Student Baseline and Post-Instruction Checklist
Common Core Essential Elements and Instructional Achievement Level Descriptors
Mathematics Grade 3

Student Name: _____   Student Grade: _____
Teacher: _____   Date: _____

Common Core State Standard: 3.OA.1. Interpret products of whole numbers, e.g., interpret 5 × 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 × 7.*

3.OA.2. Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 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 ÷ 8.*

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.1-2. Use repeated addition and equal groups to find the total number of objects to find the sum.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Use repeated addition to find the total number of objects arranged in a square or rectangular array.	____Y ـــــــN
Level III	Student demonstrates the content knowledge and skills: • Use repeated addition and equal groups to find the total number of objects to find the sum.	____Y ـــــــN
Level II	Student demonstrates some of the content knowledge and skills: • Use addition to find the total number of objects.	____Y ـــــــN
Level I	Student attempts to perform the task <u>with support:</u> • Identify which group has more or less when objects are added or taken away.	____Y ـــــــN

Common Core State Standard: 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.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.3. See EE3.OA.1. for repeated addition, a foundational skill for multiplication and division. (Multiplication begins in grade 4 and division begins in grade 5).		**Indicate Yes or No**

Common Core State Standard: 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 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?*

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.4. Solve addition and subtraction problems when result is unknown with number 0-30.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Solve addition and subtraction problems when any number in the problem is unknown (result, start, change, difference) with numbers to 50.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Solve addition and subtraction problems when result is unknown with number 0-30.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills • Solve addition and subtraction problems with numbers 0-10.	**____Y _____N**
Level I	Student attempts to perform the task <u>with support:</u> • Identify numbers 1 to 9.	**____Y _____N**

Common Core State Standard: 3.OA.5. Apply properties of operations as strategies to multiply and divide.[1]
Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2

---

[1] Students need not use formal terms for these properties.

can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.5. N/A (Multiplication begins at grade 4).		**Indicate Yes or No**

Common Core State Standard: 3.OA.6. Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.*

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.6. N/A (Division begins at grade 5).		**Indicate Yes or No**

Common Core State Standard: 3.OA.7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.7. **N/A (Multiplication begins grade 4 and division begins in grade 5).**		**Indicate Yes or No**

Common Core State Standard: 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.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.8. Add to solve real world one-step story problems from 0-30.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Add to solve real world one-step story problems with sums up to 50 using various problem-solving models.	**____Y _____N**

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
Level III	Student demonstrates the content knowledge and skills: • Add to solve real world one-step story problems from 0-30. Represent the problem in pictures or with objects.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Add to solve word problems identified through symbol representation.	**____Y _____N**
Level I	Student attempts to perform the task <u>with support:</u> • Identify the object(s) that appear in a real world one-step story problem.	**____Y _____N**

Common Core State Standard: 3.OA.9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.*

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.OA.9. Identify arithmetic patterns.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Complete a complex arithmetic pattern.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Identify arithmetic patterns.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Identify a pattern.	**____Y _____N**
Level I	Student attempts to perform the task <u>with support:</u> • Follow patterns.	**____Y _____N**

WISCONSIN
DEPARTMENT OF
PUBLIC
INSTRUCTION

Common Core State Standard: 3.NBT.1. Use place value understanding to round whole numbers to the nearest 10 or 100.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.NBT.1. Identify the two 10s a number comes in between on a number line (numbers 0-30).		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Identify the two 10s a number comes in between and tell which is closest (numbers 0-50).	**____Y ـــــــN**
Level III	Student demonstrates the content knowledge and skills: • Identify the two 10s a number comes in between on a number line (numbers 0-30).	**____Y ـــــــN**
Level II	Student demonstrates some of the content knowledge and skills: • Identify tens on a number line.	**____Y ـــــــN**
Level I	Student attempts to perform the task <u>with support:</u> • Identify a number.	**____Y ـــــــN**

Common Core State Standard: 3.NBT.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.NBT.2. Identify place value to tens.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Identify place value to 50.	**____Y ـــــــN**
Level III	Student demonstrates the content knowledge and skills: • Identify place value to tens.	**____Y ـــــــN**
Level II	Student demonstrates some of the content knowledge and skills: • Count to 10 using one-to-one correspondence.	**____Y ـــــــN**

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
Level I	Student attempts to perform the task with support: • Identify more or less.	____Y _____N

Common Core State Standard: 3.NBT.3. Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.NBT.3. Count by tens using money.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Compare the value of money based on place value.	____Y _____N
Level III	Student demonstrates the content knowledge and skills: • Count by tens using money.	____Y _____N
Level II	Student demonstrates some of the content knowledge and skills: • Identify whole numbers to 10.	____Y _____N
Level I	Student attempts to perform the task with support: • Count pennies to 10.	____Y _____N

Common Core State Standard: 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* parts of size 1/*b.*

3.NF.2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.
▪ 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/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line.
▪ Represent a fraction *a/b* on a number line diagram by marking off a lengths 1/*b* from 0. Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line.

3.NF.3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.
▪ Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.
▪ 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 model.

- Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. *Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a number line diagram.*

Compare two fractions with the same numerator or the same denominator 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.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.NF.1-3. Differentiate a fractional part from a whole.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Identify halves or fourths as related to the whole.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Differentiate a fractional part from a whole.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Recognize that fractions are part of a whole.	**____Y _____N**
Level I	Student attempts to perform the task <u>with support:</u> • Identify a whole.	**____Y _____N**

Common Core State Standard: 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 in minutes, e.g., by representing the problem on a number line diagram.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.1. Tell time to the hour on a digital clock.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Tell time to the half hour using a digital clock.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Tell time to the hour on a digital clock.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Identify which is the hour on a digital clock.	**____Y _____N**

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
Level I	Student attempts to perform the task with support: • Differentiate a digital clock from other measurement tools as a tool for telling time.	____Y ____N

Common Core State Standard: 3.MD.2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).[2] Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.[3]

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.2. Identify standard units of measure for mass and liquid.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (I).	____Y ____N
Level III	Student demonstrates the content knowledge and skills: • Identify standard units of measure for mass and liquid.	____Y ____N
Level II	Student demonstrates some of the content knowledge and skills: • Select the appropriate tool to measure a solid or a liquid.	____Y ____N
Level I	Student attempts to perform the task with support: • Determine if an object is a solid and a liquid.	____Y ____N

Common Core State Standard: 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 a bar graph in which each square in the bar graph might represent 5 pets.*

[2] Excludes compound units such as cm3 and finding the geometric volume of a container.
[3] Excludes multiplicative comparison problems (problems involving notions of "times as much".

WISCONSIN DEPARTMENT OF PUBLIC INSTRUCTION

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.3. Use picture or bar graph data to answer questions about data.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Interpret data to answer questions.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Use picture or bar graph data to answer questions about data.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Organize data.	**____Y _____N**
Level I	Student attempts to perform the task <u>with support</u>: • Collect data.	**____Y _____N**

Common Core State Standard: 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 quarters.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.4. Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks, by repeating the use of the measurement tool/unit.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Measure length with non-standard units of	**____Y _____N**

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
	measurement.	
Level I	Student attempts to perform the task <u>with support</u>: • Place a standard measuring tool where one would begin to measure the length of an object.	____Y ____N

Common Core State Standard: 3.MD.5. Recognize area as an attribute of plane figures and understand concepts of area measurement.
▪ A square with side length of 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
▪ A plane figure, which can be covered without gaps or overlaps by n unit squares, is said to have an area of *n* square units.

3.MD.6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

3.MD.7. Relate area to the operations of multiplication and addition.
▪ 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 lengths.
▪ 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.
▪ 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.
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.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.5-7. N/A (Area begins at grade 6).		**Indicate Yes or No**

Common Core State Standard: 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.

WISCONSIN
DEPARTMENT OF
PUBLIC
INSTRUCTION

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.MD.8. N/A (Perimeter begins at grade 7).		**Indicate Yes or No**

Common Core State Standard: 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.

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.G.1. Recognize that shapes in different categories can share attributes.		**Indicate Yes or No**
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Identify the shared attributes of shapes in different categories.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Recognize that shapes in different categories can share attributes.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Sort shapes by attributes.	**____Y _____N**
Level I	Student attempts to perform the task with support: • Match shapes (e.g., squares, rectangles, circles, triangles).	**____Y _____N**

Common Core State Standard: 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.*

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
EE3.G.2. Recognize that shapes can be partitioned into equal areas.		**Indicate Yes or No**

Common Core Essential Elements - Math	Instructional Achievement Level Descriptors	Estimated Level of Student Proficiency
Level IV	Student demonstrates the content knowledge and skills at a higher level of complexity then described in Level 3: • Given shapes with multiple lines of symmetry, will be able to identify equal areas.	**____Y _____N**
Level III	Student demonstrates the content knowledge and skills: • Recognize that shapes can be partitioned into equal areas.	**____Y _____N**
Level II	Student demonstrates some of the content knowledge and skills: • Create shapes.	**____Y _____N**
Level I	Student attempts to perform the task with support: • Match shapes.	**____Y _____N**