     |
| 12   | 1      | 7.NS.3  |     | 2      | 7.NS.3    |         | 1      | 7.NS.3  |     |
| 13   | 1      | 7.G.6   |     | 2      | 7.EE.4a   |         | 1      | 7.G.6   |     |

#### Mathematics Grade 7 Table 7D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S | DOK R6 | R6P       | R6S    | DOK R7 | R7P     | <b>R7S</b> |
|------|--------|---------|-----|--------|-----------|--------|--------|---------|------------|
|      | •      |         |     | S      | Session 2 | ·      | · · ·  |         | <u>.</u>   |
| 2    | 2      | 7.G.1   |     | 1      | 7.NS.1d   |        | 2      | 7.NS.3  |            |
| 3    | 2      | 7.NS.3  |     | 2      | 7.RP.2b   |        | 3      | 7.RP.2d |            |
| 4    | 1      | 7.RP.1  |     | 2      | 7.G.5     |        | 2      | 7.G.5   |            |
| 6    | 1      | 7.G.5   |     | 1      | 7.EE.4b   |        | 3      | 7.EE.4b |            |
| 7    | 2      | 7.SP.4  |     | 2      | 7.EE.4a   |        |        |         |            |
| 8    | 2      | 7.EE.4b |     | 2      | 7.G.1     |        | 2      | 7.G.6   |            |
| 9    | 2      | 7.G.2   |     | 2      | 7.RP.3    |        | 2      | 7.EE.3  |            |
| 11   | 2      | 7.RP.3  |     | 2      | 7.G.5     |        | 1      | 7.G.5   |            |
| 12   | 2      | 7.NS.3  |     | 2      | 7.G.2     |        | 2      | 7.G.2   |            |
| 13   | 1      | 7.EE.3  |     | 2      | 7.SP.8a   |        | 2      | 7.SP.7a |            |
| 14   | 1      | 7.EE.4a |     | 2      | 7.G.4     |        | 2      | 7.G.4   |            |
| 16   | 2      | 7.G.2   |     | 2      | 7.SP.2    |        | 3      | 7.SP.1  |            |
| 17   | 3      | 7.SP.8a |     | 2      | 7.RP.2d   |        | 2      | 7.RP.2  |            |
| 18   | 2      | 7.G.4   |     | 2      | 7.SP.5    |        | 2      | 7.SP.5  |            |
| 19   | 2      | 7.NS.2a |     | 2      | 7.RP.3    | 7.RP.1 | 1      | 7.RP.1  |            |
| 21   | 2      | 7.SP.2  |     | 3      | 7.G.6     |        | 2      | 7.G.6   |            |
| 22   | 1      | 7.RP.2d |     | 3      | 7.SP.1    |        | 2      | 7.SP.3  |            |
| 23   | 1      | 7.SP.1  |     | 2      | 7.RP.3    |        | 2      | 7.EE.3  |            |
| 24   | 2      | 7.NS.2a |     | 2      | 7.SP.6    |        | 2      | 7.RP.3  |            |
| 26   | 3      | 7.SP.6  |     | 1      | 7.RP.1    |        | 2      | 7.RP.3  |            |
| 27   | 2      | 7.G.6   |     | 2      | 7.G.3     |        | 2      | 7.G.3   |            |
| 28   | 3      | 7.SP.2  |     | 3      | 7.SP.2    |        | 3      | 7.SP.4  |            |
| 29   | 2      | 7.NS.3  |     | 2      | 7.RP.3    | 7.RP.1 | 2      | 7.RP.3  |            |
| 30   | 2      | 7.NS.3  |     | 2      | 7.EE.4a   |        | 2      | 7.EE.4a |            |
| 31   | 1      | 7.G.4   |     | 1      | 7.G.6     |        | 2      | 7.G.6   |            |
| 32   | 1      | 7.NS.2a |     | 3      | 7.SP.5    | 7.G.6  | 2      | 7.SP.6  |            |
| 33   | 1      | 7.G.3   |     | 2      | 7.SP.2    |        | 2      | 7.SP.4  |            |
| 34   | 2      | 7.SP.2  |     | 2      | 7.G.4     |        | 2      | 7.G.4   |            |
| 35   | 2      | 7.RP.3  |     | 3      | 7.SP.1    |        | 3      | 7.SP.6  |            |

# Table 7D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| 36 | 2 | 7.EE.4a | 1 | 7.RP.2c |        | 2 | 7.RP.1 |  |
|----|---|---------|---|---------|--------|---|--------|--|
| 37 | 1 | 7.G.6   | 2 | 7.EE.3  |        | 2 | 7.NS.3 |  |
| 38 | 2 | 7.RP.2a | 2 | 7.SP.6  |        | 2 | 7.SP.1 |  |
| 39 | 3 | 7.SP.8a | 2 | 7.RP.3  | 7.RP.1 | 2 | 7.RP.1 |  |
| 40 | 2 | 7.RP.2c | 1 | 7.G.6   |        | 2 | 7.G.6  |  |
| 41 | 2 | 7.RP.3  | 3 | 7.SP.4  |        | 3 | 7.SP.4 |  |

| Item | DOK R1 | R1P    | R1S | DOK R2 | R2P    | R2S       | DOK R3 | R3P    | R3S | DOK R4 | R4P    | R4S |
|------|--------|--------|-----|--------|--------|-----------|--------|--------|-----|--------|--------|-----|
|      | •      |        |     | •      |        | Session 1 |        |        |     |        |        |     |
| 2    | 1      | 8.EE.1 |     | 1      | 8.EE.1 |           | 1      | 8.EE.1 |     | 1      | 8.NS.1 |     |
| 3    | 1      | 8.NS.2 |     | 1      | 8.NS.2 |           | 1      | 8.NS.2 |     | 1      | 8.NS.1 |     |
| 4    | 1      | 8.EE.1 |     | 1      | 8.EE.2 |           | 1      | 8.EE.2 |     | 1      | 8.G.9  |     |
| 6    | 1      | 8.NS.1 |     | 1      | 8.NS.1 |           | 1      | 8.NS.1 |     | 1      | 8.NS.1 |     |
| 7    | 1      | 8.NS.2 |     | 1      | 8.NS.2 |           | 2      | 8.NS.2 |     | 1      | 8.NS.1 |     |
| 8    | 2      | 8.EE.4 |     | 2      | 8.EE.4 | 8.EE.3    | 2      | 8.EE.4 |     | 2      | 8.EE.4 |     |
| 9    | 1      | 8.NS.1 |     | 1      | 8.NS.1 |           | 1      | 8.NS.1 |     | 1      | 8.NS.2 |     |
| 10   | 1      | 8.EE.2 |     | 2      | 8.EE.2 |           | 1      | 8.EE.2 |     | 2      | 8.G.5  |     |
| 11   | 1      | 8.EE.2 |     | 1      | 8.NS.1 |           | 1      | 8.NS.1 |     | 2      | 8.NS.2 |     |
| 12   | 1      | 8.NS.1 |     | 1      | 8.NS.1 |           | 1      | 8.NS.1 |     | 2      | 8.EE.4 |     |
| 13   | 2      | 8.NS.1 |     | 1      | 8.NS.1 |           | 1      | 8.NS.1 |     | 2      | 8.NS.2 |     |
| 14   | 2      | 8.EE.4 |     | 2      | 8.EE.3 | 8.EE.4    | 2      | 8.EE.4 |     | 2      | 8.EE.4 |     |
| 15   | 1      | 8.EE.2 |     | 2      | 8.NS.2 |           | 2      | 8.NS.2 |     | 2      | 8.EE.4 |     |

# Table 8D2M DOK Levels and Indicator Coded by Reviewers 1-4

#### Mathematics Grade 8 Table 8D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P     | R1S   | DOK R2 | R2P    | R2S       | DOK R3 | R3P     | R3S | DOK R4 | R4P     | R4S      |
|------|--------|---------|-------|--------|--------|-----------|--------|---------|-----|--------|---------|----------|
|      |        |         |       |        |        | Session 2 |        |         |     |        |         | <u>.</u> |
| 2    | 2      | 8.G.1b  |       | 1      | 8.G.1b |           | 2      | 8.G.1b  |     | 2      | 8.G.1b  |          |
| 3    | 2      | 8.F.2   |       | 2      | 8.EE.5 |           | 2      | 8.F.4   |     | 2      | 8.F.4   |          |
| 4    | 2      | 8.G.5   |       | 2      | 8.G.5  |           | 2      | 8.G.4   |     | 2      | 8.G.5   |          |
| 6    | 2      | 8.SP.1  |       | 1      | 8.SP.1 |           | 2      | 8.SP.1  |     | 1      | 8.NS.1  |          |
| 7    | 2      | 8.G.9   |       | 2      | 8.G.9  |           | 2      | 8.G.9   |     | 2      | 8.G.9   |          |
| 8    | 2      | 8.EE.7a |       | 2      | 8.EE.5 |           | 2      | 8.EE.7b |     | 2      | 8.EE.7b |          |
| 9    | 2      | 8.G.3   |       | 1      | 8.G.3  |           | 2      | 8.G.3   |     | 2      | 8.G.5   |          |
| 11   | 3      | 8.SP.4  |       | 2      | 8.SP.4 |           | 2      | 8.SP.4  |     | 2      | 8.G.8   |          |
| 12   | 1      | 8.SP.2  |       | 1      | 8.SP.2 |           | 2      | 8.SP.2  |     | 2      | 8.F.1   |          |
| 13   | 1      | 8.F.5   |       | 1      | 8.F.5  |           | 1      | 8.F.5   |     | 2      | 8.F.1   |          |
| 14   | 2      | 8.F.4   |       | 2      | 8.F.4  | 8.EE.5    | 2      | 8.F.4   |     | 2      | 8.F.1   |          |
| 16   | 2      | 8.G.8   |       | 2      | 8.G.8  |           | 2      | 8.G.8   |     | 2      | 8.SP.2  |          |
| 17   | 2      | 8.F.4   |       | 2      | 8.EE.6 | 8.F.3     | 2      | 8.F.4   |     | 2      | 8.F.2   |          |
| 18   | 1      | 8.F.5   |       | 2      | 8.EE.5 |           | 2      | 8.F.4   |     | 1      | 8.F.4   |          |
| 19   | 2      | 8.F.1   |       | 1      | 8.F.4  | 8.F.3     | 2      | 8.F.4   |     | 1      | 8.F.2   |          |
| 21   | 1      | 8.F.4   |       | 2      | 8.EE.5 | 8.EE.8c   | 2      | 8.F.2   |     | 2      | 8.SP.4  |          |
| 22   | 1      | 8.F.5   |       | 1      | 8.F.5  |           | 2      | 8.F.5   |     | 2      | 8.EE.1  |          |
| 23   | 2      | 8.EE.7b |       | 2      | 8.EE.8 | 8.EE.8b   | 2      | 8.EE.8b |     | 2      | 8.EE.7  |          |
| 24   | 1      | 8.F.3   |       | 1      | 8.F.3  |           | 1      | 8.F.5   |     | 2      | 8.EE.7  |          |
| 26   | 1      | 8.SP.1  |       | 1      | 8.SP.1 |           | 2      | 8.F.5   |     | 2      | 8.EE.7a |          |
| 27   | 1      | 8.G.5   |       | 1      | 8.G.5  |           | 2      | 8.G.5   |     | 2      | 8.G.5   |          |
| 28   | 2      | 8.F.4   |       | 1      | 8.EE.5 | 8.F.2     | 2      | 8.F.2   |     | 2      | 8.F.1   |          |
| 29   | 1      | 8.F.3   |       | 1      | 8.EE.6 |           | 1      | 8.F.4   |     | 2      | 8.F.3   |          |
| 30   | 3      | 8.G.2   |       | 2      | 8.G.2  | 8.G.3     | 2      | 8.G.3   |     | 2      | 8.G.1a  |          |
| 31   | 2      | 8.F.5   |       | 1      | 8.F.5  |           | 1      | 8.F.5   |     | 2      | 8.F.5   |          |
| 32   | 2      | 8.G.6   |       | 1      | 8.G.7  |           | 1      | 8.G.7   |     | 2      | 8.G.5   |          |
| 33   | 3      | 8.G.2   | 8.G.4 | 1      | 8.G.2  | 8.G.3     | 1      | 8.G.2   |     | 2      | 8.G.4   |          |
| 34   | 1      | 8.F.1   |       | 1      | 8.F.1  |           | 1      | 8.F.1   |     | 1      | 8.F.1   |          |
| 35   | 2      | 8.G.3   |       | 1      | 8.G.4  |           | 2      | 8.G.3   |     | 2      | 8.G.4   |          |

| 36 | 1 | 8.F.3   | 1 | 8.F.3   |        | 2 | 8.F.4   | 2 | 8.F.4   |  |
|----|---|---------|---|---------|--------|---|---------|---|---------|--|
| 37 | 2 | 8.EE.7b | 2 | 8.EE.7b | 8.EE.7 | 1 | 8.EE.7b | 2 | 8.EE.7a |  |
| 38 | 2 | 8.SP.4  | 1 | 8.SP.4  |        | 2 | 8.SP.4  | 2 | 8.F.2   |  |
| 39 | 1 | 8.EE.5  | 2 | 8.SP.3  |        | 2 | 8.EE.5  | 2 | 8.SP.1  |  |

# Table 8D2M DOK Levels and Indicator Coded by Reviewers 1-4 continued

# Table 8D2M DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P    | R5S | DOK R6 | R6P    | R6S    | DOK R7 | R7P    | R7S |
|------|--------|--------|-----|--------|--------|--------|--------|--------|-----|
|      |        |        |     | Sess   | ion 1  |        |        |        |     |
| 2    | 1      | 8.NS.2 |     | 1      | 8.EE.1 |        | 1      | 8.EE.4 |     |
| 3    | 1      | 8.NS.2 |     | 2      | 8.NS.2 |        | 1      | 8.NS.2 |     |
| 4    | 1      | 8.EE.2 |     | 1      | 8.EE.2 |        | 1      | 8.EE.2 |     |
| 6    | 1      | 8.NS.1 |     | 1      | 8.NS.1 |        | 1      | 8.NS.1 |     |
| 7    | 1      | 8.NS.1 |     | 2      | 8.NS.2 |        | 2      | 8.NS.2 |     |
| 8    | 2      | 8.EE.4 |     | 2      | 8.EE.3 | 8.EE.4 | 1      | 8.EE.4 |     |
| 9    | 1      | 8.NS.1 |     | 1      | 8.NS.1 |        | 1      | 8.NS.1 |     |
| 10   | 2      | 8.EE.2 |     | 2      | 8.EE.2 |        | 2      | 8.EE.2 |     |
| 11   | 1      | 8.EE.1 |     | 1      | 8.NS.1 |        | 1      | 8.NS.1 |     |
| 12   | 1      | 8.NS.1 |     | 2      | 8.NS.1 |        | 2      | 8.NS.2 |     |
| 13   | 1      | 8.NS.1 |     | 1      | 8.NS.1 |        | 1      | 8.NS.2 |     |
| 14   | 2      | 8.EE.4 |     | 2      | 8.EE.3 |        | 1      | 8.EE.3 |     |
| 15   | 1      | 8.NS.2 |     | 2      | 8.NS.2 |        | 2      | 8.NS.1 |     |

#### Mathematics Grade 8 Table 8D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P     | R5S | DOK R6 | R6P     | R6S | DOK R7 | R7P    | R7S |
|------|--------|---------|-----|--------|---------|-----|--------|--------|-----|
|      |        |         | ·   | Sessi  | on 2    |     |        |        | -   |
| 2    | 1      | 8.G.2   |     | 2      | 8.G.2   |     | 1      | 8.G.2  |     |
| 3    | 2      | 8.EE.5  |     | 3      | 8.F.2   |     | 2      | 8.F.2  |     |
| 4    | 1      | 8.G.1   |     | 2      | 8.G.4   |     | 2      | 8.G.4  |     |
| 6    | 1      | 8.SP.1  |     | 2      | 8.SP.1  |     | 2      | 8.SP.1 |     |
| 7    | 2      | 8.G.9   |     | 2      | 8.G.9   |     | 2      | 8.G.9  |     |
| 8    | 2      | 8.EE.5  |     | 2      | 8.F.2   |     | 2      | 8.F.2  |     |
| 9    | 2      | 8.G.4   |     | 2      | 8.G.3   |     | 2      | 8.G.1c |     |
| 11   | 2      | 8.SP.4  |     | 3      | 8.SP.4  |     | 3      | 8.SP.4 |     |
| 12   | 1      | 8.SP.2  |     | 2      | 8.SP.2  |     | 2      | 8.SP.2 |     |
| 13   | 1      | 8.F.1   |     | 2      | 8.F.5   |     | 3      | 8.F.4  |     |
| 14   | 3      | 8.EE.7a |     | 2      | 8.EE.5  |     | 3      | 8.F.4  |     |
| 16   | 1      | 8.G.8   |     | 2      | 8.G.8   |     | 1      | 8.G.8  |     |
| 17   | 2      | 8.EE.7a |     | 2      | 8.F.3   |     | 2      | 8.F.4  |     |
| 18   | 2      | 8.EE.5  |     | 2      | 8.EE.5  |     | 1      | 8.F.1  |     |
| 19   | 2      | 8.F.1   |     | 3      | 8.F.3   |     | 3      | 8.F.4  |     |
| 21   | 3      | 8.F.2   |     | 3      | 8.F.2   |     | 2      | 8.F.4  |     |
| 22   | 1      | 8.F.5   |     | 2      | 8.F.5   |     | 2      | 8.F.5  |     |
| 23   | 2      | 8.EE.8b |     | 2      | 8.EE.8b |     | 2      | 8.EE.7 |     |
| 24   | 2      | 8.F.5   |     | 2      | 8.F.3   |     | 1      | 8.F.3  |     |
| 26   | 1      | 8.SP.1  |     | 2      | 8.F.5   |     | 2      | 8.SP.1 |     |
| 27   | 2      | 8.G.5   |     | 2      | 8.G.5   |     | 2      | 8.G.7  |     |
| 28   | 2      | 8.EE.5  |     | 2      | 8.EE.5  |     | 2      | 8.F.2  |     |
| 29   | 1      | 8.EE.7b |     | 2      | 8.F.3   |     | 2      | 8.F.4  |     |
| 30   | 1      | 8.G.2   |     | 3      | 8.G.2   |     | 2      | 8.G.2  |     |
| 31   | 1      | 8.F.5   |     | 2      | 8.F.5   |     | 2      | 8.F.5  |     |
| 32   | 2      | 8.G.7   |     | 2      | 8.G.7   |     | 2      | 8.G.7  |     |
| 33   | 2      | 8.G.3   |     | 2      | 8.G.2   |     | 2      | 8.G.2  |     |
| 34   | 2      | 8.F.4   |     | 2      | 8.F.1   |     | 1      | 8.F.1  |     |
| 35   | 2      | 8.EE.5  |     | 2      | 8.G.4   |     | 2      | 8.G.3  |     |

# Table 8D2M DOK Levels and Indicator Coded by Reviewers 5-8 continued

| 36 | 2 | 8.EE.7b | 2 | 8.F.3   | 2 | 8.F.4   |  |
|----|---|---------|---|---------|---|---------|--|
| 37 | 1 | 8.EE.7b | 2 | 8.EE.7b | 1 | 8.EE.7b |  |
| 38 | 2 | 8.SP.4  | 2 | 8.SP.4  | 3 | 8.SP.4  |  |
| 39 | 2 | 8.F.4   | 2 | 8.F.4   | 2 | 8.F.3   |  |

# Table 4D2S DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P   | R1S | DOK R2 | R2P   | R2S       | DOK R3 | R3P   | R3S | DOK R4 | R4P   | R4S |
|------|--------|-------|-----|--------|-------|-----------|--------|-------|-----|--------|-------|-----|
|      |        |       | •   |        |       | Session 1 |        |       |     |        |       |     |
| 1    | 2      | B.4.3 |     | 2      | C.4.3 |           | 2      | F.4.1 |     | 2      | B.4.3 |     |
| 2    | 1      | C.4.4 |     | 2      | A.4.1 |           | 1      | C.4.4 |     | 1      | C.4.4 |     |
| 3    | 1      | D.4.4 |     | 2      | D.4.4 |           | 1      | D.4.3 |     | 1      | C.4.4 |     |
| 4    | 2      | E.4.1 |     | 2      | F.4.1 |           | 1      | F.4.1 |     | 2      | F.4.1 |     |
| 5    | 2      | C.4.2 |     | 2      | F.4.4 |           | 2      | F.4.2 |     | 2      | F.4.2 |     |
| 6    | 1      | E.4.7 |     | 2      | E.4.7 |           | 1      | H.4.4 |     | 2      | H.4.1 |     |
| 7    | 2      | C.4.5 |     | 2      | A.4.2 |           | 2      | C.4.2 |     | 1      | C.4.2 |     |
| 8    | 2      | E.4.1 |     | 1      | E.4.1 |           | 1      | E.4.1 |     | 1      | D.4.2 |     |
| 9    | 2      | C.4.5 |     | 2      | C.4.5 |           | 3      | F.4.1 |     | 2      | C.4.2 |     |
| 10   | 2      | C.4.6 |     | 2      | C.4.5 |           | 2      | C.4.6 |     | 2      | C.4.6 |     |
| 11   | 2      | F.4.2 |     | 2      | C.4.7 |           | 2      | A.4.2 |     | 2      | C.4.2 |     |
| 12   | 2      | H.4.1 |     | 2      | H.4.2 |           | 2      | C.4.2 |     | 2      | H.4.2 |     |
| 13   | 1      | G.4.1 |     | 2      | H.4.3 |           | 1      | H.4.1 |     | 1      | H.4.3 |     |
| 14   | 1      | C.4.5 |     | 1      | D.4.4 |           | 2      | C.4.2 |     | 2      | D.4.4 |     |
| 15   | 1      | D.4.3 |     | 1      | D.4.3 |           | 1      | D.4.3 |     | 1      | D.4.3 |     |
| 16   | 1      | F.4.2 |     | 1      | F.4.4 |           | 2      | F.4.1 |     | 2      | F.4.1 |     |
| 17   | 2      | C.4.5 |     | 2      | E.4.7 |           | 2      | C.4.5 |     | 2      | F.4.3 |     |
| 18   | 2      | E.4.3 |     | 2      | D.4.4 |           | 2      | C.4.2 |     | 1      | E.4.3 |     |
| 19   | 2      | G.4.1 |     | 1      | H.4.3 |           | 1      | C.4.2 |     | 1      | D.4.5 |     |
| 20   | 1      | F.4.1 |     | 1      | F.4.2 |           | 1      | F.4.4 |     | 2      | F.4.4 |     |
| 21   | 2      | C.4.5 |     | 1      | C.4.5 |           | 1      | C.4.5 |     | 1      |       |     |

# Table 4D2S DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P   | R1S | DOK R2 | R2P   | R2S       | DOK R3 | R3P   | R3S   | DOK R4 | R4P   | R4S |
|------|--------|-------|-----|--------|-------|-----------|--------|-------|-------|--------|-------|-----|
|      |        |       |     |        |       | Session 2 | 2      |       |       |        |       | •   |
| 1    | 2      | F.4.1 |     | 2      | F.4.4 |           | 1      | F.4.1 |       | 2      | F.4.1 |     |
| 2    | 1      | F.4.4 |     | 2      | E.4.8 |           | 1      | H.4.4 |       | 1      | H.4.4 |     |
| 3    | 2      | D.4.4 |     | 1      | C.4.4 |           | 1      | D.4.4 |       | 1      | D.4.4 |     |
| 4    | 1      |       |     | 3      | C.4.8 |           | 2      | C.4.2 |       | 1      | D.4.8 |     |
| 5    | 2      | B.4.1 |     | 2      | C.4.3 |           | 1      | B.4.1 |       | 1      | E.4.7 |     |
| 6    | 2      | C.4.5 |     | 2      | C.4.5 |           | 2      | C.4.5 |       | 2      | F.4.3 |     |
| 7    | 1      | F.4.1 |     | 1      | F.4.1 |           | 1      | F.4.1 |       | 1      | F.4.1 |     |
| 8    | 1      | E.4.5 |     | 1      | A.4.4 |           | 1      | E.4.5 |       | 1      | F.4.2 |     |
| 9    | 1      | C.4.4 |     | 2      | E.4.8 |           | 1      | C.4.4 |       | 1      | H.4.1 |     |
| 10   | 2      | C.4.2 |     | 2      | H.4.1 |           | 3      | C.4.2 |       | 2      | F.4.1 |     |
| 11   | 1      | F.4.4 |     | 1      | F.4.4 |           | 1      | F.4.4 |       | 1      | F.4.4 |     |
| 12   | 2      | C.4.2 |     | 2      | F.4.3 |           | 2      | H.4.4 |       | 2      | F.4.4 |     |
| 13   | 2      | C.4.8 |     | 2      | C.4.2 |           | 2      | F.4.4 | C.4.2 | 2      | F.4.1 |     |
| 14   | 1      | G.4.1 |     | 2      | G.4.1 |           | 2      | H.4.1 |       | 1      | G.4.1 |     |
| 15   | 1      | E.4.4 |     | 2      | E.4.4 |           | 2      | E.4.4 |       | 1      | E.4.6 |     |
| 16   | 1      | G.4.4 |     | 3      | D.4.5 |           | 2      | C.4.4 |       | 1      | D.4.5 |     |
| 17   | 1      | D.4.8 |     | 2      | D.4.5 |           | 1      | D.4.6 |       | 2      | D.4.4 |     |
| 18   | 2      | C.4.2 |     | 2      | D.4.1 |           | 2      | C.4.2 |       | 2      | D.4.8 |     |
| 19   | 1      | B.4.2 |     | 2      | G.4.1 |           | 2      | B.4.2 |       | 1      | B.4.2 |     |

# Table 4D2S DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P   | R5S | DOK R6 | R6P   | R6S       | DOK R7 | R7P   | R7S   | DOK R8 | R8P   | R8S   |
|------|--------|-------|-----|--------|-------|-----------|--------|-------|-------|--------|-------|-------|
|      |        |       |     |        |       | Session 1 |        |       |       |        |       |       |
| 1    | 2      | B.4.3 |     | 2      | A.4.1 | A.4.2     | 2      | A.4.2 | A.4.1 | 2      | A.4.1 | A.4.2 |
| 2    | 1      | C.4.4 |     | 1      | C.4.4 |           | 2      | C.4.4 |       | 1      | A.4.4 |       |
| 3    | 1      | D.4.3 |     | 1      | D.4.3 |           | 2      | D.4.4 | D.4.3 | 1      | A.4.3 | A.4.4 |
| 4    | 2      | F.4.1 |     | 1      | F.4.1 |           | 2      | F.4.2 |       | 1      | F.4.1 |       |
| 5    | 2      | F.4.2 |     | 2      | F.4.2 |           | 2      | F.4.1 | A.4.3 | 2      | F.4.1 | F.4.2 |
| 6    | 1      |       |     | 1      | E.4.7 |           | 2      | E.4.7 |       | 1      | D.4.1 |       |
| 7    | 2      | D.4.5 |     | 2      | A.4.1 | A.4.2     | 2      | C.4.2 | D.4.5 | 2      | D.4.4 |       |
| 8    | 1      | D.4.2 |     | 1      | E.4.1 |           | 1      | E.4.1 |       | 1      | D.4.2 |       |
| 9    | 2      | F.4.2 |     | 2      | A.4.5 | A.4.2     | 2      | C.4.6 |       | 2      | F.4.2 |       |
| 10   | 1      | A.4.5 |     | 1      | C.4.5 |           | 1      | C.4.6 |       | 2      | C.4.2 |       |
| 11   | 2      | A.4.2 |     | 2      | A.4.2 |           | 2      | F.4.1 |       | 1      | A.4.2 |       |
| 12   | 2      | H.4.2 |     | 2      | C.4.2 | C.4.3     | 2      | H.4.1 |       | 2      | C.4.3 |       |
| 13   | 2      | G.4.3 |     | 1      | G.4.1 |           | 1      | H.4.3 |       | 1      | G.4.1 |       |
| 14   | 2      | D.4.5 |     | 2      | D.4.4 |           | 2      | D.4.4 | A.4.2 | 2      | D.4.1 |       |
| 15   | 1      | D.4.3 |     | 1      | D.4.3 |           | 1      | D.4.3 |       | 1      | D.4.3 |       |
| 16   | 1      | F.4.1 |     | 2      | F.4.1 | F.4.4     | 2      | F.4.1 |       | 2      | F.4.1 |       |
| 17   | 2      | F.4.3 |     | 1      | C.4.5 |           | 2      | C.4.5 |       | 1      | A.4.2 |       |
| 18   | 2      | E.4.6 |     | 1      | E.4.3 |           | 1      | E.4.6 |       | 2      | E.4.3 |       |
| 19   | 1      | G.4.3 |     | 1      | G.4.1 |           | 2      | C.4.2 |       | 1      | G.4.1 |       |
| 20   | 1      | F.4.2 |     | 1      | F.4.4 | F.4.1     | 1      | F.4.4 |       | 1      | F.4.1 |       |
| 21   | 1      | C.4.5 |     | 1      | C.4.5 |           | 2      | C.4.5 |       | 1      | A.4.2 |       |

# Table 4D2S DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P   | R5S   | DOK R6 | R6P          | R6S       | DOK R7 | R7P   | R7S   | DOK R8 | R8P          | R8S   |
|------|--------|-------|-------|--------|--------------|-----------|--------|-------|-------|--------|--------------|-------|
|      |        |       |       | •      |              | Session 2 |        |       |       |        |              |       |
| 1    | 2      | F.4.1 |       | 1      | F.4.4        |           | 2      | F.4.3 |       | 1      | F.4.1        | F.4.4 |
| 2    | 2      | H.4.4 |       | 2      | F.4.4        | H.4.4     | 2      | H.4.4 |       | 1      | A.4.2        |       |
| 3    | 1      | D.4.3 | E.4.3 | 1      | D.4.4        |           | 1      | D.4.5 |       | 2      | D.4.3        |       |
| 4    | 2      | D.4.8 | D.4.7 | 2      | D.4.8        |           | 2      | D.4.5 |       | 2      | C.4.2        | A.4.2 |
| 5    | 1      | B.4.1 |       | 2      | <b>B.4.1</b> |           | 1      | B.4.1 |       | 1      | <b>B.4.1</b> |       |
| 6    | 1      | A.4.5 |       | 1      | C.4.5        |           | 2      | C.4.5 |       | 2      | C.4.5        |       |
| 7    | 1      | F.4.1 |       | 1      | F.4.2        |           | 1      | F.4.2 |       | 1      | F.4.1        |       |
| 8    | 1      | E.4.5 |       | 1      | E.4.5        |           | 2      | E.4.5 |       | 1      | E.4.5        |       |
| 9    | 1      | C.4.4 |       | 2      | C.4.4        |           | 2      | C.4.4 | A.4.2 | 1      | C.4.4        |       |
| 10   | 1      | F.4.1 | C.4.5 | 2      | F.4.1        | F.4.4     | 2      | C.4.2 |       | 2      | F.4.1        |       |
| 11   | 1      | F.4.4 |       | 1      | F.4.4        |           | 1      | F.4.4 |       | 1      | E.4.2        | F.4.4 |
| 12   | 1      | H.4.3 |       | 2      | C.4.7        | C.4.8     | 1      | A.4.2 |       | 1      | C.4.1        |       |
| 13   | 2      | F.4.3 |       | 2      | <b>B.4.1</b> | F.4.3     | 2      | F.4.1 |       | 2      | C.4.8        |       |
| 14   | 2      | G.4.2 |       | 2      | H.4.1        |           | 1      | G.4.1 |       | 1      | G.4.1        |       |
| 15   | 2      | E.4.6 |       | 2      | E.4.6        |           | 2      | E.4.4 |       | 2      | E.4.4        |       |
| 16   | 2      | G.4.4 |       | 1      | D.4.7        |           | 1      | G.4.4 |       | 1      | D.4.7        |       |
| 17   | 2      | D.4.6 |       | 2      | D.4.8        |           | 1      | D.4.8 |       | 1      | C.4.2        |       |
| 18   | 2      | D.4.2 |       | 2      | D.4.8        |           | 1      | C.4.5 |       | 1      | D.4.1        |       |
| 19   | 1      | B.4.2 |       | 2      | A.4.4        | B.4.2     | 2      | G.4.3 |       | 1      | B.4.2        |       |

# Table 8D2S DOK Levels and Indicator Coded by Reviewers 1-4

| Item | DOK R1 | R1P          | R1S | DOK R2 | R2P   | R2S       | DOK R3 | R3P   | R3S   | DOK R4 | R4P   | R4S |
|------|--------|--------------|-----|--------|-------|-----------|--------|-------|-------|--------|-------|-----|
|      |        |              |     |        |       | Session 1 |        |       |       |        |       |     |
| 1    | 1      | C.8.1        |     | 1      | A.8.6 |           | 1      | C.8.4 |       | 2      | A.8.1 |     |
| 2    | 2      | G.8.6        |     | 1      | G.8.2 |           | 1      | D.8.1 |       | 2      | A.8.2 |     |
| 3    | 1      | B.8.2        |     | 2      | A.8.5 | C.8.5     | 1      | A.8.5 |       | 2      | A.8.1 |     |
| 4    | 2      | C.8.2        |     | 2      | C.8.6 |           | 2      | C.8.2 |       | 2      | B.8.1 |     |
| 5    | 2      | C.8.4        |     | 2      | C.8.7 |           | 2      | C.8.6 |       | 2      | C.8.2 |     |
| 6    | 1      | D.8.8        |     | 1      | D.8.5 |           | 1      | D.8.8 |       | 2      | F.8.2 |     |
| 7    | 2      | G.8.1        |     | 2      | G.8.1 |           | 1      | G.8.1 |       | 2      | D.8.8 |     |
| 8    | 1      | D.8.5        |     | 2      | D.8.5 |           | 1      | D.8.6 | D.8.2 | 2      | D.8.6 |     |
| 9    | 2      | E.8.3        |     | 3      | A.8.5 |           | 2      | C.8.6 |       | 2      | E.8.2 |     |
| 10   | 2      | C.8.2        |     | 2      | G.8.7 |           | 2      | C.8.2 |       | 2      | D.8.8 |     |
| 11   | 2      | F.8.9        |     | 2      | F.8.8 | A.8.8     | 2      | F.8.9 | F.8.8 | 2      | F.8.9 |     |
| 12   | 3      | F.8.8        |     | 3      | F.8.9 |           | 2      | F.8.8 | F.8.9 | 2      | F.8.2 |     |
| 13   | 1      |              |     | 1      | D.8.1 |           | 1      | D.8.1 |       | 1      | D.8.1 |     |
| 14   | 2      |              |     | 2      | G.8.3 | A.8.4     | 2      | C.8.6 |       | 2      | F.8.2 |     |
| 15   | 1      | E.8.3        |     | 1      | E.8.3 |           | 1      | E.8.3 |       | 1      | E.8.4 |     |
| 16   | 1      | F.8.8        |     | 1      | F.8.7 |           | 1      | D.8.8 |       | 1      | D.8.7 |     |
| 17   | 2      | E.8.2        |     | 1      | E.8.5 |           | 1      | E.8.1 |       | 1      | D.8.2 |     |
| 18   | 1      | <b>B.8.1</b> |     | 1      | B.8.3 | D.8.5     | 2      | D.8.6 |       | 1      | D.8.5 |     |
| 19   | 2      | C.8.1        |     | 2      | A.8.4 | F.8.7     | 3      | C.8.1 |       | 2      | F.8.2 |     |
| 20   | 2      | C.8.2        |     | 2      | C.8.2 |           | 2      | C.8.3 |       | 1      | D.8.1 |     |
| 21   | 1      | C.8.5        |     | 1      | D.8.6 |           | 2      | D.8.5 |       | 2      | D.8.5 |     |

# Table 8D2S DOK Levels and Indicator Coded by Reviewers 1-4 continued

| Item | DOK R1 | R1P   | R1S   | DOK R2 | R2P   | R2S       | DOK R3 | R3P   | R3S | DOK R4 | R4P    | R4S      |
|------|--------|-------|-------|--------|-------|-----------|--------|-------|-----|--------|--------|----------|
|      |        |       | L     |        |       | Session 2 |        |       |     |        |        | <u>.</u> |
| 1    | 2      | E.8.5 |       | 2      | E.8.1 | E.8.2     | 2      | E.8.1 |     | 1      | E.8.1  |          |
| 2    | 2      | E.8.5 |       | 2      | G.8.1 |           | 1      | E.8.2 |     | 2      | E.8.3  |          |
| 3    | 1      | E.8.2 |       | 1      | E.8.1 |           | 1      | E.8.2 |     | 2      | E.8.2  |          |
| 4    | 1      | F.8.1 |       | 1      | F.8.1 |           | 1      | F.8.1 |     | 1      | F.8.1  |          |
| 5    | 1      | G.8.3 |       | 2      | G.8.3 |           | 2      | G.8.3 |     | 2      | D.8.4  |          |
| 6    | 1      | E.8.8 |       | 2      | F.8.2 |           | 2      | F.8.2 |     | 2      | F.8.2  |          |
| 7    | 1      | D.8.2 |       | 1      | D.8.8 |           | 1      | D.8.4 |     | 1      | D.8.1  |          |
| 8    | 2      | C.8.4 |       | 3      | A.8.3 |           | 2      | C.8.2 |     | 2      | G.8.5  |          |
| 9    | 2      | C.8.4 |       | 2      | D.8.9 |           | 2      | C.8.7 |     | 2      | G.8.4  |          |
| 10   | 2      | D.8.2 |       | 2      | D.8.4 | C.8.5     | 3      | D.8.4 |     | 2      | D.8.1  |          |
| 11   | 3      | G.8.4 |       | 3      | C.8.9 |           | 2      | D.8.9 |     | 2      | G.8.4  |          |
| 12   | 2      | D.8.8 |       | 3      | A.8.1 |           | 3      | D.8.3 |     | 2      | G.8.4  |          |
| 13   | 2      | C.8.4 |       | 2      | H.8.2 |           | 2      | C.8.2 |     | 2      | G.8.4  |          |
| 14   | 2      | G.8.5 | H.8.3 | 2      | B.8.4 | B.8.6     | 2      | B.8.6 |     | 2      | E.8.3  |          |
| 15   | 2      | C.8.4 |       | 2      | C.8.5 | C.8.6     | 2      | C.8.2 |     | 2      | G.8.5  |          |
| 16   | 2      | C.8.4 |       | 2      | A.8.6 |           | 2      | C.8.2 |     | 2      | G.8.5  |          |
| 17   | 2      |       |       | 2      | E.8.3 |           | 1      | C.8.2 |     | 2      | E.8.1  |          |
| 18   | 2      | C.8.4 |       | 2      | H.8.3 |           | 2      | C.8.6 |     | 2      | F.8.10 |          |
| 19   | 1      | F.8.8 |       | 1      | F.8.1 |           | 1      | F.8.2 |     | 2      | F.8.8  |          |

# Table 8D2S DOK Levels and Indicator Coded by Reviewers 5-8

| Item | DOK R5 | R5P   | R5S   | DOK R6 | R6P          | R6S       | DOK R7 | R7P   | R7S   | DOK R8 | R8P   | R8S   |
|------|--------|-------|-------|--------|--------------|-----------|--------|-------|-------|--------|-------|-------|
|      | ·      |       |       |        |              | Session 1 | 1      |       |       | •      |       |       |
| 1    | 1      | A.8.1 |       | 1      | C.8.1        | A.8.6     | 1      | C.8.5 |       | 1      | A.8.1 | C.8.1 |
| 2    | 2      | A.8.2 |       | 1      | C.8.4        | D.8.8     | 1      | D.8.9 |       | 2      | A.8.1 |       |
| 3    | 1      | A.8.5 |       | 1      | <b>B.8.1</b> |           | 1      | A.8.5 |       | 1      | C.8.9 |       |
| 4    | 2      | C.8.3 |       | 2      | B.8.3        |           | 2      | C.8.3 |       | 2      | C.8.3 | A.8.7 |
| 5    | 2      | C.8.2 |       | 2      | C.8.7        |           | 2      | C.8.2 |       | 2      | C.8.2 |       |
| 6    | 1      | D.8.9 |       | 2      | D.8.8        |           | 1      | D.8.8 |       | 1      | D.8.6 | D.8.8 |
| 7    | 1      | G.8.1 |       | 2      | G.8.1        |           | 2      | F.8.1 |       | 1      | G.8.1 |       |
| 8    | 2      | D.8.6 |       | 2      | D.8.6        |           | 1      | D.8.5 |       | 2      | D.8.6 |       |
| 9    | 2      | E.8.1 |       | 2      | E.8.3        |           | 2      | A.8.6 | E.8.3 | 2      | E.8.3 |       |
| 10   | 1      | E.8.3 |       | 2      | C.8.5        | A.8.6     | 3      | E.8.1 |       | 2      | C.8.2 |       |
| 11   | 2      | F.8.8 |       | 2      | F.8.8        | F.8.9     | 2      | F.8.8 |       | 2      | F.8.8 | F.8.9 |
| 12   | 2      | F.8.9 |       | 2      | B.8.4        |           | 2      | E.8.1 |       | 2      | F.8.9 |       |
| 13   | 1      | D.8.2 |       | 1      | D.8.2        |           | 1      | D.8.2 |       | 2      | D.8.3 |       |
| 14   | 2      | G.8.2 | G.8.7 | 1      |              |           | 2      | C.8.4 |       | 1      | G.8.3 |       |
| 15   | 2      | E.8.3 |       | 2      | E.8.1        |           | 2      | E.8.8 |       | 1      | E.8.1 |       |
| 16   | 2      | D.8.9 | D.8.3 | 1      | F.8.2        |           | 1      | F.8.8 |       | 2      | F.8.8 |       |
| 17   | 2      | E.8.3 | E.8.5 | 1      | E.8.1        |           | 1      | E.8.5 |       | 1      | E.8.1 |       |
| 18   | 1      | B.8.2 | D.8.5 | 1      | <b>B.8.1</b> | B.8.2     | 1      | D.8.5 |       | 1      | D.8.5 |       |
| 19   | 1      | C.8.3 | C.8.2 | 2      | A.8.1        |           | 2      | C.8.1 | C.8.5 | 2      | C.8.3 | C.8.4 |
| 20   | 2      | C.8.3 | C.8.2 | 2      | A.8.1        |           | 2      | C.8.4 | A.8.4 | 1      | C.8.1 | C.8.4 |
| 21   | 2      | D.8.6 |       | 2      | D.8.5        |           | 2      | D.8.6 |       | 1      | D.8.5 |       |

# Table 8D2S DOK Levels and Indicator Coded by Reviewers 5-8 continued

| Item | DOK R5 | R5P   | R5S   | DOK R6 | R6P   | R6S     | DOK R7 | R7P    | R7S   | DOK R8 | R8P   | R8S   |
|------|--------|-------|-------|--------|-------|---------|--------|--------|-------|--------|-------|-------|
|      |        |       | L     |        |       | Session | 2      |        | I     |        |       |       |
| 1    | 2      | E.8.5 |       | 1      | E.8.2 |         | 1      | E.8.2  |       | 1      | E.8.2 |       |
| 2    | 2      | E.8.5 |       | 2      | E.8.1 |         | 2      | E.8.5  | A.8.6 | 2      | E.8.1 |       |
| 3    | 1      | E.8.2 |       | 1      | E.8.2 |         | 1      | E.8.2  |       | 1      | E.8.1 |       |
| 4    | 1      | F.8.1 |       | 1      | F.8.3 |         | 1      | F.8.1  |       | 1      | F.8.1 |       |
| 5    | 2      | G.8.3 | G.8.5 | 2      | G.8.3 |         | 2      | H.8.3  | G.8.3 | 1      | H.8.3 |       |
| 6    | 2      | F.8.2 | F.8.8 | 2      | F.8.2 |         | 1      | F.8.8  |       | 2      | F.8.9 |       |
| 7    | 2      | D.8.2 |       | 1      | D.8.1 |         | 1      | D.8.2  |       | 1      | D.8.1 |       |
| 8    | 2      | C.8.2 |       | 2      | A.8.4 |         | 2      | C.8.9  |       | 2      | C.8.2 |       |
| 9    | 2      | G.8.5 | G.8.4 | 2      | A.8.3 |         | 3      | C.8.2  |       | 2      | C.8.2 | D.8.9 |
| 10   | 1      | D.8.2 |       | 2      | D.8.8 | D.8.9   | 2      | D.8.2  |       | 2      | D.8.2 |       |
| 11   | 2      | G.8.4 |       | 2      | A.8.3 |         | 3      | C.8.4  | D.8.8 | 2      | D.8.9 |       |
| 12   | 2      | D.8.9 | G.8.5 | 2      | D.8.2 |         | 2      | D.8.1  | D.8.8 | 2      | D.8.1 |       |
| 13   | 1      | C.8.7 |       | 2      | C.8.4 |         | 2      | C.8.2  |       | 2      | H.8.2 | C.8.2 |
| 14   | 2      | G.8.3 |       | 2      | G.8.3 |         | 2      | F.8.10 |       | 2      | H.8.3 |       |
| 15   | 2      | C.8.6 | C.8.7 | 2      | A.8.3 |         | 2      | C.8.2  |       | 2      | F.8.6 | F.8.7 |
| 16   | 2      | C.8.7 |       | 1      | A.8.4 |         | 1      | C.8.2  |       | 2      | C.8.2 |       |
| 17   | 1      | C.8.2 |       | 2      | C.8.9 |         | 2      | A.8.3  | E.8.7 | 1      | H.8.1 |       |
| 18   | 2      | C.8.6 |       | 2      | A.8.4 |         | 2      | C.8.2  |       | 1      | H.8.3 | C.8.3 |
| 19   | 1      | F.8.1 |       | 1      | F.8.2 |         | 1      | F.8.2  |       | 1      | F.8.1 |       |

#### Table 3D3E Standard Coded to Each Item by Reviewers

|    |         |         |         |         |         | Sessior | 1       |         |         |         |       |
|----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 1  | 3.L.4.a | 3.RI.1  | 3.RI.4  | 3.RI.4  | 3.RI.4  | 3.RI.4  | 3.RI.4  | 3.W.2.b | 3.W.8   |         |       |
| 2  | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.W.2.b | 3.W.8   |         |         |       |
| 3  | 3.RI.2  | 3.RI.2  | 3.RI.2  | 3.RI.2  | 3.RI.2  | 3.RL.2  | 3.W.1.b | 3.W.8   |         |         |       |
|    | 3.RI.3  | 3.RI.7  | 3.W.1   | 3.W.1   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.8 |
| 4  | 3.RI.3  | 3.RI.7  | 3.W.1   | 3.W.1   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.8 |
| -  | 3.RI.3  | 3.RI.7  | 3.W.1   | 3.W.1   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.8 |
|    | 3.RI.3  | 3.RI.7  | 3.W.1   | 3.W.1   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.2   | 3.W.8 |
|    |         |         |         |         |         | Sessior | n 2     |         |         |         |       |
| 1  | 3.L.1.i | 3.L.5   | 3.RI.3  | 3.RI.8  | 3.W.1.c | 3.W.1.c | 3.W.1.c | 3.W.2   | 3.W.2.c |         |       |
| 2  | 3.L.5   | 3.RI.1  | 3.RI.2  | 3.RL.3  | 3.RL.3  | 3.RL.3  | 3.RL.4  | 3.W.3.b | 3.W.3.b | 3.W.5   |       |
| 3  | 3.RI.1  | 3.RI.2  | 3.W.1.b | 3.W.2   | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.c |       |
| 5  | 3.RI.1  | 3.RI.2  | 3.W.1.b | 3.W.2   | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.b | 3.W.2.c |       |
| 4  | 3.RI.3  | 3.RI.8  | 3.W.2   | 3.W.2.c | 3.W.2.c | 3.W.2.c | 3.W.2.c | 3.W.2.c | 3.W.2.c | 3.W.3.c |       |
| 6  | 3.RI.2  | 3.RI.5  | 3.RI.5  | 3.RI.5  | 3.W.2.a | 3.W.2.a | 3.W.8   | 3.W.8   | 3.W.8   | 3.W.8   |       |
| 7  | 3.RI.5  | 3.RI.5  | 3.RI.9  | 3.W.2.a | 3.W.2.b | 3.W.8   | 3.W.8   | 3.W.8   | 3.W.8   |         |       |
| /  | 3.RI.5  | 3.RI.5  | 3.RI.9  | 3.W.2.a | 3.W.2.b | 3.W.8   | 3.W.8   | 3.W.8   | 3.W.8   |         |       |
| 8  | 3.RI.2  | 3.RI.5  | 3.W.2.a | 3.W.2.b | 3.W.2.b | 3.W.8   | 3.W.8   | 3.W.8   | 3.W.8   |         |       |
| 9  | 3.RI.6  | 3.W.1.a | 3.W.1.b | 3.W.1.b | 3.W.1.b | 3.W.1.b | 3.W.1.b | 3.W.2   | 3.W.2.b | 3.W.2.b |       |
| 10 | 3.L.1   | 3.L.1   | 3.L.1   | 3.L.1.g | 3.L.1.g | 3.L.1.g | 3.L.1.g | 3.L.1.g | 3.L.1.g | 3.W.2   |       |
| 11 | 3.L.2   | 3.L.2.d | 3.L.2.g |         |       |
| 12 | 3.L.1.a | 3.L.2   | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.g |         |       |
| 14 | 3.L.2.a | 3.L.1.a | 3.L.2   | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.a | 3.L.2.g |         |       |

# Table 3D3E Standard Coded to Each Item by Reviewers continued

|    |         |         |         |        |        | Sessio | on 3   |        |        |        |        |        |
|----|---------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1  | 3.RL.1  | 3.RL.3  | 3.RL.3  | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |
| 1  | 3.RL.1  | 3.RL.3  | 3.RL.3  | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |
| 2  | 3.RI.2  | 3.RL.2  | 3.SL.2  | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.3 |        |        |        |
| 6  | 3.RI.1  | 3.SL.2  | 3.SL.2  | 3.SL.2 | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |        |
| 7  | 3.RI.1  | 3.SL.2  | 3.SL.2  | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |        |
|    | 3.RI.1  | 3.SL.2  | 3.SL.2  | 3.SL.2 | 3.SL.2 | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |        |
| 8  | 3.RI.1  | 3.SL.2  | 3.SL.2  | 3.SL.2 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 | 3.SL.3 |        |        |
|    |         |         |         |        |        | Sessio |        |        |        |        |        |        |
| 1  | 3.L.4   | 3.L.4.a | 3.L.4.a | 3.RI.2 | 3.RI.4 | 3.RI.4 | 3.RI.4 | 3.RI.4 | 3.RI.4 | 3.RL.4 | 3.RL.4 |        |
| 2  | 3.RI.1  | 3.RI.2  | 3.RI.2  | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RL.6 | 3.RL.7 |        |        |
| 4  | 3.RI.1  | 3.RI.2  | 3.RI.2  | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RI.6 | 3.RL.6 | 3.RL.7 |        |        |
| 3  | 3.RI.1  | 3.RI.1  | 3.RI.2  | 3.RI.2 | 3.RI.2 | 3.RI.3 | 3.RI.8 | 3.RI.8 | 3.RI.8 |        |        |        |
| 5  | 3.RI.1  | 3.RI.1  | 3.RI.2  | 3.RI.2 | 3.RI.2 | 3.RI.3 | 3.RI.8 | 3.RI.8 | 3.RI.8 |        |        |        |
| 4  | 3.L.5.a | 3.RI.1  | 3.RI.1  | 3.RI.2 | 3.RI.3 | 3.RI.3 | 3.RI.3 | 3.RI.3 | 3.RI.3 |        |        |        |
| 5  | 3.L.4   | 3.L.4.a | 3.L.5.a | 3.RL.1 | 3.RL.4 | 3.RL.4 | 3.RL.4 | 3.RL.4 | 3.RL.4 |        |        |        |
| 6  | 3.RL.1  | 3.RL.1  | 3.RL.1  | 3.RL.2 | 3.RL.2 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.7 |
|    | 3.RL.1  | 3.RL.1  | 3.RL.2  | 3.RL.2 | 3.RL.3 |        |
| 7  | 3.RL.1  | 3.RL.1  | 3.RL.2  | 3.RL.2 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.3 |        |        |        |        |
| 8  | 3.RL.1  | 3.RL.2  | 3.RL.2  | 3.RL.2 | 3.RL.2 | 3.RL.2 | 3.RL.3 | 3.RL.3 |        |        |        |        |
| 9  | 3.RL.1  | 3.RL.1  | 3.RL.1  | 3.RL.1 | 3.RL.3 | 3.RL.6 | 3.RL.6 | 3.RL.6 |        |        |        |        |
| 14 | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.RI.1 | 3.RI.2 | 3.RL.1 | 3.RL.1 | 3.RL.1 | 3.RL.1 |        |        |        |
| 17 | 3.RI.1  | 3.RI.1  | 3.RI.1  | 3.RI.1 | 3.RI.2 | 3.RL.1 | 3.RL.1 | 3.RL.1 | 3.RL.1 |        |        |        |
| 15 | 3.RI.1  | 3.RI.2  | 3.RI.8  | 3.RL.1 | 3.RL.1 | 3.RL.2 | 3.RL.5 | 3.RL.7 |        |        |        |        |
| 16 | 3.RI.1  | 3.RI.3  | 3.RI.9  | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.3 | 3.RL.7 |        |        |        |        |
| 17 | 3.RI.2  | 3.RI.9  | 3.RI.9  | 3.RL.1 | 3.RL.2 | 3.RL.9 | 3.RL.9 | 3.RL.9 |        |        |        |        |

#### Table 4D3E Standard Coded to Each Item by Reviewers

|    |         |         |         |         |         | Session | 1       |         |         |         |         |       |
|----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| 1  | 4.L.1.a | 4.L.4.a | 4.L.4.a | 4.RL.1  | 4.RL.4  |       |
| 2  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.RL.3  |         |       |
| 3  | 4.RL.1  | 4.RL.1  | 4.RL.2  | 4.RL.2  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.RL.3  |         |         |       |
| 3  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.RL.3  | 4.W.2   | 4.W.2.b |         |       |
| 4  | 4.RL.1  | 4.RL.3  |         |         |       |
| 5  | 4.RL.2  | 4.RL.3  | 4.RL.3  |         |       |
|    | 4.RL.2  | 4.RL.5  | 4.W.1   | 4.W.1   | 4.W.1   | 4.W.1   | 4.W.1.a | 4.W.1.a | 4.W.2   | 4.W.2   | 4.W.4   | 4.W.9 |
| 6  | 4.RL.1  | 4.RL.2  | 4.RL.5  | 4.W.1   | 4.W.1   | 4.W.1   | 4.W.1.a | 4.W.1.b | 4.W.2   | 4.W.4   | 4.W.4   | 4.W.9 |
| 0  | 4.L.3   | 4.RL.1  | 4.RL.2  | 4.RL.5  | 4.W.1   | 4.W.1   | 4.W.1   | 4.W.1.a | 4.W.1.c | 4.W.2   | 4.W.4   | 4.W.9 |
|    | 4.L.1   | 4.L.2   | 4.RL.1  | 4.RL.2  | 4.RL.5  | 4.W.1   | 4.W.1   | 4.W.1   | 4.W.1.a | 4.W.1.d | 4.W.2   | 4.W.4 |
|    | 4.W.9.a | 4.W.9.a | 4.W.9.a | 4.W.9   | 4.W.9.a |         |         |         |         |         |         |       |
|    |         |         |         |         |         | Session | 2       |         |         |         |         | _     |
| 1  | 4.RI.1  | 4.RI.2  | 4.RI.2  | 4.W.2.e |         |       |
| 2  | 4.RL.1  | 4.RL.2  | 4.RL.2  | 4.W.2.e | 4.W.2.e | 4.W.3.e | 4.W.3.e | 4.W.3.e | 4.W.3.e | 4.W.3.e |         |       |
| 3  | 4.L.3.a | 4.L.3.a | 4.L.3.a | 4.L.3.a | 4.L.3.a | 4.RI.4  | 4.RL.1  | 4.W.2.d | 4.W.2.d | 4.W.2.d | 4.W.2.d |       |
| 4  | 4.RI.2  | 4.RL.1  | 4.RL.2  | 4.W.1.d | 4.W.1.d | 4.W.1.d | 4.W.2.e | 4.W.2.e | 4.W.2.e |         |         |       |
| 6  | 4.RL.1  | 4.RL.2  | 4.RL.3  | 4.W.3.a | 4.W.3.a | 4.W.3.a | 4.W.3.a | 4.W.3.d | 4.W.3.e |         |         |       |
| 7  | 4.RI.1  | 4.RI.2  | 4.RI.2  | 4.W.2.a | 4.W.2.b | 4.W.2.b | 4.W.2.b | 4.W.2.b | 4.W.2.b |         |         |       |
| 8  | 4.RI.1  | 4.RI.7  | 4.W.2.b | 4.W.8   |         |       |
| 9  | 4.L.4.c | 4.RI.3  | 4.RI.9  | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   |         |         |       |
|    | 4.L.4.c | 4.RI.3  | 4.RI.9  | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   |         |         |       |
| 10 | 4.RI.7  | 4.RI.8  | 4.RL.2  | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   | 4.W.8   |         |         |       |
| 11 | 4.L.2   | 4.L.2   | 4.L.2   | 4.L.2.b | 4.L.2.b | 4.L.2.b | 4.L.2.b | 4.L.2.b | 4.L.4.b |         |         |       |
| 12 | 4.L.2   | 4.L.2   | 4.L.2.a |         |         |       |
| 13 | 4.L.1   | 4.L.1.a | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.2.b |         |         |       |
| 13 | 4.L.1   | 4.L.1.a | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.1.b | 4.L.2.b |         |         |       |
| 14 | 4.L.2   | 4.L.2   | 4.L.2   | 4.L.2   | 4.L.2.b | 4.L.3.b | 4.L.3.b | 4.L.3.b | 4.L.3.b |         |         |       |
| 14 | 4.L.2   | 4.L.2   | 4.L.2   | 4.L.2   | 4.L.2.b | 4.L.3.b | 4.L.3.b | 4.L.3.b | 4.L.3.b |         |         |       |

#### Table 4D3E Standard Coded to Each Item by Reviewers continued

|    |         |         |         |         | Se     | ssion 3 |        |        |        |        |        |
|----|---------|---------|---------|---------|--------|---------|--------|--------|--------|--------|--------|
| 1  | 4.RI.1  | 4.SL.2  | 4.SL.3  | 4.SL.3  | 4.SL.3 | 4.SL.3  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
| 1  | 4.RI.1  | 4.SL.2  | 4.SL.3  | 4.SL.3  | 4.SL.3 | 4.SL.3  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
| 2  | 4.RI.2  | 4.SL.2  | 4.SL.3  | 4.SL.3  | 4.SL.3 | 4.SL.3  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
| 3  | 4.RI.2  | 4.RL.2  | 4.SL.2  | 4.SL.2  | 4.SL.2 | 4.SL.2  | 4.SL.2 | 4.SL.2 | 4.SL.3 |        |        |
| 7  | 4.RI.2  | 4.RI.2  | 4.SL.2  | 4.SL.2  | 4.SL.2 | 4.SL.2  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
| '  | 4.RI.2  | 4.RI.2  | 4.RI.2  | 4.SL.2  | 4.SL.3 | 4.SL.3  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
| 8  | 4.RI.2  | 4.RI.3  | 4.SL.2  | 4.SL.2  | 4.SL.2 | 4.SL.2  | 4.SL.2 | 4.SL.2 | 4.SL.2 | 4.SL.2 |        |
| 9  | 4.RI.1  | 4.RI.8  | 4.SL.3  | 4.SL.3  | 4.SL.3 | 4.SL.3  | 4.SL.3 | 4.SL.3 | 4.SL.3 |        |        |
|    |         |         |         |         | Se     | ssion 4 |        |        |        |        |        |
| 1  | 4.RI.3  | 4.RI.5  | 4.RI.5  | 4.RI.5  | 4.RI.5 | 4.RI.5  | 4.RI.5 | 4.RI.7 | 4.RI.8 | 4.RI.8 |        |
| 2  | 4.L.3.a | 4.L.4.a | 4.RI.1  | 4.RI.4  | 4.RI.4 | 4.RI.4  | 4.RI.4 | 4.RI.4 | 4.RI.4 | 4.RI.4 | 4.RI.4 |
| 3  | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.1 | 4.RI.1  | 4.RI.1 | 4.RI.3 | 4.RI.3 | 4.RI.7 |        |
| 4  | 4.L.5.a | 4.L.5.b | 4.L.5.b | 4.L.5.b | 4.RL.1 | 4.RL.4  | 4.RL.4 | 4.RL.4 | 4.RL.4 | 4.RL.4 |        |
| 5  | 4.L.4   | 4.L.4.a | 4.L.4.a | 4.L.4.c | 4.RL.1 | 4.RL.4  | 4.RL.4 | 4.RL.4 | 4.RL.4 | 4.RL.6 |        |
| 6  | 4.RL.1  | 4.RL.2  | 4.RL.2  | 4.RL.2  | 4.RL.2 | 4.RL.2  | 4.RL.2 | 4.RL.2 | 4.RL.2 |        |        |
| 7  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.3  | 4.RL.3 | 4.RL.3  | 4.RL.3 | 4.RL.3 | 4.RL.3 |        |        |
| /  | 4.RL.1  | 4.RL.1  | 4.RL.1  | 4.RL.3  | 4.RL.3 | 4.RL.3  | 4.RL.3 | 4.RL.3 | 4.RL.3 |        |        |
| 8  | 4.RL.1  | 4.RL.6  | 4.RL.6  | 4.RL.6  | 4.RL.6 | 4.RL.6  | 4.RL.6 | 4.RL.6 | 4.RL.6 |        |        |
| 13 | 4.L.4.a | 4.L.4.a | 4.L.4.a | 4.RI.1  | 4.RI.4 | 4.RI.4  | 4.RI.4 | 4.RI.4 | 4.RI.4 | 4.RI.4 | 4.RI.4 |
| 14 | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.2 | 4.RI.2  | 4.RI.2 | 4.RI.3 | 4.RI.8 |        |        |
| 15 | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.2 | 4.RI.3  | 4.RI.3 | 4.RI.8 | 4.RI.8 | 4.RI.8 |        |
| 15 | 4.RI.1  | 4.RI.1  | 4.RI.1  | 4.RI.3  | 4.RI.3 | 4.RI.6  | 4.RI.8 | 4.RI.8 | 4.RI.8 | 4.RI.8 |        |
| 16 | 4.RI.1  | 4.RI.3  | 4.RI.5  | 4.RI.5  | 4.RI.5 | 4.RI.5  | 4.RI.5 | 4.RI.5 | 4.RI.7 |        |        |

#### Table 5D3E Standard Coded to Each Item by Reviewers

|    |         |         |         |         |         | Session | n 1     |         |         |         |         |         |
|----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1  | 5.L.4.a | 5.L.4.a | 5.L.4.a | 5.L.4.a | 5.RI.4  | 5.RI.4  | 5.RI.4  | 5.RI.4  | 5.RI.4  | 5.RI.4  | 5.RI.6  | 5.RL.4  |
|    | 5.RL.4  |         |         |         |         |         |         |         |         |         |         |         |
| 2  | 5.RI.1  | 5.RI.3  | 5.RI.6  | 5.RI.6  | 5.RI.6  | 5.RI.7  | 5.RI.7  | 5.RI.7  | 5.RI.9  | 5.RI.9  | 5.RL.1  | 5.RL.9  |
|    | 5.RL.9  |         |         |         |         |         |         |         |         |         |         |         |
| 3  | 5.RI.2  | 5.RI.3  | 5.RI.6  | 5.RI.6  | 5.RI.6  | 5.RI.6  | 5.RI.6  | 5.RI.6  | 5.RI.8  | 5.RL.6  | 5.RL.6  |         |
|    | 5.RI.9  | 5.RI.9  | 5.RI.9  | 5.W.1   | 5.W.1.a | 5.W.1.a |
|    | 5.RI.6  | 5.RI.9  | 5.RI.9  | 5.RI.9  | 5.RI.9  | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1.a |
| 4  | 5.L.1   | 5.L.2   | 5.RI.9  | 5.RI.9  | 5.RI.9  | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1   | 5.W.1.a |
|    | 5.L.3   | 5.RI.9  | 5.RI.9  | 5.RI.9  | 5.W.1   | 5.W.1.a |
|    | 5.W.1.a | 5.W.4   | 5.W.4   | 5.W.4   | 5.W.1.b | 5.W.4   | 5.W.8   | 5.W.1.c | 5.W.4   | 5.W.4   | 5.W.1.d | 5.W.4   |
|    |         |         |         |         |         | Session | n 2     |         |         |         |         |         |
| 1  | 5.L.3   | 5.L.3   | 5.W.1.c | 5.W.2.c | 5.W.3.c |
| 2  | 5.RI.2  | 5.W.1.b | 5.W.2.a | 5.W.2.b |         |         |
| 3  | 5.L.4   | 5.L.4.a | 5.L.5.c | 5.RI.1  | 5.W.2.d | 5.W.2.d | 5.W.2.d | 5.W.2.d | 5.W.2.d |         |         |         |
| 4  | 5.W.1   | 5.W.1.a | 5.W.1.b | 5.W.1.d |         |
| 6  | 5.RL.2  | 5.RL.5  | 5.W.3   | 5.W.3   | 5.W.3.b |         |
| 7  | 5.RL.2  | 5.RL.2  | 5.RL.3  | 5.W.3.e |         |         |
| 8  | 5.RI.3  | 5.RI.8  | 5.W.2.a | 5.W.2.a | 5.W.2.b | 5.W.2.b | 5.W.2.b | 5.W.2.b | 5.W.2.b | 5.W.2.b | 5.W.9   |         |
| 9  | 5.RI.7  | 5.RI.7  | 5.RI.9  | 5.W.2.b | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.9   | 5.W.9   |
| ,  | 5.RI.7  | 5.RI.7  | 5.RI.9  | 5.W.2.b | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.9   | 5.W.9.b |
| 10 | 5.RI.7  | 5.RI.7  | 5.RI.9  | 5.W.2.b | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.8   | 5.W.9   | 5.W.9   | 5.W.9   |         |
| 11 | 5.L.2   | 5.L.2.d | 5.L.2.d | 5.L.3   |         |         |
| 12 | 5.L.2   | 5.L.2   | 5.L.2.b | 5.L.3   | 5.RI.2  |         |
| 13 | 5.L.2   | 5.L.2   | 5.L.2.b | 5.L.3   | 5.L.3   | 5.L.3.a | 5.L.3.a | 5.L.3.a | 5.L.3.a | 5.L.3.a | 5.L.3.a | 5.W.3.c |
| 14 | 5.L.1   | 5.L.1   | 5.L.1   | 5.L.1   | 5.L.1   | 5.L.1.a | 5.L.1.a | 5.L.3   | 5.L.3   | 5.L.3   | 5.L.5.c |         |
| 15 | 5.L.1   | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.c | 5.L.1.c | 5.L.1.c | 5.L.1.d |         |
| 13 | 5.L.1   | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.b | 5.L.1.c | 5.L.1.c | 5.L.1.c | 5.L.1.d | 5.L.1.d |         |

|    | Session 3           5.RI.1         5.RL.2         5.SL.2         5.SL.2         5.SL.2         5.SL.3         5.SL.3         5.SL.3         5.SL.3 |         |         |        |        |           |        |        |        |        |        |        |  |  |  |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|--------|--------|-----------|--------|--------|--------|--------|--------|--------|--|--|--|
|    | 5.RI.1                                                                                                                                             | 5.RI.8  | 5.RL.2  | 5.SL.2 | 5.SL.2 | 5.SL.2    | 5.SL.2 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |  |  |  |
| 1  | 5.RI.1                                                                                                                                             | 5.RI.8  | 5.RL.2  | 5.SL.2 | 5.SL.2 | 5.SL.2    | 5.SL.2 | 5.SL.2 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |  |  |  |
|    | 5.SL.3                                                                                                                                             | 5.SL.3  |         |        |        |           |        |        |        |        |        |        |  |  |  |
| 2  | 5.RI.1                                                                                                                                             | 5.RL.1  | 5.SL.2  | 5.SL.2 | 5.SL.2 | 5.SL.2    | 5.SL.2 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |        |  |  |  |
| 3  | 5.RI.1                                                                                                                                             | 5.RI.8  | 5.RL.1  | 5.SL.2 | 5.SL.2 | 5.SL.3    | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |  |  |  |
| 7  | 5.RI.3                                                                                                                                             | 5.RI.3  | 5.RI.8  | 5.SL.3 | 5.SL.3 | 5.SL.3    | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |        |  |  |  |
| 8  | 5.RI.2                                                                                                                                             | 5.RI.2  | 5.SL.2  | 5.SL.2 | 5.SL.2 | 5.SL.2    | 5.SL.2 | 5.SL.2 | 5.SL.2 | 5.SL.2 |        |        |  |  |  |
| 9  | 5.RI.1                                                                                                                                             | 5.RI.2  | 5.RI.8  | 5.SL.2 | 5.SL.3 | 5.SL.3    | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |        |  |  |  |
| 9  | 5.RI.1                                                                                                                                             | 5.RI.1  | 5.RI.8  | 5.SL.2 | 5.SL.2 | 5.SL.3    | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 | 5.SL.3 |  |  |  |
|    |                                                                                                                                                    |         |         |        |        | Session 4 |        |        |        |        |        |        |  |  |  |
| 1  | 5.RI.1                                                                                                                                             | 5.RI.2  | 5.RI.2  | 5.RI.2 | 5.RI.2 | 5.RI.2    | 5.RI.2 | 5.RI.3 | 5.RI.3 | 5.RI.8 |        |        |  |  |  |
| -  | 5.RI.1                                                                                                                                             | 5.RI.2  | 5.RI.2  | 5.RI.2 | 5.RI.2 | 5.RI.2    | 5.RI.2 | 5.RI.3 | 5.RI.3 | 5.RI.8 |        |        |  |  |  |
| 2  | 5.RI.1                                                                                                                                             | 5.RI.1  | 5.RI.1  | 5.RI.1 | 5.RI.2 | 5.RI.8    | 5.RI.8 | 5.RI.8 | 5.RI.8 |        |        |        |  |  |  |
| 3  | 5.RI.1                                                                                                                                             | 5.RI.1  | 5.RI.1  | 5.RI.1 | 5.RI.1 | 5.RI.1    | 5.RI.1 | 5.RI.1 | 5.RI.2 | 5.RI.8 |        |        |  |  |  |
| 4  | 5.L.4.a                                                                                                                                            | 5.L.4.a | 5.L.4.a | 5.RI.1 | 5.RI.4 | 5.RI.4    | 5.RI.4 | 5.RI.4 | 5.RI.4 | 5.RI.4 | 5.RI.4 |        |  |  |  |
| 5  | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.2  | 5.RL.3 | 5.RL.3 | 5.RL.3    | 5.RL.3 | 5.RL.3 | 5.RL.3 |        |        |        |  |  |  |
| 5  | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.1  | 5.RL.1 | 5.RL.1 | 5.RL.3    | 5.RL.3 | 5.RL.3 | 5.RL.3 |        |        |        |  |  |  |
| 6  | 5.RL.3                                                                                                                                             | 5.RL.3  | 5.RL.3  | 5.RL.3 | 5.RL.3 | 5.RL.3    | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 |        |  |  |  |
| 7  | 5.RL.3                                                                                                                                             | 5.RL.3  | 5.RL.3  | 5.RL.3 | 5.RL.9 | 5.RL.9    | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 |        |  |  |  |
| 8  | 5.RL.2                                                                                                                                             | 5.RL.2  | 5.RL.2  | 5.RL.2 | 5.RL.2 | 5.RL.2    | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 | 5.RL.9 |        |  |  |  |
| 0  | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.1  | 5.RL.2 | 5.RL.2 | 5.RL.2    | 5.RL.3 | 5.RL.3 | 5.RL.9 |        |        |        |  |  |  |
| 13 | 5.RL.2                                                                                                                                             | 5.RL.5  | 5.RL.5  | 5.RL.5 | 5.RL.5 | 5.RL.5    | 5.RL.5 | 5.RL.5 | 5.RL.5 |        |        |        |  |  |  |
| 14 | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.1  | 5.RL.1 | 5.RL.1 | 5.RL.1    | 5.RL.1 | 5.RL.3 | 5.RL.3 |        |        |        |  |  |  |
| 15 | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.1  | 5.RL.1 | 5.RL.1 | 5.RL.1    | 5.RL.1 | 5.RL.2 | 5.RL.2 |        |        |        |  |  |  |
| 13 | 5.RL.1                                                                                                                                             | 5.RL.1  | 5.RL.1  | 5.RL.1 | 5.RL.1 | 5.RL.1    | 5.RL.1 | 5.RL.2 | 5.RL.2 |        |        |        |  |  |  |
| 16 | 5.RL.2                                                                                                                                             | 5.RL.3  | 5.RL.6  | 5.RL.6 | 5.RL.6 | 5.RL.6    | 5.RL.6 | 5.RL.6 | 5.RL.6 | 5.RL.6 |        |        |  |  |  |

#### Table 5D3E Standard Coded to Each Item by Reviewers continued

#### Table 6D3E Standard Coded to Each Item by Reviewers

|    | Session 1           6.RL.1         6.RL.1         6.RL.1         6.RL.1         6.RL.1         6.RL.1         6.RL.3         < |         |         |         |         |         |         |         |         |         |         |         |  |  |  |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|--|--|
|    | 6.RL.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.3  | 6.RL.3  | 6.RL.3  | 6.RL.3  |  |  |  |
| 1  | 6.RL.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.1  | 6.RL.3  | 6.RL.3  | 6.RL.3  | 6.RL.3  |  |  |  |
|    | 6.RL.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.RL.3  | 6.RL.3  | 6.RL.3  |         |         |         |         |         |         |         |         |  |  |  |
| 2  | 6.L.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.RL.1  | 6.RL.5  |         |         |  |  |  |
| 3  | 6.RL.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.RL.4  | 6.RL.4  | 6.RL.4  | 6.RL.5  |  |  |  |
|    | 6.RL.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.RL.1  | 6.RL.2  | 6.W.1   | 6.W.1.a | 6.W.1.b | 6.W.2   | 6.W.2   | 6.W.2   | 6.W.2   | 6.W.2   | 6.W.2.a |  |  |  |
|    | 6.L.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.1   | 6.W.1.a | 6.W.1.b | 6.W.1.b | 6.W.1.c | 6.W.2.a | 6.W.2.b | 6.W.2.b | 6.W.2.b | 6.W.2.c | 6.W.2.c |  |  |  |
| 4  | 6.L.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.1   | 6.L.2   | 6.L.2   | 6.L.2   | 6.L.6   | 6.RL.1  | 6.W.1.c | 6.W.1.e | 6.W.2.b | 6.W.2.c | 6.W.2.d |  |  |  |
|    | 6.L.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.2   | 6.L.2   | 6.L.3   | 6.L.3   | 6.L.3   | 6.L.6   | 6.SL.2  | 6.W.2.c | 6.W.2.d | 6.W.2.e | 6.W.2.f |  |  |  |
|    | 6.W.2.a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.W.2.a | 6.W.4   | 6.W.4   | 6.W.2.d | 6.W.2.e | 6.W.2.e | 6.W.9   | 6.W.2.f | 6.W.2.f | 6.W.4   | 6.W.4   |  |  |  |
|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |         |         |         | Session | n 2     |         |         |         |         |         |  |  |  |
| 1  | 6.L.5.b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.6   | 6.RL.4  | 6.W.1.c | 6.W.1.c | 6.W.1.c | 6.W.1.c | 6.W.1.c | 6.W.2.c | 6.W.2.c | 6.W.4   |         |  |  |  |
| 2  | 6.L.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.6   | 6.L.6   | 6.L.6   | 6.W.2.c | 6.W.2.d | 6.W.2.d | 6.W.2.d | 6.W.2.d | 6.W.2.d | 6.W.3.d |         |  |  |  |
| 3  | 6.L.3.b                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.3.b | 6.L.3.b | 6.L.5.c | 6.W.1.d | 6.W.1.e | 6.W.2.e | 6.W.2.e | 6.W.2.e | 6.W.2.e | 6.W.2.e | 6.W.2.e |  |  |  |
| 4  | 6.RL.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.W.3   | 6.W.3.b | 6.W.3.b | 6.W.3.b | 6.W.3.b | 6.W.3.b | 6.W.3.b | 6.W.3.d | 6.W.3.e | 6.W.3.e | 6.W.3.e |  |  |  |
| 6  | 6.L.3.a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.3.a | 6.L.3.a | 6.L.3.a | 6.L.3.a | 6.L.3.a | 6.L.3.a | 6.L.3.b | 6.W.3.a | 6.W.5   | 6.W.5   | 6.W.5   |  |  |  |
|    | 6.L.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.1.a | 6.L.1.a | 6.L.1.c | 6.L.1.c | 6.L.1.d | 6.L.1.d | 6.L.1.d | 6.L.1.d | 6.L.1.e | 6.L.3.a | 6.W.2.e |  |  |  |
| 7  | 6.L.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.1.a | 6.L.1.a | 6.L.1.c | 6.L.1.c | 6.L.1.d | 6.L.1.d | 6.L.1.d | 6.L.1.d | 6.L.1.e | 6.L.3.a | 6.W.5   |  |  |  |
|    | 6.W.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |         |         |         |         |         |         |         |         |         |         |  |  |  |
| 8  | 6.L.1.e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.3.b | 6.L.3.b | 6.L.3.b | 6.L.3.b | 6.L.3.b | 6.L.3.b | 6.W.1.d | 6.W.1.d | 6.W.2.e | 6.W.2.e |         |  |  |  |
| 9  | 6.L.1.e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.2   | 6.L.2   | 6.L.2   | 6.L.2   | 6.L.2.b |  |  |  |
|    | 6.L.1.e                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6.L.2   | 6.L.2   | 6.L.2   | 6.L.2   | 6.L.2.b |  |  |  |
| 10 | 6.L.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.L.2   | 6.L.2.a | 6.SL.2  |         |  |  |  |
|    | 6.W.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.RI.1  | 6.W.1   | 6.W.2   | 6.W.2   | 6.W.2.b | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.9   | 6.W.9   |  |  |  |
| 11 | 6.RI.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.W.1   | 6.W.2   | 6.W.2   | 6.W.2.b | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.9   | 6.W.9   |  |  |  |
|    | 6.W.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.W.9   |         |         |         |         |         |         |         |         |         |         |  |  |  |
| 12 | 6.W.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.9   |         |         |         |  |  |  |
|    | 6.W.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.9   |         |         |         |  |  |  |
| 13 | 6.W.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.8   | 6.W.9   | 6.W.9   | 6.W.9   | 6.W.9   |         |  |  |  |

#### Table 6D3E Standard Coded to Each Item by Reviewers continued

|    | Session 3 |         |         |         |         |        |         |        |         |         |         |         |  |  |  |
|----|-----------|---------|---------|---------|---------|--------|---------|--------|---------|---------|---------|---------|--|--|--|
| 1  | 6.RI.1    | 6.RI.1  | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.2 | 6.SL.3  | 6.SL.3  |         |         |  |  |  |
| 2  | 6.RI.1    | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.3  | 6.SL.3 | 6.SL.3  | 6.SL.3 | 6.SL.3  | 6.SL.3  | 6.SL.3  |         |  |  |  |
| 3  | 6.RI.5    | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.3 | 6.SL.3  | 6.SL.3  | 6.SL.3  | 6.SL.3  |  |  |  |
| 3  | 6.RI.5    | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.3 | 6.SL.3  | 6.SL.3  | 6.SL.3  | 6.SL.3  |  |  |  |
|    | 6.RI.2    | 6.RI.2  | 6.RI.3  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.3  | 6.SL.3  | 6.SL.3  |  |  |  |
| 7  | 6.RI.2    | 6.RI.2  | 6.RI.3  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.3  | 6.SL.3  | 6.SL.3  |  |  |  |
|    | 6.SL.3    | 6.SL.3  | 6.SL.3  | 6.SL.3  | 6.SL.3  | 6.SL.3 |         |        |         |         |         |         |  |  |  |
| 8  | 6.L.2     | 6.RI.6  | 6.RI.6  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.2  | 6.SL.3 | 6.SL.3  | 6.SL.3  | 6.SL.3  |         |  |  |  |
| 9  | 6.L.3     | 6.RI.3  | 6.SL.2  | 6.SL.2  | 6.SL.2  | 6.SL.2 | 6.SL.3  | 6.SL.3 |         |         |         |         |  |  |  |
|    |           |         |         |         |         | Sessi  | ion 4   |        |         |         |         |         |  |  |  |
| 1  | 6.RI.4    | 6.L.2   | 6.L.5.c | 6.RI.1  | 6.RI.2  | 6.RI.4 | 6.RI.4  | 6.RI.4 | 6.RI.4  | 6.RI.6  | 6.RI.6  | 6.W.1.b |  |  |  |
| 1  | 6.RI.4    | 6.L.2   | 6.L.5.c | 6.RI.1  | 6.RI.2  | 6.RI.4 | 6.RI.4  | 6.RI.4 | 6.RI.4  | 6.RI.6  | 6.RI.6  | 6.W.1.b |  |  |  |
| 2  | 6.RI.1    | 6.RI.1  | 6.RI.1  | 6.RI.1  | 6.RI.1  | 6.RI.1 | 6.RI.4  | 6.RI.8 | 6.RI.8  | 6.RI.8  | 6.W.1.b |         |  |  |  |
| 3  | 6.RI.1    | 6.RI.2  | 6.RI.2  | 6.RI.2  | 6.RI.3  | 6.RI.3 | 6.RI.3  | 6.RI.5 | 6.RI.8  | 6.RI.8  | 6.W.1.b |         |  |  |  |
| 4  | 6.RI.8    | 6.RI.9  | 6.RI.9  | 6.RI.9  | 6.RI.9  | 6.RI.9 | 6.RI.9  | 6.RI.9 | 6.W.1.b | 6.W.1.c |         |         |  |  |  |
| 5  | 6.L.4     | 6.L.4   | 6.L.4.a | 6.L.4.a | 6.L.4.a | 6.L.5  | 6.L.5.b | 6.RL.4 | 6.RL.4  | 6.RL.4  | 6.RL.4  | 6.RL.4  |  |  |  |
| 6  | 6.L.5     | 6.L.5.a | 6.L.5.a | 6.L.5.a | 6.RL.4  | 6.RL.4 | 6.RL.4  | 6.RL.4 | 6.RL.5  | 6.RL.5  | 6.RL.5  | 6.RL.5  |  |  |  |
| 7  | 6.RI.6    | 6.RL.2  | 6.RL.6  | 6.RL.6  | 6.RL.6  | 6.RL.6 | 6.RL.6  | 6.RL.6 | 6.RL.6  |         |         |         |  |  |  |
| 8  | 6.RI.2    | 6.RI.2  | 6.RL.2  | 6.RL.2  | 6.RL.2  | 6.RL.2 | 6.RL.2  | 6.RL.2 | 6.W.2.a |         |         |         |  |  |  |
| 0  | 6.RI.2    | 6.RI.2  | 6.RL.2  | 6.RL.2  | 6.RL.2  | 6.RL.2 | 6.RL.2  | 6.RL.2 | 6.W.2.a |         |         |         |  |  |  |
| 13 | 6.RI.1    | 6.RI.1  | 6.RI.1  | 6.RI.1  | 6.RI.1  | 6.RI.1 | 6.RI.1  | 6.RI.3 |         |         |         |         |  |  |  |
| 14 | 6.L.5.a   | 6.L.5.a | 6.RI.4  | 6.RI.4  | 6.RI.4  | 6.RI.4 | 6.RI.4  | 6.RI.4 | 6.RI.4  | 6.RI.4  |         |         |  |  |  |
| 15 | 6.RI.6    | 6.RI.6  | 6.RI.6  | 6.RI.6  | 6.RI.6  | 6.RI.6 | 6.RI.6  | 6.RI.8 |         |         |         |         |  |  |  |
| 15 | 6.RI.6    | 6.RI.6  | 6.RI.6  | 6.RI.6  | 6.RI.6  | 6.RI.6 | 6.RI.6  | 6.RI.8 |         |         |         |         |  |  |  |
| 16 | 6.RI.1    | 6.RI.1  | 6.RI.1  | 6.RI.2  | 6.RI.2  | 6.RI.3 | 6.RI.3  | 6.RI.4 | 6.RI.5  | 6.RI.5  | 6.RI.5  | 6.RI.5  |  |  |  |
| 17 | 6.RI.2    | 6.RI.5  | 6.RI.5  | 6.RI.5  | 6.RI.5  | 6.RI.5 | 6.RI.5  | 6.RI.5 | 6.RI.5  |         |         |         |  |  |  |

#### Table 7D3E Standard Coded to Each Item by Reviewers

|    | Session 1           1         7.RL.1         7.RL.1         7.RL.1         7.RL.1         7.RL.1         7.RL.5         7.RL.5         7.RL.5         7.RL.6 |         |         |         |         |         |         |          |         |         |         |         |  |  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|--|--|
| 1  | 7.RL.1                                                                                                                                                       | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.3   | 7.RL.5  | 7.RL.5  | 7.RL.5  | 7.RL.6  |  |  |
| 2  | 7.RL.1                                                                                                                                                       | 7.RL.2  | 7.RL.3  | 7.RL.3  | 7.RL.3  | 7.RL.6  | 7.RL.6  | 7.RL.6   | 7.RL.6  | 7.RL.6  | 7.RL.6  | 7.RL.6  |  |  |
| 3  | 7.RL.2                                                                                                                                                       | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.3   | 7.RL.5  |         |         |         |  |  |
|    | 7.W.1                                                                                                                                                        | 7.W.1.a | 7.W.2   | 7.W.2   | 7.W.2   | 7.W.2   | 7.W.2   | 7.W.2    | 7.W.2.a | 7.W.2.a | 7.W.2.b | 7.W.2.b |  |  |
|    | 7.L.1                                                                                                                                                        | 7.L.1   | 7.L.6   | 7.L.6   | 7.W.1.b | 7.W.1.b | 7.W.1.c | 7.W.2    | 7.W.2.a | 7.W.2.a | 7.W.2.b | 7.W.2.b |  |  |
| 4  | 7.L.1                                                                                                                                                        | 7.L.2   | 7.L.2   | 7.L.3   | 7.W.1.d | 7.W.1.e | 7.W.2.b | 7.W.2.c  | 7.W.2.d | 7.W.2.e | 7.W.2.e | 7.W.2.f |  |  |
|    | 7.L.1                                                                                                                                                        | 7.L.1   | 7.L.2   | 7.L.2   | 7.L.3   | 7.L.3   | 7.RL.3  | 7.W.2.a  | 7.W.2.c | 7.W.2.e | 7.W.2.f | 7.W.4   |  |  |
|    | 7.W.4                                                                                                                                                        | 7.W.9   | 7.W.9   | 7.W.9   | 7.W.2.c | 7.W.2.c | 7.W.4   | 7.W.9    | 7.W.4   | 7.W.4   | 7.W.4   | 7.W.4   |  |  |
|    |                                                                                                                                                              |         |         |         |         | Sessior | n 2     | <u>.</u> |         |         |         |         |  |  |
| 1  | 7.W.1.e                                                                                                                                                      | 7.W.2.f | 7.W.3   | 7.W.3   | 7.W.3.e | 7.W.3.e | 7.W.3.e | 7.W.3.e  | 7.W.3.e |         |         |         |  |  |
| 2  | 7.L.3.a                                                                                                                                                      | 7.RI.4  | 7.W.2.c | 7.W.2.e | 7.W.2.e | 7.W.2.e | 7.W.2.e | 7.W.2.e  | 7.W.2.e | 7.W.2.e | 7.W.5   |         |  |  |
| 3  | 7.RI.1                                                                                                                                                       | 7.W.1   | 7.W.1.b | 7.W.1.b | 7.W.1.b | 7.W.1.b | 7.W.1.b | 7.W.1.b  | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8   |  |  |
| 4  | 7.RI.4                                                                                                                                                       | 7.W.1   | 7.W.1.e | 7.W.1.e | 7.W.1.e | 7.W.1.e | 7.W.1.e | 7.W.1.e  | 7.W.1.e | 7.W.2.f |         |         |  |  |
|    | 7.L.3.a                                                                                                                                                      | 7.L.3.a | 7.RI.4  | 7.W.2   | 7.W.2.b | 7.W.2.b | 7.W.2.b | 7.W.2.b  | 7.W.2.b | 7.W.2.b | 7.W.2.e | 7.W.4   |  |  |
| 6  | 7.L.3.a                                                                                                                                                      | 7.L.3.a | 7.RI.4  | 7.W.2.a | 7.W.2.b | 7.W.2.b | 7.W.2.b | 7.W.4    | 7.W.5   | 7.W.5   |         |         |  |  |
|    | 7.W.5                                                                                                                                                        |         |         |         |         |         |         |          |         |         |         |         |  |  |
| 7  | 7.L.3.a                                                                                                                                                      | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.W.4    | 7.W.5   |         |         |         |  |  |
|    | 7.L.3.a                                                                                                                                                      | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.RI.4  | 7.W.4   | 7.W.5    | 7.W.5   |         |         |         |  |  |
| 8  | 7.L.3.a                                                                                                                                                      | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.RI.4  | 7.W.2.d  | 7.W.4   |         |         |         |  |  |
| 0  | 7.L.3                                                                                                                                                        | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.L.3.a | 7.W.2.d | 7.W.3.a | 7.W.3.d  | 7.W.4   | 7.W.4   | 7.W.5   |         |  |  |
| 9  | 7.L.1                                                                                                                                                        | 7.L.1   | 7.L.1   | 7.L.1   | 7.L.1.a | 7.L.2   | 7.L.2   | 7.L.2    | 7.L.2   | 7.L.2   | 7.L.2   | 7.W.4   |  |  |
|    | 7.W.5                                                                                                                                                        |         |         |         |         |         |         |          |         |         |         |         |  |  |
| 10 | 7.L.1                                                                                                                                                        | 7.L.1   | 7.L.1.a | 7.L.1.b | 7.L.1.b | 7.L.1.c | 7.L.3   | 7.W.2.c  | 7.W.2.c | 7.W.2.c | 7.W.2.c | 7.W.2.d |  |  |
|    | 7.W.4                                                                                                                                                        | 7.W.5   | 7.W.5   |         |         |         |         |          |         |         |         |         |  |  |
| 11 | 7.W.1.b                                                                                                                                                      | 7.W.2.b | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8    | 7.W.8   |         |         |         |  |  |
| 12 | 7.W.1.b                                                                                                                                                      | 7.W.2.b | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8    | 7.W.8   | 7.W.9   |         |         |  |  |
|    | 7.RI.1                                                                                                                                                       | 7.W.1.b | 7.W.2   | 7.W.2.b | 7.W.8   | 7.W.8   | 7.W.8   | 7.W.8    | 7.W.8   | 7.W.9   | 7.W.9   | 7.W.9   |  |  |
| 13 | 7.W.1.b                                                                                                                                                      | 7.W.1.b | 7.W.2.b | 7.W.4   | 7.W.4   | 7.W.8   | 7.W.8   | 7.W.9    | 7.W.9   | 7.W.9   | 7.W.9   | 7.W.9   |  |  |
|    | 7.W.9                                                                                                                                                        | 7.W.9.b | 7.W.9   |         |         | •=0     |         |          |         |         |         |         |  |  |

| 1  | 7.L.1.a | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.3  | 7.SL.3  |        |        |        |  |  |  |
|----|---------|---------|---------|---------|---------|-----------|---------|---------|---------|--------|--------|--------|--|--|--|
| 2  | 7.RI.1  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.2  |         |        |        |        |  |  |  |
| 2  | 7.RI.1  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.3 |        |        |  |  |  |
| 6  | 7.RI.5  | 7.RI.6  |         | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.3  | 7.SL.3  | 7.SL.3 | 7.SL.3 |        |  |  |  |
| -  | 7.RI.6  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.2  |         |        |        |        |  |  |  |
| 7  | 7.RI.1  | 7.RI.1  | 7.RI.5  | 7.SL.2  | 7.SL.2  | 7.SL.2    | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.3 |        |        |  |  |  |
| 8  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.2  | 7.SL.3  | 7.SL.3    | 7.SL.3  | 7.SL.3  | 7.SL.3  | 7.SL.3 |        |        |  |  |  |
| ð  | 7.RI.5  | 7.SL.2  | 7.SL.2  | 7.SL.3  | 7.SL.3  | 7.SL.3    | 7.SL.3  | 7.SL.3  | 7.SL.3  | 7.SL.3 |        |        |  |  |  |
|    |         |         |         |         |         | Session 4 |         |         |         | •      |        | •      |  |  |  |
| 1  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5    | 7.RI.5  | 7.RI.5  |         |        |        |        |  |  |  |
| 2  | 7.L.4.a | 7.L.4.b | 7.L.4.b | 7.L.4.b | 7.L.4.b | 7.L.4.b   | 7.L.4.b | 7.L.4.b | 7.RI.4  | 7.RI.4 | 7.RI.4 |        |  |  |  |
| 3  | 7.RI.4  | 7.L.4   | 7.L.4.a | 7.L.4.a | 7.L.4.a | 7.L.4.a   | 7.L.4.a | 7.L.4.a | 7.L.4.a | 7.L.6  | 7.RI.4 | 7.RI.4 |  |  |  |
| 5  | 7.RI.4  | 7.RI.5  |         |         |         |           |         |         |         |        |        |        |  |  |  |
| 4  | 7.RI.6  | 7.RI.6  | 7.RI.6  | 7.RI.6  | 7.RI.6  | 7.RI.6    | 7.RI.6  | 7.RI.9  |         |        |        |        |  |  |  |
| 4  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.3  | 7.RI.6    | 7.RI.6  | 7.RI.6  | 7.RI.6  | 7.RI.8 |        |        |  |  |  |
| 5  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5  | 7.RI.5    | 7.RI.5  | 7.RI.6  | 7.RI.6  |        |        |        |  |  |  |
| 6  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1    | 7.RI.1  | 7.RI.3  | 7.RI.8  |        |        |        |  |  |  |
| 7  | 7.RI.1  | 7.RI.2  | 7.RI.2  | 7.RI.2  | 7.RI.2  | 7.RI.2    | 7.RI.2  | 7.RI.5  |         |        |        |        |  |  |  |
| 8  | 7.L.4   | 7.L.4   | 7.L.4.a | 7.L.4.a | 7.L.4.c | 7.L.4.c   | 7.L.4.c | 7.L.6   | 7.RI.4  | 7.RI.4 | 7.RI.4 | 7.RI.4 |  |  |  |
| 9  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.3  | 7.RI.3    | 7.RI.3  | 7.RI.8  | 7.RI.8  |        |        |        |  |  |  |
| 10 | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.1  | 7.RI.2  | 7.RI.8    | 7.RI.8  | 7.RI.8  | 7.RI.8  | 7.RI.8 | 7.RI.8 |        |  |  |  |
| 15 | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1    | 7.RL.1  | 7.RL.2  | 7.RL.3  | 7.RL.6 |        |        |  |  |  |
| 15 | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1  | 7.RL.1    | 7.RL.1  | 7.RL.1  |         |        |        |        |  |  |  |
| 16 | 7.RL.3  | 7.RL.3  | 7.RL.3  | 7.RL.3  | 7.RL.3  | 7.RL.3    | 7.RL.3  | 7.RL.6  |         |        |        |        |  |  |  |
| 17 | 7.L.5   | 7.L.5   | 7.RL.4  | 7.RL.4  | 7.RL.4  | 7.RL.4    | 7.RL.4  | 7.RL.4  | 7.RL.4  |        |        |        |  |  |  |
| 18 | 7.RL.1  | 7.RL.2  | 7.RL.3  | 7.RL.3  | 7.RL.3  | 7.RL.6    | 7.RL.6  |         |         |        |        |        |  |  |  |
| 19 | 7.L.3.a | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.2  | 7.RL.2    | 7.RL.2  | 7.RL.2  | 7.RL.2  |        |        |        |  |  |  |

# Table 7D3E Standard Coded to Each Item by Reviewers continued

|    | Session 1 |         |         |         |         |         |         |         |         |         |         |         |  |  |
|----|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|--|
| 1  | 8.RI.1    | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.5  | 8.RL.1  |         |         |         |  |  |
| 2  | 8.RI.2    | 8.RI.2  | 8.RI.2  | 8.RI.2  | 8.RI.2  | 8.RI.2  | 8.RI.2  | 8.RI.3  |         |         |         |         |  |  |
| 2  | 8.RI.1    | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.1  | 8.RI.2  | 8.RI.2  | 8.RI.3  | 8.RI.5  | 8.RL.1  |         |         |  |  |
| 3  | 8.RI.3    | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.5  |         |         |         |  |  |
| 4  | 8.RI.1    | 8.RI.1  | 8.RI.2  | 8.RI.2  | 8.RI.2  | 8.RI.3  | 8.RI.3  | 8.RI.3  | 8.RI.5  | 8.RI.8  |         |         |  |  |
|    | 8.L.2     | 8.RI.1  | 8.W.2   | 8.W.2   | 8.W.2   | 8.W.2   | 8.W.2   | 8.W.2.a | 8.W.2.a | 8.W.2.a | 8.W.2.a | 8.W.2.b |  |  |
|    | 8.L.3     | 8.W.2   | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.c | 8.W.2.c | 8.W.2.c | 8.W.2.c | 8.W.2.d | 8.W.2.e | 8.W.2.e |  |  |
| 5  | 8.L.1     | 8.L.1   | 8.L.2   | 8.L.6   | 8.RI.3  | 8.W.2.b | 8.W.2.c | 8.W.2.d | 8.W.2.d | 8.W.2.d | 8.W.2.e | 8.W.2.e |  |  |
|    | 8.L.1     | 8.L.1   | 8.L.1   | 8.L.2   | 8.L.2   | 8.L.3   | 8.L.6   | 8.RI.1  | 8.W.2.a | 8.W.2.f | 8.W.2.f | 8.W.2.f |  |  |
|    | 8.W.2.b   | 8.W.2.b | 8.W.2.d | 8.W.9   | 8.W.2.e | 8.W.4   | 8.W.9   | 8.W.2.f | 8.W.4   | 8.W.9   | 8.W.9.b |         |  |  |
|    |           |         |         |         |         | Session | n 2     |         |         |         |         |         |  |  |
| 1  | 8.L.6     | 8.W.2.c | 8.W.2.c | 8.W.3.c | 8.W.3.c | 8.W.3.c | 8.W.3.d | 8.W.3.d | 8.W.3.d |         |         |         |  |  |
| 2  | 8.L.3     | 8.L.5   | 8.W.2.d | 8.W.3.b | 8.W.3.b | 8.W.3.b | 8.W.3.b | 8.W.3.d | 8.W.3.d | 8.W.3.d | 8.W.3.d | 8.W.3.d |  |  |
| 2  | 8.W.5     | 8.W.5   |         |         |         |         |         |         |         |         |         |         |  |  |
| 3  | 8.W.1.e   | 8.W.1.e | 8.W.1.e | 8.W.1.e | 8.W.1.e | 8.W.2.f | 8.W.2.f | 8.W.3.e |         |         |         |         |  |  |
| 4  | 8.L.6     | 8.W.2.a | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.c | 8.W.2.d | 8.W.4   |         |         |  |  |
| 6  | 8.L.6     | 8.W.1.a | 8.W.1.c | 8.W.1.c | 8.W.1.c | 8.W.1.c | 8.W.1.c | 8.W.1.c |         |         |         |         |  |  |
| 7  | 8.L.2.a   | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.3   | 8.W.4   |         |         |         |  |  |
|    | 8.L.2     | 8.L.2   | 8.L.2.a | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.L.2.c | 8.W.4   |         |         |         |  |  |
| 8  | 8.L.2     | 8.L.2.a | 8.L.3.a | 8.W.4   |         |         |  |  |
| 9  | 8.L.2     | 8.L.2.a | 8.L.2.b | 8.L.2.b | 8.L.2.b | 8.L.2.b | 8.L.2.b | 8.L.2.b | 8.W.4   |         |         |         |  |  |
| 10 | 8.RI.1    | 8.W.2   | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.8   | 8.W.9   |         |         |  |  |
| 10 | 8.RI.1    | 8.W.2   | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.b | 8.W.2.d | 8.W.8   | 8.W.9   |         |         |         |  |  |
| 11 | 8.L.6     | 8.W.8   | 8.W.9   | 8.W.9   |         |  |  |
| 12 | 8.W.8     | 8.RI.8  | 8.W.1   | 8.W.1.b | 8.W.2.b | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.9   | 8.W.9.b | 8.W.9.b |  |  |
| 13 | 8.W.8     | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.9.b |         |         |         |  |  |
| 14 | 8.W.8     | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.9   | 8.W.9   | 8.W.9   |  |  |
| 14 | 8.W.8     | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.8   | 8.W.9   | 8.W.9   | 8.W.9   | 8.W.9   |         |         |  |  |

#### ELA Grade 8 Table 8D3E Standard Coded to Each Item by Reviewers

8.RL.1

8.RL.3

8.RL.3

15

16

8.RL.2

8.RL.3

8.RL.6

8.RL.2

8.RL.3

8.RL.6

8.RL.2

8.RL.3

8.RL.6

#### Session 3 1 8.RI.1 8.SL.3 8.SL.3 8.SL.3 8.SL.3 2 8.L.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.3 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.3 8.SL.3 3 8.RI.1 8.RI.1 8.SL.3 8.SL.3 8.SL.3 8.SL.3 7 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.3 8.SL.2 8 8.RI.2 8.SL.3 8.W.2.f 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 8.SL.2 9 8.RI.1 8.SL.2 8.SL.2 8.SL.3 8.SL.3 8.SL.3 Session 4 8.RL.3 8.RL.3 8.RL.4 8.RL.4 1 8.L.4 8.L.5 8.L.6 8.RI.6 8.RL.4 8.RL.4 8.RL.4 2 8.L.4 8.L.6 8.RL.1 8.RL.1 8.RL.1 8.RL.1 8.RL.1 8.RL.3 8.RL.1 8.RL.1 8.RL.3 3 8.RL.3 8.RL.3 8.RL.3 8.RL.3 8.RL.3 8.RL.3 8.RL.3 8.RL.3 4 8.RL.1 8.RL.3 8.RL.3 8.RL.3 8.RL.6 8.RL.6 8.RL.6 8.RL.6 5 8.RI.3 8.RI.3 8.RI.3 8.RI.4 8.RI.4 8.RI.4 8.RI.4 8.RI.6 8.RL.4 8.L.5 8.RI.2 8.RI.3 8.RI.4 8.RI.4 8.RI.4 8.RI.5 6 8.L.4.a 8.L.4.a 8.L.4.a 8.RI.4 8.RI.1 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.9 8.RI.9 8.RI.9 7 8.RI.1 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.8 8.RI.9 8.RI.9 8.RI.9 8.RI.2 8.RI.8 8.RI.1 8.RI.9 8.RI.9 8.RI.9 8.RI.9 8.RI.9 8.RI.9 8 8.RI.1 8.RI.2 8.RI.8 8.RI.9 8.RI.9 8.RI.9 8.RI.9 8.RI.1 8.RI.9 8.L.4.a 8.RL.4 8.L.4 8.L.4.a 8.L.4.c 8.RL.4 13 8.L.4.a 8.L.6 8.RL.4 8.RL.4 8.RL.4 8.RL.1 8.RL.2 8.RL.2 8.RL.2 8.RL.2 8.RL.2 8.RL.3 8.RL.2 14

8.RL.4

8.RI.9

8.RI.9

8.RL.4

#### Table 8D3E Standard Coded to Each Item by Reviewers continued

8.RL.2

8.RL.3

8.RL.6

8.RL.2

8.RL.3

8.RL.6

8.RL.3

8.RL.3

8.RL.6

8.RL.9

8.RL.2

8.RL.3

8.RL.6

#### Table 3D3M Standard Coded to Each Item by Reviewers

|    |          |          |          |          |          | Session  | 1        |          |          |          |          |        |
|----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--------|
| 2  | 3.NBT.1  | 3.0A.5   |          |          |          |        |
| 3  | 3.NF.1   | 3.NF.2.b |          |          |        |
| 4  | 3.OA.1   | 3.OA.1   | 3.OA.1   | 3.OA.1   | 3.0A.1   | 3.0A.1   | 3.OA.3   | 3.OA.3   | 3.OA.3   | 3.0A.7   |          |        |
| 6  | 3.MD.1   | 3.NBT.2  | 3.NBT.2  |          |          |        |
| 7  | 3.G.1    |          |          |          |        |
| 8  | 3.NBT.1  |          |          |          |        |
| 9  | 3.OA.1   | 3.OA.2   | 3.OA.3   | 3.OA.3   | 3.OA.4   | 3.OA.4   | 3.OA.4   | 3.OA.4   | 3.OA.4   | 3.0A.4   | 3.OA.4   | 3.0A.4 |
| 9  | 3.OA.7   |          |          |          |          |          |          |          |          |          |          |        |
| 11 | 3.G.1    |          |          |          |        |
| 12 | 3.NF.2   | 3.NF.2   | 3.NF.2.a | 3.NF.2.b |          |        |
| 13 | 3.MD.3   | 3.NBT.2  |          |          |        |
| 14 | 3.OA.3   | 3.NBT.3  | 3.OA.1   | 3.OA.2   | 3.OA.2   | 3.0A.3   | 3.OA.3   | 3.OA.4   | 3.OA.4   | 3.OA.4   | 3.OA.4   | 3.0A.6 |
| 17 | 3.OA.6   | 3.OA.7   | 3.OA.8   |          |          |          |          |          |          |          |          |        |
| 16 | 3.MD.1   | 3.NBT.2  |          |          |        |
| 17 | 3.NBT.2  | 3.OA.8   |          |          |        |
| 18 | 3.MD.5   | 3.MD.5   | 3.MD.5   | 3.MD.5   | 3.MD.5.b | 3.MD.5.b | 3.MD.8   |          |          |          |          |        |
| 19 | 3.NF.1   | 3.NF.3   | 3.NF.3.d |          |        |
| 20 | 3.MD.7.b | 3.MD.7.b | 3.MD.7.c | 3.MD.7.d |          |        |
| 21 | 3.NBT.2  | 3.OA.8   |          |          |          |        |
| 22 | 3.NF.1   | 3.NF.1   | 3.NF.3   | 3.NF.3.a | 3.NF.3.a | 3.NF.3.b | 3.NF.3.b | 3.NF.3.b | 3.NF.3.b | 3.NF.3.b | 3.NF.3.b |        |
| 23 | 3.NBT.3  | 3.NBT.3  | 3.NBT.3  | 3.OA.3   | 3.OA.3   | 3.OA.3   | 3.OA.3   | 3.OA.3   | 3.OA.7   | 3.OA.7   |          |        |
| 24 | 3.NF.1   | 3.NF.3.b |          |          |          |        |
| 25 | 3.G.2    | 3.G.2    | 3.G.2    | 3.G.2    | 3.G.2    | 3.NF.1   | 3.NF.1   | 3.NF.1   | 3.NF.1   |          |          |        |

| Table 3D3M Standard | Coded to Each | Item by Reviewers continued |
|---------------------|---------------|-----------------------------|
|---------------------|---------------|-----------------------------|

|    |          |         |          |          |          | Session 2 |          |          |          |          |          |        |
|----|----------|---------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|--------|
| 2  | 3.MD.8   | 3.MD.8  | 3.MD.8   | 3.MD.8   | 3.MD.8   | 3.MD.8    | 3.MD.8   |          |          |          |          |        |
| 3  | 3.NBT.1  | 3.NBT.1 | 3.NBT.1  | 3.NBT.1  | 3.NBT.1  | 3.NBT.1   | 3.NBT.1  | 3.NBT.1  |          |          |          |        |
| 4  | 3.OA.2   | 3.OA.2  | 3.OA.2   | 3.OA.2   | 3.OA.2   | 3.OA.3    | 3.0A.3   | 3.0A.3   | 3.OA.5   | 3.OA.6   |          |        |
| 6  | 3.G.1    | 3.G.1   | 3.G.1    | 3.G.1    | 3.G.1    | 3.G.1     | 3.G.1    | 3.G.2    |          |          |          |        |
| 7  | 3.NBT.3  | 3.OA.2  | 3.OA.2   | 3.OA.2   | 3.OA.2   | 3.OA.3    | 3.0A.3   | 3.0A.3   | 3.OA.3   | 3.OA.3   | 3.OA.3   | 3.OA.7 |
| /  | 3.OA.7   |         |          |          |          |           |          |          |          |          |          |        |
| 8  | 3.G.1    | 3.G.1   | 3.G.1    | 3.G.1    | 3.G.1    | 3.G.1     | 3.G.1    | 3.G.1    |          |          |          |        |
| 9  | 3.NF.2.b | 3.NF.1  | 3.NF.2   | 3.NF.2   | 3.NF.2   | 3.NF.2.b  | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b |        |
| 11 | 3.NBT.2  | 3.NBT.2 | 3.NBT.2  | 3.NBT.2  | 3.NBT.2  | 3.NBT.2   | 3.NBT.2  | 3.NBT.2  | 3.OA.3   | 3.OA.8   |          |        |
| 12 | 3.MD.2   | 3.MD.2  | 3.MD.2   | 3.MD.2   | 3.MD.2   | 3.MD.2    | 3.MD.2   | 3.MD.2   |          |          |          |        |
| 13 | 3.NF.1   | 3.G.2   | 3.G.2    | 3.G.2    | 3.G.2    | 3.NF.1    | 3.NF.1   | 3.NF.1   | 3.NF.1   | 3.NF.1   |          |        |
| 14 | 3.OA.5   | 3.OA.1  | 3.OA.3   | 3.OA.3   | 3.OA.5   | 3.OA.5    | 3.OA.5   | 3.OA.5   | 3.OA.5   | 3.OA.7   | 3.OA.7   | 3.OA.8 |
| 17 | 3.OA.8   |         |          |          |          |           |          |          |          |          |          |        |
| 16 | 3.NF.1   | 3.G.2   | 3.MD.1   | 3.NBT.2  | 3.NF.1   | 3.NF.1    | 3.NF.1   | 3.NF.1   | 3.NF.1   | 3.NF.1   |          |        |
| 17 | 3.G.2    | 3.G.2   | 3.G.2    | 3.NF.1   | 3.NF.1   | 3.NF.1    | 3.NF.1   | 3.NF.1   | 3.NF.1   | 3.NF.1   |          |        |
| 18 | 3.NF.1   | 3.NF.2  | 3.NF.2.a | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b  | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b | 3.NF.2.b |          |        |
| 19 | 3.NF.1   | 3.MD.4  | 3.MD.4   | 3.MD.4   | 3.MD.4   | 3.NF.2    | 3.NF.2.a | 3.NF.2.b | 3.NF.2.b |          |          |        |
| 20 | 3.OA.1   | 3.OA.1  | 3.OA.7   | 3.OA.7   | 3.OA.7   | 3.OA.7    | 3.OA.7   | 3.OA.7   | 3.OA.7   |          |          |        |
| 21 | 3.NBT.3  | 3.NBT.3 | 3.NBT.3  | 3.0A.1   | 3.OA.1   | 3.0A.1    | 3.0A.3   | 3.0A.3   | 3.OA.3   | 3.OA.3   | 3.OA.8   | 3.OA.8 |
| 22 | 3.NBT.2  | 3.NBT.2 | 3.NBT.2  | 3.NBT.2  | 3.NBT.2  | 3.NBT.2   | 3.NBT.2  | 3.NBT.2  | 3.OA.8   | 3.OA.8   | 3.OA.8   |        |
| 23 | 3.MD.6   | 3.MD.5  | 3.MD.5.a | 3.MD.5.a | 3.MD.5.b | 3.MD.5.b  | 3.MD.6   | 3.MD.6   | 3.MD.6   | 3.MD.6   |          |        |
| 24 | 3.MD.1   | 3.MD.3  | 3.MD.3   | 3.MD.3   | 3.MD.3   | 3.MD.3    | 3.MD.3   |          |          |          |          |        |
| 25 | 3.NBT.2  | 3.OA.9  | 3.OA.9   | 3.OA.9   | 3.OA.9   | 3.OA.9    | 3.OA.9   |          |          |          |          |        |

#### Table 4D3M Standard Coded to Each Item by Reviewers

|    | Session 1 |          |          |          |          |          |          |          |          |          |          |          |  |  |
|----|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| 2  | 4.NBT.1   | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  |          |          |          |          |  |  |
| 3  | 4.OA.1    | 4.OA.1   | 4.OA.1   | 4.OA.1   | 4.OA.1   | 4.0A.1   | 4.OA.1   | 4.0A.1   |          |          |          |          |  |  |
| 4  | 4.G.1     | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    |          |          |          |          |  |  |
| 6  | 4.NF.1    | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.2   | 4.NF.5   |          |          |          |  |  |
| 7  | 4.NBT.3   | 4.NBT.3  | 4.NBT.3  | 4.NBT.3  | 4.NBT.3  | 4.NBT.3  | 4.NBT.3  | 4.NBT.3  |          |          |          |          |  |  |
| 8  | 4.MD.3    | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.NBT.6  | 4.OA.2   |          |          |  |  |
| 9  | 4.MD.2    | 4.0A.1   | 4.OA.1   | 4.0A.1   | 4.0A.1   | 4.0A.1   | 4.OA.1   | 4.OA.2   | 4.OA.2   |          |          |          |  |  |
| 11 | 4.MD.1    | 4.MD.1   | 4.MD.2   | 4.OA.2   | 4.OA.3   |          |  |  |
| 12 | 4.NBT.4   | 4.NBT.5  | 4.OA.2   | 4.OA.3   |          |          |  |  |
| 13 | 4.G.1     | 4.G.1    | 4.G.2    |          |          |          |  |  |
| 14 | 4.NBT.6   | 4.OA.2   | 4.OA.2   | 4.OA.2   | 4.OA.3   | 4.OA.4   | 4.OA.4   | 4.OA.4   |          |          |          |          |  |  |
| 16 | 4.NBT.1   | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.1  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  |          |          |  |  |
| 17 | 4.NF.1    | 4.NF.2   | 4.NF.3   | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b | 4.NF.3.c | 4.NF.4.b |          |          |  |  |
| 18 | 4.MD.4    | 4.MD.4   | 4.MD.4   | 4.MD.4   | 4.MD.4   | 4.MD.4   | 4.NF.3.c | 4.NF.3.c | 4.NF.3.c | 4.NF.3.c | 4.NF.3.c | 4.NF.3.c |  |  |
| 10 | 4.NF.3.c  | 4.NF.3.d |          |          |          |          |          |          |          |          |          |          |  |  |
| 19 | 4.NBT.5   | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.OA.2   | 4.OA.3   | 4.OA.4   |          |          |          |  |  |
| 20 | 4.OA.4    | 4.OA.4   | 4.OA.4   | 4.OA.4   | 4.OA.4   | 4.OA.4   | 4.OA.4   | 4.OA.4   |          |          |          |          |  |  |
| 21 | 4.G.1     | 4.MD.5   | 4.MD.5   | 4.MD.5   | 4.MD.5   | 4.MD.5.a | 4.MD.5.a | 4.MD.5.a | 4.MD.5.b | 4.MD.5.b | 4.MD.5.b | 4.MD.6   |  |  |
| 22 | 4.NF.4    | 4.NF.4   | 4.NF.4.a | 4.NF.4.b | 4.NF.4.c |          |  |  |
| 23 | 4.0A.5    | 4.OA.5   |          |          |          |          |  |  |
| 24 | 4.MD.2    | 4.MD.4   | 4.NF.5   | 4.NF.5   | 4.NF.6   |  |  |
| 25 | 4.MD.5    | 4.MD.6   |          |          |          |  |  |
| 26 | 4.G.3     | 4.G.3    | 4.G.3    | 4.G.3    | 4.G.3    | 4.G.3    | 4.G.3    | 4.G.3    |          |          |          |          |  |  |
| 27 | 4.NF.7    | 4.NF.7   | 4.NF.7   | 4.NF.7   | 4.NF.7   | 4.NF.7   | 4.NF.7   | 4.NF.7   |          |          |          |          |  |  |

#### Table 4D3M Standard Coded to Each Item by Reviewers continued

|    |          |          |          |          |          | Session 2 |          |          |         |         |        |        |
|----|----------|----------|----------|----------|----------|-----------|----------|----------|---------|---------|--------|--------|
| 2  | 4.NBT.3  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2   | 4.NBT.2  | 4.NBT.2  |         |         |        |        |
| 3  | 4.MD.1   | 4.MD.7   | 4.OA.1   | 4.OA.1   | 4.OA.1   | 4.OA.1    | 4.OA.2   | 4.OA.2   | 4.OA.2  | 4.OA.2  | 4.OA.2 |        |
| 4  | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1    | 4.G.1     | 4.G.1    | 4.G.1    |         |         |        |        |
| 6  | 4.MD.1   | 4.MD.2   | 4.MD.2   | 4.MD.2   | 4.MD.2   | 4.MD.2    | 4.MD.2   | 4.NBT.4  | 4.NBT.4 | 4.NBT.4 | 4.OA.3 | 4.OA.3 |
| U  | 4.OA.3   |          |          |          |          |           |          |          |         |         |        |        |
| 7  | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1   | 4.NF.1    | 4.NF.2   | 4.NF.2   | 4.NF.2  |         |        |        |
| 8  | 4.NBT.1  | 4.NBT.4  | 4.NBT.4  | 4.NBT.4  | 4.NBT.4  | 4.NBT.4   | 4.NBT.4  | 4.NBT.4  | 4.NBT.4 | 4.OA.2  | 4.OA.3 |        |
| 9  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2  | 4.NBT.2   | 4.NBT.2  | 4.NBT.2  |         |         |        |        |
| 11 | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3   | 4.MD.3    | 4.MD.3   | 4.MD.3   | 4.OA.2  |         |        |        |
| 12 | 4.NBT.6  | 4.NBT.6  | 4.NBT.6  | 4.NBT.6  | 4.NBT.6  | 4.OA.2    | 4.OA.2   | 4.OA.3   | 4.OA.3  | 4.OA.3  | 4.OA.3 | 4.OA.3 |
| 14 | 4.OA.3   |          |          |          |          |           |          |          |         |         |        |        |
| 13 | 4.NF.2   | 4.NF.2   | 4.NF.2   | 4.NF.2   | 4.NF.2   | 4.NF.2    | 4.NF.2   | 4.NF.2   |         |         |        |        |
| 14 | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2     | 4.G.2    | 4.G.2    |         |         |        |        |
| 16 | 4.MD.1   | 4.MD.7   | 4.MD.7   | 4.MD.7   | 4.MD.7   | 4.MD.7    | 4.MD.7   | 4.NBT.4  | 4.NBT.4 | 4.NBT.4 |        |        |
| 17 | 4.NF.3   | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b | 4.NF.3.b  | 4.NF.3.b | 4.NF.3.b |         |         |        |        |
| 18 | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.NBT.5  | 4.NBT.5   | 4.OA.2   | 4.OA.3   | 4.OA.3  |         |        |        |
| 19 | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5    | 4.OA.5   | 4.OA.5   |         |         |        |        |
| 20 | 4.MD.5.a | 4.MD.5.a | 4.MD.5.a | 4.MD.5.a | 4.MD.5.a | 4.MD.5.a  | 4.MD.5.a | 4.MD.5.a |         |         |        |        |
| 21 | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2     | 4.G.2    | 4.MD.5   | 4.MD.5  | 4.MD.6  |        |        |
| 22 | 4.NF.1   | 4.NF.3.d | 4.NF.3.d | 4.NF.3.d | 4.NF.3.d | 4.NF.5    | 4.NF.5   | 4.NF.5   | 4.NF.5  | 4.NF.5  | 4.NF.5 |        |
| 23 | 4.NBT.5  | 4.NBT.6  | 4.NBT.6  | 4.NBT.6  | 4.NBT.6  | 4.NBT.6   | 4.NBT.6  | 4.OA.3   | 4.OA.3  | 4.OA.3  |        |        |
| 24 | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5   | 4.OA.5    | 4.OA.5   | 4.OA.5   |         |         |        |        |
| 25 | 4.NBT.6  | 4.NF.6   | 4.NF.5   | 4.NF.6   | 4.NF.6   | 4.NF.6    | 4.NF.6   | 4.NF.6   |         |         |        |        |
| 26 | 4.MD.5   | 4.MD.7   | 4.MD.7   | 4.MD.7   | 4.MD.7   | 4.MD.7    | 4.MD.7   | 4.NBT.4  | 4.NBT.4 | 4.NBT.4 |        |        |
| 27 | 4.G.1    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2    | 4.G.2     | 4.G.2    | 4.G.2    |         |         |        |        |

#### Table 5D3M Standard Coded to Each Item by Reviewers

|    | Session 1 |          |          |          |          |          |          |          |          |          |          |          |  |  |
|----|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| 2  | 5.NBT.1   | 5.NBT.1  | 5.NBT.1  | 5.NBT.1  | 5.NBT.1  | 5.NBT.1  | 5.NBT.1  | 5.NBT.1  | 5.NBT.2  |          |          |          |  |  |
| 3  | 5.NF.1    | 5.NF.1   | 5.NF.1   | 5.NF.1   | 5.NF.1   | 5.NF.1   | 5.NF.2   | 5.NF.2   | 5.NF.2   | 5.NF.2   |          |          |  |  |
| 4  | 5.MD.1    | 5.MD.1   | 5.MD.1   | 5.MD.1   | 5.MD.1   | 5.MD.1   | 5.MD.1   | 5.NBT.7  | 5.OA.2   |          |          |          |  |  |
| 6  | 5.G.1     | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.2    | 5.G.2    | 5.G.2    |          |          |  |  |
| 7  | 5.NBT.4   | 5.NBT.4  | 5.NBT.4  | 5.NBT.4  | 5.NBT.4  | 5.NBT.4  | 5.NBT.4  | 5.NBT.4  |          |          |          |          |  |  |
| 8  | 5.NF.1    | 5.NF.1   | 5.NF.1   | 5.NF.1   | 5.NF.1   | 5.NF.2   | 5.NF.2   | 5.NF.2   | 5.NF.2   | 5.NF.2   |          |          |  |  |
| 9  | 5.OA.1    | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.2   |          |          |          |  |  |
| 11 | 5.MD.2    | 5.MD.2   | 5.MD.2   | 5.MD.2   | 5.MD.2   | 5.MD.2   | 5.MD.2   | 5.NF.1   | 5.NF.2   | 5.NF.2   | 5.NF.2   |          |  |  |
| 12 | 5.NBT.5   | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.OA.2   |          |          |          |  |  |
| 13 | 5.OA.1    | 5.OA.1   | 5.OA.1   | 5.OA.2   |          |  |  |
| 14 | 5.NF.3    | 5.NF.3   | 5.NF.3   | 5.NF.3   | 5.NF.3   | 5.NF.3   | 5.NF.3   | 5.NF.3   |          |          |          |          |  |  |
| 16 | 5.G.1     | 5.G.1    | 5.G.1    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.OA.2   | 5.OA.3   | 5.OA.3   | 5.OA.3   |  |  |
| 10 | 5.OA.3    | 5.OA.3   |          |          |          |          |          |          |          |          |          |          |  |  |
| 17 | 5.MD.3    | 5.MD.5   | 5.MD.5.b |          |          |          |  |  |
| 18 | 5.NBT.6   | 5.NBT.6  | 5.NBT.6  | 5.NBT.6  | 5.NBT.6  | 5.NBT.6  | 5.NBT.6  | 5.NBT.6  |          |          |          |          |  |  |
| 19 | 5.G.1     | 5.G.1    | 5.G.1    | 5.G.2    |          |          |  |  |
| 20 | 5.OA.1    | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.2   | 5.OA.2   | 5.OA.2   | 5.OA.2   | 5.OA.2   |          |          |  |  |
| 21 | 5.NF.4    | 5.NF.4   | 5.NF.4   | 5.NF.4.a | 5.NF.6   | 5.NF.6   | 5.NF.6   | 5.NF.6   | 5.NF.6   |          |          |          |  |  |
| 22 | 5.G.1     | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.MD.1   | 5.MD.2   |          |  |  |
| 23 | 5.OA.1    | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.1   | 5.OA.2   | 5.OA.2   |          |          |  |  |
| 24 | 5.NBT.5   | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.5  | 5.NBT.6  |          |          |          |          |  |  |
| 25 | 5.MD.3    | 5.MD.3.b | 5.MD.5   | 5.MD.5   | 5.MD.5.a | 5.MD.5.a | 5.MD.5.b | 5.MD.5.b | 5.MD.5.b | 5.MD.5.b | 5.MD.5.b | 5.MD.5.b |  |  |
| 26 | 5.NF.4    | 5.NF.4.a | 5.NF.7   | 5.NF.7.b | 5.NF.7.b | 5.NF.7.b | 5.NF.7.c | 5.NF.7.c | 5.NF.7.c | 5.NF.7.c |          |          |  |  |
| 27 | 5.G.1     | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.1    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    | 5.G.2    |          |  |  |

| Table 5D3M Standard | Coded to Each | Item by Reviewe | rs continued |
|---------------------|---------------|-----------------|--------------|
|---------------------|---------------|-----------------|--------------|

| Session 2 |           |          |           |           |           |           |           |           |           |          |          |          |
|-----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|----------|----------|
| 2         | 5.NBT.1   | 5.NBT.1  | 5.NBT.2   | 5.NBT.2  |          |          |
| 3         | 5.MD.1    | 5.MD.1   | 5.MD.1    | 5.MD.1    | 5.MD.1    | 5.NBT.2   | 5.NBT.3.a | 5.NBT.7   | 5.NBT.7   | 5.NBT.7  | 5.NF.2   | 5.OA.2   |
| 4         | 5.G.1     | 5.G.1    | 5.G.1     | 5.G.1     | 5.G.1     | 5.G.1     | 5.G.1     | 5.G.1     |           |          |          |          |
| 6         | 5.NBT.3.a | 5.NBT.3  | 5.NBT.3.a | 5.OA.1   |          |          |
| 7         | 5.MD.1    | 5.MD.1   | 5.MD.1    | 5.MD.1    | 5.MD.1    | 5.MD.1    | 5.MD.1    | 5.NBT.6   | 5.NBT.7   | 5.NBT.7  |          |          |
| 8         | 5.OA.1    | 5.OA.1   | 5.OA.1    | 5.OA.1    | 5.OA.1    | 5.OA.1    | 5.OA.1    | 5.OA.2    | 5.OA.2    |          |          |          |
| 9         | 5.G.1     | 5.G.1    | 5.G.2     |          |          |          |
| 11        | 5.NF.3    | 5.NF.3   | 5.NF.3    | 5.NF.3    | 5.NF.3    | 5.NF.3    | 5.NF.3    | 5.NF.4.a  |           |          |          |          |
| 12        | 5.OA.1    | 5.OA.1   | 5.OA.2    | 5.OA.2   |          |          |
| 13        | 5.NF.4    | 5.NF.4   | 5.NF.4    | 5.NF.4.a  | 5.NF.4.a  | 5.NF.4.a  | 5.NF.6    | 5.NF.6    |           |          |          |          |
| 14        | 5.G.1     | 5.G.1    | 5.G.1     | 5.G.1     | 5.G.2     | 5.G.2     | 5.G.2     | 5.G.2     | 5.G.2     | 5.G.2    | 5.G.2    |          |
| 16        | 5.MD.2    | 5.MD.2   | 5.MD.2    | 5.MD.2    | 5.MD.2    | 5.MD.2    | 5.MD.2    | 5.MD.2    | 5.NF.1    | 5.NF.1   | 5.NF.2   | 5.NF.2   |
| 10        | 5.NF.2    | 5.NF.6   |           |           |           |           |           |           |           |          |          |          |
| 17        | 5.NF.4    | 5.NF.5.a | 5.NF.5.a  | 5.NF.5.b  | 5.NF.5.b  | 5.NF.5.b  | 5.NF.5.b  | 5.NF.5.b  | 5.NF.5.b  | 5.NF.6   |          |          |
| 18        | 5.G.3     | 5.G.3    | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.4     | 5.G.4     | 5.G.4    | 5.G.4    | 5.G.4    |
| 10        | 5.G.4     |          |           |           |           |           |           |           |           |          |          |          |
| 19        | 5.OA.3    | 5.OA.3   | 5.OA.3    | 5.OA.3    | 5.OA.3    | 5.OA.3    | 5.OA.3    | 5.OA.3    |           |          |          |          |
| 20        | 5.NF.1    | 5.NF.4   | 5.NF.4    | 5.NF.4.a  | 5.NF.6    | 5.NF.6    | 5.NF.6    | 5.NF.6    | 5.NF.6    | 5.NF.6   | 5.NF.6   |          |
| 21        | 5.NBT.6   | 5.NBT.7  | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   |           |          |          |          |
| 22        | 5.MD.5    | 5.MD.5.a | 5.MD.5.b  | 5.MD.5.b  | 5.MD.5.b  | 5.MD.5.c  | 5.MD.5.c  | 5.MD.5.c  | 5.MD.5.c  | 5.MD.5.c | 5.MD.5.c | 5.MD.5.c |
|           | 5.MD.5.c  |          |           |           |           |           |           |           |           |          |          |          |
| 23        | 5.MD.3    | 5.MD.3   | 5.MD.3    | 5.MD.3    | 5.MD.3    | 5.MD.3    | 5.MD.3    | 5.MD.3    | 5.MD.3.b  | 5.MD.3.b |          |          |
| 24        | 5.OA.1    | 5.OA.1   | 5.OA.1    | 5.OA.2    | 5.OA.2    | 5.OA.2    | 5.OA.2    | 5.OA.2    | 5.OA.2    | 5.OA.2   |          |          |
| 25        | 5.MD.3    | 5.MD.3.a | 5.MD.3.b  | 5.MD.4    | 5.MD.4    | 5.MD.4    | 5.MD.4    | 5.MD.4    | 5.MD.4    | 5.NF.5.b |          |          |
| 26        | 5.NBT.7   | 5.NBT.7  | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NBT.7   | 5.NF.7.b  | 5.NF.7.c  |          |          |          |
| 27        | 5.G.3     | 5.G.3    | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.3     | 5.G.4     | 5.G.4     | 5.G.4    | 5.G.4    | 5.G.4    |

### Table 6D3M Standard Coded to Each Item by Reviewers

|    |         |         |         | Session | 1       |         |         |         |
|----|---------|---------|---------|---------|---------|---------|---------|---------|
| 2  | 6.EE.1  | 6.EE.1  | 6.EE.1  | 6.EE.1  | 6.G.1   | 6.G.1   | 6.RP.2  |         |
| 3  | 6.RP.1  | 6.RP.1  | 6.RP.1  | 6.RP.1  | 6.RP.2  | 6.RP.3a | 6.RP.3a |         |
| 4  | 6.NS.2  | 6.NS.2  | 6.NS.2  | 6.NS.2  | 6.NS.2  | 6.RP.2  | 6.RP.3b |         |
| 6  | 6.NS.6c | 6.NS.6c | 6.RP.2  | 6.RP.3  | 6.RP.3a | 6.RP.3a | 6.RP.3a | 6.RP.3b |
| 7  | 6.NS.1  | 6.RP.2  | 6.RP.3  | 6.RP.3a | 6.RP.3a | 6.RP.3b | 6.RP.3b | 6.RP.3b |
| 8  | 6.NS.1  | 6.NS.1  | 6.NS.1  | 6.NS.1  | 6.NS.1  | 6.RP.2  | 6.RP.3b |         |
| 9  | 6.NS.2  | 6.NS.2  | 6.NS.2  | 6.RP.1  | 6.RP.2  | 6.RP.2  | 6.RP.3b |         |
| 11 | 6.NS.1  | 6.NS.3  | 6.NS.3  | 6.NS.3  | 6.NS.3  | 6.RP.2  | 6.RP.3b |         |
| 12 | 6.EE.1  | 6.EE.4  | 6.EE.4  | 6.EE.4  | 6.EE.4  | 6.EE.4  | 6.RP.2  |         |
| 13 | 6.RP.2  | 6.RP.3  | 6.RP.3c | 6.RP.3c | 6.RP.3c | 6.RP.3c | 6.RP.3c |         |
| 14 | 6.RP.2  | 6.NS.4  | 6.NS.4  | 6.NS.4  | 6.NS.4  | 6.NS.4  | 6.NS.4  |         |
| 16 | 6.EE.2  | 6.EE.2c | 6.EE.2c | 6.EE.2c | 6.EE.2c | 6.EE.4  | 6.EE.5  | 6.RP.1  |
| 17 | 6.RP.1  |         |
| 18 | 6.RP.1  | 6.RP.2  | 6.RP.2  | 6.RP.2  | 6.RP.2  | 6.RP.3b | 6.RP.3b |         |
| 19 | 6.EE.2  | 6.EE.2  | 6.EE.2a | 6.EE.2a | 6.EE.2a | 6.EE.2a | 6.EE.6  |         |
| 20 | 6.EE.1  | 6.NS.3  | 6.NS.3  | 6.NS.3  | 6.NS.3  | 6.NS.3  | 6.NS.3  |         |

#### Mathematics Grade 6 Table 6D3M Standard Coded to Each Item by Reviewers continued

|    |         |         | em by Reviewers | Session | 2       |         |         |         |
|----|---------|---------|-----------------|---------|---------|---------|---------|---------|
| 2  | 6.SP.1  | 6.RP.1  | 6.SP.1          | 6.SP.1  | 6.SP.1  | 6.SP.1  | 6.SP.2  | 6.SP.2  |
| 3  | 6.NS.5  | 6.NS.5  | 6.NS.5          | 6.NS.5  | 6.NS.6a | 6.NS.7c | 6.SP.1  |         |
| 4  | 6.EE.1  | 6.EE.5  | 6.EE.7          | 6.EE.7  | 6.EE.7  | 6.EE.7  | 6.EE.7  |         |
| 6  | 6.G.1   | 6.G.1   | 6.G.1           | 6.G.1   | 6.G.1   | 6.G.1   | 6.G.2   |         |
| 7  | 6.SP.2  | 6.SP.2  | 6.SP.4          | 6.SP.5c | 6.SP.5c | 6.SP.5c | 6.SP.5c | 6.SP.5c |
| 8  | 6.EE.2a | 6.EE.3  | 6.EE.6          | 6.EE.6  | 6.EE.6  | 6.EE.7  | 6.EE.7  |         |
| 9  | 6.G.3   | 6.G.3   | 6.G.3           | 6.G.3   | 6.NS.6b | 6.NS.6b | 6.NS.8  |         |
| 11 | 6.G.1   | 6.G.1   | 6.G.1           | 6.G.1   | 6.G.1   | 6.G.1   | 6.G.3   |         |
| 12 | 6.SP.2  | 6.SP.4  | 6.SP.4          | 6.SP.4  | 6.SP.4  | 6.SP.5  | 6.SP.5a |         |
| 13 | 6.G.1   | 6.G.3   | 6.G.3           | 6.G.3   | 6.G.3   | 6.G.3   | 6.NS.8  |         |
| 14 | 6.NS.6c | 6.NS.6c | 6.NS.6c         | 6.NS.6c | 6.NS.6c | 6.NS.7  | 6.NS.7d | 6.NS.7d |
| 16 | 6.EE.8  | 6.EE.8  | 6.EE.8          | 6.NS.7a | 6.NS.7b | 6.SP.1  | 6.SP.2  |         |
| 17 | 6.NS.7a | 6.NS.7c | 6.SP.3          | 6.SP.4  | 6.SP.4  | 6.SP.5c | 6.SP.5c | 6.SP.5c |
| 18 | 6.G.4   | 6.G.4   | 6.G.4           | 6.G.4   | 6.G.4   | 6.G.4   | 6.G.4   |         |
| 19 | 6.EE.5  | 6.EE.7  | 6.EE.7          | 6.EE.7  | 6.EE.7  | 6.NS.3  | 6.RP.3b |         |
| 20 | 6.G.3   | 6.G.3   | 6.G.3           | 6.NS.8  | 6.NS.8  | 6.NS.8  | 6.RP.2  |         |
| 21 | 6.G.2   | 6.G.2   | 6.G.2           | 6.G.2   | 6.G.2   | 6.G.2   | 6.RP.2  |         |
| 22 | 6.SP.4  | 6.SP.4  | 6.SP.4          | 6.SP.5  | 6.SP.5  | 6.SP.5a | 6.SP.5d |         |
| 23 | 6.EE.1  | 6.EE.1  | 6.EE.2a         | 6.EE.2a | 6.EE.2a | 6.EE.2a | 6.EE.7  |         |
| 24 | 6.SP.1  | 6.SP.3  | 6.SP.3          | 6.SP.5c | 6.SP.5c | 6.SP.5c | 6.SP.5c |         |
| 25 | 6.G.3   | 6.NS.6b | 6.NS.6b         | 6.NS.6b | 6.NS.6b | 6.NS.6c | 6.NS.8  | 6.RP.1  |
| 26 | 6.EE.5  | 6.EE.5  | 6.EE.5          | 6.EE.8  | 6.EE.8  | 6.EE.8  | 6.RP.1  |         |
| 27 | 6.SP.1  | 6.SP.2  | 6.SP.3          | 6.SP.3  | 6.SP.5b | 6.SP.5b | 6.SP.5c | 6.SP.5d |
| 28 | 6.G.3   | 6.G.3   | 6.G.3           | 6.NS.6b | 6.NS.6b | 6.NS.8  | 6.NS.8  |         |
| 29 | 6.NS.7  | 6.SP.3  | 6.SP.3          | 6.SP.3  | 6.SP.3  | 6.SP.5a | 6.SP.5d |         |
| 30 | 6.EE.6  | 6.EE.6  | 6.EE.9          | 6.EE.9  | 6.EE.9  | 6.NS.6b | 6.RP.2  | 6.RP.3  |
| 31 | 6.G.1   | 6.G.4   | 6.G.4           | 6.G.4   | 6.G.4   | 6.G.4   | 6.G.4   |         |
| 32 | 6.G.4   | 6.SP.2  | 6.SP.4          | 6.SP.5  | 6.SP.5c | 6.SP.5c | 6.SP.5d | 6.SP.5d |
| 33 | 6.G.2   | 6.G.2   | 6.G.2           | 6.G.2   | 6.G.2   | 6.G.2   | 6.SP.4  |         |
| 34 | 6.SP.2  | 6.SP.2  | 6.SP.2          | 6.SP.4  | 6.SP.5b | 6.SP.5c | 6.SP.5d |         |

### Table 7D3M Standard Coded to Each Item by Reviewers

|    |         |         |         |         | Session 1 |         |         |         |         |
|----|---------|---------|---------|---------|-----------|---------|---------|---------|---------|
| 2  | 7.EE.1  | 7.EE.4  | 7.EE.4  | 7.EE.4a | 7.EE.4a   | 7.NS.1a | 7.RP.1  |         |         |
| 3  | 7.EE.3  | 7.EE.3  | 7.NS.2c | 7.NS.2c | 7.NS.3    | 7.NS.3  | 7.NS.3  | 7.RP.1  |         |
| 4  | 7.NS.2d | 7.NS.2d | 7.NS.2d | 7.NS.2d | 7.NS.2d   | 7.NS.2d | 7.NS.2d |         |         |
| 6  | 7.NS.1b | 7.NS.2  | 7.NS.2a | 7.NS.2a | 7.NS.2a   | 7.NS.2b | 7.NS.2b | 7.NS.2b | 7.NS.2b |
| 7  | 7.EE.1  | 7.EE.1  | 7.EE.2  | 7.EE.4a | 7.EE.4a   | 7.EE.4a | 7.NS.2a |         |         |
| 8  | 7.EE.1  | 7.EE.2  | 7.EE.2  | 7.EE.3  | 7.EE.4a   | 7.EE.4a | 7.EE.4a | 7.NS.1c |         |
| 9  | 7.NS.1c | 7.NS.1d | 7.NS.1d | 7.NS.1d | 7.NS.1d   | 7.NS.1d | 7.NS.3  |         |         |
| 10 | 7.NS.1  | 7.NS.1b | 7.NS.1b | 7.NS.1b | 7.NS.1c   | 7.NS.1c | 7.NS.1d |         |         |
| 11 | 7.EE.1  | 7.EE.1  | 7.EE.1  | 7.EE.2  | 7.EE.2    | 7.EE.4  | 7.EE.4a |         |         |
| 12 | 7.NS.3  | 7.NS.1d | 7.NS.2b | 7.NS.2c | 7.NS.3    | 7.NS.3  | 7.NS.3  | 7.NS.3  |         |
| 13 | 7.EE.1  | 7.EE.4a | 7.EE.4a | 7.EE.4a | 7.G.1     | 7.G.6   | 7.G.6   | 7.G.6   |         |
|    |         |         |         |         | Session 2 |         |         |         |         |
| 2  | 7.G.1   | 7.NS.1d | 7.NS.1d | 7.NS.3  | 7.NS.3    | 7.NS.3  | 7.NS.3  |         |         |
| 3  | 7.NS.3  | 7.RP.2b | 7.RP.2b | 7.RP.2b | 7.RP.2b   | 7.RP.2c | 7.RP.2d |         |         |
| 4  | 7.G.5   | 7.G.5   | 7.G.5   | 7.G.5   | 7.G.5     | 7.G.5   | 7.RP.1  |         |         |
| 6  | 7.EE.4b | 7.EE.4b | 7.EE.4b | 7.EE.4b | 7.EE.4b   | 7.G.5   | 7.NS.1  |         |         |
| 7  | 7.EE.4a | 7.EE.4a | 7.EE.4b | 7.G.5   | 7.NS.2c   | 7.NS.3  | 7.SP.4  |         |         |
| 8  | 7.EE.4b | 7.G.1   | 7.G.1   | 7.G.1   | 7.G.1     | 7.G.6   | 7.G.6   |         |         |
| 9  | 7.EE.3  | 7.EE.3  | 7.EE.3  | 7.G.2   | 7.NS.1a   | 7.NS.3  | 7.NS.3  | 7.RP.3  | 7.RP.3  |
| 11 | 7.G.5   | 7.G.5   | 7.G.5   | 7.G.5   | 7.G.5     | 7.G.5   | 7.RP.3  |         |         |
| 12 | 7.G.2   | 7.G.2   | 7.G.2   | 7.G.2   | 7.G.2     | 7.G.6   | 7.NS.3  |         |         |
| 13 | 7.EE.3  | 7.SP.7a | 7.SP.8a | 7.SP.8a | 7.SP.8b   | 7.SP.8b | 7.SP.8b | 7.SP.8b |         |
| 14 | 7.EE.3  | 7.EE.4a | 7.G.4   | 7.G.4   | 7.G.4     | 7.G.4   | 7.G.4   | 0       |         |
| 16 | 7.G.2   | 7.SP.1  | 7.SP.1  | 7.SP.1  | 7.SP.2    | 7.SP.2  | 7.SP.2  | 7.SP.2  |         |
| 17 | 7.RP.2  | 7.RP.2d | 7.RP.2d | 7.RP.2d | 7.RP.2d   | 7.RP.2d | 7.SP.8a |         |         |
| 18 | 7.G.4   | 7.RP.2a | 7.SP.5  | 7.SP.5  | 7.SP.5    | 7.SP.5  | 7.SP.5  | 7.SP.8  |         |
| 19 | 7.NS.2a | 7.RP.1  | 7.RP.1  | 7.RP.1  | 7.RP.1    | 7.RP.1  | 7.RP.2b | 7.RP.3  | 7.RP.3  |
| 21 | 7.G.1   | 7.G.4   | 7.G.6   | 7.G.6   | 7.G.6     | 7.G.6   | 7.G.6   | 7.SP.2  |         |
| 22 | 7.G.1   | 7.RP.2d | 7.SP.1  | 7.SP.1  | 7.SP.1    | 7.SP.1  | 7.SP.2  | 7.SP.3  |         |

|    |         |         |         | ,       | Session 2 cont | inued   |         |         |        |         |
|----|---------|---------|---------|---------|----------------|---------|---------|---------|--------|---------|
| 23 | 7.EE.3  | 7.EE.3  | 7.EE.3  | 7.NS.3  | 7.RP.3         | 7.RP.3  | 7.RP.3  | 7.RP.3  | 7.SP.1 |         |
| 24 | 7.NS.2a | 7.NS.3  | 7.RP.2c | 7.RP.2c | 7.RP.3         | 7.SP.2  | 7.SP.6  | 7.SP.7b |        |         |
| 26 | 7.NS.1d | 7.NS.2c | 7.RP.1  | 7.RP.1  | 7.RP.1         | 7.RP.3  | 7.SP.6  |         |        |         |
| 27 | 7.G.3   | 7.G.3   | 7.G.3   | 7.G.3   | 7.G.3          | 7.G.6   | 7.G.6   |         |        |         |
| 28 | 7.SP.1  | 7.SP.2  | 7.SP.2  | 7.SP.2  | 7.SP.2         | 7.SP.2  | 7.SP.4  |         |        |         |
| 29 | 7.G.3   | 7.NS.3  | 7.RP.1  | 7.RP.1  | 7.RP.3         | 7.RP.3  | 7.RP.3  | 7.RP.3  |        |         |
| 30 | 7.EE.3  | 7.EE.4  | 7.EE.4a | 7.EE.4a | 7.EE.4a        | 7.EE.4a | 7.G.3   | 7.NS.3  |        |         |
| 31 | 7.G.1   | 7.G.4   | 7.G.6   | 7.G.6   | 7.G.6          | 7.G.6   | 7.G.6   |         |        |         |
| 32 | 7.G.1   | 7.G.6   | 7.G.6   | 7.NS.2a | 7.SP.5         | 7.SP.6  | 7.SP.7  | 7.SP.7b |        |         |
| 33 | 7.G.3   | 7.G.4   | 7.SP.2  | 7.SP.3  | 7.SP.4         | 7.SP.4  | 7.SP.4  |         |        |         |
| 34 | 7.G.1   | 7.G.1   | 7.G.4   | 7.G.4   | 7.G.4          | 7.G.4   | 7.SP.2  |         |        |         |
| 35 | 7.RP.3  | 7.SP.1  | 7.SP.2  | 7.SP.6  | 7.SP.6         | 7.SP.6  | 7.SP.7b | 7.SP.7b |        |         |
| 36 | 7.EE.2  | 7.EE.4a | 7.NS.2c | 7.RP.1  | 7.RP.1         | 7.RP.1  | 7.RP.2c | 7.RP.2c |        |         |
| 37 | 7.EE.3  | 7.EE.3  | 7.G.6   | 7.NS.3  | 7.NS.3         | 7.NS.3  | 7.SP.1  |         |        |         |
| 38 | 7.NS.2d | 7.RP.1  | 7.RP.2a | 7.RP.3  | 7.SP.1         | 7.SP.6  | 7.SP.6  |         |        |         |
| 39 | 7.NS.2c | 7.NS.2d | 7.NS.3  | 7.RP.1  | 7.RP.1         | 7.RP.1  | 7.RP.2  | 7.RP.3  | 7.RP.3 | 7.SP.8a |
| 40 | 7.G.1   | 7.G.6   | 7.G.6   | 7.G.6   | 7.G.6          | 7.G.6   | 7.RP.2c |         |        |         |
| 41 | 7.G.4   | 7.RP.3  | 7.SP.3  | 7.SP.3  | 7.SP.4         | 7.SP.4  | 7.SP.4  | 7.SP.4  |        |         |

# Table 7D3M Standard Coded to Each Item by Reviewers continued

### Table 8D3M Standard Coded to Each Item by Reviewers

|    |        |         |         | Ses     | ssion 1 |        |        |        |        |
|----|--------|---------|---------|---------|---------|--------|--------|--------|--------|
| 2  | 8.EE.1 | 8.EE.1  | 8.EE.1  | 8.EE.1  | 8.EE.4  | 8.NS.1 | 8.NS.2 |        |        |
| 3  | 8.NS.1 | 8.NS.2  | 8.NS.2  | 8.NS.2  | 8.NS.2  | 8.NS.2 | 8.NS.2 |        |        |
| 4  | 8.EE.1 | 8.EE.2  | 8.EE.2  | 8.EE.2  | 8.EE.2  | 8.EE.2 | 8.G.9  |        |        |
| 6  | 8.NS.1 | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1 | 8.NS.1 |        |        |
| 7  | 8.NS.1 | 8.NS.1  | 8.NS.2  | 8.NS.2  | 8.NS.2  | 8.NS.2 | 8.NS.2 |        |        |
| 8  | 8.EE.3 | 8.EE.3  | 8.EE.4  | 8.EE.4  | 8.EE.4  | 8.EE.4 | 8.EE.4 | 8.EE.4 | 8.EE.4 |
| 9  | 8.NS.1 | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1 | 8.NS.2 |        |        |
| 10 | 8.EE.2 | 8.EE.2  | 8.EE.2  | 8.EE.2  | 8.EE.2  | 8.EE.2 | 8.G.5  |        |        |
| 11 | 8.EE.1 | 8.EE.2  | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1 | 8.NS.2 |        |        |
| 12 | 8.EE.4 | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1 | 8.NS.2 |        |        |
| 13 | 8.NS.1 | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.1  | 8.NS.2 | 8.NS.2 |        |        |
| 14 | 8.EE.3 | 8.EE.3  | 8.EE.3  | 8.EE.4  | 8.EE.4  | 8.EE.4 | 8.EE.4 | 8.EE.4 |        |
| 15 | 8.EE.2 | 8.EE.4  | 8.NS.1  | 8.NS.2  | 8.NS.2  | 8.NS.2 | 8.NS.2 |        |        |
|    |        |         |         | Ses     | ssion 2 |        |        |        |        |
| 2  | 8.G.1b | 8.G.1b  | 8.G.1b  | 8.G.1b  | 8.G.2   | 8.G.2  | 8.G.2  |        |        |
| 3  | 8.EE.5 | 8.EE.5  | 8.F.2   | 8.F.2   | 8.F.2   | 8.F.4  | 8.F.4  |        |        |
| 4  | 8.G.1  | 8.G.4   | 8.G.4   | 8.G.4   | 8.G.5   | 8.G.5  | 8.G.5  |        |        |
| 6  | 8.NS.1 | 8.SP.1  | 8.SP.1  | 8.SP.1  | 8.SP.1  | 8.SP.1 | 8.SP.1 |        |        |
| 7  | 8.G.9  | 8.G.9   | 8.G.9   | 8.G.9   | 8.G.9   | 8.G.9  | 8.G.9  |        |        |
| 8  | 8.EE.5 | 8.EE.5  | 8.EE.7a | 8.EE.7b | 8.EE.7b | 8.F.2  | 8.F.2  |        |        |
| 9  | 8.G.1c | 8.G.3   | 8.G.3   | 8.G.3   | 8.G.3   | 8.G.4  | 8.G.5  |        |        |
| 11 | 8.SP.4 | 8.SP.4  | 8.SP.4  | 8.SP.4  | 8.SP.4  | 8.SP.4 | 8.G.8  |        |        |
| 12 | 8.F.1  | 8.SP.2  | 8.SP.2  | 8.SP.2  | 8.SP.2  | 8.SP.2 | 8.SP.2 |        |        |
| 13 | 8.F.1  | 8.F.1   | 8.F.4   | 8.F.5   | 8.F.5   | 8.F.5  | 8.F.5  |        |        |
| 14 | 8.EE.5 | 8.EE.5  | 8.EE.7a | 8.F.1   | 8.F.4   | 8.F.4  | 8.F.4  | 8.F.4  |        |
| 16 | 8.G.8  | 8.G.8   | 8.G.8   | 8.G.8   | 8.G.8   | 8.G.8  | 8.SP.2 |        |        |
| 17 | 8.EE.6 | 8.EE.7a | 8.F.2   | 8.F.3   | 8.F.3   | 8.F.4  | 8.F.4  | 8.F.4  |        |
| 18 | 8.EE.5 | 8.EE.5  | 8.EE.5  | 8.F.1   | 8.F.4   | 8.F.4  | 8.F.5  |        |        |
| 19 | 8.F.1  | 8.F.1   | 8.F.2   | 8.F.3   | 8.F.3   | 8.F.4  | 8.F.4  | 8.F.4  |        |

|    |         |         |         | Session | n 2 continued |         |         |         |       |
|----|---------|---------|---------|---------|---------------|---------|---------|---------|-------|
| 21 | 8.EE.5  | 8.EE.8c | 8.F.2   | 8.F.2   | 8.F.2         | 8.F.4   | 8.F.4   | 8.SP.4  |       |
| 22 | 8.EE.1  | 8.F.5   | 8.F.5   | 8.F.5   | 8.F.5         | 8.F.5   | 8.F.5   |         |       |
| 23 | 8.EE.7  | 8.EE.7  | 8.EE.7b | 8.EE.8  | 8.EE.8b       | 8.EE.8b | 8.EE.8b | 8.EE.8b |       |
| 24 | 8.EE.7  | 8.F.3   | 8.F.3   | 8.F.3   | 8.F.3         | 8.F.5   | 8.F.5   |         |       |
| 26 | 8.EE.7a | 8.F.5   | 8.F.5   | 8.SP.1  | 8.SP.1        | 8.SP.1  | 8.SP.1  |         |       |
| 27 | 8.G.5   | 8.G.5   | 8.G.5   | 8.G.5   | 8.G.5         | 8.G.5   | 8.G.7   |         |       |
| 28 | 8.EE.5  | 8.EE.5  | 8.EE.5  | 8.F.1   | 8.F.2         | 8.F.2   | 8.F.2   | 8.F.4   |       |
| 29 | 8.EE.6  | 8.EE.7b | 8.F.3   | 8.F.3   | 8.F.3         | 8.F.4   | 8.F.4   |         |       |
| 30 | 8.G.1a  | 8.G.2   | 8.G.2   | 8.G.2   | 8.G.2         | 8.G.2   | 8.G.3   | 8.G.3   |       |
| 31 | 8.F.5   | 8.F.5   | 8.F.5   | 8.F.5   | 8.F.5         | 8.F.5   | 8.F.5   |         |       |
| 32 | 8.G.5   | 8.G.6   | 8.G.7   | 8.G.7   | 8.G.7         | 8.G.7   | 8.G.7   |         |       |
| 33 | 8.G.2   | 8.G.2   | 8.G.2   | 8.G.2   | 8.G.2         | 8.G.3   | 8.G.3   | 8.G.4   | 8.G.4 |
| 34 | 8.F.1   | 8.F.1   | 8.F.1   | 8.F.1   | 8.F.1         | 8.F.1   | 8.F.4   |         |       |
| 35 | 8.EE.5  | 8.G.3   | 8.G.3   | 8.G.3   | 8.G.4         | 8.G.4   | 8.G.4   |         |       |
| 36 | 8.EE.7b | 8.F.3   | 8.F.3   | 8.F.3   | 8.F.4         | 8.F.4   | 8.F.4   |         |       |
| 37 | 8.EE.7  | 8.EE.7a | 8.EE.7b | 8.EE.7b | 8.EE.7b       | 8.EE.7b | 8.EE.7b | 8.EE.7b |       |
| 38 | 8.F.2   | 8.SP.4  | 8.SP.4  | 8.SP.4  | 8.SP.4        | 8.SP.4  | 8.SP.4  |         |       |
| 39 | 8.EE.5  | 8.EE.5  | 8.F.3   | 8.F.4   | 8.F.4         | 8.SP.1  | 8.SP.3  |         |       |

### Table 4D3S Standard Coded to Each Item by Reviewers

|    |       |       |       |       | Se    | ssion 1 |       |       |       |       |       |
|----|-------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| 1  | A.4.1 | A.4.1 | A.4.1 | A.4.2 | A.4.2 | A.4.2   | B.4.3 | B.4.3 | B.4.3 | C.4.3 | F.4.1 |
| 2  | A.4.1 | A.4.4 | C.4.4 | C.4.4 | C.4.4 | C.4.4   | C.4.4 | C.4.4 |       |       |       |
| 3  | A.4.3 | A.4.4 | C.4.4 | D.4.3 | D.4.3 | D.4.3   | D.4.3 | D.4.4 | D.4.4 | D.4.4 |       |
| 4  | E.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1   | F.4.1 | F.4.2 |       |       |       |
| 5  | A.4.3 | C.4.2 | F.4.1 | F.4.1 | F.4.2 | F.4.2   | F.4.2 | F.4.2 | F.4.2 | F.4.4 |       |
| 6  | D.4.1 | E.4.7 | E.4.7 | E.4.7 | E.4.7 | H.4.1   | H.4.4 |       |       |       |       |
| 7  | A.4.1 | A.4.2 | A.4.2 | C.4.2 | C.4.2 | C.4.2   | C.4.5 | D.4.4 | D.4.5 | D.4.5 |       |
| 8  | D.4.2 | D.4.2 | D.4.2 | E.4.1 | E.4.1 | E.4.1   | E.4.1 | E.4.1 |       |       |       |
| 9  | A.4.2 | A.4.5 | C.4.2 | C.4.5 | C.4.5 | C.4.6   | F.4.1 | F.4.2 | F.4.2 |       |       |
| 10 | A.4.5 | C.4.2 | C.4.5 | C.4.5 | C.4.6 | C.4.6   | C.4.6 | C.4.6 |       |       |       |
| 11 | A.4.2 | A.4.2 | A.4.2 | A.4.2 | C.4.2 | C.4.7   | F.4.1 | F.4.2 |       |       |       |
| 12 | C.4.2 | C.4.2 | C.4.3 | C.4.3 | H.4.1 | H.4.1   | H.4.2 | H.4.2 | H.4.2 |       |       |
| 13 | G.4.1 | G.4.1 | G.4.1 | G.4.3 | H.4.1 | H.4.3   | H.4.3 | H.4.3 |       |       |       |
| 14 | A.4.2 | C.4.2 | C.4.5 | D.4.1 | D.4.4 | D.4.4   | D.4.4 | D.4.4 | D.4.5 |       |       |
| 15 | D.4.3 | D.4.3 | D.4.3 | D.4.3 | D.4.3 | D.4.3   | D.4.3 | D.4.3 |       |       |       |
| 16 | F.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1   | F.4.2 | F.4.4 | F.4.4 |       |       |
| 17 | A.4.2 | C.4.5 | C.4.5 | C.4.5 | C.4.5 | E.4.7   | F.4.3 | F.4.3 |       |       |       |
| 18 | C.4.2 | D.4.4 | E.4.3 | E.4.3 | E.4.3 | E.4.3   | E.4.6 | E.4.6 |       |       |       |
| 19 | C.4.2 | C.4.2 | D.4.5 | G.4.1 | G.4.1 | G.4.1   | G.4.3 | H.4.3 |       |       |       |
| 20 | F.4.1 | F.4.1 | F.4.1 | F.4.2 | F.4.2 | F.4.4   | F.4.4 | F.4.4 | F.4.4 |       |       |
| 21 | A.4.2 | C.4.5 | C.4.5 | C.4.5 | C.4.5 | C.4.5   | C.4.5 |       |       |       |       |

|    |       |       |       |       | Session | 2     |       |       |       |       |
|----|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|
| 1  | F.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1   | F.4.3 | F.4.4 | F.4.4 | F.4.4 |       |
| 2  | A.4.2 | E.4.8 | F.4.4 | F.4.4 | H.4.4   | H.4.4 | H.4.4 | H.4.4 | H.4.4 |       |
| 3  | C.4.4 | D.4.3 | D.4.3 | D.4.4 | D.4.4   | D.4.4 | D.4.4 | D.4.5 | E.4.3 |       |
| 4  | A.4.2 | C.4.2 | C.4.2 | C.4.8 | D.4.5   | D.4.7 | D.4.8 | D.4.8 | D.4.8 |       |
| 5  | B.4.1 | B.4.1 | B.4.1 | B.4.1 | B.4.1   | B.4.1 | C.4.3 | E.4.7 |       |       |
| 6  | A.4.5 | C.4.5 | C.4.5 | C.4.5 | C.4.5   | C.4.5 | C.4.5 | F.4.3 |       |       |
| 7  | F.4.1 | F.4.1 | F.4.1 | F.4.1 | F.4.1   | F.4.1 | F.4.2 | F.4.2 |       |       |
| 8  | A.4.4 | E.4.5 | E.4.5 | E.4.5 | E.4.5   | E.4.5 | E.4.5 | F.4.2 |       |       |
| 9  | A.4.2 | C.4.4 | C.4.4 | C.4.4 | C.4.4   | C.4.4 | C.4.4 | E.4.8 | H.4.1 |       |
| 10 | C.4.2 | C.4.2 | C.4.2 | C.4.5 | F.4.1   | F.4.1 | F.4.1 | F.4.1 | F.4.4 | H.4.1 |
| 11 | E.4.2 | F.4.4 | F.4.4 | F.4.4 | F.4.4   | F.4.4 | F.4.4 | F.4.4 | F.4.4 |       |
| 12 | A.4.2 | C.4.1 | C.4.2 | C.4.7 | C.4.8   | F.4.3 | F.4.4 | H.4.3 | H.4.4 |       |
| 13 | B.4.1 | C.4.2 | C.4.2 | C.4.8 | C.4.8   | F.4.1 | F.4.1 | F.4.3 | F.4.3 | F.4.4 |
| 14 | G.4.1 | G.4.1 | G.4.1 | G.4.1 | G.4.1   | G.4.2 | H.4.1 | H.4.1 |       |       |
| 15 | E.4.4 | E.4.4 | E.4.4 | E.4.4 | E.4.4   | E.4.6 | E.4.6 | E.4.6 |       |       |
| 16 | C.4.4 | D.4.5 | D.4.5 | D.4.7 | D.4.7   | G.4.4 | G.4.4 | G.4.4 |       |       |
| 17 | C.4.2 | D.4.4 | D.4.5 | D.4.6 | D.4.6   | D.4.8 | D.4.8 | D.4.8 |       |       |
| 18 | C.4.2 | C.4.2 | C.4.5 | D.4.1 | D.4.1   | D.4.2 | D.4.8 | D.4.8 |       |       |
| 19 | A.4.4 | B.4.2 | B.4.2 | B.4.2 | B.4.2   | B.4.2 | B.4.2 | G.4.1 | G.4.3 |       |

### Table 4D3S Standard Coded to Each Item by Reviewers continued

### Table 8D3S Standard Coded to Each Item by Reviewers

|    |              |       |       |       |       | Session | 1     |       |       |       |       |       |
|----|--------------|-------|-------|-------|-------|---------|-------|-------|-------|-------|-------|-------|
| 1  | A.8.1        | A.8.1 | A.8.1 | A.8.6 | A.8.6 | C.8.1   | C.8.1 | C.8.1 | C.8.4 | C.8.5 |       |       |
| 2  | A.8.1        | A.8.2 | A.8.2 | C.8.4 | D.8.1 | D.8.8   | D.8.9 | G.8.2 | G.8.6 |       |       |       |
| 3  | A.8.1        | A.8.5 | A.8.5 | A.8.5 | A.8.5 | B.8.1   | B.8.2 | C.8.5 | C.8.9 |       |       |       |
| 4  | A.8.7        | B.8.1 | B.8.3 | C.8.2 | C.8.2 | C.8.3   | C.8.3 | C.8.3 | C.8.6 |       |       |       |
| 5  | C.8.2        | C.8.2 | C.8.2 | C.8.2 | C.8.4 | C.8.6   | C.8.7 | C.8.7 |       |       |       |       |
| 6  | D.8.5        | D.8.6 | D.8.8 | D.8.8 | D.8.8 | D.8.8   | D.8.8 | D.8.9 | F.8.2 |       |       |       |
| 7  | D.8.8        | F.8.1 | G.8.1 | G.8.1 | G.8.1 | G.8.1   | G.8.1 | G.8.1 |       |       |       |       |
| 8  | D.8.2        | D.8.5 | D.8.5 | D.8.5 | D.8.6 | D.8.6   | D.8.6 | D.8.6 | D.8.6 |       |       |       |
| 9  | A.8.5        | A.8.6 | C.8.6 | E.8.1 | E.8.2 | E.8.3   | E.8.3 | E.8.3 | E.8.3 |       |       |       |
| 10 | A.8.6        | C.8.2 | C.8.2 | C.8.2 | C.8.5 | D.8.8   | E.8.1 | E.8.3 | G.8.7 |       |       |       |
| 11 | A.8.8        | F.8.8 | F.8.8 | F.8.8 | F.8.8 | F.8.8   | F.8.8 | F.8.9 | F.8.9 | F.8.9 | F.8.9 | F.8.9 |
| 12 | B.8.4        | E.8.1 | F.8.2 | F.8.8 | F.8.8 | F.8.9   | F.8.9 | F.8.9 | F.8.9 |       |       |       |
| 13 | D.8.1        | D.8.1 | D.8.1 | D.8.2 | D.8.2 | D.8.2   | D.8.3 |       |       |       |       |       |
| 14 | A.8.4        | C.8.4 | C.8.6 | F.8.2 | G.8.2 | G.8.3   | G.8.3 | G.8.7 |       |       |       |       |
| 15 | E.8.1        | E.8.1 | E.8.3 | E.8.3 | E.8.3 | E.8.3   | E.8.4 | E.8.8 |       |       |       |       |
| 16 | D.8.3        | D.8.7 | D.8.8 | D.8.9 | F.8.2 | F.8.7   | F.8.8 | F.8.8 | F.8.8 |       |       |       |
| 17 | D.8.2        | E.8.1 | E.8.1 | E.8.1 | E.8.2 | E.8.3   | E.8.5 | E.8.5 | E.8.5 |       |       |       |
| 18 | <b>B.8.1</b> | B.8.1 | B.8.2 | B.8.2 | B.8.3 | D.8.5   | D.8.5 | D.8.5 | D.8.5 | D.8.5 | D.8.6 |       |
| 19 | A.8.1        | A.8.4 | C.8.1 | C.8.1 | C.8.1 | C.8.2   | C.8.3 | C.8.3 | C.8.4 | C.8.5 | F.8.2 | F.8.7 |
| 20 | A.8.1        | A.8.4 | C.8.1 | C.8.2 | C.8.2 | C.8.2   | C.8.3 | C.8.3 | C.8.4 | C.8.4 | D.8.1 |       |
| 21 | C.8.5        | D.8.5 | D.8.5 | D.8.5 | D.8.5 | D.8.6   | D.8.6 | D.8.6 |       |       |       |       |

| Table 8D3S Standard Coded to Each Item by Reviewers continued | Table 8D3S Standard | Coded to Each Iten | n by Reviewers continued |
|---------------------------------------------------------------|---------------------|--------------------|--------------------------|
|---------------------------------------------------------------|---------------------|--------------------|--------------------------|

|    |       |       |       |       | Se     | ession 2 |        |       |       |       |       |
|----|-------|-------|-------|-------|--------|----------|--------|-------|-------|-------|-------|
| 1  | E.8.1 | E.8.1 | E.8.1 | E.8.2 | E.8.2  | E.8.2    | E.8.2  | E.8.5 | E.8.5 |       |       |
| 2  | A.8.6 | E.8.1 | E.8.1 | E.8.2 | E.8.3  | E.8.5    | E.8.5  | E.8.5 | G.8.1 |       |       |
| 3  | E.8.1 | E.8.1 | E.8.2 | E.8.2 | E.8.2  | E.8.2    | E.8.2  | E.8.2 |       |       |       |
| 4  | F.8.1 | F.8.1 | F.8.1 | F.8.1 | F.8.1  | F.8.1    | F.8.1  | F.8.3 |       |       |       |
| 5  | D.8.4 | G.8.3 | G.8.3 | G.8.3 | G.8.3  | G.8.3    | G.8.3  | G.8.5 | H.8.3 | H.8.3 |       |
| 6  | E.8.8 | F.8.2 | F.8.2 | F.8.2 | F.8.2  | F.8.2    | F.8.8  | F.8.8 | F.8.9 |       |       |
| 7  | D.8.1 | D.8.1 | D.8.1 | D.8.2 | D.8.2  | D.8.2    | D.8.4  | D.8.8 |       |       |       |
| 8  | A.8.3 | A.8.4 | C.8.2 | C.8.2 | C.8.2  | C.8.4    | C.8.9  | G.8.5 |       |       |       |
| 9  | A.8.3 | C.8.2 | C.8.2 | C.8.4 | C.8.7  | D.8.9    | D.8.9  | G.8.4 | G.8.4 | G.8.5 |       |
| 10 | C.8.5 | D.8.1 | D.8.2 | D.8.2 | D.8.2  | D.8.2    | D.8.4  | D.8.4 | D.8.8 | D.8.9 |       |
| 11 | A.8.3 | C.8.4 | C.8.9 | D.8.8 | D.8.9  | D.8.9    | G.8.4  | G.8.4 | G.8.4 |       |       |
| 12 | A.8.1 | D.8.1 | D.8.1 | D.8.2 | D.8.3  | D.8.8    | D.8.8  | D.8.9 | G.8.4 | G.8.5 |       |
| 13 | C.8.2 | C.8.2 | C.8.2 | C.8.4 | C.8.4  | C.8.7    | G.8.4  | H.8.2 | H.8.2 |       |       |
| 14 | B.8.4 | B.8.6 | B.8.6 | E.8.3 | F.8.10 | G.8.3    | G.8.3  | G.8.5 | H.8.3 | H.8.3 |       |
| 15 | A.8.3 | C.8.2 | C.8.2 | C.8.4 | C.8.5  | C.8.6    | C.8.6  | C.8.7 | F.8.6 | F.8.7 | G.8.5 |
| 16 | A.8.4 | A.8.6 | C.8.2 | C.8.2 | C.8.2  | C.8.4    | C.8.7  | G.8.5 |       |       |       |
| 17 | A.8.3 | C.8.2 | C.8.2 | C.8.9 | E.8.1  | E.8.3    | E.8.7  | H.8.1 |       |       |       |
| 18 | A.8.4 | C.8.2 | C.8.3 | C.8.4 | C.8.6  | C.8.6    | F.8.10 | H.8.3 | H.8.3 |       |       |
| 19 | F.8.1 | F.8.1 | F.8.1 | F.8.2 | F.8.2  | F.8.2    | F.8.8  | F.8.8 |       |       |       |

|         | (S3)1  | (S3)1  | (S4)5  | (S4)6  | (S4)6  | (S4)6  | (S4)6  | (S4)6      | (S4)7  | (S4)7     |
|---------|--------|--------|--------|--------|--------|--------|--------|------------|--------|-----------|
| 3.RL.1  | (S4)8  | (S4)9  | (S4)9  | (S4)9  | (S4)9  | (S4)14 | (S4)14 | (S4)14     | (S4)14 | (S4)14    |
| UNL!!   | (S4)14 | (S4)14 | (S4)14 | (S4)15 | (S4)15 | (S4)17 |        |            |        |           |
|         | (S1)3  | (S3)2  | (S4)6  | (S4)6  | (S4)6  | (S4)6  | (S4)7  | (S4)7      | (S4)8  | (S4)8     |
| 3.RL.2  | (S4)8  | (S4)8  | (S4)8  | (S4)15 | (S4)17 | (~ ))  | (~ 1)1 | (~ ))      | (~ ) ~ | (13-1)-5  |
|         | (S2)2  | (S2)2  | (S2)2  | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S4)6      | (S4)6  | (S4)6     |
|         | (S4)6      | (S4)6  | (S4)6     |
| 3.RL.3  | (S4)7  | (S4)7  | (S4)7  | (S4)7  | (S4)8  | (S4)8  | (S4)9  | (S4)16     | (S4)16 | (S4)16    |
|         | (S4)16 | (~ ))  | (3 1)1 | (~ .). | (      | (~ ))  | (~ ))  | (          | (      | (2 1) - 0 |
| 3.RL.4  | (S2)2  | (S4)1  | (S4)1  | (S4)5  | (S4)5  | (S4)5  | (S4)5  | (S4)5      |        |           |
| 3.RL.5  | (S4)15 | (~ ))- | (~ ·)- | (~ ')' | (      | ()     | (~ ))* | ()         |        |           |
| 3.RL.6  | (S4)2  | (S4)2  | (S4)9  | (S4)9  | (S4)9  |        |        |            |        |           |
| 3.RL.7  | (S4)2  | (S4)2  | (S4)15 | (S4)16 |        |        |        |            |        |           |
| 3.RL.9  | (S4)17 | (S4)17 | (S4)17 | ~ /    |        |        |        |            |        |           |
|         | (S1)1  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S2)2      | (S2)3  | (S2)3     |
| 2 DI 1  | (S3)6  | (S3)7  | (S3)7  | (S3)8  | (S4)2  | (S4)2  | (S4)3  | (S4)3      | (S4)3  | (S4)3     |
| 3.RI.1  | (S4)4  | (S4)4  | (S4)14 | (S4)14 | (S4)14 | (S4)14 | (S4)14 | (S4)14     | (S4)14 | (S4)14    |
|         | (S4)15 | (S4)16 |        | ~ /    | ~ /    |        |        |            |        |           |
|         | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S2)2  | (S2)3  | (S2)3      | (S2)6  | (S2)8     |
| 3.RI.2  | (S3)2  | (S4)1  | (S4)2  | (S4)2  | (S4)2  | (S4)2  | (S4)3  | (S4)3      | (S4)3  | (S4)3     |
|         | (S4)3  | (S4)3  | (S4)4  | (S4)14 | (S4)15 | (S4)17 |        |            |        |           |
| 2.01.2  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)1  | (S2)4  | (S4)3  | (S4)3      | (S4)4  | (S4)4     |
| 3.RI.3  | (S4)4  | (S4)4  | (S4)4  | (S4)16 |        |        | · · ·  | , <i>í</i> |        |           |
| 3.RI.4  | (S1)1  | (S1)1  | (S1)1  | (S1)1  | (S1)1  | (S4)1  | (S4)1  | (S4)1      | (S4)1  | (S4)1     |
| 3.RI.5  | (S2)6  | (S2)6  | (S2)6  | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)8      |        |           |
| 2 DI (  | (S2)9  | (S4)2      | (S4)2  | (S4)2     |
| 3.RI.6  | (S4)2  |        |        |        |        |        |        |            |        |           |
| 3.RI.7  | (S1)4  | (S1)4  | (S1)4  | (S1)4  |        |        |        |            |        |           |
| 3.RI.8  | (S2)1  | (S2)4  | (S4)3  | (S4)3  | (S4)3  | (S4)3  | (S4)3  | (S4)3      | (S4)15 |           |
| 3.RI.9  | (S2)7  | (S2)7  | (S4)16 | (S4)17 | (S4)17 |        |        |            |        |           |
| 3.W.1   | (S1)4      |        |           |
| 3.W.1.a | (S2)9  |        |        |        |        |        |        |            |        |           |
| 3.W.1.b | (S1)3  | (S2)3  | (S2)3  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9      |        |           |
| 3.W.1.c | (S2)1  | (S2)1  | (S2)1  |        |        |        |        |            |        |           |
| 3.W.1.d |        |        |        |        |        |        |        |            |        |           |
|         | (S1)4      | (S1)4  | (S1)4     |
| 3.W.2   | (S1)4      | (S1)4  | (S1)4     |
|         | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)3  | (S2)3  | (S2)4  | (S2)9      | (S2)10 |           |
| 3.W.2.a | (S2)6  | (S2)6  | (S2)7  | (S2)7  | (S2)8  |        |        |            |        |           |
| 3.W.2.b | (S1)1  | (S1)2  | (S2)3  | (S2)3  | (S2)3  | (S2)3  | (S2)3  | (S2)3      | (S2)3  | (S2)3     |
|         | (S2)3  | (S2)3  | (S2)7  | (S2)7  | (S2)8  | (S2)8  | (S2)9  | (S2)9      |        |           |
| 3.W.2.c | (S2)1  | (S2)3  | (S2)3  | (S2)4  | (S2)4  | (S2)4  | (S2)4  | (S2)4      | (S2)4  |           |
| 3.W.2.d |        |        |        |        |        |        |        |            |        |           |
| 3.W.3   |        |        |        |        |        |        |        |            |        |           |
| 3.W.3.a |        |        |        |        |        |        |        |            |        |           |

 Table 3D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

| 3.W.3.b | (S2)2  | (S2)2  |        |        |        |        |        |        |        |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3.W.3.c | (S2)4  |        |        |        |        |        |        |        |        |        |
| 3.W.3.d |        |        |        |        |        |        |        |        |        |        |
| 3.W.4   |        |        |        |        |        |        |        |        |        |        |
| 3.W.5   | (S2)2  |        |        |        |        |        |        |        |        |        |
|         | (S1)1  | (S1)2  | (S1)3  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)6  | (S2)6  | (S2)6  |
| 3.W.8   | (S2)6  | (S2)7  | (S2)8  |
|         | (S2)8  | (S2)8  | (S2)8  |        |        |        |        |        |        |        |
|         | (S3)1  | (S3)2  | (S3)2  |
|         | (S3)2  | (S3)2  | (S3)2  | (S3)2  | (S3)6  | (S3)6  | (S3)6  | (S3)6  | (S3)7  | (S3)7  |
| 3.SL.2  | (S3)7  | (S3)8  |
|         | (S3)8  | (S3)8  |        |        |        |        |        |        |        |        |
|         | (S3)1  | (S3)2  | (S3)6  |
| 3.SL.3  | (S3)6  | (S3)6  | (S3)6  | (S3)6  | (S3)7  | (S3)7  | (S3)7  | (S3)7  | (S3)7  | (S3)7  |
|         | (S3)7  | (S3)8  | (S3)8  | (S3)8  | (S3)8  | (S3)8  | (S3)8  |        |        |        |
| 3.L.1   | (S2)10 | (S2)10 | (S2)10 |        |        |        |        |        |        |        |
| 3.L.1.a | (S2)12 | (S2)12 |        |        |        |        |        |        |        |        |
| 3.L.1.b |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.c |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.d |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.e |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.f |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.g | (S2)10 | (S2)10 | (S2)10 | (S2)10 | (S2)10 | (S2)10 |        |        |        |        |
| 3.L.1.h |        |        |        |        |        |        |        |        |        |        |
| 3.L.1.i | (S2)1  |        |        |        |        |        |        |        |        |        |
| 3.L.2   | (S2)11 | (S2)12 | (S2)12 |        |        |        |        |        |        |        |
|         | (S2)12 |
| 3.L.2.a | (S2)12 | (S2)12 |        |        |        |        |        |        |        |        |
| 3.L.2.b |        |        |        |        |        |        |        |        |        |        |
| 3.L.2.c |        |        |        |        |        |        |        |        |        |        |
| 3.L.2.d | (S2)11 |        |        |        |
| 3.L.2.e |        |        |        |        |        |        |        |        |        |        |
| 3.L.2.f |        |        |        |        |        |        |        |        |        |        |
| 3.L.2.g | (S2)11 | (S2)12 | (S2)12 |        |        |        |        |        |        |        |
| 3.L.3   |        |        |        |        |        |        |        |        |        |        |
| 3.L.3.a |        |        |        |        |        |        |        |        |        |        |
| 3.L.3.b |        |        |        |        |        |        |        |        |        |        |
| 3.L.4   | (S4)1  | (S4)5  |        |        |        |        |        |        |        |        |
| 3.L.4.a | (S1)1  | (S4)1  | (S4)1  | (S4)5  |        |        |        |        |        |        |
| 3.L.4.b |        |        |        |        |        |        |        |        |        |        |
| 3.L.4.c |        |        |        |        |        |        |        |        |        |        |
| 3.L.4.d |        |        |        |        |        |        |        |        |        |        |
| 3.L.5   | (S2)1  | (S2)2  |        |        |        |        |        |        |        |        |
| 3.L.5.a | (S4)4  | (S4)5  |        |        |        |        |        |        |        |        |
| 3.L.5.b |        |        |        |        |        |        |        |        |        |        |
| 3.L.5.c |        |        |        |        |        |        |        |        |        |        |
| 3.L.6   |        |        |        |        |        |        |        |        |        |        |

### Table 3D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

|                | (S1)1          | (S1)2          | (S1)2          | (S1)2          | (S1)2          | (S1)2          | (S1)2          | (S1)3          | (S1)3           | (S1)3          |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|
|                | (S1)1<br>(S1)3 | (S1)2<br>(S1)3 | (S1)2<br>(S1)4 | (S1)2<br>(S1)4 | (S1)2<br>(S1)4 | (S1)2<br>(S1)4 | (S1)2<br>(S1)4 | (S1)3<br>(S1)4 | (S1)3<br>(S1)4  | (S1)3<br>(S1)4 |
| 4.RL.1         | (S1)5<br>(S1)6 | (S1)5<br>(S1)6 | (S1)4<br>(S1)6 | (S1)4          | (S1)4<br>(S2)3 | (S1)4<br>(S2)4 | (S1)4<br>(S2)6 | (S1)4<br>(S4)4 | (S1)4<br>(S4)5  | (S1)4<br>(S4)6 |
|                | (S1)0<br>(S4)7 | (S1)0<br>(S4)7 | (S1)0<br>(S4)7 | (S2)2<br>(S4)7 | (S2)3<br>(S4)7 | (S2)4<br>(S4)7 | (S2)0<br>(S4)8 | +(+C)          | (54)5           | (54)0          |
|                | (S1)3          | (S4)7<br>(S1)3 | (S4)7<br>(S1)5 | (S4)7<br>(S1)5 | (S4)7<br>(S1)5 | (S4)7<br>(S1)5 | (S4)8<br>(S1)5 | (S1)5          | (S1)5           | (S1)5          |
| 4.RL.2         | (S1)5<br>(S1)6 | (S1)5<br>(S1)6 | (S1)5<br>(S1)6 | (S1)5<br>(S1)6 | (S1)3<br>(S2)2 | (\$1)3         | (S1)5<br>(S2)4 | (S1)5<br>(S2)6 | (S1)5<br>(S2)10 | (\$3)3         |
| <b>4.KL.</b> 2 | (S1)6          | (S1)6<br>(S4)6 | (S1)6          | (S1)0<br>(S4)6 | (S2)2<br>(S4)6 | (S2)2<br>(S4)6 | (S2)4<br>(S4)6 | (S2)0<br>(S4)6 | (52)10          | (55)5          |
|                | (S4)0<br>(S1)2 | (S4)0<br>(S1)2 | (S1)2          | (S1)2          | (S1)3          | (S1)3          | (S1)3          | (S4)0<br>(S1)3 | (S1)3           | (S1)3          |
| 4.RL.3         | (S1)2<br>(S1)3 | (S1)2<br>(S1)3 | (\$1)2         | (S1)2<br>(S1)3 | (S1)3<br>(S1)4 | (S1)5<br>(S1)5 | (S1)5<br>(S1)5 | (S1)5<br>(S2)6 | (S1)3<br>(S4)7  | (S1)3<br>(S4)7 |
| 4.KL.3         |                |                |                |                | (S1)4<br>(S4)7 |                |                |                |                 |                |
|                | (S4)7          | (S4)7          | (S4)7          | (S4)7          | ( )            | (S4)7          | (S4)7          | (S4)7          | (S4)7           | (S4)7          |
| 4.RL.4         | (S1)1          | (S4)4          | (S4)4           | (S4)4          |
|                | (S4)4          | (S4)4          | (S4)5          | (S4)5          | (S4)5          | (S4)5          |                |                |                 |                |
| 4.RL.5         | (S1)6          | (S1)6          | (S1)6          | (S1)6          | (0.4) 0        | (0.4) 0        | (0.4) 0        | (0.4) 0        | (0.4) 0         |                |
| 4.RL.6         | (S4)5          | (S4)8           |                |
| 4.RL.7         |                |                |                |                |                |                |                |                |                 |                |
| 4.RL.9         | (00)1          | (00)7          | (00)0          | (00)1          | (00)1          | (00)0          | (0.4)2         | (0.4) 2        | (0.4) 2         | (0.4) 2        |
|                | (S2)1          | (S2)7          | (S2)8          | (\$3)1         | (S3)1          | (\$3)9         | (S4)2          | (S4)3          | (S4)3           | (S4)3          |
| 4.RI.1         | (S4)3          | (S4)3          | (S4)3          | (S4)3          | (S4)13         | (S4)14         | (S4)14         | (S4)14         | (S4)14          | (S4)15         |
|                | (S4)15         | (S4)15         | (S4)15         | (S4)15         | (S4)15         | (S4)15         | (S4)16         | (20) -         | (20) -          | (20) -         |
| 4.RI.2         | (S2)1          | (S2)1          | (S2)4          | (S2)7          | (S2)7          | (\$3)2         | (\$3)3         | (S3)7          | (S3)7           | (S3)7          |
|                | (S3)7          | (S3)7          | (\$3)8         | (S4)14         | (S4)14         | (S4)14         | (S4)15         |                | (2.0.1.7        | (2.0.1.7       |
| 4.RI.3         | (S2)9p         | (S2)9p         | (S3)8          | (S4)1          | (S4)3          | (S4)3          | (S4)14         | (S4)15         | (S4)15          | (S4)15         |
|                | (S4)15         | (S4)16         | (2.1)          | (2.1)          | (7.0.4         | (2.4)          | (2.0.2         | (2.0.2         | (2.4) (2.4)     | (2.0.1.2       |
| 4.RI.4         | (S4)2          | (S4)13          | (S4)13         |
|                | (S4)13         | (S4)13         | (S4)13         | (S4)13         | (S4)13         |                |                |                |                 |                |
| 4.RI.5         | (S4)1          | (S4)1          | (S4)1          | (S4)1          | (S4)1          | (S4)1          | (S4)16         | (S4)16         | (S4)16          | (S4)16         |
|                | (S4)16         | (S4)16         |                |                |                |                |                |                |                 |                |
| 4.RI.6         | (S4)15         |                |                |                |                |                |                |                |                 |                |
| 4.RI.7         | (S2)8          | (S2)10         | (S4)1          | (S4)3          | (S4)16         |                |                |                |                 |                |
| 4.RI.8         | (S2)10         | (S3)9          | (S4)1          | (S4)1          | (S4)14         | (S4)15         | (S4)15         | (S4)15         | (S4)15          | (S4)15         |
|                | (S4)15         | (S4)15         |                |                |                |                |                |                |                 |                |
| 4.RI.9         | (S2)9          | (S2)9          |                |                |                |                |                |                |                 |                |
| 4.W.1          | (S1)6           | (S1)6          |
|                | (S1)6          | (S1)6          | (S1)6          |                |                |                |                |                |                 |                |
| 4.W.1.a        | (S1)6          | (S1)6          | (S1)6          | (S1)6          | (S1)6          |                |                |                |                 |                |
| 4.W.1.b        | (S1)6          |                |                |                |                |                |                |                |                 |                |
| 4.W.1.c        | (S1)6          |                |                |                |                |                |                |                |                 |                |
| 4.W.1.d        | (S1)6          | (S2)4          | (S2)4          | (S2)4          |                |                |                |                |                 |                |
| 4.W.2          | (S1)3          | (S1)6          | (S1)6          | (S1)6          | (S1)6          | (S1)6          |                |                |                 |                |
| 4.W.2.a        | (S2)7          |                |                |                |                |                |                |                |                 |                |
| 4.W.2.b        | (S1)3          | (S2)7          | (S2)7          | (S2)7          | (S2)7          | (S2)7          | (S2)8          |                |                 |                |
| 4.W.2.c        |                |                |                |                |                |                |                |                |                 |                |
| 4.W.2.d        | (S2)3          | (S2)3          | (S2)3          | (S2)3          |                |                |                |                |                 |                |
| 4.W.2.e        | (S2)1          | (S2)2          | (S2)2           | (S2)4          |
| 4.VV.Z.C       | (S2)4          | (S2)4          |                | , , ,          | l ` ´          |                |                |                | l ` ´           | , í            |
| 4.W.3          | (S2)6          | (S2)6          | (S2)6          | (S2)6          |                |                |                |                |                 |                |

Table 4D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

| 1       |        |        | 1      | 1      | 1      | 1       |         |        | 1      |        |
|---------|--------|--------|--------|--------|--------|---------|---------|--------|--------|--------|
| 4.W.3.a |        |        |        |        |        |         |         |        |        |        |
| 4.W.3.b |        |        |        |        |        |         |         |        |        |        |
| 4.W.3.c |        |        |        |        |        |         |         |        |        |        |
| 4.W.3.d | (S2)6  |        |        |        |        |         |         |        |        |        |
| 4.W.3.e | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)6   |         |        |        |        |
| 4.W.4   | (S1)6  | (S1)6  | (S1)6  | (S1)6  | (S1)6  |         |         |        |        |        |
| 4.W.5   |        |        |        |        |        |         |         |        |        |        |
|         | (S2)8  | (S2)8  | (S2)8  | (S2)8  | (S2)8  | (S2)8   | (S2)8   | (S2)9  | (S2)9  | (S2)9  |
| 4.W.8   | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9   | (S2)9   | (S2)9  | (S2)9  | (S2)10 |
|         | (S2)10 | (S2)10 | (S2)10 | (S2)10 | (S2)10 |         |         |        |        |        |
| 4.W.9   | (S1)6  | (S1)6  | (S1)6  | (S1)6  |        |         |         |        |        |        |
| 4.W.9.a | (S1)6  | (S1)6  | (S1)6  | (S1)6  |        |         |         |        |        |        |
| 4.W.9.b |        |        |        |        |        |         |         |        |        |        |
|         | (S3)1  | (S3)1  | (S3)2  | (S3)3  | (S3)3  | (S3)3   | (S3)3   | (S3)3  | (S3)3  | (S3)7  |
| 4.SL.2  | (S3)7  | (S3)7  | (S3)7  | (S3)7  | (S3)8  | (S3)8   | (S3)8   | (S3)8  | (S3)8  | (S3)8  |
|         | (S3)8  | (S3)8  |        |        |        |         |         |        |        |        |
|         | (S3)1  | (\$3)1 | (S3)1  | (S3)1  | (S3)1  | (S3)1   | (S3)1   | (S3)1  | (S3)1  | (\$3)1 |
| 4 61 2  | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S3)2  | (S3)2   | (\$3)2  | (\$3)2 | (\$3)2 | (\$3)2 |
| 4.SL.3  | (\$3)2 | (\$3)3 | (S3)7  | (S3)7  | (S3)7  | (S3)7   | (S3)7   | (S3)7  | (S3)7  | (\$3)7 |
|         | (\$3)9 | (\$3)9 | (S3)9  | (S3)9  | (S3)9  | (S3)9   | (S3)9   |        |        | . ,    |
| 4.L.1   | (S1)6  | (S2)13 | (S2)13 |        |        |         |         |        |        |        |
| 4.L.1.a | (S1)1  | (S2)13 | (S2)13 |        |        |         |         |        |        |        |
| 41.11   | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13  | (S2)13  | (S2)13 | (S2)13 | (S2)13 |
| 4.L.1.b | (S2)13 | (S2)13 |        |        |        |         |         |        |        |        |
| 4.L.1.c |        |        |        |        |        |         |         |        |        |        |
| 4.L.1.d |        |        |        |        |        |         |         |        |        |        |
| 4.L.1.e |        |        |        |        |        |         |         |        |        |        |
| 4.L.1.f |        |        |        |        |        |         |         |        |        |        |
| 4.L.1.g |        |        |        |        |        |         |         |        |        |        |
|         | (S1)6  | (S2)11 | (S2)11 | (S2)11 | (S2)12 | (S2)12  | (S2)14  | (S2)14 | (S2)14 | (S2)14 |
| 4.L.2   | (S2)14 | (S2)14 | (S2)14 | (S2)14 |        |         |         |        |        |        |
| 4.L.2.a | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12  | (S2)12  |        |        |        |
| 4.L.2.b | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)13p | (S2)13p | (S2)14 | (S2)14 |        |
| 4.L.2.c |        |        |        |        |        |         |         |        |        |        |
| 4.L.2.d |        |        |        |        |        |         |         |        |        |        |
| 4.L.3   | (S1)6  |        |        |        |        |         |         |        |        |        |
| 4.L.3.a | (S2)3  | (S2)3  | (S2)3  | (S2)3  | (S2)3  | (S4)2   |         |        |        |        |
| 4.L.3.b | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)14  | (S2)14  | (S2)14 |        |        |
| 4.L.3.c |        |        |        |        |        |         |         |        |        |        |
| 4.L.4   | (S4)5  |        |        |        |        |         |         |        |        |        |
| 4.L.4.a | (S1)1  | (S1)1  | (S4)2  | (S4)5  | (S4)5  | (S4)13  | (S4)13  | (S4)13 |        |        |
| 4.L.4.b | (S2)11 |        |        |        |        |         | . ,     | . ,    |        |        |
| 4.L.4.c | (S2)9  | (S2)9  | (S4)5  |        |        |         |         |        |        |        |
| 4.L.5   |        |        |        |        |        |         |         |        |        |        |
| 4.L.5.a | (S4)4  |        |        |        |        |         |         |        |        |        |
| 4.L.5.b | (S4)4  | (S4)4  | (S4)4  |        |        |         |         |        |        |        |
| 4.L.5.c |        |        |        |        |        |         |         |        |        |        |
| 4.L.6   |        |        |        |        |        |         |         |        |        |        |
| L       |        |        |        | •      | •      |         |         |        |        |        |

### Table 4D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

Table 5D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

|                 | (S1)2            | (S3)2            | (\$3)3           | (S4)5                  |
|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------------|
|                 | (S1)2<br>(S4)8   | (S3)2<br>(S4)8   | (S4)8            | (S4)14           | (S4)3<br>(S4)14  | (S4)14           | (S4)14           | (S4)14           | (S4)14           | (S4)14                 |
| 5.RL.1          | (S4)15           | (S4)8<br>(S4)15  | (S4)8<br>(S4)15  | (S4)14<br>(S4)15       |
|                 | (S4)15<br>(S4)15 | (S4)15<br>(S4)15 | (S4)15<br>(S4)15 | (S4)15<br>(S4)15 | (S4)13<br>(S4)17 | (34)13           | (34)13           | (34)13           | (34)13           | (34)13                 |
|                 | (S2)6            | (S4)15<br>(S2)7  | (S2)7            | (\$3)1           | (\$3)1           | (S4)5            | (S4)8            | (S4)8            | (S4)8            | (S4)8                  |
| 5.RL.2          | (S2)0<br>(S4)8   | (S2)7<br>(S4)8   | (S2)7<br>(S4)8   | (S4)8            | (S4)8            | (S4)13           | (S4)15           | (S4)15           | (S4)15           | (S4)15                 |
| <b>J.KL.2</b>   | (S4)16           | (S4)17           | 0(+0)            | 0(+0)            | 0(+0)            | (34)13           | (34)15           | (34)15           | (54)15           | (34)15                 |
|                 | (S4)10<br>(S2)7  | (S4)17           | (S4)5                  |
| 5.RL.3          | (S2)7<br>(S4)5   | (S4)6            | (S4)6            | (S4)6            | (S4)6            | (S4)6            | (S4)6            | (S4)7            | (S4)7            | (S4)7                  |
| <b>5.KL.5</b>   | (S4)7            | (S4)8            | (S4)8            | (S4)14           | (S4)14           | (S4)16           | 0(+0)            |                  |                  |                        |
| 5.RL.4          | (S1)1            | (S1)0            | (01)0            |                  |                  | (51)10           |                  |                  |                  |                        |
|                 | (S1)1<br>(S2)6   | (S4)13           | (S4)17                 |
| 5.RL.5          | (S4)17           | (51)15           | (01)15           |                        |
| 5.RL.6          | (S1)3            | (S1)3            | (S4)16                 |
| 5.RL.7          | (01)0            | (21)0            | (2.)10           | (5.)10           | (2.)10           | (5.)10           | (2.)10           | (2.)10           | (0.)10           | (2.)10                 |
|                 | (S1)2            | (S1)2            | (S4)6            | (S4)6            | (S4)6            | (S4)6            | (S4)6            | (S4)7            | (S4)7            | (S4)7                  |
| 5.RL.9          | (S4)7            | (S4)7            | (S4)7            | (S4)8            | (S4)8            | (S4)8            | (S4)8            | (S4)8            | (S4)8            | ( ) ·                  |
|                 | (S1)2            | (S2)3            | (S3)1            | (S3)1            | (\$3)2           | (\$3)3           | (S3)9            | (S3)9            | (S3)9            | (S4)1                  |
| 5.RI.1          | (S4)1            | (S4)2            | (S4)2            | (S4)2            | (S4)2            | (S4)3            | (S4)3            | (S4)3            | (S4)3            | (S4)3                  |
|                 | (S4)3            | (S4)3            | (S4)3            | (S4)4            | ~ /              |                  |                  |                  |                  | · · · ·                |
| 5 DI 0          | (S1)3            | (S2)2            | (S2)12           | (S3)8            | (S3)8            | (\$3)9           | (S4)1            | (S4)1            | (S4)1            | (S4)1                  |
| 5.RI.2          | (S4)1            | (S4)2            | (S4)3                  |
| 5.RI.3          | (S1)2            | (S1)3            | (S2)8            | (S3)7            | (S3)7            | (S4)1            | (S4)1            | (S4)1            | (S4)1            |                        |
|                 | (S1)1            | (S1)1            | (S1)1            | (S1)1            | (S1)1            | (S1)1            | (S4)4            | (S4)4            | (S4)4            | (S4)4                  |
| 5.RI.4          | (S4)4            | (S4)4            | (S4)4            |                  |                  |                  |                  |                  |                  |                        |
| 5.RI.5          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                        |
| 5.RI.6          | (S1)1            | (S1)2            | (S1)2            | (S1)2            | (S1)3            | (S1)3            | (S1)3            | (S1)3            | (S1)3            | (S1)3                  |
| <b>5.KI.</b> 0  | (S1)4            |                  |                  |                  |                  |                  |                  |                  |                  |                        |
| 5.RI.7          | (S1)2            | (S1)2            | (S1)2            | (S2)9            | (S2)9            | (S2)9            | (S2)9            | (S2)10           | (S2)10           |                        |
| 5.RI.8          | (S1)3            | (S2)8            | (S3)1            | (S3)1            | (S3)3            | (S3)7            | (S3)9            | (S3)9            | (S4)1            | (S4)1                  |
| <b>J.NI.0</b>   | (S4)2            | (S4)2            | (S4)2            | (S4)2            | (S4)3            |                  |                  |                  |                  |                        |
| 5.RI.9          | (S1)2            | (S1)2            | (S1)4                  |
| 5. <b>XI</b> .) | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S2)9            | (S2)9            | (S2)10           |                  |                        |
|                 | (S1)4                  |
| 5.W.1           | (S1)4                  |
|                 | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S2)4            |                  |                  |                        |
| 5.W.1.a         | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S2)4            |                  |                  |                        |
| 5.W.1.b         | (S1)4            | (S2)2            | (S2)4            |                  |                  |                  |                  |                  |                  |                        |
| 5.W.1.c         | (S1)4            | (S2)1            |                        |
| 5.W.1.d         | (S1)4            | (S2)4            |                        |
| 5.W.2           | (00)0            | (00)0            | (00)0            |                  |                  |                  |                  |                  |                  |                        |
| 5.W.2.a         | (S2)2            | (S2)8            | (S2)8            | (00)0            | (00)0            | (00)0            | (00)0            | (00)0            | (00)0            | ( <b>00</b> ) <b>0</b> |
| 5.W.2.b         | (S2)2            | (S2)8            | (S2)8            | (S2)8                  |
|                 | (S2)8            | (S2)8            | (S2)8            | (S2)9            | (S2)9            | (S2)10           |                  |                  |                  |                        |
| 5.W.2.c         | (S2)1            | (50)2            | (60)2            | (0)2             | (0)2             |                  |                  |                  |                  |                        |
| 5.W.2.d         | (S2)3            | (S2)3            | (S2)3            | (S2)3            | (S2)3            |                  |                  |                  |                  |                        |
| 5.W.2.e         |                  |                  |                  |                  | 303              |                  |                  |                  |                  |                        |

| 5.W.3   | (S2)6          | (S2)6           | [      | [      | [      | [      |                                    |         | 1       |        |
|---------|----------------|-----------------|--------|--------|--------|--------|------------------------------------|---------|---------|--------|
|         | (32)0          | (32)0           |        |        |        |        |                                    |         |         |        |
| 5.W.3.a | (82)6          | (52)6           | (52)6  | (82)6  | (82)6  | (52)6  | (82)6                              |         |         |        |
| 5.W.3.b | (S2)6<br>(S2)1 | (S2)6<br>(S2)13 | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6                              |         |         |        |
| 5.W.3.c | (32)1          | (32)15          |        |        |        |        |                                    |         |         |        |
| 5.W.3.d | (82)7          | (52)7           | (82)7  | (62)7  | (82)7  | (52)7  | $(\mathbf{S}\mathbf{O})\mathbf{Z}$ |         |         |        |
| 5.W.3.e | (S2)7          | (S2)7           | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)7                              |         |         |        |
| 5.W.4   | (S1)4          | (S1)4           | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)4                              |         |         |        |
| 5.W.5   | (0.1).4        | (72)0           | (20)0  | (22)0  | (20)0  | (99)0  | (22)0                              | (22)0   | (99)0   | (20)0  |
| 5.W.8   | (S1)4          | (S2)9           | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9                              | (S2)9   | (S2)9   | (S2)9  |
|         | (S2)9          | (S2)9           | (S2)9  | (S2)10 | (S2)10 | (S2)10 | (S2)10                             |         |         |        |
| 5.W.9   | (S2)8          | (S2)9           | (S2)9  | (S2)9  | (S2)10 | (S2)10 | (S2)10                             |         |         |        |
| 5.W.9.a | (00)0          |                 |        |        |        |        |                                    |         |         |        |
| 5.W.9.b | (S2)9          | (00) 1          | (20)1  | (22)1  | (20)1  | (22) 1 | (22)1                              | (22)1   | (00) 1  | (20) 0 |
|         | (S3)1          | (S3)1           | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S3)1                              | (S3)1   | (S3)1   | (S3)2  |
| 5.SL.2  | (S3)2          | (S3)2           | (\$3)2 | (S3)2  | (S3)3  | (S3)3  | (S3)8                              | (S3)8   | (S3)8   | (S3)8  |
|         | (S3)8          | (S3)8           | (S3)8  | (S3)8  | (S3)9  | (S3)9  | (S3)9                              | (0.0) ( | (0.0) ( | (00) ( |
|         | (S3)1          | (S3)1           | (\$3)1 | (S3)1  | (S3)1  | (S3)1  | (S3)1                              | (S3)1   | (S3)1   | (S3)1  |
| _ ~     | (\$3)1         | (\$3)2          | (\$3)2 | (S3)2  | (\$3)2 | (S3)3  | (S3)3                              | (S3)3   | (S3)3   | (S3)3  |
| 5.SL.3  | (S3)3          | (S3)3           | (S3)7  | (S3)7  | (S3)7  | (S3)7  | (S3)7                              | (S3)7   | (S3)7   | (S3)7  |
|         | (S3)9          | (S3)9           | (S3)9  | (S3)9  | (S3)9  | (S3)9  | (S3)9                              | (S3)9   | (S3)9   | (S3)9  |
|         | (S3)9          | (S3)9           | (S3)9  | (S3)9  |        |        |                                    |         |         |        |
| 5.L.1   | (S1)4          | (S2)14          | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)15                             | (S2)15  |         |        |
| 5.L.1.a | (S2)14         | (S2)14          |        |        |        |        |                                    |         |         |        |
| 5.L.1.b | (S2)15         | (S2)15          | (S2)15 | (S2)15 | (S2)15 | (S2)15 | (S2)15                             | (S2)15  | (S2)15  | (S2)15 |
|         | (S2)15         |                 |        |        |        |        |                                    |         |         |        |
| 5.L.1.c | (S2)15         | (S2)15          | (S2)15 | (S2)15 | (S2)15 | (S2)15 |                                    |         |         |        |
| 5.L.1.d | (S2)15         | (S2)15          | (S2)15 |        |        |        |                                    |         |         |        |
| 5.L.1.e |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.2   | (S1)4          | (S2)11          | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11                             | (S2)11  | (S2)12  | (S2)12 |
|         | (S2)13         | (S2)13          |        |        |        |        |                                    |         |         |        |
| 5.L.2.a |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.2.b | (S2)12         | (S2)12          | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12                             | (S2)13  |         |        |
| 5.L.2.c |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.2.d | (S2)11         | (S2)11          |        |        |        |        |                                    |         |         |        |
| 5.L.2.e |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.3   | (S1)4          | (S2)1           | (S2)1  | (S2)11 | (S2)12 | (S2)13 | (S2)13                             | (S2)14  | (S2)14  | (S2)14 |
| 5.L.3.a | (S2)13         | (S2)13          | (S2)13 | (S2)13 | (S2)13 | (S2)13 |                                    |         |         |        |
| 5.L.3.b |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.4   | (S2)3          |                 |        |        |        |        |                                    |         |         |        |
| 5.L.4.a | (S1)1          | (S1)1           | (S1)1  | (S1)1  | (S2)3  | (S4)4  | (S4)4                              | (S4)4   |         |        |
| 5.L.4.b |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.4.c |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.5   |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.5.a |                |                 |        |        |        |        |                                    |         |         |        |
| 5.L.5.b |                | ( <b>A a</b> )  |        |        |        |        |                                    |         |         |        |
| 5.L.5.c | (S2)3          | (S2)14          |        |        |        |        |                                    |         |         |        |
| 5.L.6   |                |                 |        |        | 204    |        |                                    |         |         |        |

### Table 5D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

Table 6D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

|         | (S1)1          | (S1)1          | (S1)1                                                   | (S1)1            | (S1)1           | (S1)1          | (S1)1                               | (S1)1          | (S1)1          | (S1)1                     |
|---------|----------------|----------------|---------------------------------------------------------|------------------|-----------------|----------------|-------------------------------------|----------------|----------------|---------------------------|
|         | (S1)1<br>(S1)1 | (S1)1<br>(S1)1 | (S1)1<br>(S1)1                                          | (S1)1<br>(S1)1   | (S1)1<br>(S1)1  | (S1)1<br>(S1)1 | (S1)1<br>(S1)2                      | (S1)1<br>(S1)2 | (S1)1<br>(S1)2 | (S1)1<br>(S1)2            |
| 6.RL.1  | . ,            | . ,            | < ,                                                     | · /              |                 |                | · /                                 | (31)2          | (31)2          | (31)2                     |
|         | (S1)2          | (S1)2          | (S1)2                                                   | (S1)2            | (S1)4           | (S1)4          | (S1)4<br>(S4)8                      | (\$4)9         | (\$4)9         | (\$4)9                    |
| 6.RL.2  | (S1)4          | (S4)7          | (S4)8                                                   | (S4)8            | (S4)8           | (S4)8          | (34)8                               | (S4)8          | (S4)8          | (S4)8                     |
|         | (S4)8          | (S4)8          | (S4)8                                                   | (S4)8            | (01)1           | (01)1          | (01)1                               | (01)1          | (01)1          | (01)1                     |
| 6.RL.3  | (S1)1          | (S1)1          | (S1)1                                                   | (S1)1            | (S1)1           | (S1)1          | (S1)1                               | (S1)1          | (S1)1          | (S1)1                     |
|         | (S1)1          | (S1)1          | (01)2                                                   | (01)2            | (00)1           | (0.4) 5        | $(\mathbf{C} \mathbf{A})\mathbf{c}$ | (0.4) 5        | (0.4) 5        | (0.4) 5                   |
| 6.RL.4  | (S1)3          | (S1)3          | (S1)3                                                   | (S1)3            | (S2)1           | (S4)5          | (S4)5                               | (S4)5          | (S4)5          | (S4)5                     |
|         | (S4)6          | (S4)6          | (S4)6                                                   | (S4)6            | (01)2           | (01)2          | (01)2                               | (01)2          | (01)2          | $(\mathbf{CO})\mathbf{A}$ |
| 6.RL.5  | (S1)2          | (S1)3          | (S1)3                                                   | (S1)3            | (S1)3           | (S1)3          | (S1)3                               | (S1)3          | (S1)3          | (S2)4                     |
|         | (S4)6          | (S4)6          | (S4)6                                                   | (S4)6            |                 | (0.1)7         |                                     |                |                |                           |
| 6.RL.6  | (S4)7          | (S4)7          | (S4)7                                                   | (S4)7            | (S4)7           | (S4)7          | (S4)7                               |                |                |                           |
| 6.RL.9  | (00)11         | (00)11         | (00)1                                                   | (00)1            | (20)0           | (0.4) 1        | (0.4) 1                             | (0.4) 0        | (0.1) 0        | (0.4) 0                   |
| F       | (S2)11         | (S2)11         | (S3)1                                                   | (S3)1            | (\$3)2          | (S4)1          | (S4)1                               | (S4)2          | (S4)2          | (S4)2                     |
|         | (S4)2          | (S4)2          | (S4)2                                                   | (S4)3            | (S4)13          | (S4)13         | (S4)13                              | (S4)13         | (S4)13         | (S4)13                    |
| 6.RI.1  | (S4)13         | (S4)16         | (S4)16                                                  | (S4)16           | (S4)1           | (S4)1          | (S4)2                               | (S4)2          | (S4)2          | (S4)2                     |
|         | (S4)2          | (S4)2          | (S4)3                                                   | (S4)13           | (S4)13          | (S4)13         | (S4)13                              | (S4)13         | (S4)13         | (S4)13                    |
|         | (S4)16         | (S4)16         | (S4)16                                                  | (00)7            | (0.4) 1         | (0.4) 1        | (0.4) 0                             | (0.4) 2        | (0.4) 0        | (0.4) 0                   |
| 6.RI.2  | (S3)7          | (S3)7          | (S3)7                                                   | (S3)7            | (S4)1           | (S4)1          | (S4)3                               | (S4)3          | (S4)3          | (S4)8                     |
|         | (S4)8          | (S4)8          | (S4)8                                                   | (S4)16           | (S4)16          | (S4)17         |                                     |                |                |                           |
| 6.RI.3  | (S3)7          | (S3)7          | (S3)9                                                   | (S4)3            | (S4)3           | (S4)3          | (S4)13                              | (S4)16         | (S4)16         | ( <b>6</b> () (           |
| 6.RI.4  | (S4)1          | (S4)1          | (S4)1                                                   | (S4)1            | (S4)1           | (S4)1          | (S4)1                               | (S4)1          | (S4)1          | (S4)1                     |
|         | (S4)2          | (S4)14         | (S4)14                                                  | (S4)14           | (S4)14          | (S4)14         | (S4)14                              | (S4)14         | (S4)14         | (S4)16                    |
| 6.RI.5  | (S3)3          | (S3)3          | (S4)3                                                   | (S4)16           | (S4)16          | (S4)16         | (S4)16                              | (S4)17         | (S4)17         | (S4)17                    |
| 0.11110 | (S4)17         | (S4)17         | (S4)17                                                  | (S4)17           | (S4)17          |                |                                     |                |                |                           |
| -       | (S3)8          | (S3)8          | (S4)1                                                   | (S4)1            | (S4)1           | (S4)1          | (S4)7                               | (S4)15         | (S4)15         | (S4)15                    |
| 6.RI.6  | (S4)15         | (S4)15         | (S4)15                                                  | (S4)15           | (S4)15          | (S4)15         | (S4)15                              | (S4)15         | (S4)15         | (S4)15                    |
|         | (S4)15         |                |                                                         |                  |                 |                |                                     |                |                |                           |
| 6.RI.8  | (S4)2          | (S4)2          | (S4)2                                                   | (S4)3            | (S4)3           | (S4)4          | (S4)15                              | (S4)15         |                |                           |
| 6.RI.9  | (S4)4          | (S4)4          | (S4)4                                                   | (S4)4            | (S4)4           | (S4)4          | (S4)4                               |                |                |                           |
| 6.W.1   | (S1)4          | (S2)11         | (S2)11                                                  |                  |                 |                |                                     |                |                |                           |
| 6.W.1.a | (S1)4          | (S1)4          |                                                         |                  |                 |                |                                     |                |                |                           |
| 6.W.1.b | (S1)4          | (S1)4          | (S1)4                                                   | (S4)1            | (S4)1           | (S4)2          | (S4)3                               | (S4)4          |                |                           |
| 6.W.1.c | (S1)4          | (S1)4          | (S2)1                                                   | (S2)1            | (S2)1           | (S2)1          | (S2)1                               | (S4)4          |                |                           |
| 6.W.1.d | (S2)3          | (S2)8          | (S2)8                                                   |                  |                 |                |                                     |                |                |                           |
| 6.W.1.e | (S1)4          | (S2)3          | <i>(</i> <b>2</b> · · · · · · · · · · · · · · · · · · · | ( <b>a</b> : : : | ( <b>Q</b> :: ) |                |                                     |                |                |                           |
| 6.W.2   | (S1)4          | (S1)4          | (S1)4                                                   | (S1)4            | (S1)4           | (S2)11         | (S2)11                              | (S2)11         | (S2)11         |                           |
| 6.W.2.a | (S1)4          | (S1)4          | (S1)4                                                   | (S1)4            | (S4)8           | (S4)8          |                                     |                |                |                           |
| 6.W.2.b | (S1)4          | (S1)4          | (S1)4                                                   | (S1)4            | (S2)11          | (S2)11         |                                     |                |                |                           |
| 6.W.2.c | (S1)4          | (S1)4          | (S1)4                                                   | (S1)4            | (S2)1           | (S2)1          | (S2)2                               |                |                |                           |
| 6.W.2.d | (S1)4          | (S1)4          | (S1)4                                                   | (S2)2            | (S2)2           | (S2)2          | (S2)2                               | (S2)2          |                |                           |
| 6.W.2.e | (S1)4          | (S1)4          | (S1)4                                                   | (S2)3            | (S2)3           | (S2)3          | (S2)3                               | (S2)3          | (S2)3          | (S2)7                     |
|         | (S2)8          | (S2)8          |                                                         |                  |                 |                |                                     |                |                |                           |
| 6.W.2.f | (S1)4          | (S1)4          | (S1)4                                                   |                  |                 |                |                                     |                |                |                           |
| 6.W.3   | (S2)4          |                |                                                         |                  |                 |                |                                     |                |                |                           |
| 6.W.3.a | (S2)6          |                |                                                         |                  |                 |                |                                     |                |                |                           |

| 6.W.3.b            | (S2)4          | (S2)4          | (S2)4          | (S2)4          | (S2)4    | (S2)4   |         |                |                |                |
|--------------------|----------------|----------------|----------------|----------------|----------|---------|---------|----------------|----------------|----------------|
| 6.W.3.c            |                |                |                |                |          |         |         |                |                |                |
| 6.W.3.d            | (S2)2          | (S2)4          |                |                |          |         |         |                |                |                |
| 6.W.3.e            | (S2)4          | (S2)4          | (S2)4          |                |          |         |         |                |                |                |
| 6.W.4              | (S1)4          | (S1)4          | (S1)4          | (S1)4          | (S2)1    |         |         |                |                |                |
| 6.W.5              | (S2)6          | (S2)6          | (S2)6          | (S2)7          | (S2)7    |         |         |                |                |                |
|                    | (S2)11         | (S2)11         | (S2)11         | (S2)11         | (S2)11   | (S2)11  | (S2)11  | (S2)11         | (S2)11         | (S2)11         |
| 6.W.8              | (S2)12         | (S2)12         | (S2)12         | (S2)12         | (S2)12   | (S2)12  | (S2)12  | (S2)12         | (S2)12         | (S2)12         |
|                    | (S2)12         | (S2)12         | (S2)12         | (S2)12         | (S2)12   | (S2)12  | (S2)13  | (S2)13         | (S2)13         | (S2)13         |
|                    | (S2)13         | (S2)13         | (S2)13         | (00)11         | (22) 1.1 | (20) 11 | (20) 11 | (20) 10        | (22)12         | (20) 10        |
| 6.W.9              | (S1)4          | (S2)11         | (S2)11         | (S2)11         | (S2)11   | (S2)11  | (S2)11  | (S2)12         | (S2)12         | (S2)13         |
|                    | (S2)13         | (S2)13         | (S2)13         |                |          |         |         |                |                |                |
| 6.W.9.a<br>6.W.9.b |                |                |                |                |          |         |         |                |                |                |
| 0. 0.9.0           | (S1)4          | (S2)10         | (S3)1          | (\$3)1         | (S3)1    | (\$3)1  | (S3)1   | (\$3)1         | (\$3)2         | (\$3)2         |
|                    | (\$3)2         | (\$3)3         | (S3)1<br>(S3)3 | (\$3)3         | (\$3)3   | (\$3)3  | (\$3)3  | (\$3)3         | (\$3)2         | (S3)2<br>(S3)3 |
| 6.SL.2             | (\$3)3         | (S3)3          | (\$3)3         | (S3)7          | (S3)7    | (S3)7   | (S3)7   | (S3)7          | (S3)7          | (\$3)7         |
| 0.01.1             | (S3)7          | (S3)7          | (S3)7          | (S3)7          | (S3)7    | (S3)8   | (S3)8   | (S3)8          | (S3)8          | (\$3)9         |
|                    | (S3)9          | (S3)9          | (S3)9          | (20)/          | (20)1    | (20)0   | (50)0   | (20)0          | (20)0          | (20)>          |
|                    | (\$3)1         | (S3)1          | (\$3)2         | (S3)2          | (\$3)2   | (S3)2   | (\$3)2  | (S3)2          | (\$3)2         | (\$3)3         |
|                    | (\$3)3         | (S3)3          | (S3)3          | (S3)3          | (S3)3    | (S3)3   | (S3)3   | (S3)3          | (S3)3          | (S3)7          |
| 6.SL.3             | (\$3)7         | (S3)7          | (S3)7          | (S3)7          | (S3)7    | (S3)7   | (S3)7   | (S3)7          | (S3)7          | (\$3)7         |
|                    | (\$3)7         | (S3)8          | (\$3)8         | (S3)8          | (S3)8    | (S3)9   | (S3)9   |                |                |                |
| 6.L.1              | (S1)4          | (S1)4          | (S1)4          | (S1)4          | (S1)4    | (S2)7   | (S2)7   |                |                |                |
| 6.L.1.a            | (S2)7          | (S2)7          | (S2)7          | (S2)7          |          |         |         |                |                |                |
| 6.L.1.b            |                |                |                |                |          |         |         |                |                |                |
| 6.L.1.c            | (S2)7          | (S2)7          | (S2)7          | (S2)7          |          |         |         |                |                |                |
| 6.L.1.d            | (S2)7          | (S2)7          | (S2)7          | (S2)7          | (S2)7    | (S2)7   | (S2)7   | (S2)7          |                |                |
| 6.L.1.e            | (S2)7          | (S2)7          | (S2)8          | (S2)9          | (S2)9    |         |         |                |                |                |
| 6.L.2              | (S1)4          | (S1)4          | (S1)4          | (S1)4          | (S1)4    | (S2)9   | (S2)9   | (S2)9          | (S2)9          | (S2)9          |
|                    | (S2)9          | (S2)9          | (S2)9          | (S2)10         | (S2)10   | (S3)8   | (S4)1   | (S4)1          |                |                |
| 6.L.2.a            | (S2)10         | (S2)10         | (S2)10         | (S2)10         | (S2)10   | (S2)10  | (S2)10  | (S2)10         | 0(00)          | (00)0          |
| 6.L.2.b            | (S2)9          | (S2)9          | (S2)9          | (S2)9          | (S2)9    | (S2)9   | (S2)9   | (S2)9          | (S2)9          | (S2)9          |
| 6.L.3              | (S2)9<br>(S1)4 | (S2)9<br>(S1)4 | (S2)9<br>(S1)4 | (S2)9<br>(S3)9 |          |         |         |                |                |                |
| 6.L.3.a            | (S1)4          | (S1)4<br>(S2)6 | (S1)4<br>(S2)6 | (S2)6          | (S2)6    | (S2)6   | (S2)6   | (S2)7          | (S2)7          |                |
| 6.L.3.b            | (S2)0          | (S2)0<br>(S2)3 | (S2)0<br>(S2)3 | (S2)6          | (S2)8    | (S2)8   | (S2)8   | (S2)7<br>(S2)8 | (S2)7<br>(S2)8 | (S2)8          |
| 6.L.4              | (S2)2          | (S4)5          | (S4)5          | (02)0          | (02)0    | (02)0   | (02)0   | (02)0          | (02)0          | (02)0          |
| 6.L.4.a            | (S4)5          | (S4)5          | (S4)5          |                |          |         |         |                |                |                |
| 6.L.4.b            | (              | (~ ))*         | (~ ))          |                |          |         |         |                |                |                |
| 6.L.4.c            |                |                |                |                |          |         |         |                |                |                |
| 6.L.4.d            |                |                |                |                |          |         |         |                |                |                |
| 6.L.5              | (S1)2          | (S4)5          | (S4)6          |                |          |         |         |                |                |                |
| 6.L.5.a            | (S4)6          | (S4)6          | (S4)6          | (S4)14         | (S4)14   |         |         |                |                |                |
| 6.L.5.b            | (S2)1          | (S4)5          |                |                |          |         |         |                |                |                |
| 6.L.5.c            | (S2)3          | (S4)1          | (S4)1          |                |          |         |         |                |                |                |
| 6.L.6              | (S1)4          | (S1)4          | (S2)1          | (S2)2          | (S2)2    | (S2)2   |         |                |                |                |

### Table 6D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

| Table 7D4E Items | Coded by R | eviewers to H | Each Standard | [(Session Number) | Item Number] |
|------------------|------------|---------------|---------------|-------------------|--------------|
|------------------|------------|---------------|---------------|-------------------|--------------|

|                   |                |                   |                | -               |                 | -               | -                | -               |        | -       |
|-------------------|----------------|-------------------|----------------|-----------------|-----------------|-----------------|------------------|-----------------|--------|---------|
|                   | (S1)1          | (S1)1             | (S1)1          | (S1)1           | (S1)1           | (S1)1           | (S1)1            | (S1)2           | (S4)15 | (S4)15  |
| 7.RL.1            | (S4)15         | (S4)15            | (S4)15         | (S4)15          | (S4)15          | (S4)15          | (S4)15           | (S4)15          | (S4)15 | (S4)15  |
|                   | (S4)15         | (S4)15            | (S4)15         | (S4)18          |                 |                 |                  |                 |        |         |
| 7.RL.2            | (S1)2          | (S1)3             | (S1)3          | (S1)3           | (S1)3           | (S1)3           | (S1)3            | (S1)3           | (S4)15 | (S4)18  |
| / • <b>NL</b> • 2 | (S4)19         | (S4)19            | (S4)19         | (S4)19          | (S4)19          | (S4)19          | (S4)19           | (S4)19          |        |         |
| 7.RL.3            | (S1)1          | (S1)2             | (S1)2          | (S1)2           | (S1)3           | (S1)4           | (S4)15           | (S4)16          | (S4)16 | (S4)16  |
|                   | (S4)16         | (S4)16            | (S4)16         | (S4)16          | (S4)18          | (S4)18          | (S4)18           |                 |        |         |
| 7.RL.4            | (S4)17         | (S4)17            | (S4)17         | (S4)17          | (S4)17          | (S4)17          | (S4)17           |                 |        |         |
| 7.RL.5            | (S1)1          | (S1)1             | (S1)1          | (S1)3           |                 |                 |                  |                 |        |         |
| 7.RL.6            | (S1)1          | (S1)2             | (S1)2          | (S1)2           | (S1)2           | (S1)2           | (S1)2            | (S1)2           | (S4)15 | (S4)16  |
|                   | (S4)18         | (S4)18            |                |                 |                 |                 |                  |                 |        |         |
| 7.RL.9            |                |                   |                |                 |                 |                 |                  |                 |        |         |
|                   | (S2)3          | (S2)13            | (S3)2          | (S3)2           | (S3)7           | (S3)7           | (S4)4            | (S4)4           | (S4)4  | (S4)4   |
| 7.RI.1            | (S4)6          | (S4)6             | (S4)6          | (S4)6           | (S4)6           | (S4)6           | (S4)7            | (S4)9           | (S4)9  | (S4)9   |
|                   | (S4)9          | (S4)10            | (S4)10         | (S4)10          | (S4)10          |                 |                  |                 |        |         |
| 7.RI.2            | (S4)7          | (S4)7             | (S4)7          | (S4)7           | (S4)7           | (S4)7           | (S4)10           |                 |        |         |
| 7.RI.3            | (S4)4          | (S4)6             | (S4)9          | (S4)9           | (S4)9           |                 |                  |                 |        |         |
| 7.RI.4            | (S2)2          | (S2)4             | (S2)6          | (S2)6           | (S2)7           | (S2)8           | (S4)2            | (S4)2           | (S4)2  | (S4)3   |
|                   | (S4)3          | (S4)3             | (S4)3          | (S4)8           | (S4)8           | (S4)8           | (S4)8            |                 |        |         |
| 7.RI.5            | (S3)6          | (S3)7             | (S3)8          | (S4)1           | (S4)1           | (S4)1           | (S4)1            | (S4)1           | (S4)1  | (S4)1   |
|                   | (S4)1          | (S4)3             | (S4)5          | (S4)5           | (S4)5           | (S4)5           | (S4)5            | (S4)5           | (S4)5  | (S4)7   |
| 7.RI.6            | (\$3)6         | (S3)7             | (S4)4          | (S4)4           | (S4)4           | (S4)4           | (S4)4            | (S4)4           | (S4)4  | (S4)4   |
|                   | (S4)4          | (S4)4             | (S4)4          | (S4)4           | (S4)4           | (\$4)5          | (S4)5            | (7.1) 1.0       | (21)10 | (7.1)10 |
| 7.RI.8            | (S4)1          | (S4)6             | (S4)9          | (S4)9           | (S4)10          | (S4)10          | (S4)10           | (S4)10          | (S4)10 | (S4)10  |
| 7.RI.9            | (S4)1          | (00)2             | (00) 4         |                 |                 |                 |                  |                 |        |         |
| 7.W.1             | (S1)4          | (S2)3             | (S2)4          |                 |                 |                 |                  |                 |        |         |
| 7.W.1.a           | (S1)4          | (01)4             | (50)2          | (02)2           | (52)2           | (02)2           | (52)2            | (52)2           | (02)11 | (60)10  |
| 7.W.1.b           | (S1)4          | (S1)4             | (S2)3          | (S2)3           | (S2)3           | (S2)3           | (S2)3            | (S2)3           | (S2)11 | (S2)12  |
|                   | (S2)13         | (S2)13            | (S2)13         |                 |                 |                 |                  |                 |        |         |
| 7.W.1.c           | (S1)4          |                   |                |                 |                 |                 |                  |                 |        |         |
| 7.W.1.d           | (S1)4          | (00)1             | (00) 4         | (00)4           | (00)4           | (00)4           | (00)4            | (00)4           | (00) 4 |         |
| 7.W.1.e           | (S1)4          | (S2)1             | (S2)4          | (S2)4           | (S2)4           | (S2)4           | (S2)4            | (S2)4           | (S2)4  |         |
| 7.W.2             | (S1)4          | (S1)4             | (S1)4          | (S1)4           | (S1)4           | (S1)4           | (S1)4            | (S2)6           | (S2)13 |         |
| 7.W.2.a           | (S1)4          | (S1)4             | (S1)4          | (S1)4           | (S1)4<br>(S1)4  | (S2)6           | (82)6            | (82)6           | (82)6  | (52)6   |
| 7.W.2.b           | (S1)4<br>(S2)6 | (S1)4<br>(S2)6    | (S1)4<br>(S2)6 | (S1)4<br>(S2)6  |                 | (S2)6<br>(S2)12 | (S2)6<br>(S2)13  | (S2)6<br>(S2)13 | (S2)6  | (S2)6   |
| 7.W.2.c           | (S2)0<br>(S1)4 | (S2)0<br>(S1)4    | (S2)0<br>(S1)4 | (S2)0<br>(S1)4  | (S2)11<br>(S2)2 |                 | (S2)13<br>(S2)10 |                 | (S2)10 |         |
| 7.W.2.d           | (S1)4<br>(S1)4 | (S1)4<br>(S2)8    | · · /          | . ,             | (S2)2           | (S2)10          | (32)10           | (S2)10          | (32)10 |         |
| 7. <b>w.</b> 2.u  | (S1)4<br>(S1)4 | (S2)8<br>(S1)4    | (S2)8<br>(S1)4 | (S2)10<br>(S2)2 | (S2)2           | (S2)2           | (S2)2            | (S2)2           | (S2)2  | (S2)2   |
| 7.W.2.e           | (S1)4<br>(S2)6 | (31)4             | (01)4          | (52)2           | (32)2           | (52)2           | (32)2            | (52)2           | (32)2  | (32)2   |
| 7.W.2.f           | (S2)0<br>(S1)4 | (S1)4             | (S2)1          | (S2)4           |                 |                 |                  |                 |        |         |
| 7.W.2.1<br>7.W.3  | (S1)4<br>(S2)1 | $(S1)^4$<br>(S2)1 | (02)1          | (52)+           |                 |                 |                  |                 |        |         |
| 7.W.3.a           | (S2)1<br>(S2)8 | (52)1             |                |                 |                 |                 |                  |                 |        |         |
| 7.W.3.b           | (52)0          |                   |                |                 |                 |                 |                  |                 |        |         |
| 7.W.3.c           |                |                   |                |                 |                 |                 |                  |                 |        |         |
| 1.11.J.C          |                |                   |                |                 | 207             |                 |                  |                 |        | l       |

| 7.W.3.d         | (S2)8  |        |        |        |        |        |        |        |        |        |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 7.W.3.e         | (S2)1  | (S2)1  | (S2)1  | (S2)1  | (S2)1  |        |        |        |        |        |
| 7.W.4           | (S1)4  | (S2)6  | (S2)6  | (S2)7  |
| /. •••.4        | (S2)7  | (S2)8  | (S2)8  | (S2)8  | (S2)9  | (S2)10 | (S2)13 | (S2)13 |        |        |
| 7.W.5           | (S2)2  | (S2)6  | (S2)6  | (S2)6  | (S2)7  | (S2)7  | (S2)7  | (S2)8  | (S2)9  | (S2)10 |
| 7.00.5          | (S2)10 |        |        |        |        |        |        |        |        |        |
|                 | (S2)3  | (S2)3  | (S2)3  | (S2)3  | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 |
| 7.W.8           | (S2)11 | (S2)12 | (S2)13 | (S2)13 |
|                 | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 |        |        |        |        |        |
| 7.W.9           | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)12 | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 |
| 1               | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 |        |        |        |        |        |
| 7.W.9.a         |        |        |        |        |        |        |        |        |        |        |
| 7.W.9.b         | (S2)13 |        |        |        |        |        |        |        |        |        |
|                 | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S3)1  | (S3)2  | (S3)2  | (S3)2  | (S3)2  |
|                 | (S3)2  |
| 7.SL.2          | (S3)2  | (S3)6  | (S3)6  | (S3)6  | (S3)6  | (S3)6  | (S3)7  | (S3)7  | (S3)7  | (S3)7  |
|                 | (S3)7  | (S3)8  |
|                 | (S3)8  | (S3)8  | (S3)8  | (S3)8  | (S3)8  |        |        |        |        |        |
|                 | (S3)1  | (S3)1  | (S3)2  | (S3)6  | (S3)6  | (S3)6  | (S3)6  | (S3)7  | (S3)8  | (S3)8  |
| 7.SL.3          | (S3)8  |
|                 | (S3)8  |        |        |        |        |        |        |        |        |        |
| 7.L.1           | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)10 |
|                 | (S2)10 |        |        |        |        |        |        |        |        |        |
| 7.L.1.a         | (S2)9  | (S2)10 | (S3)1  |        |        |        |        |        |        |        |
| 7.L.1.b         | (S2)10 | (S2)10 |        |        |        |        |        |        |        |        |
| 7.L.1.c         | (S2)10 |        |        |        |        |        |        |        |        |        |
| 7.L.2           | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)9  |
| 7.L.2.a         |        |        |        |        |        |        |        |        |        |        |
| 7.L.2.b         |        |        |        |        |        |        |        |        |        |        |
| 7.L.3           | (S1)4  | (S1)4  | (S1)4  | (S2)8  | (S2)10 |        |        |        |        |        |
|                 | (S2)2  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)7  |
| 7.L.3.a         | (S2)7  | (S2)8  | (S2)8  | (S2)8  |
|                 | (S2)8  | (S4)19 |        |        |
| 7.L.4           | (S4)3  | (S4)8  | (S4)8  |        |        |        |        |        |        |        |
| <b>7.L.4.</b> a | (S4)2  | (S4)3  | (S4)8  | (S4)8  |
| 7.L.4.b         | (S4)2  |        |        |        |
| 7.L.4.c         | (S4)8  | (S4)8  | (S4)8  |        |        |        |        |        |        |        |
| <b>7.L.4.d</b>  |        |        |        |        |        |        |        |        |        |        |
| 7.L.5           | (S4)17 | (S4)17 |        |        |        |        |        |        |        |        |
| 7.L.5.a         |        |        |        |        |        |        |        |        |        |        |
| 7.L.5.b         |        |        |        |        |        |        |        |        |        |        |
| 7.L.5.c         |        |        |        |        |        |        |        |        |        |        |
| 7.L.6           | (S1)4  | (S1)4  | (S4)3  | (S4)8  |        |        |        |        |        |        |

### Table 7D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

|          | (S1)1           | (S1)2           | (S4)2            | (S4)2          | (S4)2          | (S4)2          | (S4)2          | (S4)2           | (S4)2  | (S4)4  |
|----------|-----------------|-----------------|------------------|----------------|----------------|----------------|----------------|-----------------|--------|--------|
| 8.RL.1   | (S4)14          | (S4)14          | (~ )_            | (~ ')=         | (~ ·)=         | (~ -)=         | (~ ·)=         | (~ ))=          | (~ ')= | (~ ))  |
| 0.01.0   | (S4)14          | (S4)14          | (S4)14           | (S4)14         | (S4)14         | (S4)14         | (S4)14         | (S4)14          | (S4)14 | (S4)14 |
| 8.RL.2   | (S4)14          | (S4)14          |                  |                |                |                |                |                 |        |        |
|          | (S4)1           | (S4)1           | (S4)2            | (S4)2          | (S4)3          | (S4)3          | (S4)3          | (S4)3           | (S4)3  | (S4)3  |
| 8.RL.3   | (S4)3           | (S4)3           | (S4)4            | (S4)4          | (S4)4          | (S4)14         | (S4)14         | (S4)15          | (S4)15 | (S4)15 |
|          | (S4)15          | (S4)15          | (S4)15           | (S4)15         | (S4)15         | (S4)16         |                |                 |        |        |
| 0 DI 4   | (S4)1           | (S4)1           | (S4)1            | (S4)1          | (S4)1          | (S4)1          | (S4)5          | (S4)13          | (S4)13 | (S4)13 |
| 8.RL.4   | (S4)13          | (S4)13          | (S4)13           |                |                |                |                |                 |        |        |
| 8.RL.5   |                 |                 |                  |                |                |                |                |                 |        |        |
| 8.RL.6   | (S4)4           | (S4)4           | (S4)4            | (S4)4          | (S4)16         | (S4)16         | (S4)16         | (S4)16          | (S4)16 | (S4)16 |
| 0.NL.U   | (S4)16          |                 |                  |                |                |                |                |                 |        |        |
| 8.RL.9   | (S4)15          |                 |                  |                |                |                |                |                 |        |        |
|          | (S1)1           | (S1)1           | (S1)1            | (S1)1          | (S1)1          | (S1)1          | (S1)1          | (S1)2           | (S1)2  | (S1)2  |
| 8.RI.1   | (S1)2           | (S1)2           | (S1)4            | (S1)4          | (S1)5          | (S1)5          | (S2)10         | (S2)10          | (S3)1  | (S3)3  |
|          | (S3)3           | (S3)9           | (S4)7            | (S4)7          | (S4)8          | (S4)8          | (S4)8          |                 |        |        |
| 8.RI.2   | (S1)2           | (S1)2           | (S1)2            | (S1)2          | (S1)2          | (S1)2          | (S1)2          | (S1)2           | (S1)2  | (S1)4  |
| 0.1(1.2  | (S1)4           | (S1)4           | (S3)8            | (S4)6          | (S4)8          | (S4)8          |                |                 |        |        |
| 8.RI.3   | (S1)2           | (S1)2           | (S1)3            | (S1)3          | (S1)3          | (S1)3          | (S1)3          | (S1)3           | (S1)3  | (S1)3  |
|          | (S1)4           | (S1)4           | (S1)4            | (S1)5          | (S4)5          | (S4)5          | (S4)5          | (S4)6           |        |        |
| 8.RI.4   | (S4)5           | (S4)5           | (S4)5            | (S4)5          | (S4)6          | (S4)6          | (S4)6          | (S4)6           |        |        |
| 8.RI.5   | (S1)1           | (S1)2           | (S1)3            | (S1)4          | (S4)6          |                |                |                 |        |        |
| 8.RI.6   | (S4)1           | (S4)5           |                  |                |                |                |                |                 |        |        |
| 8.RI.8   | (S1)4           | (S2)12          | (S4)7            | (S4)7          | (S4)7          | (S4)7          | (S4)7          | (S4)7           | (S4)7  | (S4)7  |
|          | (S4)7           | (S4)7           | (S4)7            | (S4)7          | (S4)7          | (S4)7          | (S4)8          | (S4)8           |        |        |
| 8.RI.9   | (S4)7           | (S4)7           | (S4)7            | (S4)7          | (S4)7          | (S4)7          | (S4)7          | (S4)7           | (S4)8  | (S4)8  |
|          | (S4)8           | (S4)8           | (S4)8            | (S4)8          | (S4)8          | (S4)8          | (S4)8          | (S4)8           | (S4)8  |        |
| 8.W.1    | (S2)12          |                 |                  |                |                |                |                |                 |        |        |
| 8.W.1.a  | (S2)6           |                 |                  |                |                |                |                |                 |        |        |
| 8.W.1.b  | (S2)12          |                 |                  |                |                | (70) (         |                |                 |        |        |
| 8.W.1.c  | (S2)6           | (S2)6           | (S2)6            | (S2)6          | (S2)6          | (S2)6          |                |                 |        |        |
| 8.W.1.d  | (00)2           | (00)2           | (00)2            | (00)2          | (00)2          |                |                |                 |        |        |
| 8.W.1.e  | (\$2)3          | (\$2)3          | (S2)3            | (S2)3          | (S2)3          | (01)5          | (02)10         | (02)10          |        |        |
| 8.W.2    | (S1)5           | (S1)5           | (S1)5            | (S1)5          | (S1)5          | (S1)5          | (S2)10         | (S2)10          |        |        |
| 8.W.2.a  | (S1)5           | (S1)5           | (S1)5            | (S1)5          | (S1)5          | (S2)4          | (01)5          | (52)4           | (62)4  | (82)4  |
| 0 W 2 L  | (S1)5           | (S1)5           | (S1)5            | (S1)5          | (S1)5          | (S1)5          | (S1)5          | (S2)4           | (S2)4  | (S2)4  |
| 8.W.2.b  | (S2)4           | (S2)4           | (S2)10<br>(S2)12 | (S2)10         | (S2)10         | (S2)10         | (S2)10         | (S2)10          | (S2)10 | (S2)10 |
| 8.W.2.c  | (S2)10<br>(S1)5 | (S2)10<br>(S1)5 | (S2)12<br>(S1)5  | (S1)5          | (S1)5          | (S2)1          | (S2)1          | (S2)4           |        |        |
| 8.W.2.d  | (S1)5<br>(S1)5  | (S1)5<br>(S1)5  | (S1)5<br>(S1)5   | (S1)5<br>(S1)5 | (S1)5<br>(S1)5 | (S2)1<br>(S2)2 | (S2)1<br>(S2)4 | (S2)4<br>(S2)10 |        |        |
| 8.W.2.e  | (S1)5<br>(S1)5  | (S1)5<br>(S1)5  | (S1)5<br>(S1)5   | (S1)5<br>(S1)5 | (S1)5<br>(S1)5 | (32)2          | (32)4          | (32)10          |        |        |
| 8.W.2.f  | (S1)5           | (S1)5<br>(S1)5  | (S1)5<br>(S1)5   | (S1)5<br>(S1)5 | (S1)3<br>(S2)3 | (\$2)3         | (\$3)8         |                 |        |        |
| 8.W.3    |                 | (51)5           |                  | (31)3          | (52)5          | (52)5          | (65)6          |                 |        |        |
| 8.W.3.a  |                 |                 |                  |                |                |                |                |                 |        |        |
| o. w.s.a |                 |                 |                  |                |                |                |                |                 |        |        |

# Table 8D4E Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

| Table 8D4E Items Coded by | <b>Reviewers to Each Standard</b> | [(Session Number) | Item Number] continued |
|---------------------------|-----------------------------------|-------------------|------------------------|
|                           |                                   |                   |                        |

| 8.W.3.b         (S2)2         (S2)2         (S2)2           8.W.3.c         (S2)1         (S2)1         (S2)1           8.W.3.d         (S2)1         (S2)1         (S2)1           8.W.3.e         (S2)3         S2         S2           8.W.4         (S1)5         (S1)5         (S2)2           8.W.5         (S2)2         (S2)2         S2 | 2)1         (S2)2           2)1         (S2)2           2)4         (S2)7           )11         (S2)11           )12         (S2)12 | (S2)2<br>(S2)7<br>(S2)11 | (S2)2<br>(S2)8 | (S2)2<br>(S2)9 | (\$2)2 |        |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------|----------------|----------------|--------|--------|--------|
| 8.W.3.d         (S2)1         (S2)1         (S2)1           8.W.3.e         (S2)3                                                                                                                                                                                                                                                                | 2)1 (S2)2<br>2)4 (S2)7<br>)11 (S2)11<br>)12 (S2)12                                                                                  | (S2)7<br>(S2)11          | (\$2)8         |                | (82)2  |        |        |
| 8.W.3.e         (S2)3           8.W.4         (S1)5         (S1)5         (S2)3                                                                                                                                                                                                                                                                  | 2)4 (S2)7<br>)11 (S2)11<br>)12 (S2)12                                                                                               | (S2)7<br>(S2)11          | (\$2)8         |                | (\$2)2 |        |        |
| <b>8.W.4</b> (S1)5 (S1)5 (S2                                                                                                                                                                                                                                                                                                                     | )11 (S2)11<br>)12 (S2)12                                                                                                            | (S2)11                   |                | (S2)9          |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                  | )11 (S2)11<br>)12 (S2)12                                                                                                            | (S2)11                   |                | (S2)9          |        |        |        |
| <b>8.W.5</b> (S2)2 (S2)2                                                                                                                                                                                                                                                                                                                         | )12 (S2)12                                                                                                                          | · · ·                    | (62)11         |                |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                  | )12 (S2)12                                                                                                                          | · · ·                    | (00)11         |                |        |        |        |
| (S2)10 (S2)10 (S2                                                                                                                                                                                                                                                                                                                                |                                                                                                                                     |                          | (S2)11         | (S2)11         | (S2)11 | (S2)11 | (S2)11 |
|                                                                                                                                                                                                                                                                                                                                                  | (00)14                                                                                                                              | (S2)12                   | (S2)13         | (S2)13         | (S2)13 | (S2)13 | (S2)13 |
| (S2)13 (S2)13 (S2)                                                                                                                                                                                                                                                                                                                               | )13 (S2)14                                                                                                                          | (S2)14                   | (S2)14         | (S2)14         | (S2)14 | (S2)14 | (S2)14 |
|                                                                                                                                                                                                                                                                                                                                                  | )14 (S2)14                                                                                                                          | (S2)14                   | (S2)14         | (S2)14         | (S2)14 |        |        |
|                                                                                                                                                                                                                                                                                                                                                  | 1)5 (S2)10                                                                                                                          | (S2)10                   | (S2)11         | (S2)11         | (S2)12 | (S2)14 | (S2)14 |
| (52)14 $(52)14$ $(52)$                                                                                                                                                                                                                                                                                                                           | )14 (S2)14                                                                                                                          | (S2)14                   |                |                |        |        |        |
| 8.W.9.a                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.W.9.b</b> (S1)5 (S2)12 (S2                                                                                                                                                                                                                                                                                                                  | )12 (S2)13                                                                                                                          |                          |                |                |        |        |        |
| (\$3)2 (\$3)2 (\$3                                                                                                                                                                                                                                                                                                                               | 3)2 (S3)2                                                                                                                           | (S3)2                    | (S3)2          | (S3)3          | (S3)3  | (S3)3  | (S3)7  |
| <b>8.SL.2</b> (S3)7 (S3)7 (S3)                                                                                                                                                                                                                                                                                                                   | 3)7 (S3)7                                                                                                                           | (S3)7                    | (S3)7          | (S3)8          | (S3)9  | (S3)9  | (S3)9  |
| (\$3)9 (\$3)9 (\$3                                                                                                                                                                                                                                                                                                                               | 3)9 (S3)9                                                                                                                           | (S3)9                    | (S3)9          |                |        |        |        |
| 8.SL.3 (S3)1 (S3)1 (S3)                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     | (S3)2                    | (S3)3          | (S3)3          | (S3)3  | (S3)3  | (S3)3  |
| (S3)3 $(S3)3$ $(S3)3$                                                                                                                                                                                                                                                                                                                            | 3)3 (S3)9                                                                                                                           | (S3)9                    | (S3)9          |                |        |        |        |
| <b>8.L.1</b> (S1)5 (S1)5 (S1)                                                                                                                                                                                                                                                                                                                    | l)5 (S1)5                                                                                                                           | (S1)5                    |                |                |        |        |        |
| 8.L.1.a                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.1.b                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.1.c                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.1.d                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.L.2</b> (S1)5 (S1)5 (S1)5                                                                                                                                                                                                                                                                                                                   | , ,                                                                                                                                 | (S2)7                    | (S2)7          | (S2)8          | (S2)9  | (S3)2  |        |
|                                                                                                                                                                                                                                                                                                                                                  | 2)8 (S2)8                                                                                                                           | (S2)8                    | (S2)8          | (S2)8          | (S2)8  | (S2)8  | (S2)9  |
|                                                                                                                                                                                                                                                                                                                                                  | 2)9 (S2)9                                                                                                                           | (S2)9                    | (S2)9          |                |        |        |        |
| 8.L.2.c (S2)7 (S2)7 (S2)                                                                                                                                                                                                                                                                                                                         | 2)7 (S2)7                                                                                                                           | (S2)7                    | (S2)7          | (S2)7          | (S2)7  | (S2)7  | (S2)7  |
| (\$2)7                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.L.3</b> (S1)5 (S1)5 (S2)                                                                                                                                                                                                                                                                                                                    | 2)2 (S2)7                                                                                                                           |                          |                |                |        |        |        |
| <b>8.L.3.a</b> (S2)8                                                                                                                                                                                                                                                                                                                             |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.L.4</b> (S4)1 (S4)2 (S4                                                                                                                                                                                                                                                                                                                     | )13                                                                                                                                 |                          |                |                |        |        |        |
| <b>8.L.4.a</b> (S4)6 (S4)6 (S4)                                                                                                                                                                                                                                                                                                                  | 4)6 (S4)13                                                                                                                          | (S4)13                   | (S4)13         |                |        |        |        |
| 8.L.4.b                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.L.4.c</b> (S4)13                                                                                                                                                                                                                                                                                                                            |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.4.d                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                  | 4)6                                                                                                                                 |                          |                |                |        |        |        |
| 8.L.5.a                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.5.b                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| 8.L.5.c                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                     |                          |                |                |        |        |        |
| <b>8.L.6</b> (S1)5 (S1)5 (S2                                                                                                                                                                                                                                                                                                                     | 2)1 (S2)4                                                                                                                           | (S2)6                    | (S2)11         | (S4)1          | (S4)2  | (S4)13 |        |

| $\begin{array}{ c c c c c c c c c c c c c c c c c c c$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (\$2)20 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| $(S_2)_{20}$ $(S_2)_{21}$ $(S_2)_{21}$ $(S_2)_{21}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |         |
| <b>3.OA.2</b> (S1)9 (S1)14 (S1)14 (S2)4 (S2)4 (S2)4 (S2)4 (S2)4 (S2)4 (S2)7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (S2)7   |
| (\$2)7 (\$2)7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |
| (S1)4 (S1)4 (S1)4 (S1)9 (S1)9 (S1)14 (S1)14 (S1)14 (S1)12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (S1)23  |
| <b>3.OA.3</b> (S1)23 (S1)23 (S1)23 (S2)4 (S2)4 (S2)4 (S2)7 (S2)7 (S2)7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (S2)7   |
| (S2)7 (S2)7 (S2)11 (S2)14 (S2)14 (S2)21 (S2)21 (S2)21 (S2)21 (S2)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |         |
| <b>3.OA.4</b> (S1)9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (S1)14  |
| <b>3.0A.4</b> (S1)14 (S1)14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |
| <b>3.OA.5</b> (S1)2 (S2)4 (S2)14 (S2)14 (S2)14 (S2)14 (S2)14 (S2)14 (S2)14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |         |
| <b>3.OA.6</b> (S1)14 (S1)14 (S2)4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |         |
| <b>3.OA.7</b> (S1)4 (S1)9 (S1)14 (S1)23 (S1)23 (S2)7 (S2)7 (S2)14 (S2)14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (S2)20  |
| <b>3.0A.7</b> (S2)20 (S2)20 (S2)20 (S2)20 (S2)20 (S2)20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |
| <b>3.OA.8</b> (S1)14 (S1)17 (S1)21  | (S2)11  |
| <b>3.0A.6</b> (S2)14 (S2)14 (S2)21 (S2)21 (S2)22 (S2)22 (S2)22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |
| <b>3.OA.9</b> (\$2)25 (\$2)25 (\$2)25 (\$2)25 (\$2)25 (\$2)25 (\$2)25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| (S1)2 (S1)2 (S1)2 (S1)2 (S1)2 (S1)2 (S1)2 (S1)2 (S1)8 (S1)8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | (S1)8   |
| <b>3.NBT.1</b> (S1)8 (S1)8 (S1)8 (S1)8 (S1)8 (S1)8 (S2)3 (S2)3 (S2)3 (S2)3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (S2)3   |
| (\$2)3 (\$2)3 (\$2)3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |
| (S1)6 (S1)6 (S1)13 (S1)16 (S1)17 (S1)17 (S1)17 (S1)17 (S1)17 (S1)17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | · · /   |
| <b>3.NBT.2</b> (S1)17 (S1)17 (S1)21 (S2)11 | (S2)11  |
| <b>SING 1.2</b> (S2)11 (S2)16 (S2)22 (S2)2 | (S2)22  |
| (\$2)25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |
| <b>3.NBT.3</b> (S1)14 (S1)23 (S1)23 (S1)23 (S2)7 (S2)21 (S2)21 (S2)21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |         |
| (S1)3         (S1)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | · · /   |
| (S1)22 (S1)24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | · ,     |
| <b>3.NF.1</b> (S1)25 (S1)25 (S1)25 (S2)9 (S2)13 (S2)13 (S2)13 (S2)13 (S2)13                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |
| (S2)16 (S2)16 (S2)16 (S2)16 (S2)16 (S2)16 (S2)16 (S2)17 (S2)17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | (S2)17  |
| (S2)17 (S2)17 (S2)17 (S2)17 (S2)18 (S2)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |         |
| <b>3.NF.2</b> (S1)12 (S1)12 (S2)9 (S2)9 (S2)9 (S2)18 (S2)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |
| <b>3.NF.2.a</b> (S1)12 (S2)18 (S2)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |
| (S1)3 (S1)12 (S1)12 (S1)12 (S1)12 (S1)12 (S1)12 (S1)12 (S1)12 (S2)9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | (S2)9   |
| <b>3.NF.2.b</b> (S2)9 (S2)9 (S2)9 (S2)9 (S2)9 (S2)18 (S2)18 (S2)18 (S2)18                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | (S2)18  |
| (S2)18         (S2)19         (S2)19         (S2)19         (S2)19         (S2)19         (S2)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |         |
| <b>3.NF.3</b> (S1)19 (S1)22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |         |
| <b>3.NF.3.a</b> (S1)22 (S1)22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |         |
| <b>3.NF.3.b</b> (S1)22 (S1)22 (S1)22 (S1)22 (S1)22 (S1)22 (S1)22 (S1)24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |         |
| 3.NF.3.c                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |         |
| <b>3.NF.3.d</b> (S1)19 (S1)19 (S1)19 (S1)19 (S1)19 (S1)19 (S1)19 (S1)19 (S1)19                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |         |

### Table 3D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

|                 |        | -      |        |        |        |        |        |        |        |        |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 3.MD.1          | (S1)6  | (S1)16 | (S1)16 | (S1)16 |
| <b>J.WID.I</b>  | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S2)16 | (S2)24 |        |        |        |
| 3.MD.2          | (S2)12 |        |        |
| 3.MD.3          | (S1)13 | (S2)24 | (S2)24 |
| <b>5.WID.</b> 5 | (S2)24 | (S2)24 | (S2)24 | (S2)24 |        |        |        |        |        |        |
| 3.MD.4          | (S2)19 | (S2)19 | (S2)19 | (S2)19 |        |        |        |        |        |        |
| 3.MD.5          | (S1)18 | (S1)18 | (S1)18 | (S1)18 | (S2)23 |        |        |        |        |        |
| 3.MD.5.a        | (S2)23 | (S2)23 |        |        |        |        |        |        |        |        |
| 3.MD.5.b        | (S1)18 | (S1)18 | (S2)23 | (S2)23 |        |        |        |        |        |        |
| 3.MD.6          | (S2)23 | (S2)23 | (S2)23 | (S2)23 | (S2)23 |        |        |        |        |        |
| 3.MD.7          |        |        |        |        |        |        |        |        |        |        |
| 3.MD.7.a        |        |        |        |        |        |        |        |        |        |        |
| 3.MD.7.b        | (S1)20 | (S1)20 |        |        |        |        |        |        |        |        |
| 3.MD.7.c        | (S1)20 |        |        |        |        |        |        |        |        |        |
| 3.MD.7.d        | (S1)20 |        |        |        |
| 3.MD.8          | (S1)18 | (S2)2  |        |        |
|                 | (S1)7  | (S1)11 | (S1)11 |
| 3.G.1           | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S2)6  | (S2)6  | (S2)6  | (S2)6  |
| 5.0.1           | (S2)6  | (S2)6  | (S2)6  | (S2)8  |
|                 | (S2)8  |        |        |        |        |        |        |        |        |        |
| 3.G.2           | (S1)25 | (S1)25 | (S1)25 | (S1)25 | (S1)25 | (S2)6  | (S2)13 | (S2)13 | (S2)13 | (S2)13 |
| 3.6.2           | (S2)16 | (S2)17 | (S2)17 | (S2)17 |        |        |        |        |        |        |

### Table 3D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

| Table 4D4M Items Coded by Reviewers to Each Standard [(Ses | sion Number) Item Number] |
|------------------------------------------------------------|---------------------------|
|------------------------------------------------------------|---------------------------|

| 40A.1         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)3         (\$1)14         (\$1)11         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |           | ·      |        |        | -      |        |        |        |        |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| (51)9         (51)9         (51)9         (51)9         (51)9         (51)1         (51)1         (51)1         (51)1         (51)1         (51)1         (51)11         (51)12         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)14         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16         (51)16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4 0 4 1         | (S1)3     | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)9  | (S1)9  |
| 4.0A.2         (\$2)3         (\$2)3         (\$2)3         (\$2)3         (\$2)3         (\$2)1         (\$2)12         (\$2)12         (\$2)18           4.0A.3         (\$1)11         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)12         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         (\$1)10         \$1)10         (\$1)10         (\$1)10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>4.0A.1</b>   | (S1)9     | (S1)9  | (S1)9  | (S1)9  | (S2)3  | (S2)3  | (S2)3  | (S2)3  |        |        |
| (S1)1         (S2)3         (S2)3         (S2)3         (S2)3         (S2)11         (S1)12         (S1)20         (S1)21         (S1)20         (S1)21         (S1)21         (S1)21         (S1)21         (S1)21         (S1)21         (S1)21         (S1)21                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 4.04.2          | (S1)8     | (S1)9  | (S1)9  | (S1)11 | (S1)12 | (S1)14 | (S1)14 | (S1)14 | (S1)19 | (S2)3  |
| 4.0A.3         (S2)6         (S2)18         (S2)18         (S2)18         (S2)18         (S2)18         (S2)18         (S2)18         (S2)18         (S2)18         (S2)12         (S1)20         (S1)21         (S2)19         (S2)19         (S2)19         (S2)19         (S2)19         (S2)14         (S2)24         (S2)24 </th <th><b>4.0A.</b>2</th> <th>(S2)3</th> <th>(S2)3</th> <th>(S2)3</th> <th>(S2)3</th> <th>(S2)8</th> <th>(S2)11</th> <th>(S2)12</th> <th>(S2)12</th> <th>(S2)18</th> <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>4.0A.</b> 2  | (S2)3     | (S2)3  | (S2)3  | (S2)3  | (S2)8  | (S2)11 | (S2)12 | (S2)12 | (S2)18 |        |
| (\$2)18         (\$2)18         (\$2)23         (\$2)23         (\$2)23         (\$2)23         (\$2)23         (\$2)23         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)20         (\$2)219         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)19         (\$2)14         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24         (\$2)24                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | (S1)11    | (S1)12 | (S1)14 | (S1)19 |
| 4.0A.4         (S1)14         (S1)14         (S1)14         (S1)14         (S1)14         (S1)120         (S1)20         (S1)20         (S1)20         (S1)20         (S1)20         (S1)23         (S1)24         (S2)24         (S2)25         (S2)26         (S2)26                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.OA.3          | (S2)6     | (S2)6  | (S2)6  | (S2)8  | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 |
| 4.0A.4         (S1)20         (S1)23         (S2)24         (S2)22         (S2)2         (S2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 | (S2)18    | (S2)18 | (S2)23 | (S2)23 | (S2)23 |        |        |        |        |        |
| (S1)20         (S1)20         (S1)23         (S1)24         (S2)24         (S2)24<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1014            | (S1)14    | (S1)14 | (S1)14 | (S1)19 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 |
| 4.0A.5         (S2)19         (S2)19         (S2)19         (S2)19         (S2)19         (S2)24         (S2)2         (S1)2         (S1)16         (S1)17         (S1)7         (S1)7 <th< th=""><th>4.0A.4</th><th>(S1)20</th><th>(S1)20</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4.0A.4          | (S1)20    | (S1)20 |        |        |        |        |        |        |        |        |
| (S2)24         (S2)24         (S2)24         (S2)24         (S2)24         (S1)2         (S1)16         (S1)17         (S1)7         (S1)8         (S2)8         (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | (S1)23    | (S1)23 |        | (S1)23 | (S1)23 | (S1)23 | (S1)23 | (S1)23 | (S2)19 |        |
| 4.NBT.1         (S1)2         (S1)16         (S1)17         (S1)18         (S2)18         (S2)17         (S2)17         (S2)17         (S2)17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4.OA.5          | (S2)19    | (S2)19 | (S2)19 | (S2)19 | (S2)19 | (S2)19 | (S2)24 | (S2)24 | (S2)24 | (S2)24 |
| 4.NB1.1         (S1)16         (S1)2         (S2)2         (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | (S2)24    | (S2)24 | (S2)24 | (S2)24 |        |        |        |        |        |        |
| (S1)16         (S1)16         (S1)16         (S1)16         (S1)16         (S2)8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4 NRT 1         | (S1)2     | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)16 | (S1)16 |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.1\D1.1        | (S1)16    | (S1)16 | (S1)16 | (S1)16 | (S2)8  |        |        |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4 NRT 2         | (S1)16    | (S1)16 | (S1)16 | (S1)16 | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)2  |
| 4.NBT.4         (S1)12         (S2)6         (S2)6         (S2)8         (S2)16         (S2)18         (S2)13         (S2)13         (S2)12         (S2)12         (S2)13         (S2)13         (S2)17         (S2)17         (S2)17         (S2)17         (S2)17         (S2)17         (S2)17         (S2)17         (S2)17         (                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <b>7.1\D1.2</b> | (S2)2     | (S2)9  |        |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.NBT.3         | (S1)7     | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S2)2  |        |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>4 NRT 4</b>  | (S1)12    | (S2)6  | (S2)6  | (S2)6  | (S2)8  | (S2)8  | (S2)8  | (S2)8  | (S2)8  | (S2)8  |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.1101.4        | (S2)8     | (S2)8  | (S2)16 | (S2)16 | (S2)16 | (S2)26 | (S2)26 | (S2)26 |        |        |
| (S2)18         (S2)18         (S2)18         (S2)12         (S2)13         (S2)13         (S2)17         (S2)7         (S2)7         (S2)7         (S2)7         (S2)7         (S2)7         (S2)7         (S2)7         (S2)13         (S2)17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4 NRT 5         | · · · · · |        | . ,    | · · ·  | (S1)19 | (S1)19 | (S1)19 | (S2)18 | (S2)18 | (S2)18 |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 4.1(1)1.5       | (S2)18    | (S2)18 | (S2)18 | (S2)23 |        |        |        |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | A NRT 6         | (S1)8     | (S1)14 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)23 | (S2)23 | (S2)23 |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>4.1\D1.0</b> |           |        |        |        |        |        |        |        |        |        |
| $ \frac{(52)7}{(52)7} \frac{(52)7}{(52)7} \frac{(52)7}{(52)7} \frac{(52)22}{(52)13} \frac{(52)13}{(52)13} \frac{(52)13}{(52)17} \frac{(52)17}{(52)17} \frac{(52)17}{(52)1$ | 4 NF 1          | . ,       | . ,    |        |        |        | (S1)6  | (S1)6  | (S1)17 | (S2)7  | (S2)7  |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 | . ,       | . ,    | . ,    |        | , ,    |        |        |        |        |        |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4 NF 2          | . ,       |        | . ,    | (S2)7  | (S2)7  | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |           |        | (S2)13 |        |        |        |        |        |        |        |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 | (S1)17    | (S2)17 |        |        |        |        |        |        |        |        |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.NF.3.a        |           |        |        |        |        |        |        |        |        |        |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4.NF.3.b        | . ,       | . ,    | (S1)17 | (S1)17 | (S1)17 | (S2)17 | (S2)17 | (S2)17 | (S2)17 | (S2)17 |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |           |        |        |        |        |        |        |        |        |        |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 | · /       |        |        | · · /  | (S1)22 | (S1)22 | (S1)22 |        |        |        |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |           |        | (S2)22 | (S2)22 |        |        |        |        |        |        |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 | · · /     | (S1)22 |        |        |        |        |        |        |        |        |
| 4.NF.4.c         (S1)22         (S2)22         (S2)25         (S2)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |           |        |        |        |        |        |        |        |        |        |
| 4.NF.5(S1)6(S1)24(S1)24(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)22(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)25(S2)2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                 |           |        |        |        |        |        |        |        |        |        |
| 4.NF.6         (S1)24         (S2)25         (S2)25<                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |           |        |        |        |        |        |        |        |        |        |
| <b>4.NF.6</b> (S2)25 (S2)25 (S2)25 (S2)25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4.NF.5          | . ,       | . ,    | . ,    |        |        |        |        |        | · · /  |        |
| (\$2)25 (\$2)25 (\$2)25 (\$2)25                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4 NF 6          | . ,       |        | . ,    | . ,    | (S1)24 | (S1)24 | (S1)24 | (S1)24 | (S2)25 | (S2)25 |
| <b>4.NF.7</b> (S1)27 (S1)27 (S1)27 (S1)27 (S1)27 (S1)27 (S1)27 (S1)27 (S1)27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 | · · /     |        | . ,    |        |        |        |        |        |        |        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.NF.7          | (S1)27    | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S1)27 |        |        |

|          |        |        |        |        |        |        | -      |        | -      |        |
|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 4.MD.1   | (S1)11 | (S1)11 | (S2)3  | (S2)6  | (S2)16 |        |        |        |        |        |
| 4.MD.2   | (S1)9  | (S1)11 | (S1)24 | (S2)6  |
| 4.1111.2 | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  |        |        |        |        |        |
| 4.MD.3   | (S1)8  | (S2)11 | (S2)11 |
| 4.1111.3 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 |        |        |        |        |
| 4.MD.4   | (S1)18 | (S1)18 | (S1)18 | (S1)18 | (S1)18 | (S1)18 | (S1)24 |        |        |        |
| 4.MD.5   | (S1)21 | (S1)21 | (S1)21 | (S1)21 | (S1)25 | (S2)21 | (S2)21 | (S2)26 |        |        |
| 4 MD 5 a | (S1)21 | (S1)21 | (S1)21 | (S2)20 |
| 4.MD.5.a | (S2)20 |        |        |        |        |        |        |        |        |        |
| 4.MD.5.b | (S1)21 | (S1)21 | (S1)21 |        |        |        |        |        |        |        |
| 4.MD.6   | (S1)21 | (S1)25 | (S2)21 |
| 4.MD.7   | (S2)3  | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)26 | (S2)26 | (S2)26 |
| 4.IVID./ | (S2)26 | (S2)26 | (S2)26 |        |        |        |        |        |        |        |
| 4.G.1    | (S1)4  | (S1)13 | (S1)13 |
| 4.0.1    | (S1)21 | (S2)4  | (S2)27 |
|          | (S1)13 | (S2)14 | (S2)14 | (S2)14 |
| 4.G.2    | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)21 | (S2)21 | (S2)21 | (S2)21 | (S2)21 |
|          | (S2)21 | (S2)21 | (S2)27 |        |
| 4.G.3    | (S1)26 |        |        |

Table 4D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

 Table 5D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

|                | •      |        |        |        |        |        |        |        |        |        |
|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                | (S1)9  | (S1)13 | (S1)13 |
| 5.OA.1         | (S1)13 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)23 | (S1)23 | (S1)23 | (S1)23 |
| 5.04.1         | (S1)23 | (S1)23 | (S1)23 | (S1)23 | (S2)6  | (S2)8  | (S2)8  | (S2)8  | (S2)8  | (S2)8  |
|                | (S2)8  | (S2)8  | (S2)12 | (S2)12 | (S2)24 | (S2)24 | (S2)24 |        |        |        |
|                | (S1)4  | (S1)9  | (S1)12 | (S1)13 |
| 5.OA.2         | (S1)13 | (S1)16 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)23 | (S1)23 | (S2)3  |
| 3.0A.2         | (S2)8  | (S2)8  | (S2)12 |
|                | (S2)24 |        |        |        |
| 5.OA.3         | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S2)19 | (S2)19 | (S2)19 | (S2)19 | (S2)19 |
| 3.0A.3         | (S2)19 | (S2)19 | (S2)19 |        |        |        |        |        |        |        |
| 5.NBT.1        | (S1)2  | (S2)2  | (S2)2  |
| 5.NBT.2        | (S1)2  | (S2)2  | (S2)3  |
| 5.NBT.3        | (S2)6  |        |        |        |        |        |        |        |        |        |
| 5.NBT.3.a      | (S2)3  | (S2)6  |        |
| 5.NBT.3.b      |        |        |        |        |        |        |        |        |        |        |
| 5.NBT.4        | (S1)7  |        |        |
| 5.NBT.5        | (S1)12 | (S1)24 | (S1)24 |
| 5.1101.5       | (S1)24 | (S1)24 | (S1)24 | (S1)24 | (S1)24 |        |        |        |        |        |
| 5.NBT.6        | (S1)18 | (S1)24 | (S2)7  |
| 5.1101.0       | (S2)21 |        |        |        |        |        |        |        |        |        |
| 5.NBT.7        | (S1)4  | (S2)3  | (S2)3  | (S2)3  | (S2)7  | (S2)7  | (S2)21 | (S2)21 | (S2)21 | (S2)21 |
| 3.1\D1.7       | (S2)21 | (S2)21 | (S2)21 | (S2)26 |
| 5.NF.1         | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)8  | (S1)8  | (S1)8  | (S1)8  |
| <b>3.111.1</b> | (S1)8  | (S1)11 | (S2)16 | (S2)16 | (S2)20 |        |        |        |        |        |
| 5.NF.2         | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)8  | (S1)8  | (S1)8  | (S1)8  | (S1)8  | (S1)11 |
| <b>3.111.2</b> | (S1)11 | (S1)11 | (S2)3  | (S2)16 | (S2)16 | (S2)16 |        |        |        |        |
| 5.NF.3         | (S1)14 | (S2)11 | (S2)11 |
| <b>3.111.3</b> | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 |        |        |        |        |        |
| 5.NF.4         | (S1)21 | (S1)21 | (S1)21 | (S1)26 | (S2)13 | (S2)13 | (S2)13 | (S2)17 | (S2)20 | (S2)20 |
| 5.NF.4.a       | (S1)21 | (S1)26 | (S2)11 | (S2)13 | (S2)13 | (S2)13 | (S2)20 |        |        |        |
| 5.NF.4.b       |        |        |        |        |        |        |        |        |        |        |
| 5.NF.5         |        |        |        |        |        |        |        |        |        |        |
| 5.NF.5.a       | (S2)17 | (S2)17 |        |        |        |        |        |        |        |        |
| 5.NF.5.b       | (S2)17 | (S2)17 | (S2)17 | (S2)17 | (S2)17 | (S2)17 | (S2)25 |        |        |        |
| 5.NF.6         | (S1)21 | (S1)21 | (S1)21 | (S1)21 | (S1)21 | (S2)13 | (S2)13 | (S2)16 | (S2)17 | (S2)20 |
|                | (S2)20 | (S2)20 | (S2)20 | (S2)20 | (S2)20 | (S2)20 |        |        |        |        |
| 5.NF.7         | (S1)26 |        |        |        |        |        |        |        |        |        |
| 5.NF.7.a       |        |        |        |        |        |        |        |        |        |        |
| 5.NF.7.b       | (S1)26 | (S1)26 | (S1)26 | (S2)26 |        |        |        |        |        |        |
| 5.NF.7.c       | (S1)26 | (S1)26 | (S1)26 | (S1)26 | (S2)26 |        |        |        |        |        |

| 5.MD.1     | (S1)4  | (S1)22 | (S2)3  | (S2)3  |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5.111.1    | (S2)3  | (S2)3  | (S2)3  | (S2)7  |
| 5.MD.2     | (S1)11 | (S1)22 | (S2)16 | (S2)16 |
| 5.1111.2   | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 |        |        |        |        |
| 5.MD.3     | (S1)17 | (S1)25 | (S2)23 |
| 5.MD.5     | (S2)25 |        |        |        |        |        |        |        |        |        |
| 5.MD.3.a   | (S2)25 |        |        |        |        |        |        |        |        |        |
| 5.MD.3.b   | (S1)25 | (S2)23 | (S2)23 | (S2)25 |        |        |        |        |        |        |
| 5.MD.4     | (S2)25 | (S2)25 | (S2)25 | (S2)25 | (S2)25 | (S2)25 |        |        |        |        |
| 5.MD.5     | (S1)17 | (S1)25 | (S1)25 | (S2)22 |        |        |        |        |        |        |
| 5.MD.5.a   | (S1)25 | (S1)25 | (S2)22 |        |        |        |        |        |        |        |
| 5.MD.5.b   | (S1)17 | (S1)25 | (S1)25 | (S1)25 |
| 5.1010.5.0 | (S1)25 | (S1)25 | (S1)25 | (S2)22 | (S2)22 | (S2)22 |        |        |        |        |
| 5.MD.5.c   | (S2)22 |        |        |
|            | (S1)6  | (S1)16 | (S1)16 | (S1)16 |
| 5.G.1      | (S1)19 | (S1)19 | (S1)19 | (S1)22 | (S1)22 | (S1)22 | (S1)22 | (S1)27 | (S1)27 | (S1)27 |
| 3.6.1      | (S1)27 | (S1)27 | (S2)4  |
|            | (S2)9  | (S2)9  | (S2)14 | (S2)14 | (S2)14 | (S2)14 |        |        |        |        |
|            | (S1)6  | (S1)6  | (S1)6  | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)19 | (S1)19 |
| 5.G.2      | (S1)19 | (S1)19 | (S1)19 | (S1)19 | (S1)19 | (S1)22 | (S1)22 | (S1)22 | (S1)22 | (S1)22 |
| 3.0.2      | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S1)27 | (S2)9  | (S2)9  | (S2)9  | (S2)9  |
|            | (S2)9  | (S2)9  | (S2)9  | (S2)14 |
| 5.G.3      | (S2)18 | (S2)27 | (S2)27 | (S2)27 |
| 5.G.3      | (S2)27 | (S2)27 | (S2)27 | (S2)27 |        |        |        |        |        |        |
| 5.G.4      | (S2)18 | (S2)18 | (S2)18 | (S2)18 | (S2)18 | (S2)18 | (S2)27 | (S2)27 | (S2)27 | (S2)27 |
| 5.G.4      | (S2)27 |        |        |        |        |        |        |        |        |        |

Table 5D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

### Table 6D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

| 6.RP.1  | (S1)3  | (S1)3  | (S1)3  | (S1)3  | (S1)9  | (S1)16 | (S1)17 | (S1)17 | (S1)17 | (S1)17 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0.KP.1  | (S1)17 | (S1)17 | (S1)17 | (S1)18 | (S2)2  | (S2)25 | (S2)26 |        |        |        |
| ( DD 2  | (S1)2  | (S1)3  | (S1)4  | (S1)6  | (S1)7  | (S1)8  | (S1)9  | (S1)9  | (S1)11 | (S1)12 |
| 6.RP.2  | (S1)13 | (S1)14 | (S1)18 | (S1)18 | (S1)18 | (S1)18 | (S2)20 | (S2)21 | (S2)30 |        |
| 6.RP.3  | (S1)6  | (S1)7  | (S1)13 | (S2)30 |        |        |        |        |        |        |
| 6.RP.3a | (S1)3  | (S1)3  | (S1)6  | (S1)6  | (S1)6  | (S1)7  | (S1)7  |        |        |        |
|         | (S1)4  | (S1)6  | (S1)7  | (S1)7  | (S1)7  | (S1)8  | (S1)9  | (S1)11 | (S1)18 | (S1)18 |
| 6.RP.3b | (S2)19 |        |        |        |        |        |        |        |        |        |
| 6.RP.3c | (S1)13 | (S1)13 | (S1)13 | (S1)13 | (S1)13 |        |        |        |        |        |
| 6.RP.3d | (S1)7  | (S1)8  | (S1)8  | (S1)8  | (S1)8  | (S1)8  | (S1)11 |        |        |        |
| 6.NS.1  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)9  | (S1)9  | (S1)9  |        |        |
| 6.NS.2  | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S1)20 |
| 6.NS.3  | (S1)14 | (S1)14 | (S1)14 | (S1)14 | (S1)14 | (S1)14 | (S2)19 |        |        |        |
| 6.NS.4  | . ,    | . ,    |        |        |        |        | . ,    |        |        |        |
| 6.NS.5  | (S2)3  | (S2)3  | (S2)3  | (S2)3  |        |        |        |        |        |        |
| 6.NS.6  |        |        |        |        |        |        |        |        |        |        |
| 6.NS.6a | (S2)3  |        |        |        |        |        |        |        |        |        |
| 6.NS.6b | (S2)9  | (S2)9  | (S2)25 | (S2)25 | (S2)25 | (S2)25 | (S2)28 | (S2)28 | (S2)30 |        |
| 6.NS.6c | (S1)6  | (S1)6  | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)14 | (S2)25 |        |        |
| 6.NS.7  | (S2)14 | (S2)29 |        |        |        |        |        |        |        |        |
| 6.NS.7a | (S2)16 | (S2)17 |        |        |        |        |        |        |        |        |
| 6.NS.7b | (S2)16 |        |        |        |        |        |        |        |        |        |
| 6.NS.7c | (S2)3  | (S2)17 |        |        |        |        |        |        |        |        |
| 6.NS.7d | (S2)14 | (S2)14 |        |        |        |        |        |        |        |        |
| 6.NS.8  | (S2)9  | (S2)13 | (S2)20 | (S2)20 | (S2)20 | (S2)25 | (S2)28 | (S2)28 |        |        |
| 6.EE.1  | (S1)2  | (S1)2  | (S1)2  | (S1)2  | (S1)12 | (S1)20 | (S2)4  | (S2)23 | (S2)23 |        |
| 6.EE.2  | (S1)16 | (S1)19 | (S1)19 |        |        |        |        |        |        |        |
| 6.EE.2a | (S1)19 | (S1)19 | (S1)19 | (S1)19 | (S2)8  | (S2)23 | (S2)23 | (S2)23 | (S2)23 |        |
| 6.EE.2b |        |        |        |        |        |        |        |        |        |        |
| 6.EE.2c | (S1)16 | (S1)16 | (S1)16 | (S1)16 |        |        |        |        |        |        |
| 6.EE.3  | (S2)8  |        |        |        |        |        |        |        |        |        |
| 6.EE.4  | (S1)12 | (S1)12 | (S1)12 | (S1)12 | (S1)12 | (S1)16 |        |        |        |        |
| 6.EE.5  | (S1)16 | (S2)4  | (S2)19 | (S2)26 | (S2)26 | (S2)26 |        |        |        |        |
| 6.EE.6  | (S1)19 | (S2)8  | (S2)8  | (S2)8  | (S2)30 | (S2)30 |        |        |        |        |
| 6.EE.7  | (S2)4  | (S2)4  | (S2)4  | (S2)4  | (S2)4  | (S2)8  | (S2)8  | (S2)19 | (S2)19 | (S2)19 |
| 0.111.7 | (S2)19 | (S2)23 |        |        |        |        |        |        |        |        |
| 6.EE.8  | (S2)16 | (S2)16 | (S2)16 | (S2)26 | (S2)26 | (S2)26 |        |        |        |        |
| 6.EE.9  | (S2)30 | (S2)30 | (S2)30 |        |        |        |        |        |        |        |
| 6.G.1   | (S1)2  | (S1)2  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)11 | (S2)11 |
| 0.0.1   | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)13 | (S2)31 |        |        |        |        |
| 6.G.2   | (S2)6  | (S2)21 | (S2)21 | (S2)21 | (S2)21 | (S2)21 | (S2)21 | (S2)33 | (S2)33 | (S2)33 |
| 0.0.4   | (S2)33 | (S2)33 | (S2)33 |        |        |        |        |        |        |        |
| 6.G.3   | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)11 | (S2)13 | (S2)13 | (S2)13 | (S2)13 | (S2)13 |
|         | (S2)20 | (S2)20 | (S2)20 | (S2)25 | (S2)28 | (S2)28 | (S2)28 |        |        |        |
| 6.G.4   | (S2)18 | (S2)31 | (S2)31 | (S2)31 |

| 6.SP.1  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)3  | (S2)16 | (S2)24 | (S2)27 |        |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 6.SP.2  | (S2)2  | (S2)2  | (S2)7  | (S2)7  | (S2)12 | (S2)16 | (S2)27 | (S2)32 | (S2)34 | (S2)34 |
| 0.51.2  | (S2)34 |        |        |        |        |        |        |        |        |        |
| 6.SP.3  | (S2)17 | (S2)24 | (S2)24 | (S2)27 | (S2)27 | (S2)29 | (S2)29 | (S2)29 | (S2)29 |        |
| 6.SP.4  | (S2)7  | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)17 | (S2)17 | (S2)22 | (S2)22 | (S2)22 |
| 0.51.4  | (S2)32 | (S2)33 | (S2)34 |        |        |        |        |        |        |        |
| 6.SP.5  | (S2)12 | (S2)22 | (S2)22 | (S2)32 |        |        |        |        |        |        |
| 6.SP.5a | (S2)12 | (S2)22 | (S2)29 |        |        |        |        |        |        |        |
| 6.SP.5b | (S2)27 | (S2)27 | (S2)34 |        |        |        |        |        |        |        |
| 6.SP.5c | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)17 | (S2)17 | (S2)17 | (S2)24 | (S2)24 |
| 0.51.50 | (S2)24 | (S2)24 | (S2)27 | (S2)32 | (S2)32 | (S2)34 |        |        |        |        |
| 6.SP.5d | (S2)22 | (S2)27 | (S2)29 | (S2)32 | (S2)32 | (S2)34 |        |        |        |        |

### Table 6D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

### Table 7D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

|                             | (S2)2  | (S2)3  | (S2)4           | (S2)19           | (S2)19           | (S2)19    | (S2)19           | (S2)19           | (S2)26           | (S2)26           |
|-----------------------------|--------|--------|-----------------|------------------|------------------|-----------|------------------|------------------|------------------|------------------|
| 7.RP.1                      | (S2)2  | (\$2)3 | (S2)4<br>(S2)29 | (S2)15<br>(S2)36 | (S2)15<br>(S2)36 | (\$2)15   | (S2)19<br>(S2)38 | (S2)19<br>(S2)39 | (S2)20<br>(S2)39 | (S2)20<br>(S2)39 |
| 7.RP.2                      | (S2)17 | (S2)39 | (52)2>          | (52)50           | (52)20           | (52)50    | (52)20           | (02)00           |                  |                  |
| 7.RP.2a                     | (S2)18 | (S2)38 |                 |                  |                  |           |                  |                  |                  |                  |
| 7.RP.2b                     | (S2)3  | (S2)3  | (S2)3           | (S2)3            | (S2)19           |           |                  |                  |                  |                  |
| 7.RP.2c                     | (S2)3  | (S2)24 | (S2)24          | (S2)36           | (S2)36           | (S2)40    |                  |                  |                  |                  |
| 7.RP.2d                     | (\$2)3 | (S2)17 | (S2)17          | (S2)17           | (S2)17           | (S2)17    | (S2)22           |                  |                  |                  |
|                             | (S2)9  | (S2)9  | (S2)11          | (S2)19           | (S2)19           | (S2)23    | (\$2)23          | (S2)23           | (S2)23           | (S2)24           |
| 7.RP.3                      | (S2)26 | (S2)29 | (S2)29          | (S2)29           | (S2)29           | (S2)35    | (S2)38           | (S2)39           | (S2)39           | (S2)41           |
| 7.NS.1                      | (S1)10 | (S2)6  | ~ /             | ~ /              | ~ /              | ~ /       | ~ /              | ~ /              | × /              | · · /            |
| 7.NS.1a                     | (S1)2  | (S2)9  |                 |                  |                  |           |                  |                  |                  |                  |
| 7.NS.1b                     | (S1)6  | (S1)10 | (S1)10          | (S1)10           |                  |           |                  |                  |                  |                  |
| 7.NS.1c                     | (S1)8  | (S1)9  | (S1)10          | (S1)10           |                  |           |                  |                  |                  |                  |
| 7.NS.1d                     | (S1)9  | (S1)9  | (S1)9           | (S1)9            | (S1)9            | (S1)10    | (S1)12           | (S2)2            | (S2)2            | (S2)26           |
| 7.NS.2                      | (S1)6  |        | . ,             |                  |                  | · · ·     |                  |                  | , ,              |                  |
| 7.NS.2a                     | (S1)6  | (S1)6  | (S1)6           | (S1)7            | (S2)19           | (S2)24    | (S2)32           |                  |                  |                  |
| 7.NS.2b                     | (S1)6  | (S1)6  | (S1)6           | (S1)6            | (S1)12           | <u>``</u> |                  |                  |                  |                  |
| 7.NS.2c                     | (S1)3  | (S1)3  | (S1)12          | (S2)7            | (S2)26           | (S2)36    | (S2)39           |                  |                  |                  |
| 7.NS.2d                     | (S1)4  | (S1)4  | (S1)4           | (S1)4            | (S1)4            | (S1)4     | (S1)4            | (S2)38           | (S2)39           |                  |
|                             | (S1)3  | (S1)3  | (S1)3           | (S1)9            | (S1)12           | (S1)12    | (S1)12           | (S1)12           | (S1)12           | (S2)2            |
| 7.NS.3                      | (S2)2  | (S2)2  | (S2)2           | (S2)3            | (S2)7            | (S2)9     | (S2)9            | (S2)12           | (S2)23           | (S2)24           |
|                             | (S2)29 | (S2)30 | (S2)37          | (S2)37           | (S2)37           | (S2)39    |                  |                  |                  |                  |
| <b>7.EE.1</b>               | (S1)2  | (S1)7  | (S1)7           | (S1)8            | (S1)11           | (S1)11    | (S1)11           | (S1)13           |                  |                  |
| <b>7.EE.2</b>               | (S1)7  | (S1)8  | (S1)8           | (S1)11           | (S1)11           | (S2)36    |                  |                  |                  |                  |
| 7.EE.3                      | (S1)3  | (S1)3  | (S1)8           | (S2)9            | (S2)9            | (S2)9     | (S2)13           | (S2)14           | (S2)23           | (S2)23           |
|                             | (S2)23 | (S2)30 | (S2)37          | (S2)37           |                  |           |                  |                  |                  |                  |
| <b>7.EE.4</b>               | (S1)2  | (S1)2  | (S1)11          | (S2)30           |                  |           |                  |                  |                  |                  |
| <b>7.EE.4</b> a             | (S1)2  | (S1)2  | (S1)7           | (S1)7            | (S1)7            | (S1)8     | (S1)8            | (S1)8            | (S1)11           | (S1)13           |
| / <b>,1</b> 212 <b>,⊣</b> a | (S1)13 | (S1)13 | (S2)7           | (S2)7            | (S2)14           | (S2)30    | (S2)30           | (S2)30           | (S2)30           | (S2)36           |
| <b>7.EE.4b</b>              | (S2)6  | (S2)6  | (S2)6           | (S2)6            | (S2)6            | (S2)7     | (S2)8            |                  |                  |                  |
| 7.G.1                       | (S1)13 | (S2)2  | (S2)8           | (S2)8            | (S2)8            | (S2)8     | (S2)21           | (S2)22           | (S2)31           | (S2)32           |
|                             | (S2)34 | (S2)34 | (S2)40          |                  |                  |           |                  |                  |                  |                  |
| 7.G.2                       | (S2)9  | (S2)12 | (S2)12          | (S2)12           | (S2)12           | (S2)12    | (S2)16           |                  |                  |                  |
| 7.G.3                       | (S2)27 | (S2)27 | (S2)27          | (S2)27           | (S2)27           | (S2)29    | (S2)30           | (S2)33           |                  |                  |
| 7.G.4                       | (S2)14 | (S2)14 | (S2)14          | (S2)14           | (S2)14           | (S2)18    | (S2)21           | (S2)31           | (S2)33           | (S2)34           |
|                             | (S2)34 | (S2)34 | (S2)34          | (S2)41           |                  |           |                  |                  |                  |                  |
| 7.G.5                       | (S2)4  | (S2)4  | (S2)4           | (S2)4            | (S2)4            | (S2)4     | (S2)6            | (S2)7            | (S2)11           | (S2)11           |
|                             | (S2)11 | (S2)11 | (S2)11          | (S2)11           |                  |           |                  |                  |                  |                  |
|                             | (S1)13 | (S1)13 | (S1)13          | (S2)8            | (S2)8            | (S2)12    | (S2)21           | (S2)21           | (S2)21           | (S2)21           |
| 7.G.6                       | (S2)21 | (S2)27 | (S2)27          | (S2)31           | (S2)31           | (S2)31    | (S2)31           | (S2)31           | (S2)32           | (S2)32           |
|                             | (S2)37 | (S2)40 | (S2)40          | (S2)40           | (S2)40           | (S2)40    |                  |                  |                  |                  |

|         | (S2)16 | (S2)16 | (S2)16 | (S2)22 | (S2)22 | (S2)22 | (S2)22 | (S2)23 | (S2)28 | (S2)35 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 7.SP.1  | . ,    | · · /  | (32)10 | (32)22 | (32)22 | (52)22 | (32)22 | (32)23 | (32)20 | (32)33 |
|         | (S2)37 | (S2)38 |        |        |        |        |        |        |        |        |
| 7.SP.2  | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)21 | (S2)22 | (S2)24 | (S2)28 | (S2)28 | (S2)28 |
| 7.51.2  | (S2)28 | (S2)28 | (S2)33 | (S2)34 | (S2)35 |        |        |        |        |        |
| 7.SP.3  | (S2)22 | (S2)33 | (S2)41 | (S2)41 |        |        |        |        |        |        |
| 7.SP.4  | (S2)7  | (S2)28 | (S2)33 | (S2)33 | (S2)33 | (S2)41 | (S2)41 | (S2)41 | (S2)41 |        |
| 7.SP.5  | (S2)18 | (S2)18 | (S2)18 | (S2)18 | (S2)18 | (S2)32 |        |        |        |        |
| 7.SP.6  | (S2)24 | (S2)26 | (S2)32 | (S2)35 | (S2)35 | (S2)35 | (S2)38 | (S2)38 |        |        |
| 7.SP.7  | (S2)32 |        |        |        |        |        |        |        |        |        |
| 7.SP.7a | (S2)13 |        |        |        |        |        |        |        |        |        |
| 7.SP.7b | (S2)24 | (S2)32 | (S2)35 | (S2)35 |        |        |        |        |        |        |
| 7.SP.8  | (S2)18 |        |        |        |        |        |        |        |        |        |
| 7.SP.8a | (S2)13 | (S2)13 | (S2)17 | (S2)39 |        |        |        |        |        |        |
| 7.SP.8b | (S2)13 | (S2)13 | (S2)13 | (S2)13 |        |        |        |        |        |        |
| 7.SP.8c |        |        |        |        |        |        |        |        |        |        |

### Table 7D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

|               |                  | v                |                  |                  | -                |                  | ,                |                  | -                |                  |
|---------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| 8.NS.1        | (S1)2            | (S1)3            | (S1)6            | (S1)7            |
|               | (S1)7            | (S1)9            | (S1)9            | (S1)9            | (S1)9            | (S1)9            | (S1)9            | (S1)11           | (S1)11           | (S1)11           |
|               | (S1)11           | (S1)12           | (S1)12           | (S1)12           | (S1)12           | (S1)12           | (S1)13           | (S1)13           | (S1)13           | (S1)13           |
|               | (S1)13           | (S1)15           | (S2)6            |                  |                  |                  |                  |                  |                  |                  |
|               | (S1)2            | (S1)3            | (S1)3            | (S1)3            | (S1)3            | (S1)3            | (S1)3            | (S1)7            | (S1)7            | (S1)7            |
| 8.NS.2        | (S1)7            | (S1)7            | (S1)9            | (S1)11           | (S1)12           | (S1)13           | (S1)13           | (S1)15           | (S1)15           | (S1)15           |
|               | (S1)15           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>8.EE.1</b> | (S1)2            | (S1)2            | (S1)2            | (S1)2            | (S1)4            | (S1)11           | (S2)22           |                  |                  |                  |
| 9 EE 3        | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)4            | (S1)10           | (S1)10           | (S1)10           | (S1)10           | (S1)10           |
| 8.EE.2        | (S1)10           | (S1)11           | (S1)15           |                  |                  |                  |                  |                  |                  |                  |
| <b>8.EE.3</b> | (S1)8            | (S1)8            | (S1)14           | (S1)14           | (S1)14           |                  |                  |                  |                  |                  |
| 9 EE 4        | (S1)2            | (S1)8            | (S1)12           | (S1)14           |
| <b>8.EE.4</b> | (S1)14           | (S1)14           | (S1)14           | (S1)14           | (S1)15           |                  |                  |                  |                  |                  |
| 9 EE <i>5</i> | (S2)3            | (S2)3            | (S2)8            | (S2)8            | (S2)14           | (S2)14           | (S2)18           | (S2)18           | (S2)18           | (S2)21           |
| 8.EE.5        | (S2)28           | (S2)28           | (S2)28           | (S2)35           | (S2)39           | (S2)39           |                  |                  |                  |                  |
| <b>8.EE.6</b> | (S2)17           | (S2)29           |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>8.EE.7</b> | (\$2)23          | (S2)23           | (S2)24           | (S2)37           |                  |                  |                  |                  |                  |                  |
| 8.EE.7a       | (S2)8            | (S2)14           | (S2)17           | (\$2)26          | (S2)37           |                  |                  |                  |                  |                  |
| 9 EE 71       | (S2)8            | (S2)8            | (S2)23           | (S2)29           | (S2)36           | (S2)37           | (S2)37           | (S2)37           | (S2)37           | (S2)37           |
| 8.EE.7b       | (S2)37           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>8.EE.8</b> | (S2)23           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| 8.EE.8a       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| 8.EE.8b       | (S2)23           | (S2)23           | (S2)23           | (S2)23           |                  |                  |                  |                  |                  |                  |
| 8.EE.8c       | (S2)21           |                  |                  |                  |                  |                  |                  |                  |                  |                  |
| 0 F 1         | (S2)12           | (S2)13           | (S2)13           | (S2)14           | (S2)18           | (S2)19           | (S2)19           | (S2)28           | (S2)34           | (S2)34           |
| <b>8.F.1</b>  | (S2)34           | (S2)34           | (S2)34           | (S2)34           |                  |                  |                  |                  |                  |                  |
| 0 5 3         | (S2)3            | (S2)3            | (S2)3            | (S2)8            | (S2)8            | (S2)17           | (S2)19           | (S2)21           | (S2)21           | (S2)21           |
| 8.F.2         | (S2)28           | (S2)28           | (S2)28           | (S2)38           |                  |                  |                  |                  |                  |                  |
| <u>ог</u>     | (S2)17           | (S2)17           | (S2)19           | (S2)19           | (S2)24           | (S2)24           | (S2)24           | (S2)24           | (S2)29           | (S2)29           |
| 8.F.3         | (S2)29           | (\$2)36          | (S2)36           | (\$2)36          | (S2)39           |                  |                  |                  |                  |                  |
|               | (S2)3            | (S2)3            | (S2)13           | (S2)14           | (S2)14           | (S2)14           | (S2)14           | (S2)17           | (S2)17           | (S2)17           |
| <b>8.F.4</b>  | (S2)18           | (S2)18           | (S2)19           | (S2)19           | (S2)19           | (S2)21           | (S2)21           | (S2)28           | (S2)29           | (S2)29           |
|               |                  |                  |                  | , ,              | (S2)39           | (S2)39           |                  |                  |                  | . /              |
|               | (S2)34           | (S2)36           | (S2)36           | (S2)36           | (32)39           | (32)37           |                  |                  |                  |                  |
|               | (S2)34<br>(S2)13 | (S2)36<br>(S2)13 | (S2)36<br>(S2)13 | (S2)36<br>(S2)13 | (S2)39<br>(S2)18 | (S2)37<br>(S2)22 | (\$2)22          | (S2)22           | (S2)22           | (S2)22           |
| 8.F.5         | · · /            | . ,              |                  | . ,              |                  | · · /            | (S2)22<br>(S2)31 | (S2)22<br>(S2)31 | (S2)22<br>(S2)31 | (S2)22<br>(S2)31 |

| 8.G.1  | (S2)4  |        |        |        |        |        |        |        |        |        |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 8.G.1a | (S2)30 |        |        |        |        |        |        |        |        |        |
| 8.G.1b | (S2)2  | (S2)2  | (S2)2  | (S2)2  |        |        |        |        |        |        |
| 8.G.1c | (S2)9  |        |        |        |        |        |        |        |        |        |
| 8.G.2  | (S2)2  | (S2)2  | (S2)2  | (S2)30 | (S2)30 | (S2)30 | (S2)30 | (S2)30 | (S2)33 | (S2)33 |
| ð.G.2  | (S2)33 | (S2)33 | (S2)33 |        |        |        |        |        |        |        |
| 8.G.3  | (S2)9  | (S2)9  | (S2)9  | (S2)9  | (S2)30 | (S2)30 | (S2)33 | (S2)33 | (S2)35 | (S2)35 |
| ð.G.3  | (S2)35 |        |        |        |        |        |        |        |        |        |
| 8.G.4  | (S2)4  | (S2)4  | (S2)4  | (S2)9  | (S2)33 | (S2)33 | (S2)35 | (S2)35 | (S2)35 |        |
| 8.G.5  | (S1)10 | (S2)4  | (S2)4  | (S2)4  | (S2)9  | (S2)27 | (S2)27 | (S2)27 | (S2)27 | (S2)27 |
| 0.G.5  | (S2)27 | (S2)32 |        |        |        |        |        |        |        |        |
| 8.G.6  | (S2)32 |        |        |        |        |        |        |        |        |        |
| 8.G.7  | (S2)27 | (S2)32 | (S2)32 | (S2)32 | (S2)32 | (S2)32 |        |        |        |        |
| 8.G.8  | (S2)11 | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 | (S2)16 |        |        |        |
| 8.G.9  | (S1)4  | (S2)7  |        |        |
| 8.SP.1 | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)26 | (S2)26 | (S2)26 | (S2)26 |
| 0.5P.1 | (S2)39 |        |        |        |        |        |        |        |        |        |
| 8.SP.2 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)12 | (S2)16 |        |        |        |
| 8.SP.3 | (S2)39 |        |        |        |        |        |        |        |        |        |
| 8.SP.4 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)11 | (S2)21 | (S2)38 | (S2)38 | (S2)38 |
| 0.31.4 | (S2)38 | (S2)38 | (S2)38 |        |        |        |        |        |        |        |

### Table 8D4M Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

| A.4.1        | (S1)1           | (S1)1           | (S1)1          | (S1)2          | (S2)7          |                   |        |        |        |        |
|--------------|-----------------|-----------------|----------------|----------------|----------------|-------------------|--------|--------|--------|--------|
|              | (S1)1<br>(S1)1  | (S1)1<br>(S1)1  | (S1)1<br>(S1)1 | (S1)2<br>(S2)7 | (S2)7<br>(S2)7 | (S2)9             | (S2)11 | (S2)11 | (S2)11 | (S2)11 |
| A.4.2        | (S1)1<br>(S2)14 | (S1)1<br>(S2)17 | (S1)1<br>(S2)2 | (S2)7<br>(S2)4 | (S2)7<br>(S2)9 | $(S2)^{j}$ (S2)12 | (52)11 | (52)11 | (52)11 | (52)11 |
| A.4.3        | (S2)14<br>(S1)3 | (S1)5           | (02)2          | (02)+          | (02))          | (02)12            |        |        |        |        |
| A.4.4        | (S1)3<br>(S1)2  | (S1)3           | (S2)8          | (S2)19         |                |                   |        |        |        |        |
| A.4.5        | (S1)2<br>(S1)9  | (S1)5<br>(S1)10 | (S2)6          | (02)17         |                |                   |        |        |        |        |
| B.4.1        | (\$2)5          | (S1)10<br>(S2)5 | (S2)5          | (S2)5          | (S2)5          | (S2)5             | (S2)13 |        |        |        |
| B.4.2        | (S2)19          | (S2)19          | (S2)19         | (S2)19         | (S2)19         | (S2)19            | (52)10 |        |        |        |
| B.4.3        | (S1)1           | (S1)1           | (S1)1          | (52)17         | (02)19         | (52)15            |        |        |        |        |
| C.4.1        | (S2)12          | (01)1           |                |                |                |                   |        |        |        |        |
|              | (S1)5           | (S1)7           | (S1)7          | (S1)7          | (S1)9          | (S1)10            | (S1)11 | (S1)12 | (S1)12 | (S1)14 |
| C.4.2        | (S1)18          | (S1)19          | (S1)19         | (S2)4          | (S2)4          | (S2)10            | (S2)10 | (S2)10 | (S2)12 | (S2)13 |
|              | (S2)13          | (S2)17          | (S2)18         | (S2)18         |                |                   |        |        |        |        |
| C.4.3        | (S1)1           | (S1)12          | (S1)12         | (S2)5          |                |                   |        |        |        |        |
|              | (S1)2           | (S1)2           | (S1)2          | (S1)2          | (S1)2          | (S1)2             | (S1)3  | (S2)3  | (S2)9  | (S2)9  |
| C.4.4        | (S2)9           | (S2)9           | (S2)9          | (S2)9          | (S2)16         |                   |        |        |        |        |
|              | (S1)7           | (S1)9           | (S1)9          | (S1)10         | (S1)10         | (S1)14            | (S1)17 | (S1)17 | (S1)17 | (S1)17 |
| C.4.5        | (S1)21          | (S1)21          | (S1)21         | (S1)21         | (S1)21         | (S1)21            | (S2)6  | (S2)6  | (S2)6  | (S2)6  |
|              | (S2)6           | (S2)6           | (S2)10         | (S2)18         |                |                   |        |        |        |        |
| C.4.6        | (S1)9           | (S1)10          | (S1)10         | (S1)10         | (S1)10         |                   |        |        |        |        |
| C.4.7        | (S1)11          | (S2)12          |                |                |                |                   |        |        |        |        |
| C.4.8        | (S2)4           | (S2)12          | (S2)13         | (S2)13         |                |                   |        |        |        |        |
| D.4.1        | (S1)6           | (S1)14          | (S2)18         | (S2)18         |                |                   |        |        |        |        |
| D.4.2        | (S1)8           | (S1)8           | (S1)8          | (S2)18         |                |                   |        |        |        |        |
| D.4.3        | (S1)3           | (S1)3           | (S1)3          | (S1)3          | (S1)15         | (S1)15            | (S1)15 | (S1)15 | (S1)15 | (S1)15 |
| D.4.3        | (S1)15          | (S1)15          | (S2)3          | (S2)3          |                |                   |        |        |        |        |
| D.4.4        | (S1)3           | (S1)3           | (S1)3          | (S1)7          | (S1)14         | (S1)14            | (S1)14 | (S1)14 | (S1)18 | (S2)3  |
| D.4.4        | (S2)3           | (S2)3           | (S2)3          | (S2)17         |                |                   |        |        |        |        |
| <b>D.4.5</b> | (S1)7           | (S1)7           | (S1)14         | (S1)19         | (S2)3          | (S2)4             | (S2)16 | (S2)16 | (S2)17 |        |
| <b>D.4.6</b> | (S2)17          | (S2)17          |                |                |                |                   |        |        |        |        |
| <b>D.4.7</b> | (S2)4           | (S2)16          | (S2)16         |                |                |                   |        |        |        |        |
| D.4.8        | (S2)4           | (S2)4           | (S2)4          | (S2)17         | (S2)17         | (S2)17            | (S2)18 | (S2)18 |        |        |
| <b>E.4.1</b> | (S1)4           | (S1)8           | (S1)8          | (S1)8          | (S1)8          | (S1)8             |        |        |        |        |
| E.4.2        | (S2)11          |                 |                |                |                |                   |        |        |        |        |
| E.4.3        | (S1)18          | (S1)18          | (S1)18         | (S1)18         | (S2)3          |                   |        |        |        |        |
| <b>E.4.4</b> | (S2)15          | (S2)15          | (S2)15         | (S2)15         | (S2)15         |                   |        |        |        |        |
| E.4.5        | (S2)8           | (S2)8           | (S2)8          | (S2)8          | (S2)8          | (S2)8             |        |        |        |        |
| E.4.6        | (S1)18          | (S1)18          | (S2)15         | (S2)15         | (S2)15         |                   |        |        |        |        |
| E.4.7        | (S1)6           | (S1)6           | (S1)6          | (S1)6          | (S1)17         | (S2)5             |        |        |        |        |
| E.4.8        | (S2)2           | (S2)9           |                |                |                |                   |        |        |        |        |

|              | (S1)1  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)4  | (S1)5  | (S1)5  | (S1)9  |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| F.4.1        | (S1)11 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)16 | (S1)20 | (S1)20 | (S1)20 |
| F.4.1        | (S2)1  | (S2)1  | (S2)1  | (S2)1  | (S2)1  | (S2)7  | (S2)7  | (S2)7  | (S2)7  | (S2)7  |
|              | (S2)7  | (S2)10 | (S2)10 | (S2)10 | (S2)10 | (S2)13 | (S2)13 |        |        |        |
| E 4 3        | (S1)4  | (S1)5  | (S1)5  | (S1)5  | (S1)5  | (S1)5  | (S1)9  | (S1)9  | (S1)11 | (S1)16 |
| <b>F.4.2</b> | (S1)20 | (S1)20 | (S2)7  | (S2)7  | (S2)8  |        |        |        |        |        |
| <b>F.4.3</b> | (S1)17 | (S1)17 | (S2)1  | (S2)6  | (S2)12 | (S2)13 | (S2)13 |        |        |        |
|              | (S1)5  | (S1)16 | (S1)16 | (S1)20 | (S1)20 | (S1)20 | (S1)20 | (S2)1  | (S2)1  | (S2)1  |
| <b>F.4.4</b> | (S2)2  | (S2)2  | (S2)10 | (S2)11 |
|              | (S2)11 | (S2)12 | (S2)13 |        |        |        |        |        |        |        |
| C 4 1        | (S1)13 | (S1)13 | (S1)13 | (S1)19 | (S1)19 | (S1)19 | (S2)14 | (S2)14 | (S2)14 | (S2)14 |
| G.4.1        | (S2)14 | (S2)19 |        |        |        |        |        |        |        |        |
| G.4.2        | (S1)14 |        |        |        |        |        |        |        |        |        |
| G.4.3        | (S1)13 | (S1)19 | (S2)19 |        |        |        |        |        |        |        |
| G.4.4        | (S2)16 | (S2)16 | (S2)16 |        |        |        |        |        |        |        |
| G.4.5        |        |        |        |        |        |        |        |        |        |        |
| H.4.1        | (S1)6  | (S1)12 | (S1)12 | (S1)13 | (S2)9  | (S2)10 | (S2)14 | (S2)14 |        |        |
| H.4.2        | (S1)12 | (S1)12 | (S1)12 |        |        |        |        |        |        |        |
| H.4.3        | (S1)13 | (S1)13 | (S1)13 | (S1)19 | (S2)12 |        |        |        |        |        |
| H.4.4        | (S1)6  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)2  | (S2)12 |        |        |        |

Table 4D4S Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

| A.8.1          | (S1)1           | (S1)1             | (S1)1                  | (S1)2           | (S1)3               | (S1)19                                             | (S1)20 | (S2)12  |                            |         |
|----------------|-----------------|-------------------|------------------------|-----------------|---------------------|----------------------------------------------------|--------|---------|----------------------------|---------|
| A.8.1<br>A.8.2 | (S1)1<br>(S1)2  | (S1)1<br>(S1)2    | (31)1                  | (31)2           | (31)3               | (31)19                                             | (31)20 | (32)12  |                            |         |
| A.8.2<br>A.8.3 | (S1)2<br>(S2)8  | $(S1)^2$<br>(S2)9 | (S2)11                 | (S2)15          | (S2)17              |                                                    |        |         |                            |         |
| A.8.4          | (S1)14          | $(S_2)^{(S_2)}$   | $(S_2)^{11}$<br>(S1)20 | (S2)15<br>(S2)8 | (S2)17<br>(S2)16    | (S2)18                                             |        |         |                            |         |
| A.8.5          | (S1)14<br>(S1)3 | (S1)15<br>(S1)3   | (S1)20<br>(S1)3        | (S2)8<br>(S1)3  | (S2)10<br>(S1)9     | (52)10                                             |        |         |                            |         |
| A.8.6          | (S1)3<br>(S1)1  | (S1)3<br>(S1)1    | (S1)9                  | (S1)10          | $(S1)^{j}$<br>(S2)2 | (S2)16                                             |        |         |                            |         |
| A.8.7          | (S1)4           | (01)1             | (01))                  | (01)10          | (02)2               | (02)10                                             |        |         |                            |         |
| A.8.8          | (S1)11          |                   |                        |                 |                     |                                                    |        |         |                            |         |
| B.8.1          | (S1)3           | (S1)4             | (S1)18                 | (S1)18          |                     |                                                    |        |         |                            |         |
| <b>B.8.2</b>   | (S1)3           | (S1)18            | (S1)18                 | (               |                     |                                                    |        |         |                            |         |
| <b>B.8.3</b>   | (S1)4           | (S1)18            |                        |                 |                     |                                                    |        |         |                            |         |
| <b>B.8.4</b>   | (S1)12          | (S2)14            |                        |                 |                     |                                                    |        |         |                            |         |
| B.8.5          | . ,             |                   |                        |                 |                     |                                                    |        |         |                            |         |
| <b>B.8.6</b>   | (S2)14          | (S2)14            |                        |                 |                     |                                                    |        |         |                            |         |
| C.8.1          | (S1)1           | (S1)1             | (S1)1                  | (S1)19          | (S1)19              | (S1)19                                             | (S1)20 |         |                            |         |
|                | (S1)4           | (S1)4             | (S1)5                  | (S1)5           | (S1)5               | (S1)5                                              | (S1)10 | (S1)10  | (S1)10                     | (S1)19  |
| C.8.2          | (S1)20          | (S1)20            | (S1)20                 | (S2)8           | (S2)8               | (S2)8                                              | (S2)9  | (S2)9   | (S2)13                     | (S2)13  |
|                | (S2)13          | (S2)15            | (S2)15                 | (S2)16          | (S2)16              | (S2)16                                             | (S2)17 | (S2)17  | (S2)18                     |         |
| C.8.3          | (S1)4           | (S1)4             | (S1)4                  | (S1)19          | (S1)19              | (S1)20                                             | (S1)20 | (S2)18  |                            |         |
| C.8.4          | (S1)1           | (S1)2             | (S1)5                  | (S1)14          | (S1)19              | (S1)20                                             | (S1)20 | (S2)8   | (S2)9                      | (S2)11  |
|                | (S2)13          | (S2)13            | (S2)15                 | (S2)16          | (S2)18              |                                                    |        |         |                            |         |
| C.8.5          | (S1)1           | (S1)3             | (S1)10                 | (S1)19          | (S1)21              | (S2)10                                             | (S2)15 |         |                            |         |
| C.8.6          | (S1)4           | (S1)5             | (S1)9                  | (S1)14          | (S2)15              | (S2)15                                             | (S2)18 | (S2)18  |                            |         |
| C.8.7          | (S1)5           | (S1)5             | (S2)9                  | (S2)13          | (S2)15              | (S2)16                                             |        |         |                            |         |
| C.8.8          |                 |                   |                        |                 |                     |                                                    |        |         |                            |         |
| C.8.9          | (S1)3           | (S2)8             | (S2)11                 | (S2)17          |                     |                                                    |        |         |                            |         |
| C.8.10         |                 |                   |                        |                 |                     |                                                    |        |         |                            |         |
| C.8.11         | (21)2           | (61)10            | (21)10                 | (91)10          | (61) 00             | (20) 7                                             | (22) 5 | (20) 5  | (20)10                     | (20)10  |
| <b>D.8.1</b>   | (S1)2           | (S1)13            | (S1)13                 | (S1)13          | (S1)20              | (S2)7                                              | (S2)7  | (S2)7   | (S2)10                     | (S2)12  |
|                | (S2)12          | (01)12            | (01)12                 | (01)12          | (01)17              | $\langle \mathbf{C} \mathbf{Q} \rangle \mathbf{Z}$ | (00)7  | (CO)7   | $(\mathbf{C}\mathbf{Q})10$ | (02)10  |
| <b>D.8.2</b>   | (S1)8           | (S1)13<br>(S2)10  | (S1)13<br>(S2)12       | (S1)13          | (S1)17              | (S2)7                                              | (S2)7  | (S2)7   | (S2)10                     | (S2)10  |
| D.8.3          | (S2)10          | (S2)10            | (S2)12                 |                 |                     |                                                    |        |         |                            |         |
| D.8.3<br>D.8.4 | (S1)13<br>(S2)5 | (S1)16<br>(S2)7   | (S2)12<br>(S2)10       | (\$2)10         |                     |                                                    |        |         |                            |         |
|                | (S2)5<br>(S1)6  | (S2)7<br>(S1)8    | (S2)10<br>(S1)8        | (S2)10<br>(S1)8 | (S1)18              | (S1)18                                             | (S1)18 | (S1)18  | (S1)18                     | (S1)21  |
| D.8.5          | (\$1)0          | (S1)8<br>(S1)21   | (S1)8<br>(S1)21        | (01)0           | (51)10              | (51)10                                             | (51)10 | (51)10  | (51)10                     | (51)/21 |
| D.8.6          | (S1)21<br>(S1)6 | (S1)21<br>(S1)8   | (S1)21<br>(S1)8        | (S1)8           | (S1)8               | (S1)8                                              | (S1)18 | (S1)21  | (S1)21                     | (S1)21  |
| D.8.7          | (S1)0<br>(S1)16 | (51)0             | 0(10)                  | (51)0           | (51)0               | (51)0                                              | (51)10 | (01)/21 | (51)21                     | (51)21  |
|                | (S1)10<br>(S1)2 | (S1)6             | (S1)6                  | (S1)6           | (S1)6               | (S1)6                                              | (S1)7  | (S1)10  | (S1)16                     | (S2)7   |
| D.8.8          | (S1)2<br>(S2)10 | (S1)0<br>(S2)11   | (S1)0<br>(S2)12        | (S1)0<br>(S2)12 | (61)0               | 0(10)                                              | (01)/  | (01)10  | (01)10                     | (52)1   |
| D.8.9          | (S1)2           | (S2)11<br>(S1)6   | (S2)12<br>(S1)16       | (S2)12<br>(S2)9 | (S2)9               | (S2)10                                             | (S2)11 | (S2)11  | (S2)12                     |         |
| D.8.10         | (51)2           | (51)0             | (51)10                 | (52))           | (52))               | (52)10                                             | (52)11 | (52)11  | (52)12                     |         |
|                |                 |                   |                        |                 |                     |                                                    |        | L J     |                            |         |

### Table 8D4S Items Coded by Reviewers to Each Standard [(Session Number) Item Number]

| <b>E.8.1</b>  | (S1)9  | (S1)10 | (S1)12 | (S1)15 | (S1)15 | (S1)17 | (S1)17 | (S1)17 | (S2)1  | (S2)1  |
|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L.0.1         | (S2)1  | (S2)2  | (S2)2  | (S2)3  | (S2)3  | (S2)17 |        |        |        |        |
| E.8.2         | (S1)9  | (S1)17 | (S2)1  | (S2)1  | (S2)1  | (S2)1  | (S2)2  | (S2)3  | (S2)3  | (S2)3  |
| L.0.2         | (S2)3  | (S2)3  | (S2)3  |        |        |        |        |        |        |        |
| E.8.3         | (S1)9  | (S1)9  | (S1)9  | (S1)9  | (S1)10 | (S1)15 | (S1)15 | (S1)15 | (S1)15 | (S1)17 |
|               | (S2)2  | (S2)14 | (S2)17 |        |        |        |        |        |        |        |
| <b>E.8.4</b>  | (S1)15 |        |        |        |        |        |        |        |        |        |
| E.8.5         | (S1)17 | (S1)17 | (S1)17 | (S2)1  | (S2)1  | (S2)2  | (S2)2  | (S2)2  |        |        |
| <b>E.8.6</b>  |        |        |        |        |        |        |        |        |        |        |
| <b>E.8.7</b>  | (S2)17 |        |        |        |        |        |        |        |        |        |
| <b>E.8.8</b>  | (S1)15 | (S2)6  |        |        |        |        |        |        |        |        |
| <b>F.8.1</b>  | (S1)7  | (S2)4  | (S2)19 | (S2)19 |
| 1.0.1         | (S2)19 |        |        |        |        |        |        |        |        |        |
| <b>F.8.2</b>  | (S1)6  | (S1)12 | (S1)14 | (S1)16 | (S1)19 | (S2)6  | (S2)6  | (S2)6  | (S2)6  | (S2)6  |
| I'.0.2        | (S2)19 | (S2)19 | (S2)19 |        |        |        |        |        |        |        |
| <b>F.8.3</b>  | (S2)4  |        |        |        |        |        |        |        |        |        |
| <b>F.8.4</b>  |        |        |        |        |        |        |        |        |        |        |
| <b>F.8.5</b>  |        |        |        |        |        |        |        |        |        |        |
| <b>F.8.6</b>  | (S2)15 |        |        |        |        |        |        |        |        |        |
| <b>F.8.7</b>  | (S1)16 | (S1)19 | (S2)15 |        |        |        |        |        |        |        |
| <b>F.8.8</b>  | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)12 | (S1)12 | (S1)16 | (S1)16 |
|               | (S1)16 | (S2)6  | (S2)6  | (S2)19 | (S2)19 |        |        |        |        |        |
| <b>F.8.9</b>  | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)11 | (S1)12 | (S1)12 | (S1)12 | (S1)12 | (S2)6  |
| <b>F.8.10</b> | (S2)14 | (S2)18 |        |        |        |        |        |        |        |        |
| G.8.1         | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S1)7  | (S2)2  |        |        |        |
| G.8.2         | (S1)2  | (S1)14 |        |        |        |        |        |        |        |        |
| G.8.3         | (S1)14 | (S1)14 | (S2)5  | (S2)5  | (S2)5  | (S2)5  | (S2)5  | (S2)5  | (S2)14 | (S2)14 |
| <b>G.8.4</b>  | (S2)9  | (S2)9  | (S2)11 | (S2)11 | (S2)11 | (S2)12 | (S2)13 |        |        |        |
| G.8.5         | (S2)5  | (S2)8  | (S2)9  | (S2)12 | (S2)14 | (S2)15 | (S2)16 |        |        |        |
| <b>G.8.6</b>  | (S1)2  |        |        |        |        |        |        |        |        |        |
| <b>G.8.7</b>  | (S1)10 | (S1)14 |        |        |        |        |        |        |        |        |
| H.8.1         | (S2)17 |        |        |        |        |        |        |        |        |        |
| H.8.2         | (S2)13 | (S2)13 |        |        |        |        |        |        |        |        |
| H.8.3         | (S2)5  | (S2)5  | (S2)14 | (S2)14 | (S2)18 | (S2)18 |        |        |        |        |

Table 8D4S Items Coded by Reviewers to Each Standard [(Session Number) Item Number] continued

Table 3D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 3.RL.1             | (S3)1:2                  | (S4)5:1             | (S4)6:5            | (S4)7:2  |          |          |          |         |          |          |
|--------------------|--------------------------|---------------------|--------------------|----------|----------|----------|----------|---------|----------|----------|
| 3.RL.2             | (S1)3:1                  | (S3)2:1             | (S4)6:4            | (S4)7:2  | (S4)8:5  | (S4)15:1 | (S4)17:1 |         |          |          |
| 3.RL.3             | (S2)2:3                  | (S3)1:4             | (S4)6:13           | (S4)7:4  | (S4)8:2  | (S4)9:1  | (S4)16:4 |         |          |          |
| 3.RL.4             | (S2)2:1                  | (S4)1:2             | (S4)5:5            |          |          |          |          |         |          |          |
| 3.RL.5             | (S4)15:1                 |                     |                    |          |          |          |          |         |          |          |
| 3.RL.6             | (S4)2:2                  | (S4)9:3             |                    |          |          |          |          |         |          |          |
| 3.RL.7             | (S4)2:2                  | (S4)15:1            | (S4)16:1           |          |          |          |          |         |          |          |
| 3.RL.9             | (S4)17:3                 |                     |                    |          |          |          |          |         |          |          |
| 3.RI.1             | (S1)2:7                  | (S2)2:3             | (S3)6:1            | (S3)7:2  | (S3)8:1  | (S4)2:2  | (S4)3:4  | (S4)4:2 | (S4)14:8 | (S4)15:1 |
| J.NI.1             | (S4)16:1                 |                     |                    |          |          |          |          |         |          |          |
| 3.RI.2             | (S1)3:5                  | (S2)2:3             | (S2)3:2            | (S2)6:1  | (S2)8:1  | (S3)2:1  | (S4)1:1  | (S4)2:4 | (S4)3:6  | (S4)4:1  |
|                    | (S4)14:1                 | (S4)15:1            | (S4)17:1           |          |          |          |          |         |          |          |
| 3.RI.3             | (S1)4:4                  | (S2)1:1             | (S2)4:1            | (S4)3:2  | (S4)4:5  | (S4)16:1 |          |         |          |          |
| 3.RI.4             | (S1)1:5                  | (S4)1:4             |                    |          |          |          |          |         |          |          |
| 3.RI.5             | (S2)6:3                  | (S2)7:4             | (S2)8:1            |          |          |          |          |         |          |          |
| 3.RI.6             | (S2)9:1                  | (S4)2:10            |                    |          |          |          |          |         |          |          |
| 3.RI.7             | (S1)4:4                  |                     |                    |          |          |          |          |         |          |          |
| 3.RI.8             | (S2)1:1                  | (S2)4:1             | (S4)3:6            | (S4)15:1 |          |          |          |         |          |          |
| 3.RI.9             | (S2)7:2                  | (S4)16:1            | (S4)17:2           |          |          |          |          |         |          |          |
| 3.W.1              | (S1)4:8                  |                     |                    |          |          |          |          |         |          |          |
| 3.W.1.a            | (S2)9:1                  |                     |                    |          |          |          |          |         |          |          |
| 3.W.1.b            | (S1)3:1                  | (S2)3:2             | (S2)9:5            |          |          |          |          |         |          |          |
| 3.W.1.c            | (S2)1:3                  |                     |                    |          |          |          |          |         |          |          |
| 3.W.1.d            | (C1)                     | (00)2.0             | (02)4.1            | (02)0.1  | (02)10.1 |          |          |         |          |          |
| 3.W.2              | (S1)4:24                 | (S2)3:2             | (S2)4:1            | (S2)9:1  | (S2)10:1 |          |          |         |          |          |
| 3.W.2.a            | (S2)6:2                  | (S2)7:2<br>(S2)3:10 | (S2)8:1            | (60)0.0  | (82)0.2  |          |          |         |          |          |
| 3.W.2.b<br>3.W.2.c | (S1)1:2<br>(S2)1:1       | (S2)3:10<br>(S2)3:2 | (S2)7:2<br>(S2)4:6 | (S2)8:2  | (S2)9:2  |          |          |         |          |          |
| 3.W.2.d            | (32)1.1                  | (32)3.2             | (32)4.0            |          |          |          |          |         |          |          |
| 3.W.2.u<br>3.W.3   |                          |                     |                    |          |          |          |          |         |          |          |
| 3.W.3.a            |                          |                     |                    |          |          |          |          |         |          |          |
| 3.W.3.b            | (S2)2:2                  |                     |                    |          |          |          |          |         |          |          |
| 3.W.3.c            | (S2)2:2<br>(S2)4:1       |                     |                    |          |          |          |          |         |          |          |
| 3.W.3.d            | ( <i>D2)</i> <b>T</b> ,1 |                     |                    |          |          |          |          |         |          |          |
| 3.W.3.u<br>3.W.4   |                          |                     |                    |          |          |          |          |         |          |          |
| 3.W.5              | (S2)2:1                  |                     |                    |          |          |          |          |         |          |          |
| 3.W.8              | (S1)1:2                  | (S1)3:1             | (S1)4:4            | (S2)6:4  | (S2)7:8  | (S2)8:4  |          |         |          |          |
| 2000               | ~ - /                    | ~ 1/011             | (~ -)              | (~=)0.1  |          | (~_)0.1  |          | l       |          |          |

**1** Hit **2-3** Hits **4-5** Hits **6-7** Hits **8+** Hits

 Table 3D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number:

 Number of Hits] continued

| 3.SL.2  | (S3)1:8   | (S3)2:6  | (S3)6:4 | (S3)7:11 | (S3)8:3 |  |      |   |
|---------|-----------|----------|---------|----------|---------|--|------|---|
| 3.SL.3  | (S3)1:8   | (S3)2:1  | (S3)6:5 | (S3)7:7  | (S3)8:6 |  |      |   |
| 3.L.1   | (S2)10:3  |          |         |          |         |  |      |   |
| 3.L.1.a | (S2)12:2  |          |         |          |         |  |      |   |
| 3.L.1.b |           |          |         |          |         |  |      |   |
| 3.L.1.c |           |          |         |          |         |  |      |   |
| 3.L.1.d |           |          |         |          |         |  |      |   |
| 3.L.1.e |           |          |         |          |         |  |      |   |
| 3.L.1.f |           |          |         |          |         |  |      |   |
| 3.L.1.g | (S2)10:6  |          |         |          |         |  |      |   |
| 3.L.1.h |           |          |         |          |         |  |      |   |
| 3.L.1.i | (S2)1:1   |          |         |          |         |  |      |   |
| 3.L.2   | (S2)11:1  | (S2)12:2 |         |          |         |  |      |   |
| 3.L.2.a | (S2)12:12 |          |         |          |         |  |      |   |
| 3.L.2.b |           |          |         |          |         |  |      |   |
| 3.L.2.c |           |          |         |          |         |  |      |   |
| 3.L.2.d | (S2)11:7  |          |         |          |         |  |      |   |
| 3.L.2.e |           |          |         |          |         |  |      |   |
| 3.L.2.f |           |          |         |          |         |  |      |   |
| 3.L.2.g | (S2)11:1  | (S2)12:2 |         |          |         |  |      |   |
| 3.L.3   |           |          |         |          |         |  |      |   |
| 3.L.3.a |           |          |         |          |         |  |      |   |
| 3.L.3.b |           |          |         |          |         |  |      |   |
| 3.L.4   | (S4)1:1   | (S4)5:1  |         |          |         |  |      |   |
| 3.L.4.a | (S1)1:1   | (S4)1:2  | (S4)5:1 |          |         |  |      |   |
| 3.L.4.b |           |          |         |          |         |  |      |   |
| 3.L.4.c |           |          |         |          |         |  |      |   |
| 3.L.4.d |           |          |         |          |         |  |      |   |
| 3.L.5   | (S2)1:1   | (S2)2:1  |         |          |         |  | <br> | ļ |
| 3.L.5.a | (S4)4:1   | (S4)5:1  |         |          |         |  | <br> | ļ |
| 3.L.5.b |           |          |         |          |         |  |      |   |
| 3.L.5.c |           |          |         |          |         |  | <br> | ļ |
| 3.L.6   |           |          |         |          |         |  |      |   |

Table 4D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

1 Hit 2-3 Hits 4-5 Hits 6-7 Hits 8+ Hits

| 4.RL.1        | (S1)1:1  | (S1)2:6  | (S1)3:5  | (S1)4:8  | (S1)6:3  | (S2)2:1  | (S2)3:1  | (S2)4:1  | (S2)6:1  | (S4)4:1  |
|---------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>4.NL.1</b> | (\$4)5:1 | (S4)6:1  | (S4)7:6  | (S4)8:1  |          |          |          |          |          |          |
| 4.RL.2        | (S1)3:2  | (S1)5:8  | (S1)6:4  | (S2)2:2  | (S2)4:1  | (S2)6:1  | (S2)10:1 | (\$3)3:1 | (S4)6:8  |          |
| 4.RL.3        | (S1)2:4  | (S1)3:10 | (S1)4:1  | (S1)5:2  | (S2)6:1  | (S4)7:12 |          |          |          |          |
| 4.RL.4        | (S1)1:7  | (S4)4:5  | (S4)5:4  |          |          |          |          |          |          |          |
| 4.RL.5        | (S1)6:4  |          |          |          |          |          |          |          |          |          |
| 4.RL.6        | (S4)5:1  | (S4)8:8  |          |          |          |          |          |          |          |          |
| 4.RL.7        |          |          |          |          |          |          |          |          |          |          |
| 4.RL.9        |          |          |          |          |          |          |          |          |          |          |
| 4.RI.1        | (S2)1:1  | (S2)7:1  | (S2)8:1  | (S3)1:2  | (S3)9:1  | (S4)2:1  | (S4)3:7  | (S4)13:1 | (S4)14:4 | (S4)15:7 |
| 4.1.1         | (S4)16:1 |          |          |          |          |          |          |          |          |          |
| 4.RI.2        | (S2)1:2  | (S2)4:1  | (S2)7:2  | (\$3)2:1 | (\$3)3:1 | (\$3)7:5 | (S3)8:1  | (S4)14:3 | (S4)15:1 |          |
| 4.RI.3        | (S2)9:2  | (S3)8:1  | (S4)1:1  | (S4)3:2  | (S4)14:1 | (S4)15:4 | (S4)16:1 |          |          |          |
| 4.RI.4        | (S2)3:1  | (S4)2:8  | (S4)13:7 |          |          |          |          |          |          |          |
| 4.RI.5        | (S4)1:6  | (S4)16:6 |          |          |          |          |          |          |          |          |
| 4.RI.6        | (S4)15:1 |          |          |          |          |          |          |          |          |          |
| 4.RI.7        | (S2)8:1  | (S2)10:1 | (S4)1:1  | (S4)3:1  | (S4)16:1 |          |          |          |          |          |
| 4.RI.8        | (S2)10:1 | (S3)9:1  | (S4)1:2  | (S4)14:1 | (S4)15:7 |          |          |          |          |          |
| 4.RI.9        | (S2)9:2  |          |          |          |          |          |          |          |          |          |
| 4.W.1         | (S1)6:13 |          |          |          |          |          |          |          |          |          |
| 4.W.1.a       | (S1)6:5  |          |          |          |          |          |          |          |          |          |
| 4.W.1.b       | (S1)6:1  |          |          |          |          |          |          |          |          |          |
| 4.W.1.c       | (S1)6:1  |          |          |          |          |          |          |          |          |          |
| 4.W.1.d       | (S1)6:1  | (S2)4:3  |          |          |          |          |          |          |          |          |
| 4.W.2         | (S1)3:1  | (S1)6:5  |          |          |          |          |          |          |          |          |
| 4.W.2.a       | (S2)7:1  |          |          |          |          |          |          |          |          |          |
| 4.W.2.b       | (S1)3:1  | (S2)7:5  | (S2)8:1  |          |          |          |          |          |          |          |
| 4.W.2.c       |          |          |          |          |          |          |          |          |          |          |
| 4.W.2.d       | (S2)3:4  |          |          |          |          |          |          |          |          |          |
| 4.W.2.e       | (S2)1:7  | (S2)2:2  | (S2)4:3  |          |          |          |          |          |          |          |
| 4.W.3         |          |          |          |          |          |          |          |          |          |          |
| 4.W.3.a       | (S2)6:4  |          |          |          |          |          |          |          |          |          |
| 4.W.3.b       |          |          |          |          |          |          |          |          |          |          |
| 4.W.3.c       |          |          |          |          |          |          |          |          |          |          |
| 4.W.3.d       | (S2)6:1  |          |          |          |          |          |          |          |          |          |
| 4.W.3.e       | (S2)2:5  | (S2)6:1  |          |          |          |          |          |          |          |          |
| 4.W.4         | (S1)6:5  |          |          |          |          |          |          |          |          |          |
| 4.W.5         |          |          |          |          |          |          |          |          |          |          |
| 4.W.8         | (S2)8:7  | (S2)9:6  | (S2)10:6 |          |          |          |          |          |          |          |
| 4.W.9         | (S1)6:4  |          |          |          |          |          |          |          |          |          |
| 4.W.9.a       | (S1)6:4  |          |          |          |          |          |          | T        |          |          |
| 4.W.9.b       |          |          |          |          |          |          |          |          |          |          |
| 4.SL.2        | (\$3)1:2 | (\$3)2:1 | (S3)3:6  | (\$3)7:5 | (S3)8:8  |          |          | T        |          |          |
| 4.SL.3        | (S3)1:14 | (\$3)2:7 | (S3)3:1  | (S3)7:8  | (\$3)9:7 |          |          |          |          |          |

# Table 4D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

|         |           |          |          | 1        | 1 | 1 | 1 |  |
|---------|-----------|----------|----------|----------|---|---|---|--|
| 4.L.1   | (S1)6:1   | (S2)13:2 |          |          |   |   |   |  |
| 4.L.1.a | (S1)1:1   | (S2)13:2 |          |          |   |   |   |  |
| 4.L.1.b | (S2)13:12 |          |          |          |   |   |   |  |
| 4.L.1.c |           |          |          |          |   |   |   |  |
| 4.L.1.d |           |          |          |          |   |   |   |  |
| 4.L.1.e |           |          |          |          |   |   |   |  |
| 4.L.1.f |           |          |          |          |   |   |   |  |
| 4.L.1.g |           |          |          |          |   |   |   |  |
| 4.L.2   | (S1)6:1   | (S2)11:3 | (S2)12:2 | (S2)14:8 |   |   |   |  |
| 4.L.2.a | (S2)12:7  |          |          |          |   |   |   |  |
| 4.L.2.b | (S2)11:5  | (S2)13:2 | (S2)14:2 |          |   |   |   |  |
| 4.L.2.c |           |          |          |          |   |   |   |  |
| 4.L.2.d |           |          |          |          |   |   |   |  |
| 4.L.3   | (S1)6:1   |          |          |          |   |   |   |  |
| 4.L.3.a | (S2)3:5   | (S4)2:1  |          |          |   |   |   |  |
| 4.L.3.b | (S2)14:8  |          |          |          |   |   |   |  |
| 4.L.3.c |           |          |          |          |   |   |   |  |
| 4.L.4   | (\$4)5:1  |          |          |          |   |   |   |  |
| 4.L.4.a | (S1)1:2   | (S4)2:1  | (S4)5:2  | (S4)13:3 |   |   |   |  |
| 4.L.4.b | (S2)11:1  |          |          |          |   |   |   |  |
| 4.L.4.c | (S2)9:2   | (S4)5:1  |          |          |   |   |   |  |
| 4.L.5   |           |          |          |          |   |   |   |  |
| 4.L.5.a | (S4)4:1   |          |          |          |   |   |   |  |
| 4.L.5.b | (S4)4:3   |          |          |          |   |   |   |  |
| 4.L.5.c |           |          |          |          |   |   |   |  |
| 4.L.6   |           |          |          |          |   |   |   |  |

Table 5D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 5.RL.1  | (S1)2:1  | (S3)2:1   | (\$3)3:1 | (S4)5:7            | (S4)8:3  | (S4)14:7  | (S4)15:14 | (S4)17:1 |          |         |
|---------|----------|-----------|----------|--------------------|----------|-----------|-----------|----------|----------|---------|
| 5.RL.2  | (\$2)6:1 | (S2)7:2   | (\$3)1:2 | (S4)5:1            | (S4)8:9  | (\$4)13:1 | (S4)15:4  | (S4)16:1 | (S4)17:1 |         |
| 5.RL.3  | (\$2)7:1 | (S4)5:10  | (S4)6:6  | (S4)7:4            | (S4)8:2  | (S4)14:2  | (S4)16:1  |          |          |         |
| 5.RL.4  | (S1)1:2  |           |          |                    |          |           |           |          |          |         |
| 5.RL.5  | (\$2)6:1 | (S4)13:8  | (S4)17:8 |                    |          |           |           |          |          |         |
| 5.RL.6  | (S1)3:2  | (S4)16:8  |          |                    |          |           |           |          |          |         |
| 5.RL.7  |          |           |          |                    |          |           |           |          |          |         |
| 5.RL.9  | (S1)2:2  | (S4)6:5   | (S4)7:7  | (S4)8:6            |          |           |           |          |          |         |
| 5.RI.1  | (S1)2:1  | (S2)3:1   | (S3)1:2  | (\$3)2:1           | (S3)3:1  | (\$3)9:3  | (S4)1:2   | (S4)2:4  | (S4)3:8  | (S4)4:1 |
| 5.RI.2  | (\$1)3:1 | (S2)2:1   | (S2)12:1 | (\$3)8:2           | (S3)9:1  | (S4)1:12  | (S4)2:1   | (S4)3:1  |          |         |
| 5.RI.3  | (S1)2:1  | (S1)3:1   | (S2)8:1  | (\$3)7:2           | (S4)1:4  |           |           |          |          |         |
| 5.RI.4  | (S1)1:6  | (S4)4:7   |          |                    |          |           |           |          |          |         |
| 5.RI.5  |          |           |          |                    |          |           |           |          |          |         |
| 5.RI.6  | (S1)1:1  | (S1)2:3   | (S1)3:6  | (S1)4:1            |          |           |           |          |          |         |
| 5.RI.7  | (S1)2:3  | (S2)9:4   | (S2)10:2 |                    |          |           |           |          |          |         |
| 5.RI.8  | (S1)3:1  | (S2)8:1   | (S3)1:2  | (\$3)3:1           | (S3)7:1  | (S3)9:2   | (S4)1:2   | (S4)2:4  | (S4)3:1  |         |
| 5.RI.9  | (S1)2:2  | (S1)4:13  | (S2)9:2  | (S2)10:1           |          |           |           |          |          |         |
| 5.W.1   | (S1)4:26 | (S2)4:1   |          |                    |          |           |           |          |          |         |
| 5.W.1.a | (S1)4:6  | (S2)4:1   |          |                    |          |           |           |          |          |         |
| 5.W.1.b | (S1)4:1  | (S2)2:1   | (S2)4:1  |                    |          |           |           |          |          |         |
| 5.W.1.c | (S1)4:1  | (S2)1:8   |          |                    |          |           |           |          |          |         |
| 5.W.1.d | (S1)4:1  | (S2)4:8   |          |                    |          |           |           |          |          |         |
| 5.W.2   |          |           |          |                    |          |           |           |          |          |         |
| 5.W.2.a | (S2)2:1  | (S2)8:2   |          |                    |          |           |           |          |          |         |
| 5.W.2.b | (S2)2:7  | (S2)8:6   | (S2)9:2  | (S2)10:1           |          |           |           |          |          |         |
| 5.W.2.c | (S2)1:1  |           |          |                    |          |           |           |          |          |         |
| 5.W.2.d | (S2)3:5  |           |          |                    |          |           |           |          |          |         |
| 5.W.2.e |          |           |          |                    |          |           |           |          |          |         |
| 5.W.3   | (\$2)6:2 |           |          |                    |          |           |           |          |          |         |
| 5.W.3.a |          |           |          |                    |          |           |           |          |          |         |
| 5.W.3.b | (S2)6:7  | (20) 10 1 |          |                    |          |           |           |          |          |         |
| 5.W.3.c | (S2)1:1  | (S2)13:1  |          |                    |          |           |           |          |          |         |
| 5.W.3.d | (00)777  |           |          |                    |          |           |           |          |          |         |
| 5.W.3.e | (S2)7:7  |           |          |                    |          |           |           |          |          |         |
| 5.W.4   | (S1)4:7  |           |          |                    |          |           |           |          |          |         |
| 5.W.5   | (01) 4 1 | (02)0 12  | (62)10.4 |                    |          |           |           |          |          |         |
| 5.W.8   | (S1)4:1  | (S2)9:12  | (S2)10:4 |                    |          |           |           |          |          |         |
| 5.W.9   | (S2)8:1  | (S2)9:3   | (S2)10:3 |                    |          |           |           |          |          |         |
| 5.W.9.a | (62)0.1  |           |          |                    |          |           |           |          |          |         |
| 5.W.9.b | (S2)9:1  | (82)2.5   | (62)2.2  | $(\mathbf{C}^{2})$ | (82)0.2  |           |           |          |          |         |
| 5.SL.2  | (S3)1:9  | (\$3)2:5  | (\$3)3:2 | (S3)8:8            | (S3)9:3  |           |           |          |          |         |
| 5.SL.3  | (S3)1:11 | (S3)2:4   | (\$3)3:7 | (S3)7:8            | (S3)9:14 |           |           |          |          |         |

**1** Hit **2-3** Hits **4-5** Hits **6-7** Hits **8+** Hits

# Table 5D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

| 5.L.1   | (S1)4:1   | (S2)14:5 | (\$2)15:2 |          |          |          |  |  |
|---------|-----------|----------|-----------|----------|----------|----------|--|--|
| 5.L.1.a | (S2)14:2  | , ,      | . ,       |          |          |          |  |  |
| 5.L.1.b | (S2)15:11 |          |           |          |          |          |  |  |
| 5.L.1.c | (S2)15:6  |          |           |          |          |          |  |  |
| 5.L.1.d | (S2)15:3  |          |           |          |          |          |  |  |
| 5.L.1.e |           |          |           |          |          |          |  |  |
| 5.L.2   | (S1)4:1   | (S2)11:7 | (S2)12:2  | (S2)13:2 |          |          |  |  |
| 5.L.2.a |           |          |           |          |          |          |  |  |
| 5.L.2.b | (S2)12:7  | (S2)13:1 |           |          |          |          |  |  |
| 5.L.2.c |           |          |           |          |          |          |  |  |
| 5.L.2.d | (S2)11:2  |          |           |          |          |          |  |  |
| 5.L.2.e |           |          |           |          |          |          |  |  |
| 5.L.3   | (S1)4:1   | (S2)1:2  | (S2)11:1  | (S2)12:1 | (S2)13:2 | (S2)14:3 |  |  |
| 5.L.3.a | (S2)13:6  |          |           |          |          |          |  |  |
| 5.L.3.b |           |          |           |          |          |          |  |  |
| 5.L.4   | (S2)3:1   |          |           |          |          |          |  |  |
| 5.L.4.a | (S1)1:4   | (S2)3:1  | (S4)4:3   |          |          |          |  |  |
| 5.L.4.b |           |          |           |          |          |          |  |  |
| 5.L.4.c |           |          |           |          |          |          |  |  |
| 5.L.5   |           |          |           |          |          |          |  |  |
| 5.L.5.a |           |          |           |          |          |          |  |  |
| 5.L.5.b |           |          |           |          |          |          |  |  |
| 5.L.5.c | (S2)3:1   | (S2)14:1 |           |          |          |          |  |  |
| 5.L.6   |           |          |           |          |          |          |  |  |

ELA Grade 6 Table 6D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] 1 Hit 2-3 Hits 4-5 Hits 6-7 Hits 8+ Hits

| 6.RL.1  | (S1)1:16  | (S1)2:8   | (S1)4:3  |           |          |          |          |          |
|---------|-----------|-----------|----------|-----------|----------|----------|----------|----------|
| 6.RL.2  | (S1)4:1   | (S4)7:1   | (S4)8:12 |           |          |          |          |          |
| 6.RL.3  | (S1)1:12  |           |          |           |          |          |          |          |
| 6.RL.4  | (S1)3:4   | (S2)1:1   | (S4)5:5  | (S4)6:4   |          |          |          |          |
| 6.RL.5  | (S1)2:1   | (S1)3:8   | (S2)4:1  | (S4)6:4   |          |          |          |          |
| 6.RL.6  | (S4)7:7   |           |          |           |          |          |          |          |
| 6.RL.9  |           |           |          |           |          |          |          |          |
| 6.RI.1  | (S2)11:2  | (\$3)1:2  | (\$3)2:1 | (S4)1:2   | (S4)2:6  | (S4)3:1  | (S4)13:7 | (S4)16:3 |
| 6.RI.2  | (S3)7:4   | (S4)1:2   | (S4)3:3  | (S4)8:4   | (S4)16:2 | (S4)17:1 |          |          |
| 6.RI.3  | (S3)7:2   | (\$3)9:1  | (S4)3:3  | (S4)13:1  | (S4)16:2 |          |          |          |
| 6.RI.4  | (S4)1:10  | (S4)2:1   | (S4)14:8 | (S4)16:1  |          |          |          |          |
| 6.RI.5  | (S3)3:2   | (S4)3:1   | (S4)16:4 | (S4)17:8  |          |          |          |          |
| 6.RI.6  | (S3)8:2   | (S4)1:4   | (S4)7:1  | (S4)15:14 |          |          |          |          |
| 6.RI.8  | (S4)2:3   | (S4)3:2   | (S4)4:1  | (S4)15:2  |          |          |          |          |
| 6.RI.9  | (S4)4:7   |           |          |           |          |          |          |          |
| 6.W.1   | (S1)4:1   | (S2)11:2  |          |           |          |          |          |          |
| 6.W.1.a | (S1)4:2   |           |          |           |          |          |          |          |
| 6.W.1.b | (S1)4:3   | (S4)1:2   | (S4)2:1  | (S4)3:1   | (S4)4:1  |          |          |          |
| 6.W.1.c | (S1)4:2   | (S2)1:5   | (S4)4:1  |           |          |          |          |          |
| 6.W.1.d | (S2)3:1   | (S2)8:2   |          |           |          |          |          |          |
| 6.W.1.e | (S1)4:1   | (S2)3:1   |          |           |          |          |          |          |
| 6.W.2   | (S1)4:5   | (S2)11:4  |          |           |          |          |          |          |
| 6.W.2.a | (S1)4:4   | (S4)8:2   |          |           |          |          |          |          |
| 6.W.2.b | (S1)4:4   | (S2)11:2  |          |           |          |          |          |          |
| 6.W.2.c | (S1)4:4   | (S2)1:2   | (S2)2:1  |           |          |          |          |          |
| 6.W.2.d | (S1)4:3   | (S2)2:5   |          |           |          |          |          |          |
| 6.W.2.e | (S1)4:3   | (S2)3:6   | (S2)7:1  | (S2)8:2   |          |          |          |          |
| 6.W.2.f | (S1)4:3   |           |          |           |          |          |          |          |
| 6.W.3   | (S2)4:1   |           |          |           |          |          |          |          |
| 6.W.3.a | (S2)6:1   |           |          |           |          |          |          |          |
| 6.W.3.b | (S2)4:6   |           |          |           |          |          |          |          |
| 6.W.3.c |           |           |          |           |          |          |          |          |
| 6.W.3.d | (S2)2:1   | (S2)4:1   |          |           |          |          |          |          |
| 6.W.3.e | (S2)4:3   |           |          |           |          |          |          |          |
| 6.W.4   | (S1)4:4   | (S2)1:1   |          |           |          |          |          |          |
| 6.W.5   | (S2)6:3   | (S2)7:2   |          |           |          |          |          |          |
| 6.W.8   | (S2)11:10 | (S2)12:16 | (S2)13:7 |           |          |          |          |          |
| 6.W.9   | (S1)4:1   | (S2)11:6  | (S2)12:2 | (S2)13:4  |          |          |          | ļ        |
| 6.W.9.a | <u> </u>  | ļ         |          |           |          |          |          |          |
| 6.W.9.b |           |           |          |           |          |          |          |          |
| 6.SL.2  | (S1)4:1   | (S2)10:1  | (S3)1:6  | (S3)2:3   | (S3)3:12 | (S3)7:12 | (S3)8:4  | (S3)9:4  |
| 6.SL.3  | (S3)1:2   | (S3)2:7   | (S3)3:10 | (S3)7:12  | (S3)8:4  | (S3)9:2  |          |          |

| Table 6D5E Number of Alignments | Coded to Item by Standard | [(Session Number) Item Number: |
|---------------------------------|---------------------------|--------------------------------|
| Number of Hits] continued       |                           |                                |

|         |          |          |          |          |         | 1 | 1 |
|---------|----------|----------|----------|----------|---------|---|---|
| 6.L.1   | (S1)4:5  | (S2)7:2  |          |          |         |   |   |
| 6.L.1.a | (S2)7:4  |          |          |          |         |   |   |
| 6.L.1.b |          |          |          |          |         |   |   |
| 6.L.1.c | (S2)7:4  |          |          |          |         |   |   |
| 6.L.1.d | (S2)7:8  |          |          |          |         |   |   |
| 6.L.1.e | (S2)7:2  | (S2)8:1  | (S2)9:2  |          |         |   |   |
| 6.L.2   | (S1)4:5  | (S2)9:8  | (S2)10:2 | (\$3)8:1 | (S4)1:2 |   |   |
| 6.L.2.a | (S2)10:8 |          |          |          |         |   |   |
| 6.L.2.b | (S2)9:14 |          |          |          |         |   |   |
| 6.L.3   | (S1)4:3  | (\$3)9:1 |          |          |         |   |   |
| 6.L.3.a | (S2)6:7  | (S2)7:2  |          |          |         |   |   |
| 6.L.3.b | (S2)3:3  | (S2)6:1  | (S2)8:6  |          |         |   |   |
| 6.L.4   | (S2)2:1  | (S4)5:2  |          |          |         |   |   |
| 6.L.4.a | (S4)5:3  |          |          |          |         |   |   |
| 6.L.4.b |          |          |          |          |         |   |   |
| 6.L.4.c |          |          |          |          |         |   |   |
| 6.L.4.d |          |          |          |          |         |   |   |
| 6.L.5   | (S4)5:1  | (S4)6:1  |          |          |         |   |   |
| 6.L.5.a | (S4)6:3  | (S4)14:2 |          |          |         |   |   |
| 6.L.5.b | (S4)5:1  |          |          |          |         |   |   |
| 6.L.5.c | (S2)3:1  | (S4)1:2  |          |          |         |   |   |
| 6.L.6   | (S1)4:2  | (S2)1:1  | (S2)2:3  |          |         |   |   |

Table 7D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 7.RL.2       ()         7.RL.3       ()         7.RL.4       ()         7.RL.5       ()         7.RL.6       ()         7.RL.9       () | (S1)1:7<br>(S1)2:1<br>(S1)1:1<br>S4)17:7<br>(S1)1:3<br>(S1)1:1<br>(S1)1:1<br>(S2)3:1 | (S1)2:1<br>(S1)3:7<br>(S1)2:3<br>(S1)3:1<br>(S1)3:1<br>(S1)2:7 | (S4)15:15<br>(S4)15:1<br>(S1)3:1 | (S4)18:1<br>(S4)18:1<br>(S1)4:1 | (S4)19:8<br>(S4)15:1 | (S4)16:7  |          |         |          |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------|----------------------------------|---------------------------------|----------------------|-----------|----------|---------|----------|
| 7.RL.3       ()         7.RL4       ()         7.RL5       ()         7.RL6       ()         7.RL9       ()                             | (S1)1:1<br>S4)17:7<br>(S1)1:3<br>(S1)1:1                                             | (\$1)2:3<br>(\$1)3:1                                           | (\$1)3:1                         | , <i>, ,</i>                    |                      | (\$4)16:7 |          |         |          |
| 7.RL.4     (;       7.RL.5     (;       7.RL.6     (;       7.RL.9     (;                                                               | S4)17:7<br>(S1)1:3<br>(S1)1:1                                                        | (S1)3:1                                                        |                                  | (\$1)4:1                        | (S4)15:1             | (S4)16:7  |          |         |          |
| 7.RL.5         ()           7.RL.6         ()           7.RL.9         ()                                                               | (S1)1:3<br>(S1)1:1                                                                   | , , ,                                                          |                                  |                                 |                      | ~         | (S4)18:3 |         |          |
| 7.RL.6 (<br>7.RL.9                                                                                                                      | (S1)1:1                                                                              | , , ,                                                          |                                  |                                 |                      |           |          |         |          |
| 7.RL.9                                                                                                                                  |                                                                                      | (S1)2:7                                                        |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S2)3:1                                                                              |                                                                | (S4)15:1                         | (S4)16:1                        | (S4)18:2             |           |          |         |          |
|                                                                                                                                         | (S2)3:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
| <b>7.RL1</b> (                                                                                                                          | ( )                                                                                  | (S2)13:1                                                       | (\$3)2:2                         | (\$3)7:2                        | (S4)4:4              | (S4)6:7   | (S4)7:1  | (S4)9:4 | (S4)10:4 |
| 7.RL2 (                                                                                                                                 | (S4)7:6                                                                              | (S4)10:1                                                       |                                  |                                 |                      |           |          |         |          |
| 7.RL3 (                                                                                                                                 | (S4)4:1                                                                              | (S4)6:1                                                        | (S4)9:3                          |                                 |                      |           |          |         |          |
| <b>7.RL4</b> (                                                                                                                          | (S2)2:1                                                                              | (S2)4:1                                                        | (S2)6:2                          | (S2)7:1                         | (S2)8:1              | (S4)2:3   | (S4)3:4  | (S4)8:4 |          |
| 7.RL5 (                                                                                                                                 | (\$3)6:1                                                                             | (\$3)7:1                                                       | (S3)8:1                          | (S4)1:8                         | (S4)3:1              | (S4)5:7   | (S4)7:1  |         |          |
| <b>7.RL6</b> (                                                                                                                          | (S3)6:1                                                                              | (\$3)7:1                                                       | (S4)4:11                         | (S4)5:2                         |                      |           |          |         |          |
|                                                                                                                                         | (S4)4:1                                                                              | (S4)6:1                                                        | (S4)9:2                          | (S4)10:6                        |                      |           |          |         |          |
|                                                                                                                                         | (S4)4:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              | (S2)3:1                                                        | (S2)4:1                          |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:2                                                                              | (S2)3:6                                                        | (S2)11:1                         | (S2)12:1                        | (S2)13:3             |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              | (S2)1:1                                                        | (S2)4:7                          |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:7                                                                              | (S2)6:1                                                        | (S2)13:1                         |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:5                                                                              | (S2)6:1                                                        |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:5                                                                              | (S2)6:9                                                        | (S2)11:1                         | (S2)12:1                        | (S2)13:2             |           |          |         |          |
|                                                                                                                                         | (S1)4:4                                                                              | (S2)2:1                                                        | (S2)10:4                         |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:1                                                                              | (S2)8:2                                                        | (S2)10:1                         |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:3                                                                              | (S2)2:7                                                        | (S2)6:1                          |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S1)4:2                                                                              | (S2)1:1                                                        | (S2)4:1                          |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S2)1:2                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S2)8:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
| 7.W.3.b                                                                                                                                 |                                                                                      |                                                                |                                  |                                 |                      |           |          |         |          |
| 7.W.3.c                                                                                                                                 | $(C_{2})_{0,1}$                                                                      |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S2)8:1<br>(S2)1:5                                                                   |                                                                |                                  |                                 |                      |           |          |         |          |
|                                                                                                                                         | (S2)1:5                                                                              | (S2)6:2                                                        | (\$2)7.2                         | (\$2).9.2                       | (S2)9:1              | (S2)10:1  | (S2)13:2 |         |          |
|                                                                                                                                         | (S1)4:7<br>(S2)2:1                                                                   |                                                                | (S2)7:2<br>(S2)7:3               | (S2)8:3                         |                      |           | (52)15.2 |         |          |
|                                                                                                                                         | (S2)2:1<br>(S2)3:4                                                                   | (S2)6:3<br>(S2)11:7                                            | (S2)7:3<br>(S2)12:7              | (S2)8:1<br>(S2)13:7             | (S2)9:1              | (\$2)10:2 |          |         |          |
|                                                                                                                                         | (S2)3.4<br>(S1)4:4                                                                   | (S2)11.7<br>(S2)12:1                                           | (S2)12.7<br>(S2)13:10            | (02)13.7                        |                      |           |          |         |          |
| 7.W.9 (                                                                                                                                 | (31)+.4                                                                              | (02)12.1                                                       | (52)15.10                        |                                 |                      |           |          |         |          |
|                                                                                                                                         | S2)13:1                                                                              |                                                                |                                  |                                 |                      |           |          |         |          |
| `                                                                                                                                       | (S3)1:6                                                                              | (\$3)2:15                                                      | (\$3)6:5                         | (\$3)7:13                       | (S3)8:6              |           |          |         |          |
|                                                                                                                                         | (S3)1:0<br>(S3)1:2                                                                   | (S3)2:13<br>(S3)2:1                                            | (\$3)6:4                         | (S3)7:13<br>(S3)7:1             | (S3)8:13             |           |          |         |          |

## Table 7D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

| 711     | (01)4.5  | (62)0.4  | (62)10.2 |          |          |  |  |
|---------|----------|----------|----------|----------|----------|--|--|
| 7.L.1   | (S1)4:5  | (S2)9:4  | (S2)10:2 |          |          |  |  |
| 7.L.1.a | (S2)9:1  | (S2)10:1 | (\$3)1:1 |          |          |  |  |
| 7.L.1.b | (S2)10:2 |          |          |          |          |  |  |
| 7.L.1.c | (S2)10:1 |          |          |          |          |  |  |
| 7.L.2   | (S1)4:4  | (S2)9:6  |          |          |          |  |  |
| 7.L.2.a |          |          |          |          |          |  |  |
| 7.L.2.b |          |          |          |          |          |  |  |
| 7.L.3   | (S1)4:3  | (S2)8:1  | (S2)10:1 |          |          |  |  |
| 7.L.3.a | (S2)2:1  | (S2)6:4  | (S2)7:12 | (S2)8:10 | (S4)19:1 |  |  |
| 7.L.4   | (S4)3:1  | (S4)8:2  |          |          |          |  |  |
| 7.L.4.a | (S4)2:1  | (S4)3:7  | (S4)8:2  |          |          |  |  |
| 7.L.4.b | (S4)2:7  |          |          |          |          |  |  |
| 7.L.4.c | (S4)8:3  |          |          |          |          |  |  |
| 7.L.4.d |          |          |          |          |          |  |  |
| 7.L.5   | (S4)17:2 |          |          |          |          |  |  |
| 7.L.5.a |          |          |          |          |          |  |  |
| 7.L.5.b |          |          |          |          |          |  |  |
| 7.L.5.c |          |          |          |          |          |  |  |
| 7.L.6   | (S1)4:2  | (S4)3:1  | (S4)8:1  |          |          |  |  |

Table 8D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

1 Hit 2-3 Hits 4-5 Hits 6-7 Hits 8+ Hits

| 8.RL.1  | (S1)1:1    | (S1)2:1  | (S4)2:7   | (S4)4:1  | (S4)14:2  |          |          |         |         |         |
|---------|------------|----------|-----------|----------|-----------|----------|----------|---------|---------|---------|
| 8.RL.2  | (\$4)14:12 |          | /         |          |           |          |          |         |         |         |
| 8.RL.3  | (S4)1:2    | (S4)2:2  | (S4)3:8   | (S4)4:3  | (S4)14:2  | (S4)15:8 | (S4)16:1 |         |         |         |
| 8.RL.4  | (S4)1:6    | (S4)5:1  | (S4)13:6  |          |           |          |          |         |         |         |
| 8.RL.5  |            |          |           |          |           |          |          |         |         |         |
| 8.RL.6  | (S4)4:4    | (S4)16:7 |           |          |           |          |          |         |         |         |
| 8.RL.9  | (S4)15:1   |          |           |          |           |          |          |         |         |         |
| 8.RL1   | (S1)1:7    | (S1)2:5  | (S1)4:2   | (S1)5:2  | (S2)10:2  | (S3)1:1  | (S3)3:2  | (S3)9:1 | (S4)7:2 | (S4)8:3 |
| 8.RL2   | (S1)2:9    | (S1)4:3  | (S3)8:1   | (S4)6:1  | (S4)8:2   |          |          |         |         |         |
| 8.RL3   | (S1)2:2    | (S1)3:8  | (S1)4:3   | (S1)5:1  | (S4)5:3   | (S4)6:1  |          |         |         |         |
| 8.RI.4  | (S4)5:4    | (S4)6:4  |           |          |           |          |          |         |         |         |
| 8.RI.5  | (S1)1:1    | (S1)2:1  | (S1)3:1   | (S1)4:1  | (S4)6:1   |          |          |         |         |         |
| 8.RL6   | (S4)1:1    | (S4)5:1  |           |          |           |          |          |         |         |         |
| 8.RL8   | (S1)4:1    | (S2)12:1 | (S4)7:14  |          | (S4)8:2   |          |          |         |         |         |
| 8.RI.9  | (S4)7:8    | (S4)8:11 |           |          |           |          |          |         |         |         |
| 8.W.1   | (S2)12:1   |          |           |          |           |          |          |         |         |         |
| 8.W.1.a | (S2)6:1    |          |           |          |           |          |          |         |         |         |
| 8.W.1.b | (S2)12:1   |          |           |          |           |          |          |         |         |         |
| 8.W.1.c | (\$2)6:6   |          |           |          |           |          |          |         |         |         |
| 8.W.1.d | (S1)5:5    | (S2)1:1  | (S2)4:1   | (S2)10:1 |           |          |          |         |         |         |
| 8.W.1.e | (S2)3:5    |          |           |          |           |          |          |         |         |         |
| 8.W.2   | (S1)5:6    | (S2)10:2 |           |          |           |          |          |         |         |         |
| 8.W.2.a | (S1)5:5    | (S2)4:1  |           |          |           |          |          |         |         |         |
| 8.W.2.b | (S1)5:7    | (S2)4:5  | (S2)10:10 | (S2)12:1 |           |          |          |         |         |         |
| 8.W.2.c | (S1)5:5    | (S2)1:2  | (S2)4:1   |          |           |          |          |         |         |         |
| 8.W.2.d | (S1)5:5    | (S2)2:1  | (S2)4:1   | (S2)10:1 |           |          |          |         |         |         |
| 8.W.2.e | (S1)5:5    |          |           |          |           |          |          |         |         |         |
| 8.W.2.f | (S1)5:4    | (S2)3:2  | (S3)8:1   |          |           |          |          |         |         |         |
| 8.W.3   |            |          |           |          |           |          |          |         |         |         |
| 8.W.3.a |            |          |           |          |           |          |          |         |         |         |
| 8.W.3.b | (S2)2:4    |          |           |          |           |          |          |         |         |         |
| 8.W.3.c | (S2)1:3    |          |           |          |           |          |          |         |         |         |
| 8.W.3.d | (S2)1:3    | (S2)2:5  |           |          |           |          |          |         |         |         |
| 8.W.3.e | (S2)3:1    |          |           |          |           |          |          |         |         |         |
| 8.W.4   | (S1)5:2    | (S2)4:1  | (S2)7:2   | (S2)8:1  | (S2)9:1   |          |          |         |         |         |
| 8.W.5   | (S2)2:2    |          |           |          |           |          |          |         |         |         |
| 8.W.8   | (S2)10:2   | (S2)11:8 | (S2)12:5  | (S2)13:8 | (S2)14:15 |          |          |         |         |         |
| 8.W.9   | (S1)5:3    | (S2)10:2 | (S2)11:2  | (S2)12:1 | (S2)14:7  |          |          |         |         |         |
| 8.W.9.a |            |          | (20) :- : |          |           |          |          |         |         |         |
| 8.W.9.b | (\$1)5:1   | (S2)12:2 | (S2)13:1  | (00) 0 1 | (0.0.0    |          |          |         |         |         |
| 8.SL.2  | (S3)2:6    | (S3)3:3  | (S3)7:7   | (S3)8:1  | (S3)9:9   |          |          |         |         |         |
| 8.SL.3  | (S3)1:4    | (S3)2:1  | (S3)3:2   | 3pt2:4   | (\$3)7:1  | (S3)8:1  | (\$3)9:3 |         |         |         |

# Table 8D5E Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

| 8.L.1   | (S1)5:5  |          |          |         |          |         |         |          |  |
|---------|----------|----------|----------|---------|----------|---------|---------|----------|--|
| 8.L.1.a |          |          |          |         |          |         |         |          |  |
| 8.L.1.b |          |          |          |         |          |         |         |          |  |
| 8.L.1.c |          |          |          |         |          |         |         |          |  |
| 8.L.1.d |          |          |          |         |          |         |         |          |  |
| 8.L.2   | (S1)5:4  | (S2)7:2  | (S2)8:1  | (S2)9:1 | (\$3)2:1 |         |         |          |  |
| 8.L.2.a | (S2)7:2  | (S2)8:7  | (S2)9:1  |         |          |         |         |          |  |
| 8.L.2.b | (S2)9:6  |          |          |         |          |         |         |          |  |
| 8.L.2.c | (S2)7:11 |          |          |         |          |         |         |          |  |
| 8.L.3   | (S1)5:2  | (S2)2:1  | (S2)7:1  |         |          |         |         |          |  |
| 8.L.3.a | (S2)8:1  |          |          |         |          |         |         |          |  |
| 8.L.4   | (S4)1:1  | (S4)2:1  | (S4)13:1 |         |          |         |         |          |  |
| 8.L.4.a | (S4)6:3  | (S4)13:3 |          |         |          |         |         |          |  |
| 8.L.4.b |          |          |          |         |          |         |         |          |  |
| 8.L.4.c | (S4)13:1 |          |          |         |          |         |         |          |  |
| 8.L.4.d |          |          |          |         |          |         |         |          |  |
| 8.L.5   | (S2)2:1  | (S4)1:1  | (S4)6:1  |         |          |         |         |          |  |
| 8.L.5.a |          |          |          |         |          |         |         |          |  |
| 8.L.5.b |          |          |          |         |          |         |         |          |  |
| 8.L.5.c |          |          |          |         |          |         |         |          |  |
| 8.L.6   | (S1)5:2  | (S2)1:1  | (S2)4:1  | (S2)6:1 | (S2)11:1 | (S4)1:1 | (S4)2:1 | (S4)13:1 |  |

Table 3D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

|          | -        |           |          |          |          |          |          |          |          |          |
|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 3.OA.1   | (S1)4:6  | (S1)9:1   | (S1)14:1 | (S2)14:1 | (S2)20:2 | (S2)21:3 |          |          |          |          |
| 3.OA.2   | (S1)9:1  | (S1)14:2  | (S2)4:5  | (S2)7:4  |          |          |          |          |          |          |
| 3.OA.3   | (S1)4:3  | (S1)9:2   | (S1)14:3 | (S1)23:5 | (S2)4:3  | (S2)7:6  | (S2)11:1 | (S2)14:2 | (S2)21:4 |          |
| 3.OA.4   | (S1)9:8  | (S1)14:4  |          |          |          |          |          |          |          |          |
| 3.OA.5   | (S1)2:1  | (S2)4:1   | (S2)14:6 |          |          |          |          |          |          |          |
| 3.OA.6   | (S1)14:2 | (S2)4:1   |          |          |          |          |          |          |          |          |
| 3.OA.7   | (S1)4:1  | (S1)9:1   | (S1)14:1 | (S1)23:2 | (S2)7:2  | (S2)14:2 | (S2)20:7 |          |          |          |
| 3.OA.8   | (S1)14:1 | (S1)17:1  | (S1)21:7 | (S2)11:1 | (S2)14:2 | (S2)21:2 | (S2)22:3 |          |          |          |
| 3.OA.9   | (S2)25:6 |           |          |          |          |          |          |          |          |          |
| 3.NBT.1  | (S1)2:7  | (S1)8:8   | (S2)3:8  |          |          |          |          |          |          |          |
| 3.NBT.2  | (S1)6:2  | (S1)13:1  | (S1)16:1 | (S1)17:8 | (S1)21:1 | (S2)11:8 | (S2)16:1 | (S2)22:8 | (S2)25:1 |          |
| 3.NBT.3  | (S1)14:1 | (S1)23:3  | (S2)7:1  | (S2)21:3 |          |          |          |          |          |          |
| 3.NF.1   | (S1)3:8  | (S1)19:1  | (S1)22:2 | (S1)24:7 | (S1)25:4 | (S2)9:1  | (S2)13:6 | (S2)16:7 | (S2)17:7 | (S2)18:1 |
| 3.111.1  | (S2)19:1 |           |          |          |          |          |          |          |          |          |
| 3.NF.2   | (S1)12:2 | (S2)9:3   | (S2)18:1 | (S2)19:1 |          |          |          |          |          |          |
| 3.NF.2.a | (S1)12:1 | (S2)18:1  | (S2)19:1 |          |          |          |          |          |          |          |
| 3.NF.2.b | (S1)3:1  | (S1)12:7  | (S2)9:7  | (S2)18:7 | (S2)19:6 |          |          |          |          |          |
| 3.NF.3   | (S1)19:1 | (S1)22:1  |          |          |          |          |          |          |          |          |
| 3.NF.3.a | (S1)22:2 |           |          |          |          |          |          |          |          |          |
| 3.NF.3.b | (S1)22:6 | (S1)24:1  |          |          |          |          |          |          |          |          |
| 3.NF.3.c |          |           |          |          |          |          |          |          |          |          |
| 3.NF.3.d | (S1)19:8 |           |          |          |          |          |          |          |          |          |
| 3.MD.1   | (S1)6:7  | (S1)16:8  | (S2)16:1 | (S2)24:1 |          |          |          |          |          |          |
| 3.MD.2   | (S2)12:8 |           |          |          |          |          |          |          |          |          |
| 3.MD.3   | (S1)13:8 | (S2)24:6  |          |          |          |          |          |          |          |          |
| 3.MD.4   | (S2)19:4 |           |          |          |          |          |          |          |          |          |
| 3.MD.5   | (S1)18:4 | (S2)23:1  |          |          |          |          |          |          |          |          |
| 3.MD.5.a | (S2)23:2 |           |          |          |          |          |          |          |          |          |
| 3.MD.5.b | (S1)18:2 | (\$2)23:2 |          |          |          |          |          |          |          |          |
| 3.MD.6   | (S2)23:5 |           |          |          |          |          |          |          |          |          |
| 3.MD.7   |          |           |          |          |          |          |          |          |          |          |
| 3.MD.7.a |          |           |          |          |          |          |          |          |          |          |
| 3.MD.7.b | (S1)20:2 |           |          |          |          |          |          |          |          |          |
| 3.MD.7.c | (S1)20:1 |           |          |          |          |          |          |          |          |          |
| 3.MD.7.d | (S1)20:7 |           |          |          |          |          |          |          |          |          |
| 3.MD.8   | (S1)18:1 | (S2)2:7   |          |          |          |          |          |          |          |          |
| 3.G.1    | (S1)7:8  | (S1)11:8  | (S2)6:7  | (S2)8:8  |          |          |          |          |          |          |
| 3.G.2    | (S1)25:5 | (S2)6:1   | (S2)13:4 | (S2)16:1 | (S2)17:3 |          |          |          |          |          |

## Table 4D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 4.OA.1   | (S1)3:8  | (S1)9:6  | (S2)3:4  |          |          |          |          |          |          |          |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 4.OA.2   | (S1)8:1  | (S1)9:2  | (S1)11:1 | (S1)12:1 | (S1)14:3 | (S1)19:1 | (S2)3:5  | (S2)8:1  | (S2)11:1 | (S2)12:2 |
| 4.0A.2   | (S2)18:1 |          |          |          |          |          |          |          |          |          |
| 4.OA.3   | (S1)11:1 | (S1)12:7 | (S1)14:1 | (S1)19:1 | (S2)6:3  | (S2)8:1  | (S2)12:6 | (S2)18:2 | (S2)23:3 |          |
| 4.OA.4   | (S1)14:3 | (S1)19:1 | (S1)20:8 |          |          |          |          |          |          |          |
| 4.OA.5   | (S1)23:8 | (S2)19:8 | (S2)24:8 |          |          |          |          |          |          |          |
| 4.NBT.1  | (S1)2:8  | (S1)16:6 | (S2)8:1  |          |          |          |          |          |          |          |
| 4.NBT.2  | (S1)16:4 | (S2)2:7  | (S2)9:8  |          |          |          |          |          |          |          |
| 4.NBT.3  | (S1)7:8  | (S2)2:1  |          |          |          |          |          |          |          |          |
| 4.NBT.4  | (S1)12:1 | (S2)6:3  | (S2)8:8  | (S2)16:3 | (S2)26:3 |          |          |          |          |          |
| 4.NBT.5  | (S1)12:1 | (S1)19:6 | (S2)18:6 | (S2)23:1 |          |          |          |          |          |          |
| 4.NBT.6  | (S1)8:1  | (S1)14:1 | (S2)12:5 | (S2)23:6 | (S2)25:1 |          |          |          |          |          |
| 4.NF.1   | (S1)6:7  | (S1)17:1 | (S2)7:6  | (S2)22:1 |          |          |          |          |          |          |
| 4.NF.2   | (S1)6:1  | (S1)17:1 | (S2)7:3  | (S2)13:8 |          |          |          |          |          |          |
| 4.NF.3   | (S1)17:1 | (S2)17:1 |          |          |          |          |          |          |          |          |
| 4.NF.3.a |          |          |          |          |          |          |          |          |          |          |
| 4.NF.3.b | (S1)17:5 | (S2)17:7 |          |          |          |          |          |          |          |          |
| 4.NF.3.c | (S1)17:1 | (S1)18:7 |          |          |          |          |          |          |          |          |
| 4.NF.3.d | (S2)22:4 |          |          |          |          |          |          |          |          |          |
| 4.NF.4   |          | (S1)22:2 |          |          |          |          |          |          |          |          |
| 4.NF.4.a | (S1)22:1 |          |          |          |          |          |          |          |          |          |
| 4.NF.4.b | (S1)17:1 | (S1)22:1 |          |          |          |          |          |          |          |          |
| 4.NF.4.c | (S1)22:7 |          |          |          |          |          |          |          |          |          |
| 4.NF.5   | (S1)6:1  | (S1)24:2 | (S2)22:6 | (S2)25:1 |          |          |          |          |          |          |
| 4.NF.6   | (S1)24:8 | (S2)25:6 |          |          |          |          |          |          |          |          |
| 4.NF.7   | (S1)27:8 |          |          |          |          |          |          |          |          |          |
| 4.MD.1   | (S1)11:2 | (S2)3:1  | (S2)6:1  | (S2)16:1 |          |          |          |          |          |          |
| 4.MD.2   | (S1)9:1  | (S1)11:7 | (S1)24:1 | (S2)6:6  |          |          |          |          |          |          |
| 4.MD.3   | (S1)8:8  | (S2)11:8 |          |          |          |          |          |          |          |          |
| 4.MD.4   | (S1)18:6 | (S1)24:1 |          |          |          |          |          |          |          |          |
| 4.MD.5   | (S1)21:4 | (S1)25:1 | (S2)21:2 | (S2)26:1 |          |          |          |          |          |          |
| 4.MD.5.a | (S1)21:3 | (S2)20:8 |          |          |          |          |          |          |          |          |
| 4.MD.5.b | (S1)21:3 |          |          |          |          |          |          |          |          |          |
| 4.MD.6   | (S1)21:1 | (S1)25:8 | (S2)21:1 |          |          |          |          |          |          |          |
| 4.MD.7   | (S2)3:1  | (S2)16:6 | (S2)26:6 |          |          |          |          |          |          |          |
| 4.G.1    | (S1)4:8  | (S1)13:2 | (S1)21:1 | (S2)4:8  | (S2)27:1 |          |          |          |          |          |
| 4.G.2    | (S1)13:7 | (S2)14:8 | (S2)21:7 | (S2)27:7 |          |          |          |          |          |          |
| 4.G.3    | (S1)26:8 |          |          |          |          |          |          |          |          |          |

Table 5D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 5.OA.1               | (S1)9:8              | (S1)13:3             | (S1)20:5             | (S1)23:8  | (S2)6:1  | (S2)8:7  | (S2)12:2            |          |         |          |
|----------------------|----------------------|----------------------|----------------------|-----------|----------|----------|---------------------|----------|---------|----------|
| 5.OA.2               | (S1)4:1              | (S1)9:1              | (S1)12:1             | (S1)13:8  | (S1)16:1 | (S1)20:5 | (S1)23:2            | (S2)3:1  | (S2)8:2 | (S2)12:8 |
| 5.OA.3               | (S1)16:5             | (S2)19:8             |                      |           |          |          | · · · /             | ``´´     |         |          |
| 5.NBT.1              | (S1)2:8              | (S2)2:2              |                      |           |          |          |                     |          |         |          |
| 5.NBT.2              | (S1)2:1              | (S2)2:8              | (S2)3:1              |           |          |          |                     |          |         |          |
| 5.NBT.3              | (S2)6:1              |                      |                      |           |          |          |                     |          |         |          |
| 5.NBT.3.a            | (S2)3:1              | (S2)6:8              |                      |           |          |          |                     |          |         |          |
| 5.NBT.3.b            |                      |                      |                      |           |          |          |                     |          |         |          |
| 5.NBT.4              | (S1)7:8              |                      |                      |           |          |          |                     |          |         |          |
| 5.NBT.5              | (S1)12:8             | (S1)24:7             |                      |           |          |          |                     |          |         |          |
| 5.NBT.6              | (S1)18:8             | (S1)24:1             | (S2)7:1              | (S2)21:1  |          |          |                     |          |         |          |
| 5.NBT.7              | (S1)4:1              | (S2)3:3              | (S2)7:2              | (S2)21:7  | (S2)26:7 |          |                     |          |         |          |
| 5.NF.1               | (S1)3:6              | (S1)8:5              | (S1)11:1             | (S2)16:2  | (S2)20:1 |          |                     |          |         |          |
| 5.NF.2               | (S1)3:4              | (S1)8:5              | (S1)11:3             | (S2)3:1   | (S2)16:3 |          |                     |          |         |          |
| 5.NF.3               | (S1)14:8             | (S2)11:7             |                      |           |          |          |                     |          |         |          |
| 5.NF.4               | (S1)21:3             | (S1)26:1             | (S2)13:3             | (S2)17:1  | (S2)20:2 |          |                     |          |         |          |
| 5.NF.4.a             | (S1)21:1             | (S1)26:1             | (S2)11:1             | (S2)13:3  | (S2)20:1 |          |                     |          |         |          |
| 5.NF.4.b             |                      |                      |                      |           |          |          |                     |          |         |          |
| 5.NF.5               |                      |                      |                      |           |          |          |                     |          |         |          |
| 5.NF.5.a             | (S2)17:2             |                      |                      |           |          |          |                     |          |         |          |
| 5.NF.5.b             | (S2)17:6             | (S2)25:1             |                      |           |          |          |                     |          |         |          |
| 5.NF.6               | (S1)21:5             | (S2)13:2             | (S2)16:1             | (S2)17:1  | (S2)20:7 |          |                     |          |         |          |
| 5.NF.7               | (S1)26:1             |                      |                      |           |          |          |                     |          |         |          |
| 5.NF.7.a             |                      |                      |                      |           |          |          |                     |          |         |          |
| 5.NF.7.b             | (S1)26:3             | (S2)26:1             |                      |           |          |          |                     |          |         |          |
| 5.NF.7.c             | (S1)26:4             | (S2)26:1             |                      |           |          |          |                     |          |         |          |
| 5.MD.1               | (S1)4:7              | (S1)22:1             | (S2)3:5              | (S2)7:7   |          |          |                     |          |         |          |
| 5.MD.2               | (S1)11:7             | (S1)22:1             | (S2)16:8             | (20) 07 1 |          |          |                     |          |         |          |
| 5.MD.3               | (S1)17:1             | (S1)25:1             | (S2)23:8             | (S2)25:1  |          |          |                     |          |         |          |
| 5.MD.3.a<br>5.MD.3.b | (S2)25:1             | (00)02.0             | (00)05.1             |           |          |          |                     |          |         |          |
|                      | (\$1)25:1            | (\$2)23:2            | (S2)25:1             |           |          |          |                     |          |         |          |
| 5.MD.4               | (S2)25:6             | (61)05.0             | (62)22.1             |           |          |          |                     |          |         |          |
| 5.MD.5<br>5.MD.5.a   | (S1)17:1             | (S1)25:2<br>(S2)22:1 | (S2)22:1             |           |          |          |                     |          |         |          |
| 5.MD.5.b             | (S1)25:2<br>(S1)17:7 | (S2)22:1<br>(S1)25:6 | (S2)22:3             |           |          |          |                     |          |         |          |
| 5.MD.5.c             | (S1)17:7             | (31)23.0             | (32)22.3             |           |          |          |                     |          |         |          |
| <u> </u>             | (S2)22:8<br>(S1)6:7  | (S1)16:3             | (S1)19:3             | (S1)22:4  | (S1)27:5 | (S2)4:8  | (S2)9:2             | (S2)14:4 |         |          |
| 5.G.2                | (S1)6:7              | (S1)16:5             | (S1)19.3<br>(S1)19:7 | (S1)22:4  | (S1)27:5 | (S2)4.8  | (S2)9.2<br>(S2)14:7 | (52)14.4 |         |          |
| 5.G.3                | (S1)0.3<br>(S2)18:7  | (S1)10.5<br>(S2)27:7 |                      | (01)22.5  | (D1)27.0 | (02)).1  | (02)17.7            |          |         |          |
| 5.G.4                | (S2)18.7<br>(S2)18:6 | (S2)27:7             |                      |           |          |          |                     |          |         |          |
| 5.6.4                | (52)18:6             | (32)27:3             |                      |           |          |          |                     |          |         | <u> </u> |

Table 6D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

|         |          |          |          |          |          |          |          |          | -        |          |
|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|         |          |          |          |          |          |          |          |          |          |          |
| 6.RP.1  | (S1)3:4  | (S1)9:1  | (S1)16:1 | (S1)17:7 | (S1)18:1 | (S2)2:1  | (S2)25:1 | (S2)26:1 |          |          |
|         | (S1)2:1  | (S1)3:1  | (S1)4:1  | (S1)6:1  | (S1)7:1  | (S1)8:1  | (S1)9:2  | (S1)11:1 | (S1)12:1 | (S1)13:1 |
| 6.RP.2  | (S1)14:1 | (S1)18:4 | (S2)20:1 | (S2)21:1 | (S2)30:1 |          |          |          |          |          |
| 6.RP.3  | (S1)6:1  | (S1)7:1  | (S1)13:1 | (S2)30:1 |          |          |          |          |          |          |
| 6.RP.3a | (S1)3:2  | (S1)6:3  | (S1)7:2  |          |          |          |          |          |          |          |
| 6.RP.3b | (S1)4:1  | (S1)6:1  | (S1)7:3  | (S1)8:1  | (S1)9:1  | (S1)11:1 | (S1)18:2 | (S2)19:1 |          |          |
| 6.RP.3c | (S1)13:5 |          |          |          |          |          |          |          |          |          |
| 6.RP.3d |          |          |          |          |          |          |          |          |          |          |
| 6.NS.1  | (S1)7:1  | (S1)8:5  | (S1)11:1 |          |          |          |          |          |          |          |
| 6.NS.2  | (S1)4:5  | (S1)9:3  |          |          |          |          |          |          |          |          |
| 6.NS.3  | (S1)11:4 | (S1)20:6 | (S2)19:1 |          |          |          |          |          |          |          |
| 6.NS.4  | (S1)14:6 |          |          |          |          |          |          |          |          |          |
| 6.NS.5  | (S2)3:4  |          |          |          |          |          |          |          |          |          |
| 6.NS.6  |          |          |          |          |          |          |          |          |          |          |
| 6.NS.6a | (S2)3:1  |          |          |          |          |          |          |          |          |          |
| 6.NS.6b | (S2)9:2  | (S2)25:4 | (S2)28:2 | (S2)30:1 |          |          |          |          |          |          |
| 6.NS.6c | (S1)6:2  | (S2)14:5 | (S2)25:1 |          |          |          |          |          |          |          |
| 6.NS.7  | (S2)14:1 | (S2)29:1 |          |          |          |          |          |          |          |          |
| 6.NS.7a | (S2)16:1 | (S2)17:1 |          |          |          |          |          |          |          |          |
| 6.NS.7b | (S2)16:1 |          |          |          |          |          |          |          |          |          |
| 6.NS.7c | (S2)3:1  | (S2)17:1 |          |          |          |          |          |          |          |          |
| 6.NS.7d | (S2)14:2 |          |          |          |          |          |          |          |          |          |
| 6.NS.8  | (S2)9:1  | (S2)13:1 | (S2)20:3 | (S2)25:1 | (S2)28:2 |          |          |          |          |          |
| 6.EE.1  | (S1)2:4  | (S1)12:1 | (S1)20:1 | (S2)4:1  | (S2)23:2 |          |          |          |          |          |
| 6.EE.2  | (S1)16:1 | (S1)19:2 |          |          |          |          |          |          |          |          |
| 6.EE.2a | (S1)19:4 | (S2)8:1  | (S2)23:4 |          |          |          |          |          |          |          |
| 6.EE.2b |          |          |          |          |          |          |          |          |          |          |
| 6.EE.2c | (S1)16:4 |          |          |          |          |          |          |          |          |          |
| 6.EE.3  | (S2)8:1  |          |          |          |          |          |          |          |          |          |
| 6.EE.4  | (S1)12:5 | (S1)16:1 |          |          |          |          |          |          |          |          |
| 6.EE.5  | (S1)16:1 | (S2)4:1  | (S2)19:1 | (S2)26:3 |          |          |          |          |          |          |
| 6.EE.6  | (S1)19:1 | (S2)8:3  | (S2)30:2 |          |          |          |          |          |          |          |
| 6.EE.7  | (S2)4:5  | (S2)8:2  | (S2)19:4 | (S2)23:1 |          |          |          |          |          |          |
| 6.EE.8  | (S2)16:3 | (S2)26:3 |          |          |          |          |          |          |          |          |
| 6.EE.9  | (S2)30:3 |          |          |          |          |          |          |          |          |          |
| 6.G.1   | (S1)2:2  | (S2)6:6  | (S2)11:6 | (S2)13:1 | (S2)31:1 |          |          |          |          |          |
| 6.G.2   | (S2)6:1  | (S2)21:6 | (S2)33:6 |          |          |          |          |          |          |          |
| 6.G.3   | (S2)9:4  | (S2)11:1 | (S2)13:5 | (S2)20:3 | (S2)25:1 | (S2)28:3 |          |          |          |          |
| 6.G.4   | (S2)18:7 | (S2)31:6 | (S2)32:1 |          |          |          |          |          |          |          |

Table 6D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

| 6.SP.1  | (S2)2:5  | (S2)3:1  | (S2)16:1 | (S2)24:1 | (S2)27:1 |          |          |  |  |
|---------|----------|----------|----------|----------|----------|----------|----------|--|--|
| 6.SP.2  | (S2)2:2  | (S2)7:2  | (S2)12:1 | (S2)16:1 | (S2)27:1 | (S2)32:1 | (S2)34:3 |  |  |
| 6.SP.3  | (S2)17:1 | (S2)24:2 | (S2)27:2 | (S2)29:4 |          |          |          |  |  |
| 6.SP.4  | (S2)7:1  | (S2)12:4 | (S2)17:2 | (S2)22:3 | (S2)32:1 | (S2)33:1 | (S2)34:1 |  |  |
| 6.SP.5  | (S2)12:1 | (S2)22:2 | (S2)32:1 |          |          |          |          |  |  |
| 6.SP.5a | (S2)12:1 | (S2)22:1 | (S2)29:1 |          |          |          |          |  |  |
| 6.SP.5b | (S2)27:2 | (S2)34:1 |          |          |          |          |          |  |  |
| 6.SP.5c | (S2)7:5  | (S2)17:3 | (S2)24:4 | (S2)27:1 | (S2)32:2 | (S2)34:1 |          |  |  |
| 6.SP.5d | (S2)22:1 | (S2)27:1 | (S2)29:1 | (S2)32:2 | (S2)34:1 |          |          |  |  |

## Table 7D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

|         | T        | 1        |          |          |          |          |          |          | 1        | 1        |
|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 7.RP.1  | (S1)2:1  | (S1)3:1  | (S2)4:1  | (S2)19:5 | (S2)26:3 | (S2)29:2 |          |          |          |          |
| 7.RP.2  | (S2)17:1 |          |          |          |          |          |          |          |          |          |
| 7.RP.2a | (S2)18:1 |          |          |          |          |          |          |          |          |          |
| 7.RP.2b | (S2)3:4  | (S2)19:1 |          |          |          |          |          |          |          |          |
| 7.RP.2c | (S2)3:1  | (S2)24:2 |          |          |          |          |          |          |          |          |
| 7.RP.2d | (S2)3:1  | (S2)17:5 | (S2)22:1 |          |          |          |          |          |          |          |
| 7.RP.3  | (S2)9:2  | (S2)11:1 | (S2)19:2 | (S2)23:4 | (S2)24:1 | (S2)26:1 | (S2)29:4 |          |          |          |
| 7.NS.1  | (S1)10:1 | (S2)6:1  |          |          |          |          |          |          |          |          |
| 7.NS.1a | (S1)2:1  | (S2)9:1  |          |          |          |          |          |          |          |          |
| 7.NS.1b | (S1)6:1  | (S1)10:3 |          |          |          |          |          |          |          |          |
| 7.NS.1c | (S1)8:1  | (S1)9:1  | (S1)10:2 |          |          |          |          |          |          |          |
| 7.NS.1d | (S1)9:5  | (S1)10:1 | (S1)12:1 | (S2)2:2  | (S2)26:1 |          |          |          |          |          |
| 7.NS.2  | (S1)6:1  |          |          |          |          |          |          |          |          |          |
| 7.NS.2a | (S1)6:3  | (S1)7:1  | (S2)19:1 | (S2)24:1 | (S2)32:1 |          |          |          |          |          |
| 7.NS.2b | (S1)6:4  | (S1)12:1 |          |          |          |          |          |          |          |          |
| 7.NS.2c | (S1)3:2  | (S1)12:1 | (S2)7:1  | (S2)26:1 | (S2)36:1 | (S2)39:1 |          |          |          |          |
| 7.NS.2d | (S1)4:7  | (S2)38:1 | (S2)39:1 |          |          |          |          |          |          |          |
| 7.NS.3  | (S1)3:3  | (S1)9:1  | (S1)12:5 | (S2)2:4  | (S2)3:1  | (S2)7:1  | (S2)9:2  | (S2)12:1 | (S2)23:1 | (S2)24:1 |
| 7.110.0 | (S2)29:1 | (S2)30:1 | (S2)37:3 | (S2)39:1 |          |          |          |          |          |          |
| 7.EE.1  | (S1)2:1  | (S1)7:2  | (S1)8:1  | (S1)11:3 | (S1)13:1 |          |          |          |          |          |
| 7.EE.2  | (S1)7:1  | (S1)8:2  | (S1)11:2 | (S2)36:1 |          |          |          |          |          |          |
| 7.EE.3  | (S1)3:2  | (S1)8:1  | (S2)9:3  | (S2)13:1 | (S2)14:1 | (S2)23:3 | (S2)30:1 | (S2)37:2 |          |          |
| 7.EE.4  | (S1)2:2  | (S1)11:1 | (S2)30:1 |          |          |          |          |          |          |          |
| 7.EE.4a | (S1)2:2  | (S1)7:3  | (S1)8:3  | (S1)11:1 | (S1)13:3 | (S2)7:2  | (S2)14:1 | (S2)30:4 | (S2)36:1 |          |
| 7.EE.4b | (S2)6:5  | (S2)7:1  | (S2)8:1  |          |          |          |          |          |          |          |
| 7.G.1   | (S1)13:1 | (S2)2:1  | (S2)8:4  | (S2)21:1 | (S2)22:1 | (S2)31:1 | (S2)32:1 | (S2)34:2 | (S2)40:1 |          |
| 7.G.2   | (S2)9:1  | (S2)12:5 | (S2)16:1 |          |          |          |          |          |          |          |
| 7.G.3   | (S2)27:5 | (S2)29:1 | (S2)30:1 | (S2)33:1 |          |          |          |          |          |          |
| 7.G.4   | (S2)14:5 | (S2)18:1 | (S2)21:1 | (S2)31:1 | (S2)33:1 | (S2)34:4 | (S2)41:1 |          |          |          |
| 7.G.5   | (S2)4:6  | (S2)6:1  | (S2)7:1  | (S2)11:6 |          |          |          |          |          |          |
| 7.G.6   | (S1)13:3 | (S2)8:2  | (S2)12:1 | (S2)21:5 | (S2)27:2 | (S2)31:5 | (S2)32:2 | (S2)37:1 | (S2)40:5 |          |
| 7.SP.1  | (S2)16:3 | (S2)22:4 | (S2)23:1 | (S2)28:1 | (S2)35:1 | (S2)37:1 | (S2)38:1 |          |          |          |
| 7.SP.2  | (S2)16:4 | (S2)21:1 | (S2)22:1 | (S2)24:1 | (S2)28:5 | (S2)33:1 | (S2)34:1 | (S2)35:1 |          |          |
| 7.SP.3  | (S2)22:1 | (S2)33:1 | (S2)41:2 |          |          |          |          |          |          |          |
| 7.SP.4  | (S2)7:1  | (S2)28:1 | (S2)33:3 | (S2)41:4 |          |          |          |          |          |          |
| 7.SP.5  | (S2)18:5 | (S2)32:1 |          |          |          |          |          |          |          |          |
| 7.SP.6  | (S2)24:1 | (S2)26:1 | (S2)32:1 | (S2)35:3 | (S2)38:2 |          |          |          |          |          |
| 7.SP.7  | (S2)32:1 |          |          |          |          |          |          |          |          |          |
| 7.SP.7a | (S2)13:1 |          |          |          |          |          |          |          |          |          |
| 7.SP.7b | (S2)24:1 | (S2)32:1 | (S2)35:2 |          |          |          |          |          |          |          |
| 7.SP.8  | (S2)18:1 |          |          |          |          |          |          |          |          |          |
| 7.SP.8a | (S2)13:2 | (S2)17:1 | (S2)39:1 |          |          |          |          |          |          |          |
| 7.SP.8b | (S2)13:4 |          |          |          |          |          |          |          |          |          |
| 7.SP.8c |          |          |          |          |          |          |          |          |          |          |

## Table 8D5M Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| 8.NS.1           | (S1)2:1             | (S1)3:1              | (S1)6:7   | (S1)7:2   | (S1)9:6  | (S1)11:4 | (S1)12:5 | (S1)13:5  | (S1)15:1 | (S2)6:1  |
|------------------|---------------------|----------------------|-----------|-----------|----------|----------|----------|-----------|----------|----------|
| 8.NS.2           | (S1)2:1             | (S1)3:6              | (S1)7:5   | (S1)9:1   | (S1)11:1 | (S1)12:1 | (S1)13:2 | (S1)15:4  |          |          |
| 8.EE.1           | (S1)2:4             | (S1)4:1              | (S1)11:1  | (S2)22:1  |          |          |          |           |          |          |
| 8.EE.2           | (S1)4:5             | (S1)10:6             | (S1)11:1  | (S1)15:1  |          |          |          |           |          |          |
| 8.EE.3           | (S1)8:2             | (S1)14:3             |           |           |          |          |          |           |          |          |
| 8.EE.4           | (S1)2:1             | (S1)8:7              | (S1)12:1  | (S1)14:5  | (S1)15:1 |          |          |           |          |          |
| 8.EE.5           | (S2)3:2             | (S2)8:2              | (S2)14:2  | (S2)18:3  | (S2)21:1 | (S2)28:3 | (S2)35:1 | (\$2039:2 |          |          |
| 8.EE.6           | (S2)17:1            | (S2)29:1             |           |           |          |          |          |           |          |          |
| 8.EE.7           | (S2)23:2            | (S2)24:1             | (S2)37:1  |           |          |          |          |           |          |          |
| 8.EE.7a          | (S2)8:1             | (S2)14:1             | (S2)17:1  | (S2)26:1  | (S2)37:1 |          |          |           |          |          |
| 8.EE.7b          | (S2)8:2             | (S2)23:1             | (S2)29:1  | (S2)36:1  | (S2)37:6 |          |          |           |          |          |
| 8.EE.8           | (S2)23:1            |                      |           |           |          |          |          |           |          |          |
| 8.EE.8a          |                     |                      |           |           |          |          |          |           |          |          |
| 8.EE.8b          | (S2)23:4            |                      |           |           |          |          |          |           |          |          |
| 8.EE.8c          | (S2)21:1            |                      |           |           |          |          |          |           |          |          |
| 8.F.1            | (S2)12:1            | (S2)13:2             | (S2)14:1  | (S2)18:1  | (S2)19:2 | (S2)28:1 | (S2)34:6 |           |          |          |
| 8.F.2            | (S2)3:3             | (S2)8:2              | (S2)17:1  | (S2)19:1  | (S2)21:3 | (S2)28:3 | (S2)38:1 |           |          |          |
| 8.F.3            | (S2)17:2            | (S2)19:2             | (S2)24:4  | (S2)29:3  | (S2)36:3 | (S2)39:1 |          |           |          |          |
| 8.F.4            | (S2)3:2             | (S2)13:1             | (S2)14:4  | (S2)17:3  | (S2)18:2 | (S2)19:3 | (S2)21:2 | (S2)28:1  | (S2)29:2 | (S2)34:1 |
|                  | (S2)36:3            | (S2)39:2             |           |           |          |          |          |           |          |          |
| 8.F.5            | (S2)13:4            | (S2)18:1             | (S2)22:6  | (S2)24:2  | (S2)26:2 | (S2)31:7 |          |           |          |          |
| 8.G.1            | (S2)4:1             |                      |           |           |          |          |          |           |          |          |
| 8.G.1a           | (S2)30:1            |                      |           |           |          |          |          |           |          |          |
| 8.G.1b           | (S2)2:4             |                      |           |           |          |          |          |           |          |          |
| 8.G.1c           | (S2)9:1             |                      |           |           |          |          |          |           |          |          |
| 8.G.2            | (S2)2:3             | (S2)30:5             | (S2)33:5  | (72) 27 2 |          |          |          |           |          |          |
| 8.G.3            | (S2)9:4             | (S2)30:2             | (S2)33:2  | (S2)35:3  |          |          |          |           |          |          |
| 8.G.4            | (S2)4:3             | (S2)9:1              | (S2)33:2  | (\$2)35:3 | (22)22.1 |          |          |           |          |          |
| 8.G.5            | (S1)10:1            | (S2)4:3              | (S2)9:1   | (\$2)27:6 | (S2)32:1 |          |          |           |          |          |
| 8.G.6            | (S2)32:1            | (00)22.5             |           |           |          |          |          |           |          |          |
| 8.G.7            | (S2)27:1            | (S2)32:5             |           |           |          |          |          |           |          |          |
| 8.G.8<br>8.G.9   | (S2)11:1<br>(S1)4:1 | (S2)16:6<br>(S2)7:7  |           |           |          |          |          |           |          |          |
| 8.SP.1           | . ,                 | . /                  | (\$2)20.1 |           |          |          |          |           |          |          |
| 8.SP.1<br>8.SP.2 | (S2)6:6<br>(S2)12:6 | (S2)26:4<br>(S2)16:1 | (S2)39:1  |           |          |          |          |           |          |          |
| 8.SP.2<br>8.SP.3 | (\$2)12:6           | (32)10:1             |           |           |          |          |          |           |          |          |
| 0.31.3           | (32)39.1            | 1                    |           |           | 1        | 1        | 1        |           | 1        | 1        |
| 8.SP.4           | (S2)11:6            | (S2)21:1             | (S2)38:6  |           |          |          |          |           |          |          |

# Table 4D5S Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits]

| A.4.1         (S1)1:3         (S1)2:1         (S1)7:1         Image: Constraint of the system of                                                                 | (S2)9:1<br>(S2)4:2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| A.4.2       (S2)12:1       Image: Constraint of the state o                                                       |                    |
| (S2)12:1       (S1)3:1       (S1)5:1       (S2)12:1       (S1)5:1       (S1)3:1       (S1)5:1       (S1)3:1       (S1)5:1       (S2)12:1       (S1)10:1       (S2)12:1       (S1)10:1       (S1)10:1       (S1)11:1       (S1)12:2       (S1)14:1       (S1)18:1       (S1)19:2         B.4.3       (S1)1:3       (S1)1:3       (S1)12:1       (S1)11:1       (S1)11:1       (S1)12:2       (S1)14:1       (S1)18:1       (S1)19:2         C.4.1       (S2)12:1       (S1)12:1       (S1)12:1       (S1)11:1       (S1)12:2       (S1)14:1       (S1)18:1       (S1)19:2         C.4.3       (S1)1:1       (S1)12:2       (S2)15:1       (S2)15:1       (S2)15:1       (S2)15:1       (S2)15:1       (S2)15:1       (S2)15:1       (S2)16:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (\$2)4:2           |
| A.4.4       (S1)2:1       (S1)3:1       (S2)8:1       (S2)19:1       Image: Constraint of the system of the                                                                                  | (\$2)4:2           |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | (\$2)4:2           |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (\$2)4:2           |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (\$2)4:2           |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (S2)4:2            |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (S2)4:2            |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (\$2)4:2           |
| C.4.2         (S2)10:3         (S2)12:1         (S2)13:2         (S2)17:1         (S2)18:2 <th< th=""> <th< th=""><th>(S2)4:2</th></th<></th<>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | (S2)4:2            |
| (S2)10:3         (S2)12:1         (S2)13:2         (S2)17:1         (S2)18:2           C.4.3         (S1)11         (S1)12:2         (S2)5:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |
| C.4.4         (S1)2:6         (S1)3:1         (S2)3:1         (S2)9:6         (S2)16:1 </th <th></th>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |
| C.4.5         (S1)7:1         (S1)9:2         (S1)10:2         (S1)14:1         (S1)17:4         (S1)21:6         (S2)6:6         (S2)10:1         (S2)18:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |
| <b>C.4.6</b> (S1)9:1 (S1)10:4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |
| C.4.7 (S1)11:1 (S2)12:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |
| <b>C.4.8</b> (S2)4:1 (S2)12:1 (S2)13:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| <b>D.4.1</b> (S1)6:1 (S1)14:1 (S2)18:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| <b>D.4.2</b> (S1)8:3 (S2)18:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |
| <b>D.4.3</b> (S1)3:4 (S1)15:8 (S2)3:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |
| <b>D.4.4</b> (S1)3:3 (S1)7:1 (S1)14:4 (S1)18:1 (S2)3:4 (S2)17:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |
| <b>D.4.5</b> (S1)7:2 (S1)14:1 (S1)19:1 (S2)3:1 (S2)4:1 (S2)16:2 (S2)17:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |
| <b>D.4.6</b> (S2)17:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |
| <b>D.4.7</b> (S2)4:1 (S2)16:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                    |
| <b>D.4.8</b> (S2)4:3 (S2)17:3 (S2)18:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| <b>E4.1</b> (S1)4:1 (S1)8:5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |
| <b>E4.2</b> (S2)11:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                    |
| <b>E4.3</b> (S1)18:4 (S2)3:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                    |
| E4.4         (S2)15:5         Image: Constraint of the second seco                                              |                    |
| E4.5         (S1)7:2         (S1)14:1         (S1)19:1         (S2)3:1         (S2)4:1         (S2)16:2         (S2)17:1           E4.6         (S1)18:2         (S2)15:3                                                                                                         <                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                    |
| E4.0         (31)10.2         (32)15.3           E4.7         (S1)6:4         (S1)17:1         (S2)5:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| <b>E4.8</b> (S2)2:1 (S2)9:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |
| (\$1)1:1 (\$1)4:6 (\$1)5:2 (\$1)9:1 (\$1)11:1 (\$1)16:6 (\$1)20:3 (\$2)1:5 (\$2)7:6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | (S2)10:4           |
| <b>F.4.1</b> (S2)13:2 (S1)5.2 (S1)5.1 (S1)5.1 (S1)11.1 (S1)10.0 (S1)20.5 (S2)1.5 (S2)1.6 ( | (52)10.1           |
| <b>F.4.2</b> (S1)4:1 (S1)5:5 (S1)9:2 (S1)11:1 (S1)16:1 (S1)20:2 (S2)7:2 (S2)8:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                    |
| F.4.3         (S1)17:2         (S2)1:1         (S2)6:1         (S2)12:1         (S2)13:2         (S2)7:2         (S2)7:2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |
| F.4.4         (S1)5:1         (S1)16:2         (S1)20:4         (S2)1:3         (S2)2:2         (S2)10:1         (S2)11:8         (S2)12:1         (S2)13:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                    |
| G.4.1         (S1)133         (S1)193         (S2)145         (S2)193         (S2)123         (S2)113         (S2)1231                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                    |
| G.4.2 (S2)14:1 (S2)14     |                    |
| G.4.3 (S1)13:1 (S1)19:1 (S2)19:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |
| G.4.4 (S2)16:3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |
| G.4.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                    |

# Table 4D5S Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

| H.4.1 | (S1)6:1  | (S1)12:2 | (S1)13:1 | (S2)9:1 | (S2)10:1 | (S2)14:2 |  |  |
|-------|----------|----------|----------|---------|----------|----------|--|--|
| H.4.2 | (S1)12:3 |          |          |         |          |          |  |  |
| H.4.3 | (S1)13:3 | (S1)19:1 | (S2)12:1 |         |          |          |  |  |
| H.4.4 | (S1)6:1  | (S2)2:5  | (S2)12:1 |         |          |          |  |  |

| A.8.1        | (S1)1:3           | (S1)2:1  | (S1)3:1  | (S1)19:1 | (S1)20:1  | (S2)12:1                                |           |          |             |          |
|--------------|-------------------|----------|----------|----------|-----------|-----------------------------------------|-----------|----------|-------------|----------|
| A.8.2        | (S1)2:2           |          |          |          |           |                                         |           |          |             |          |
| A.8.3        | (S2)8:1           | (S2)9:1  | (S2)11:1 | (S2)15:1 | (S2)17:1  |                                         |           |          |             |          |
| A.8.4        | (S1)14:1          | (S1)19:1 | (S1)20:1 | (S2)8:1  | (S2)16:1  | (S2)18:1                                |           |          |             |          |
| A.8.5        | (S1)3:4           | (S1)9:1  |          |          |           |                                         |           |          |             |          |
| A.8.6        | (S1)1:2           | (S1)9:1  | (S1)10:1 | (S2)2:1  | (S2)16:1  |                                         |           |          |             |          |
| A.8.7        | (S1)4:1           |          |          |          |           |                                         |           |          |             |          |
| A.8.8        | (S1)11:1          |          |          |          |           |                                         |           |          |             |          |
| <b>B.8.1</b> | (S1)3:1           | (S1)4:1  | (S1)18:2 |          |           |                                         |           |          |             |          |
| <b>B.8.2</b> | (S1)3:1           | (S1)18:2 |          |          |           |                                         |           |          |             |          |
| <b>B.8.3</b> | (S1)4:1           | (S1)18:1 |          |          |           |                                         |           |          |             |          |
| <b>B.8.4</b> | (S1)12:1          | (S2)14:1 |          |          |           |                                         |           |          |             |          |
| <b>B.8.5</b> |                   |          |          |          |           |                                         |           |          |             |          |
| <b>B.8.6</b> | (S2)14:2          |          |          |          |           |                                         |           |          |             |          |
| C.8.1        | (S1)1:3           | (S1)19:3 | (S1)20:1 |          |           |                                         |           |          |             |          |
| C.8.2        | (S1)4:2           | (S1)5:4  | (S1)10:3 | (S1)19:1 | (S1)20:3  | (S2)8:3                                 | (S2)9:2   | (S2)13:3 | (S2)15:2    | (S2)16:3 |
|              | (S2)17:2          | (S2)18:1 |          |          |           |                                         |           |          |             |          |
| C.8.3        | (S1)4:3           | (S1)19:2 | (S1)20:2 | (S2)18:1 |           |                                         |           |          |             |          |
| C.8.4        | (S1)1:1           | (S1)2:1  | (S1)5:1  | (S1)14:1 | (S1)19:1  | (S1)20:2                                | (S2)8:1   | (S2)9:1  | (S2)11:1    | (S2)13:2 |
|              | (S2)15:1          | (S2)16:1 | (S2)18:1 |          |           |                                         |           |          |             |          |
| C.8.5        | (S1)1:1           | (S1)3:1  | (S1)10:1 | (S1)19:1 | (S1)21:1  | (S2)10:1                                | (S2)15:1  |          |             |          |
| C.8.6        | (S1)4:1           | (S1)5:1  | (S1)9:1  | (S1)14:1 | (\$2)15:2 | (S2)18:2                                |           |          |             |          |
| C.8.7        | (S1)5:2           | (S2)9:1  | (S2)13:1 | (S2)15:1 | (S2)16:1  |                                         |           |          |             |          |
| C.8.8        |                   |          |          |          |           |                                         |           |          |             |          |
| C.8.9        | (S1)3:1           | (S2)8:1  | (S2)11:1 | (S2)17:1 |           |                                         |           |          |             |          |
| C.8.10       |                   |          |          |          |           |                                         |           |          |             |          |
| C.8.11       |                   |          |          |          |           |                                         |           |          |             |          |
| D.8.1        | (S1)2:1           | (S1)13:3 | (S1)20:1 | (S2)7:3  | (S2)10:1  | (S2)12:2                                |           |          |             |          |
| D.8.2        | (S1)8:1           | (S1)13:3 | (S1)17:1 | (S2)7:3  | (S2)10:4  | (S2)12:1                                |           |          |             |          |
| D.8.3        | (S1)13:1          | (S1)16:1 | (S2)12:1 |          |           |                                         |           |          |             |          |
| D.8.4        | (S2)5:1           | (S2)7:1  | (S2)10:2 |          |           |                                         |           |          |             |          |
| D.8.5        | (S1)6:1           | (S1)8:3  | (S1)18:5 | (S1)21:4 |           |                                         |           |          |             |          |
| D.8.6        | (S1)6:1           | (S1)8:5  | (S1)18:1 | (S1)21:3 |           |                                         |           |          |             |          |
| D.8.7        | (S1)16:1          | 10.00    |          |          |           | . ساند بنور                             | (0.5)     | (0.5)    | (0.2) (0.2) |          |
| D.8.8        | (S1)2:1           | (S1)6:5  | (S1)7:1  | (S1)10:1 | (S1)16:1  | (S2)7:1                                 | (S2)10:1  | (S2)11:1 | (S2)12:2    |          |
| D.8.9        | (\$1)2:1          | (S1)6:1  | (S1)16:1 | (S2)9:2  | (S2)10:1  | (S2)11:2                                | (S2)12:1  |          |             |          |
| D.8.10       | ( <b>*</b> 1) * 1 |          |          | (0.11)   |           | (11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1 | (0.0)     | (        | (0.0)       |          |
| E.8.1        | (S1)9:1           | (S1)10:1 | (S1)12:1 | (S1)15:2 | (S1)17:3  | (S2)1:3                                 | (S2)2:2   | (S2)3:2  | (S2)17:1    |          |
| E.8.2        | (S1)9:1           | (S1)17:1 | (S2)1:4  | (S2)2:1  | (\$2)3:6  | (00)111                                 | (02) 17 1 |          |             |          |
| E.8.3        | (S1)9:4           | (S1)10:1 | (S1)15:4 | (S1)17:1 | (\$2)2:1  | (S2)14:1                                | (S2)17:1  |          |             |          |
| E.8.4        | (S1)15:1          |          |          |          |           |                                         |           |          |             |          |
| E.8.5        | (S1)17:3          | (S2)1:2  | (\$2)2:3 |          |           |                                         |           |          |             |          |
| E.8.6        |                   |          |          |          |           |                                         |           |          |             |          |
| E.8.7        | (S2)17:1          |          |          |          |           |                                         |           |          |             |          |
| E.8.8        | (\$1)15:1         | (S2)6:1  |          |          |           |                                         |           |          |             |          |

## Table 8D5S Number of Alignments Coded to Item by Standard [(Session Number) Item Number: Number of Hits] continued

|              |          |          |          |          | r        |          |          |  |  |
|--------------|----------|----------|----------|----------|----------|----------|----------|--|--|
| <b>F.8.1</b> | (S1)7:1  | (S2)4:7  | (S2)19:3 |          |          |          |          |  |  |
| <b>F.8.2</b> | (S1)6:1  | (S1)12:1 | (S1)14:1 | (S1)16:1 | (S1)19:1 | (S2)6:5  | (S2)19:3 |  |  |
| F.8.3        | (S1)9:4  | (S1)10:1 | (S1)15:4 | (S1)17:1 | (S2)2:1  | (S2)14:1 | (S2)17:1 |  |  |
| <b>F.8.4</b> | (S1)15:1 |          |          |          |          |          |          |  |  |
| F.8.5        | (S1)17:3 | (S2)1:2  | (S2)2:3  |          |          |          |          |  |  |
| F.8.6        | (S2)15:1 |          |          |          |          |          |          |  |  |
| <b>F.8.7</b> | (S1)16:1 | (S1)19:1 | (S2)15:1 |          |          |          |          |  |  |
| F.8.8        | (S1)11:6 | (S1)12:2 | (S1)16:3 | (S2)6:2  | (S2)19:2 |          |          |  |  |
| F.8.9        | (S1)11:5 | (S1)12:4 | (S2)6:1  |          |          |          |          |  |  |
| F.8.10       | (S2)14:1 | (S2)18:1 |          |          |          |          |          |  |  |
| G.8.1        | (S1)7:6  | (S2)2:1  |          |          |          |          |          |  |  |
| G.8.2        | (S1)2:1  | (S1)14:1 |          |          |          |          |          |  |  |
| G.8.3        | (S1)14:2 | (S2)5:6  | (S2)14:2 |          |          |          |          |  |  |
| G.8.4        | (S2)9:2  | (S2)11:3 | (S2)12:1 | (S2)13:1 |          |          |          |  |  |
| G.8.5        | (S2)5:1  | (S2)8:1  | (S2)9:1  | (S2)12:1 | (S2)14:1 | (S2)15:1 | (S2)16:1 |  |  |
| G.8.6        | (S1)2:1  |          |          |          |          |          |          |  |  |
| G.8.7        | (S1)10:1 | (S1)14:1 |          |          |          |          |          |  |  |
| H.8.1        | (S2)17:1 |          |          |          |          |          |          |  |  |
| H.8.2        | (S2)13:2 |          |          |          |          |          |          |  |  |
| H.8.3        | (S2)5:2  | (S2)14:2 | (S2)18:2 |          |          |          |          |  |  |

### Appendix E

**Results of Intra-Class Correlation** 

Reliability can be increased by adding more training to reduce the One-Judge Reliability or by adding more judges to reduce the variability of the mean.

| Aspiration | One-J | udge Relia | ability | Number of Judges Needed |         |         |  |
|------------|-------|------------|---------|-------------------------|---------|---------|--|
| Level      | 0.335 | 0.421      | 0.399   | Mathematic s            | Reading | Science |  |
| 0.7        | 4.6   | 3.2        | 3.5     | 5                       | 4       | 4       |  |
| 0.8        | 7.9   | 5.5        | 6.0     | 8                       | 6       | 7       |  |
| 0.9        | 17.9  | 12.4       | 13.6    | 18                      | 13      | 14      |  |
| 0.95       | 37.7  | 26.1       | 28.6    | 38                      | 27      | 29      |  |

Number of Judges needed to reach Aspiration Level of Reliability

Notes: The minimum number of judges calculation is based on the Spearman Browne Prophecy formula,  $m = \begin{cases} \frac{\rho^*}{1-\rho^*} \\ \rho_L \\ \rho_L$ 

estimate for a single judge.

The two-way analysis assuming both random items and fixed judges gives a result for the mean correlation identical to Cronbach's alpha, i.e.,  $\alpha = \frac{\sigma_{Bet}^2 - \sigma_e^2}{\sigma_{Bet}^2}$ . While SPSS allows the user to

select between the random and mixed models, the calculations come out the same with either model. Assuming the judges are fixed would imply these are the only judges that would ever be used, so there is no component of variance associated with them. *Random judges* assume the judges used are one of many possible selections of judges; then the variability among judges must be taken into account, which will result in a lower value for the intra-class correlation (or any other measure of reliability).

For the mixed model (i.e., fixed judges), the intra-class correlation would be calculated identically to Alpha.

$$ICC_{FixedJudges} = \frac{ItemMS - EMS}{ItemMS}$$

For the random model, the correct calculation is:

$$ICC_{RandomJudgs} = \frac{ItemMS - EMS}{ItemMS + \frac{\langle JudgeMS - EMS \rangle}{n}}$$

| ELA Grade 3             |      |      |  |  |
|-------------------------|------|------|--|--|
|                         | dF   | MS   |  |  |
| Questions               | 44   | 2.36 |  |  |
| Judges                  | 7    | 0.49 |  |  |
| Error                   | 308  | 0.15 |  |  |
| Intra-Class Correlation | 0.93 |      |  |  |
| Cronbach's Alpha        | 0.94 |      |  |  |

| ELA Grade 4             |      |      |  |  |
|-------------------------|------|------|--|--|
|                         | dF   | MS   |  |  |
| Questions               | 47   | 1.69 |  |  |
| Judges                  | 7    | 0.46 |  |  |
| Error                   | 329  | 0.15 |  |  |
| Intra-Class Correlation | 0.91 |      |  |  |
| Cronbach's Alpha        | 0.91 |      |  |  |

| ELA Grade 5             |      |      |  |  |  |
|-------------------------|------|------|--|--|--|
|                         | dF   | MS   |  |  |  |
| Questions               | 47   | 1.76 |  |  |  |
| Judges                  | 7    | 0.34 |  |  |  |
| Error                   | 329  | 0.15 |  |  |  |
| Intra-Class Correlation | 0.91 |      |  |  |  |
| Cronbach's Alpha        | 0.99 |      |  |  |  |

| ELA Grade 6             |      |      |  |  |  |
|-------------------------|------|------|--|--|--|
|                         | dF   | MS   |  |  |  |
| Questions               | 47   | 1.95 |  |  |  |
| Judges                  | 7    | 0.92 |  |  |  |
| Error                   | 329  | 0.22 |  |  |  |
| Intra-Class Correlation | 0.88 |      |  |  |  |
| Cronbach's Alpha        | 0.99 |      |  |  |  |

| ELA Grade 7                    |      |      |  |  |  |
|--------------------------------|------|------|--|--|--|
|                                | dF   | MS   |  |  |  |
| Questions                      | 47   | 0.79 |  |  |  |
| Judges                         | 7    | 3.03 |  |  |  |
| Error                          | 329  | 0.18 |  |  |  |
| <b>Intra-Class Correlation</b> | 0.72 |      |  |  |  |
| Cronbach's Alpha               | 0.77 |      |  |  |  |

| ELA Grade 8             |      |      |  |  |
|-------------------------|------|------|--|--|
|                         | dF   | MS   |  |  |
| Questions               | 47   | 1.87 |  |  |
| Judges                  | 7    | 1.30 |  |  |
| Error                   | 329  | 0.23 |  |  |
| Intra-Class Correlation | 0.87 |      |  |  |
| Cronbach's Alpha        | 0.88 |      |  |  |

| Mathematics Grade 3     |      |      |  |  |  |
|-------------------------|------|------|--|--|--|
|                         | dF   | MS   |  |  |  |
| Questions               | 41   | 1.05 |  |  |  |
| Judges                  | 7    | 1.67 |  |  |  |
| Error                   | 287  | 0.18 |  |  |  |
| Intra-Class Correlation | 0.80 |      |  |  |  |
| Cronbach's Alpha        | 0.83 |      |  |  |  |

| Mathematics Grade 4     |      |      |  |  |  |
|-------------------------|------|------|--|--|--|
|                         | dF   | MS   |  |  |  |
| Questions               | 45   | 1.40 |  |  |  |
| Judges                  | 7    | 0.66 |  |  |  |
| Error                   | 315  | 0.13 |  |  |  |
| Intra-Class Correlation | 0.90 |      |  |  |  |
| Cronbach's Alpha        | 0.91 |      |  |  |  |

| Mathematics Grade 5     |     |      |
|-------------------------|-----|------|
|                         | dF  | MS   |
| Questions               | 45  | 0.94 |
| Judges                  | 7   | 0.93 |
| Error                   | 315 | 0.16 |
| Intra-Class Correlation |     | 0.82 |
| Cronbach's Alpha        |     | 0.83 |

| Mathematics Grade 6     |     |      |
|-------------------------|-----|------|
|                         | dF  | MS   |
| Questions               | 45  | 0.94 |
| Judges                  | 6   | 0.39 |
| Error                   | 270 | 0.22 |
| Intra-Class Correlation |     | 0.77 |
| Cronbach's Alpha        |     | 0.77 |

| Mathematics Grade 7     |     |      |
|-------------------------|-----|------|
|                         | dF  | MS   |
| Questions               | 45  | 0.79 |
| Judges                  | 6   | 0.80 |
| Error                   | 270 | 0.28 |
| Intra-Class Correlation |     | 0.64 |
| Cronbach's Alpha        |     | 0.87 |

| Mathematics Grade 8     |     |      |
|-------------------------|-----|------|
|                         | dF  | MS   |
| Questions               | 45  | 0.86 |
| Judges                  | 6   | 1.67 |
| Error                   | 270 | 0.19 |
| Intra-Class Correlation |     | 0.75 |
| Cronbach's Alpha        |     | 0.78 |

| Science Grade 4                |     |      |
|--------------------------------|-----|------|
|                                | dF  | MS   |
| Questions                      | 39  | 0.82 |
| Judges                         | 7   | 0.56 |
| Error                          | 273 | 0.19 |
| <b>Intra-Class Correlation</b> |     | 0.76 |
| Cronbach's Alpha               |     | 0.91 |

| Science Grade 8         |     |      |  |
|-------------------------|-----|------|--|
|                         | dF  | MS   |  |
| Questions               | 39  | 1.21 |  |
| Judges                  | 7   | 0.24 |  |
| Error                   | 273 | 0.17 |  |
| Intra-Class Correlation |     | 0.86 |  |
| Cronbach's Alpha        |     | 0.90 |  |

### Appendix F

Speaking and Listening Standards Waiver, U.S. Department of Education



#### UNITED STATUS DEPARTMENT OF EDUCATION OFFICE OF ELEMENTARY AND SHOWDARY FOUCATION

#### JUN 2 4 2016

The Honorable Tony Evers State Superintendent of Education Wisconsin Department of Public Instruction 123 South Webster Street Madison, WI 53707

Dear Superintendent Evers:

From writing in response to Wisconsin's request on April 19, 2016, for a limited waiver of the requirement in section 1/(16) of the Elementary and Secondary Education Act of 1965 (ESEA) to assess the full range of the Sinte's academic content standards so that the State's assessment system need not measure the State's speaking and Estening standards at this time. Wisconsin requested this waiver because assessing speaking and listening skills in a large-scale summative assessment is not practicable at this time.

After reviewing Wisconsin's request, I am pleased to grant, pursuant to my authority under section 8401(9) of the ESEA, as amended by the Every Student Succeeds Act (ESSA), a limited waiver of section 1111(b)(3)(C)(ii) of the ESEA, as amended by the No Child Left Behind Act of 2001 (NCFB), for school year (SY) 2016–2017 and of section 1111(b)(2)(i)(ii) of the ESEA, as amended by the ESSA, for SYs 2017–2018 and 2018–2019 so that the State's assessment system need not measure the State's speaking and listoning standards at this time.

This waiver is granted to Wisconsin on the condition that it will implement the following assurances:

- it will continue to meet for each year of the waiver sil other requirements in the RSEA, as amended by NCLB or the RSSA, as applicable, for State assessment systems and the iroplementing regulations with respect to the State's academic content and achievement standards and assessments, including reporting student achievement and school performance, disaggregated by subgroups, to parents and the public.
- It will work toward assessing speaking and listoning consistent with the State's academic content standards.

#### 400 MARYLAND AVE., 5W, WASHINGTON, DC 20202 http://www.of.gog/

The Department of Bibeadon's aliabut is in promote studient orkinnment only preparation for global rempatitionerse by finitering convariant accellence and ensating squat access. Page 2 - The Honorable Tony Evers

If you have any questions, please contact Lisa Sadeghi or Porscheoy Brice of my staff at: <u>OSS.Wisconsin@ed.gov</u>. I appreciate the work you are doing to improve your schools and provide a high-quality education for your students.

Sincerely,

Ann Whalen Senior Advisor to the Secretary Delogated the Duties of Assistant Secretary for Elementary and Secondary Education

 Michael Thempson, Deputy State Superintendent Lynette Russell, Assistant State Superintendent Division for Student and School Success