

Wisconsin Standards for Information and Technology Literacy (ITL) Glossary

The ITL Standard Glossary provides definitions and contextual elaborations for vocabulary terms used in the ITL content strands, standards, learning priorities and performance indicators. Glossary terms appear by the coded alignment to the ITL content strand, standards, learning priority and performance indicator. The glossary resource allows educators and leaders to create a common language around information, media and digital literacies across the grade band learning progression. The [Wisconsin Digital Learning Plan glossary](#) is posted in the Resource list, posted below, to also assist educators and leaders in framing a common understanding of current terminology. The glossary was adapted to the formatting of the WI ITL with the permission from the International Society for Technology Education (ISTE) to use their contextual definitions from their 2017 framework.

Content Area: Empowered Learner (EL)

Discipline: Information and Technology Literacy (ITL)

Content Area: Empowered Learner (EL)

Standard: EL1 - Students leverage digital tools and strategies to take an active role in choosing and achieving their learning goals.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
EL1.a: Set goals and reflect.	EL1.a.1.e: Identify the purpose of and set personal learning goals with guidance from an educator.	EL1.a.3.i: Create personal learning goals and select digital tools to achieve them.	EL1.a.5.m: Create personal learning goals and select and manage appropriate digital tools to achieve those goals.	EL1.a.7.h: Create and articulate personal learning goals and develop strategies leveraging the most effective digital tools to achieve those goals.
	EL1.a.2.e: Utilize appropriate digital tools to reflect on the learning process with guidance from an educator.	EL1.a.4.i: Utilize digital tools to reflect on and revise the learning process and make necessary revisions as needed to achieve goals with educator support.	EL1.a.6.m: Utilize digital tools to reflect on and revise the learning process and make necessary revisions as needed to achieve goals.	EL1.a.8.h: Utilize digital tools to reflect on the learning process, including successes, areas of improvement, and then make necessary revisions and adjust goals for future learning.

<p>EL1.b: Build network to support learning.</p>	<p>EL1.b.1.e: Explore and identify digital tools to be used to connect with others to enhance their learning with guidance from an educator.</p>	<p>EL1.b.2.i: Select digital tools to help build a network of experts and peers to enrich the learning experience with educator support.</p>	<p>EL1.b.3.m: Identify and pursue online networks of experts and peers to support learning processes and outcomes.</p>	<p>EL1.b.4.h: Build a professional online presence to connect with experts and peers to enhance learning processes and outcomes and prepare for future endeavors.</p>
<p>EL1.c: Create personalized learning environment.</p>	<p>EL1.c.1.e: Identify and explore digital tools that can be used to support personalized learning environment with guidance from an educator.</p>	<p>EL1.c.2.i: Explore and select digital tools to customize personalized learning environments with educator support.</p>	<p>EL1.c.3.m: Manage digital tools to customize learning by making adjustments to their personalized learning environments to maximize the learning process.</p>	<p>EL1.c.4.h: Prioritize digital tools to customize personalized learning environments in ways that maximize the learning process.</p>
<p>EL1.d: Seek and utilize feedback.</p>	<p>EL1.d.1.e: Receive performance feedback and make adjustments based on that feedback with guidance from an educator.</p>	<p>EL1.d.2.i: Seek performance feedback, and features embedded in digital tools to collect data and make learning adjustments with educator support.</p>	<p>EL1.d.3.m: Collect performance feedback, and further data from features embedded in digital tools to analyze data and make learning adjustments.</p>	<p>EL1.d.4.h: Evaluate and utilize digital tools to seek feedback from digital and nondigital, then analyze data to make adjustments and justify outcomes.</p>

Standard: EL2 - Students understand the fundamental concepts of technology operations and demonstrate the ability to choose, use, and troubleshoot current technologies.				
EL2.a: Understand and apply functions and operations.	EL2.a.1.e: Explore a variety of digital tools that will support learning.	EL2.a.2.i: Explore and select appropriate digital tools based on the necessary concepts of technology operations.	EL2.a.3.m: Navigate a variety of digital tools to create new knowledge.	EL2.a.4.h: Assess the fundamental concepts of digital tool operations, demonstrate the ability to choose, use and troubleshoot current digital tools.

Standard: EL3 - Students are able to transfer knowledge to explore emerging technologies.				
EL3.a: Transfer knowledge to emerging technology.	EL3.a.1.e: Recognize the patterns in the fundamental operations across a variety of digital tools.	EL3.a.2.e: Transfer learning between digital tools and learning environments.	EL3.a.3.e: Transfer and apply skills to begin troubleshooting and exploring emerging technologies.	EL3.a.4.e: Investigate the creation of new technologies.

Empowered Learner (EL) Glossary Terms

Standard: EL1 - Students leverage digital tools and strategies to take an active role in choosing and achieving their learning goals.

EL1.a Articulate and set personal learning goals: Age appropriate opportunities for students to have a say in their learning goals and make choices on how to meet them.

EL1.a Learning process: Recognize and evaluate the steps taken to meet learning goals - What worked? Why did things unfold as they did? What could be approached differently? What will you do differently in the future?

EL1.b Build networks: Enrich learning by making online connections with other learners and experts for personal or academic interests, for example, via social media, connecting through email, video conferencing, digital pen pals, etc.

EL1.c Customize: Choosing and making changes to meet Universal Design for Learning, and accessibility for example, by using audio, video and dynamic glossaries, highlighting, note taking, voice command, text to speech, social bookmarking, cloud collaboration tools.

EL1.c Learning environments: Local, physical and online environments, both formal and informal.

EL1.d Use technology to seek feedback: Seek digital or human feedback, for example, via spell check and grammar check tools, online search, learning analytics programs that measure how time is spent on a problem or identify specific challenge areas, collaborative spaces that allow others to give feedback, reaching out to experts for input.

Standard: EL2 - Students leverage digital tools and strategies to take an active role in choosing and achieving their learning goals.

EL2.a Demonstrate their learning in a variety of ways: Create artifacts to show how students have met their learning goals, for example, digital posters, blogs, digital stories, assessments, e-portfolios, project showcase, research paper and works of art.

EL3.a Fundamental concepts of technology operations: Basic knowledge of how to use devices and software applications.

EL3.a Troubleshoot technologies: Able to solve technical problems, for example, restart a device, install software updates, transfer work from one device to another and troubleshoot when audio/video won't play.

EL3.a Transfer knowledge: Apply prior technical and experiences to figure out how new technologies or applications work.

EL3.a Emerging technologies: New digital tools and technologies that have potential to enhance the learning process.

Content Area: Digital Citizen (DC)

Discipline: Information and Technology Literacy (ITL)

Content Area: Digital Citizen (DC)

Standard: DC1 - Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
DC1.a: Cultivate and manage digital identity and reputation.	DC1.a.1.e: Recognize how information put online creates a digital footprint and can leave a “trail” online (digital footprint).	DC1.a.4.i: Identify information that should not be shared online because it is private and personal.	DC1.a.7.m: Demonstrate safe digital actions and understand information shared digitally is public and can be searched, copied, and potentially seen by public audiences.	DC1.a.10.h: Manage digital identity and practice positive online responsibilities to avoid inappropriate forms of self-disclosure.
	DC1.a.2.e: Relate positive behavior offline to positive behavior online.	DC1.a.5.i: Identify the traits of a positive and negative online identity.	DC1.a.8.m: Analyze personal online information to distinguish whether it is helpful or harmful to reputation and image, explain why, and reflect on the risks and benefits of presenting their identities in different ways online.	DC1.a.11.h: Choose information to post online that positively affects personal image and future college and career opportunities.

	DC1.a.3.e: Recognize that online information may not be factual.	DC1.a.6.i: Recognize that photos can be altered digitally and identify the pros and cons of alteration.	DC1.a.9.m: Compare and contrast attitudes toward diverse groups regarding editing, posting, and commenting on personal photos posted on social network sites.	DC1.a.12.h: Analyze broader norms and media messages that may frame the way people use, interpret and respond to photos on social network sites and discuss the influence on society.
DC1.b: Manage personal data to maintain digital privacy and security.	DC1.b.1.e: Understand the functions of usernames and passwords.	DC1.b.4.i: Utilize strong and secure passwords to protect private account information.	DC1.b.7.m: Develop strategies to manage secure passwords.	DC1.b.10.h: Utilize secure password protection practices and management.
	DC1.b.2.e: Recognize how personal information creates your identity.	DC1.b.5.i: Demonstrate an understanding of what personal data is, how to keep it private, and how it might be shared online.	DC1.b.8.m: Create and manage strategies to protect personal data and identify and follow online application terms and conditions (such as federal law and common practice relative to terms of service regarding the age 13 requirements) and possible legal consequences.	DC1.b.11.h: Identify situations where data-collection technology is used to track navigation online and decide when it is or is not appropriate.
	DC1.b.3.e: Seek trusted adult if a website asks for any personal information and begin to identify inappropriate content.	DC1.b.6.i: Identify types of information and terms that can put a person at risk for identity theft and other scams, and safely manage unwanted messages.	DC1.b.9.m: Recognize strategies that intend harm and access private information and define the different types of malicious threats, including viruses, phishing, and identity theft.	DC1.b.12.h: Develop strategies to guard against malicious threats including viruses, phishing, and identity theft, and recognize the importance of security protocols.

Standard: DC2 - Students will demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
DC2.a: Use information, media and digital resources in a responsible manner.	DC2.a.1.e: Identify guidelines for acceptable use of Internet and other resources.	DC2.a.2.i: Recognize differences between content consumption, creation, and remixing.	DC2.a.3.m: Demonstrate responsible use of Internet, social media, and other materials, and understand consequences of violating school policy and state/federal law.	DC2.a.4.h: Assess the need for different information policies and user agreements in a variety of settings (i.e. workplace, school, government).
DC2.b: Respect intellectual property rights.	DC2.b.1.e: Recognize the intellectual property use must be cited.	DC2.b.2.i: Explain and apply the concept of intellectual property rights and how copyrights protect authors and producers.	DC2.b.3.m: Explain the concept of “fair use” as it pertains to copyright law and be able to create citations for print, graphic, audio and digital media resources.	DC2.b.4.h: Describe how to correspond with authors, publishers, or producers to obtain permission to use copyrighted materials while understanding legal consequences of plagiarism.
DC2.c: Recognize the rights and responsibilities of intellectual freedom in a democratic society.	DC2.c.1.e: Demonstrate respectful discourse, and an understanding of the importance of hearing perspectives different from one’s own, with educator guidance.	DC2.c.4.i: Define and explain the concept of intellectual freedom and identify examples of censorship.	DC2.c.7.m: Identify examples and explain the implications of censorship in the United States and in other countries and recognize the free-flow of information helps make informed citizenry decisions for the common good.	DC2.c.10.h: Understand the importance of equitable access to information and recommend strategies for ensuring others have equitable access to information, media, resources, and technology.
	DC2.c.2.e:	DC2.c.5.i:	DC2.c.8.m:	DC2.c.11.h:

	Explore what information is appropriate to put online with guidance from and educator.	Participate responsibly and respectfully in a digital community.	Identify and describe positive aspects of online communication and the importance of acting responsibly when carrying out relationships over digital media.	Demonstrate positive and responsible communications in digital communities.
	DC2.c.3.e: Demonstrate respect in social situations.	DC2.c.6.i: Identify and create positive and constructive feedback.	DC2.c.9.m: Discuss the impact that negative comments can have on both their targets and their viewers.	DC2.c.12.h: Recognize free speech, along with constitutional exceptions on free speech, and its impact on individuals, groups, and communities, both online and offline.

Digital Citizen (DC)

Standard: DC1 - Students recognize the rights, responsibilities, and opportunities of living, learning, and working in an interconnected digital world.

DC1.a Digital identity and reputation: How an individual is represented online in the public domain, based on activities, connections or tagging, for example, social media posts, photos, public online comments/reviews, awareness and monitoring of how others are depicting you online.

DC1.a Positive behavior: Interactions that convey a portrait of the way you want to be perceived and healthy interactions with technology itself, for example, moderating the time online or gaming, ergonomic issues and balancing use of the media with daily physical behavior.

DC1.a Safe behaviors: Interactions that keep you out of harm's way, for example, knowing the identity of who you are interacting with; how much and what kind of information you release online; protecting overall from scams, phishing schemes and poor purchasing practices (i.e. e-commerce theft).

DC1.a Legal behaviors: Interactions that are mindful of the laws, for example, abiding by copyright and fair use, respecting network protections by not hacking them and not using another’s identify.

DC1.a Ethical behaviors: Interactions that align with one’s moral code, for example, preventing or not engaging in cyberbullying, trolling or scamming; avoiding plagiarism; supporting other’s positive digital identity.

DC1.a Online or networked devices: Internet connected computers or tablets, multi-player gaming systems and cell phones.

DC1.b Managing personal data: Creating effective passwords, authenticating sources before providing personal information, sharing personal data conscientiously, not posting addresses or phone number visibly.

DC1.b Digital privacy and security: Activate privacy settings on social media accounts and search engines, recognize sites that use encryption, secure login and password information on shared devices, read and be conscientious about accepting privacy policies and access requests from apps and website.

DC1.b Data-collection technology for tracking navigation: Entities that track an individual’s personal data when using networked devices, for example, website cookies, search algorithms return results based on past searches, website analytics, GPS on cell phones, the “Internet of Things” when data is exchanged between networked devices and objects.

Standard: DC2 - Students will demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

DC2.b Intellectual Property: Content of ideas created by an individual or entity, for example, music, photos, narration, text and designs.

DC2.b Rights and obligations of using and sharing: Abiding by copyright and fair use, citing resources, gaining and giving permission to use (content), avoiding plagiarism, understanding and using creative commons.

DC2.c Digital Community: An online community or also called an internet community is a virtual community whose members interact with each other primarily via the Internet.

Content Area: Knowledge Constructor (KC)

Discipline: Information and Technology Literacy (ITL)				
Content Area: Knowledge Constructor (KC)				
Standard: KC1 - Students critically curate a variety of of digital tools and diverse resources.				
	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
KC1.a: Plan and employ effective research strategies.	KC1.a.1.e: Utilize knowledge of the alphabet to search and use databases; use basic keyword search techniques to locate information.	KC1.a.4.i: Explore and use different keyword searches such as using multiple words, synonyms, and alternative words and phrases; and refine searches by drawing inferences to explain-search results.	KC1.a.7.m: Demonstrate and practice a variety of search strategies for effective and efficient online searches.	KC1.a.10.h: Apply safe and effective search strategies across a range of diverse resources.
	KC1.a.2.e: Utilize digital tools and resources, contained within a classroom platform or otherwise provided by the educator, to find information on topics of interest.	KC1.a.5.i: Collaborate with an educator to employ appropriate research techniques to locate and access print and digital resources that help in the learning process.	KC1.a.8.m: Demonstrate and practice the ability to effectively utilize research strategies to locate and access appropriate print and digital resources in support of learning.	KC1.a.11.h: Plan and employ effective research strategies to locate and access information and other resources for intellectual or creative pursuits.

	KC1.a.3.e: Follow an inquiry-based process by forming simple questions and begin exploring ways to answer them using print and digital resources.	KC1.a.6.i: Follow an inquiry-based process by generating questions and exploring different ways to locate and evaluate sources that provide needed information.	KC1.a.9.m: Demonstrate and practice using an inquiry-based process that involves asking questions, investigating the answers, and developing new understandings for personal or academic learning activities.	KC1.a.12.h: Utilize an inquiry-based process to deepen content knowledge, connect academic learning with the real world, pursue personal interests, and investigate opportunities for personal growth.
KC1.b: Evaluate the accuracy, perspective, credibility, and relevance of information, media, data or other resources.	KC1.b.1.e: Explore various websites identifying different information and graphics with guidance from and educator.	KC1.b.3.i: Evaluate digital resources to determine credibility and accuracy with educator support.	KC1.b.5.m: Practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility, and relevance while distinguishing between fact and opinion in the research.	KC1.b.7.h: Assess the quality of evidence and data found in selected sources on basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context. Evaluate information and graphics for prejudice, false data, misrepresentation and misleading data.
	KC1.b.2.e: Recognize websites can influence decision-making.	KC1.b.4.i: Identify how websites can be used to appeal to different groups to evoke a response and action.	KC1.b.6.m: Recognize the importance of leveraging multiple viewpoints in decision-making and implementation.	KC1.b.8.h: Select information that is related to a problem or question while using formats and genre most appropriate to the content. Establish criteria in judging the information in this process.
KC1.c: Curate information from digital resources.	KC1.c.1.e: Explore a variety of educator-selected, curated content tools to acquire and organize information.	KC1.c.2.i: Organize information from a variety of educator-selected, curated content and make meaningful, thematic	KC1.c.3.m: Locate and collect resources from a variety of sources and organize assets into curated collections for	KC1.a.4.h: Locate, collect, and evaluate resources and curated collections from a variety of sources and organize content into

		connections between resources.	a wide range of audiences, projects, and purposes.	themes in ways that are coherent and shareable to multiple audiences.
Standard: KC2 - Students produce creative artifacts and make meaningful learning experiences from curated knowledge for themselves and others.				
	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
KC2.a: Produce creative artifacts.	KC2.a.1.e: Explore a variety of educator-selected resources, and with assistance, create an artifact that demonstrates connections to their learning.	KC2.a.2.i: Explore, select, and utilize sources of curated information to produce creative artifacts to make meaningful learning experiences.	KC2.a.3.m: Explore, select, and utilize multiple sources of curated information to produce creative artifacts for multiple audiences demonstrating meaningful connections or conclusions.	KC2.a.4.h: Explore, select, and utilize multiple sources of curated information to produce creative artifacts for multiple audiences, demonstrating meaningful connections or conclusions and consider the value of crowdsourcing, and how it works both online and offline.
KC2.b: Build knowledge by actively exploring real-world issues and problems.	KC2.b.1.e: Build knowledge to connect ideas to your own interests, previous knowledge, and experience.	KC2.b.3.i: Utilize prior and background knowledge as context for inquiry.	KC2.b.5.m: Demonstrate initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.	KC2.b.7.h: Use knowledge, information skills, and digital resources and tools to engage in public conversation and debate around issues of common concern.
	KC2.b.2.e: With guidance from an educator, students explore real-world issues and problems and share their ideas about them with	KC2.b.4.i: Connect learning to age-appropriate real-world issues and problems and begin to develop questions for problem solving.	KC2.b.6.m: Explore real-world issues and problems and actively pursue an understanding of them and begin to develop answers and solutions for problem solving.	KC2.b.8.h: Build knowledge by actively exploring real-world issues and problems, independently developing ideas and theories and

	others.			pursuing answers and solutions
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Knowledge Constructor (KC)

Standard: KC1 - Students critically curate a variety of resources using digital tools to construct knowledge.

KC1.a Research strategies: Using multiple sources (digital, online, print, etc), using library databases and catalogues, using advanced tools and criteria for online searches, using online bookmarking tools, using online and note-taking tools.

KC1.a Information and other resources: Research or other data, digital assets and media such as cell phones, clipart, videos and audio clips.

KC1.b Accuracy: When resources last updates or copyrighted (i.e. is it current?) sources of informations, links to other valid resources, factual correctness, URL cross-check on databases; use of .com, .org, .edu, etc.

KC1.b Perspective: Who is the source trying to reach? What is the tone and mission? Does it show indications of problematic bias?

KC1.b Credibility: Who wrote/published the resource and what are their credentials? How objective is the author and how reliable is the publications source? For clues, look at the domain name, affiliation, mission and vision.

KC1.b Relevance: Does the source meet your needs? Does it have the information you are looking for?

KC1.c Curate: To gather, select and categorize resources into themes in ways that are coherent and shareable.

KC1.c Variety of tools and methods to create collections: Note taking, outlining, citation and annotations tools, aggregating apps/platforms.

KC1.c Collections of artifacts: Portfolio, multimedia presentation, paper, project, video, demonstrations, etc.

Standard: KC2 - Students produce creative artifacts and make meaningful learning experiences from curated knowledge for themselves and others.

KC2.a Meaningful connections or conclusions: Learning that reflects a theme, proves a thesis or builds knowledge around an authentic topics.

KC2.b Build knowledge: Construct and expand understanding and perspectives on a topic or idea.

KC2.b Actively exploring: Open ended- student driven inquiry.

Content Area: Innovative Designer (ID)

Discipline: Information and Technology Literacy (ITL)

Content Area: Innovative Designer (ID)

Standard: ID.1 - Students use a variety of digital tools and resources to identify and solve authentic problems using design thinking.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (l)	6-8 (m)	9-12 (h)
ID1.a: Find authentic problems in local and global contexts.	ID1.a.1.e: Identify and describe a problem or challenge within the classroom or home environment. Explain why it is a problem.	ID1.a.2.i: Identify and describe problems or challenges that affect the community. Analyze all conditions that make it a problem.	ID1.a.3.m: Collaborate with others outside of the classroom to identify and describe problems and challenges on a global perspective.	ID1.a.4.h: Collaboratively analyze the community locally and globally to make change socially. Explain the depth and breadth of a problem and analyze conditions for improvement.
ID1.b: Exhibit tolerance for ambiguity, perseverance and the capacity to work with authentic, open-ended problems.	ID1.b.1.e: Demonstrate perseverance when working to complete a challenging task.	ID1.b.2.i: Demonstrate perseverance when working with authentic, open-ended problems.	ID1.b.3.m: Demonstrate an ability to persevere through authentic, open-ended problems by applying abstract concepts with greater ambiguity.	ID1.b.4.h: Apply abstract concepts to solve authentic, open-ended problems for a group of stakeholders.

Standard: ID.2 - Students use a variety of technologies within a design process to create new, useful and imaginative solutions.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
ID2.a: Know and use a deliberate design process for generating ideas, testing theories, and creating innovative artifacts and solutions.	ID2.a.1.e: Ask questions to seek understanding of an issue or problem and suggest possible solutions.	ID2.a.2.i: Explore and practice how a deliberate design process works to generate ideas, considers solutions, plans to solve a problem, and creates innovative products to share with others.	ID2.a.3.m: Use a deliberate design process to generate ideas, create innovative products, and test theories as possible solutions.	ID2.a.4.h: Select and use a deliberate design process for generating ideas, testing theories, and creating innovative artifacts.
ID2.b: Select and use digital resources to plan and manage a design process that considers design constraints and calculated risks.	ID2.b.1.e: Use age-appropriate digital resources to employ guided practice of a formal design process.	ID2.b.2.i: Use age-appropriate digital resources to plan and manage the design process.	ID2.b.3.m: Select and use digital resources to support a formal design process and expand understanding to identify constraints and trade-offs while weighing risks as they apply to authentic problems.	ID2.b.4.h: Select and use digital resources to plan and manage a design process that considers design constraints and calculated risks as they apply to authentic problems.
ID2.c: Develop, test, and refine prototypes as part of a cyclical design process.	ID2.c.1.e: Use a guided design process to create, test, and redesign if necessary.	ID2.c.2.i: Engage in an iterative process to develop and test prototypes and reflect on the role that trial and error plays in the design process.	ID2.c.3.m: Engage in an iterative process to develop and test prototypes; understand and appreciate that failures or setbacks are opportunities for growth and improvement.	ID2.c.4.h: Engage in an iterative process to develop and test prototypes. Apply this process to marketplaces, determine the metrics for success and progress monitoring, and understand that no product is final or perfect.

Innovative Designer (ID)

Standard: ID.1 - Students use a variety of digital tools and resources to identify and solve authentic problems using design thinking.

ID1.a Authentic problem: Real-world problems, such as: design challenges, science explorations, philosophical questions, service learning projects, social issues (recycling, composting, pollution, hunger, poverty).

ID1.b Tolerance for ambiguity: Comfort with the unknown or uncertainty.

ID1.b Perseverance: Continued efforts in the face of obstacles and/or uncertain outcomes.

ID1.b Open-ended problems: Problems that have many or undefined solutions.

Standard: ID.2 - Students use a variety of technologies within a design process to create new, useful and imaginative solutions.

ID2.a Deliberate design process: A methodology for problem-solving; a series of steps used to solve a problem and design a solution. For example, human-centered design process, project-based learning, engineering design processes, scientific method.

ID2.a Innovative artifacts: Artifacts created by new methods, original thinking or improvements to an existing artifact. For example, 3D artifacts, computer programs, robotics, simulations, virtual representations, prototypes, etc.

ID2.b Digital tools: Brainstorming tools, flow charts, drawing or mark up tools, 2D or 3D design software, note-taking tools, project-management tools.

ID2.b Design constraints: Time, money, expertise, materials, conditions and potential obstacles.

ID2.b Calculated risks: A decision made after careful estimation of the probable outcome.

ID2.c Prototypes: A first or preliminary model of something from which other versions are developed or copied.

ID2.c Cyclical design process: An iterative process of testing, reflection, refinement, etc. For example, alpha and beta testing.

Content Area: Computational Thinker (CT)

Discipline: Information and Technology Literacy (ITL)

Content Area: Computational Thinking (CT)

Standard: CT1 - Students develop and employ strategies for understanding and solving problems.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
CT1.a: Identify, define and interpret problems where digital tools can assist in finding solutions.	CT1.a.1.e: Identify a problem and use digital tools to explore and find solutions.	CT1.a.2.i: Identify problems and select appropriate digital tools to analyze and explore solutions.	CT1.a.3.m: Define and solve an authentic problem using data analysis, modeling, and algorithmic thinking.	CT1.a.4.h: Create and articulate a precise and thorough description of a problem designed to utilize digital tools, data analysis, abstract modeling, or algorithmic thinking to facilitate a solution.
CT1.b: Collect data, then identify and use digital tools to analyze and represent the data to find solutions.	CT1.b.1.e: Utilize age-appropriate digital tools to collect, organize, and represent data.	CT1.b.2.i: Utilize age-appropriate digital tools to collect data, design, code, test and verify possible solutions collect and represent data to discuss results and share conclusions.	CT1.b.3.m: Select an effective digital tool to collect data, design, code, test and verify possible solutions to reflect on the data to solve authentic problems.	CT1.b.4.h: Select an effective digital tool to collect data, design, code, test and verify possible solutions to reflect on the data to solve authentic problems.

CT1.c: Break problems into smaller parts, identify key information, and develop descriptive models.	CT1.c.1.e Separate a simple problem into smaller parts, identify key information, and brainstorm ways to solve the problem.	CT1.c.2.i: Separate problems into smaller parts, identify patterns and key information, and brainstorm ways to solve problems.	CT1.c.3.m: Separate authentic problems into component parts, identify patterns and differences and develop descriptive models to facilitate problem solving.	CT1.c.4.h: Evaluate the problem solving process and algorithms of others, and synthesize this information to create the most effective and efficient way to solve an authentic problem.
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Computational Thinker (CT)

Standard: CT1 - Students develop and employ strategies for understanding and solving problems.

CT1.a Algorithmic thinking: The ability to develop precise instructions or sequences that form the basis for algorithms. (Getting to a solution with clear steps)

CT1.b Collect data: Surveys, online data sets, physical measurements.

CT1.b Identify relative data sets: Could be big data, public access information, or private databases, for example, population or global food source databases, public data streams for weather satellites.

CT1.b Analyze data: Making sense of data, identifying patterns and drawing conclusions, for example, using databases, visualization tools, analytics, mapping software, text analysis software.

CT1.b Represent data: Depicting and organizing data in appropriate graphs, charts, words or images.

Content Area: Creative Communicator (CC)

Discipline: Information and Technology Literacy (ITL)

Content Area: Creative Communicator (CC)

Standard: CC1 - Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats, and digital media appropriate to their goals.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
CC1.a: Choose appropriate platforms and digital tools.	CC1.a.1.e: Use age-appropriate digital tools for producing new creations or published communications with guidance from an educator.	CC1.a.2.i: Evaluate and utilize the features and functions of a variety of digital tools for producing new creations or communications with educator support.	CC1.a.3.m: Evaluate and utilize the features and functions of a variety of digital tools and platforms to create, share, and communicate content effectively.	CC1.a.4.h: Evaluate and determine appropriate platforms and digital tools to create, communicate, and share content effectively with an authentic audience.
CC1.b: Create or remix digital resources.	CC1.b.1.e: Recognize the differences between original and remixed digital work. Use digital tools, with educator guidance, to create original and remixed work.	CC1.b.2.i: Differentiate between original and remixed digital work. Apply strategies to responsibly remix creative work.	CC1.b.3.m: Remix digital content responsibly into new, creative work.	CC1.b.4.h: Create works for an authentic audience that reflect responsible remixing of digital and Fair Use content.

CC1.c: Communicate effectively using a variety of digital tools.	CC1.c.1.e: Communicate ideas using a variety of digital tools with educator guidance.	CC1.c.2.i: Create digital artifacts to communicate ideas clearly.	CC1.c.3.m: Communicate complex ideas clearly using various digital tools to an authentic audience.	CC1.c.4.h: Utilize digital tools to analyze, modify, and communicate complex ideas, data, and solutions to an authentic audience.
Standard: CC2 - Students publish and present content customized for their audience(s), purpose, and task.				
Performance Indicators (By Grade Band)				
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
CC2.a: Publish and present content.	CC2.a.1.e: Identify audiences and appropriate communication strategies.	CC2.a.2.i: Recognize the impact of the audience, purpose, and task when publishing and presenting content.	CC2.a.3.m: Publish and present content that will effectively convey ideas to an authentic audience.	CC2.a.4.h: Intentionally align message with audience, purpose, and task when publishing and presenting content.

Creative Communicator (CC)

Standard: CC1 - Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats, and digital media appropriate to their goals.

CC1 Platforms: Mode of delivery, for example a blog, video slide deck presentation, digital poster, social media site, podcast, website or other online tool.

CC1.a Tools: Digital cameras or video, audio software, graphic design software, writing software.

CC1.b Responsibly repurpose or remix: Changing the way something was originally used or combining original assets in a unique way and, as needed seeking permission to use content from the author/creator and using proper attribution.

CC 1.b Communicate complex ideas: Deconstruct information and/or data and synthesize so it is more simply conveyed to increase understanding. For example, use of metaphors, compare/contrast, categorization.

CC1.c Digital objects: Any product, asset or artifact that is digital.

Standard: CC2 - Students publish and present content customized for their audience(s), purpose, and task.

CC2.a Customize message and medium appropriate to the audience: Identify both message (content) and medium (mode of delivery) to successfully convey ideas or creations to various audiences, for examples, peers, parents and community members.

Content Area: Global Collaborator (GC)

Discipline: Information and Technology Literacy (ITL)

Content Area: Global Collaborator (GC)

Standard: GC1 - Students use digital tools to broaden their perspectives and enrich their learning with culturally responsive practices by collaborating and working effectively with local and global teams.

	Performance Indicators (By Grade Band)			
Learning Priority	K-2 (e)	3-5 (i)	6-8 (m)	9-12 (h)
GC1.a: Use digital tools to connect with learners from a variety of backgrounds and cultures.	GC1.a.1.e: Use digital tools and resources to understand similarities and differences of others in the classroom and beyond.	GC1.a.2.i: Use digital tools to create connections with an authentic audience from diverse backgrounds or cultures.	GC1.a.3.m: Use digital tools to interact with others to develop a richer understanding of diverse perspectives and cultures.	GC1.a.4.h: Use digital tools to connect with learners from a variety of backgrounds and cultures, engaging with them in ways that broaden mutual understanding and learning.
GC1.b: Contribute constructively on project teams.	GC1.b.1.e: Learn a variety of roles within a team to cooperate.	GC1.b.2.i: Explore and participate in a variety of roles within a team using age-appropriate digital tools to complete a project or solve a problem.	GC1.b.3.m: Contribute and commit to team goals and determine role on the team based on knowledge of digital tools and content, as well as personal preference.	GC1.b.4.h: Contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.

<p>GC1.c: Contribute to the exchange of ideas within and beyond the learning community.</p>	<p>GC1.c.1.e: Share interests and experiences with one result being an understanding of different perspectives, with educator guidance.</p>	<p>GC1.c.2.i: Use appropriate digital tools, to gain an understanding of different perspectives and experiences from others, with educator support.</p>	<p>GC1.c.3.m: Select and leverage appropriate digital tools to share interests, to gain an understanding of different perspectives and experiences from others.</p>	<p>GC1.c.4.h: Contribute to and collect from the exchange of ideas within and beyond the learning community.</p>
<p>Standard: GC2 - Students use digital tools to connect with a global network of learners and engage with issues that impact local and global communities.</p>				
<p>GC2.a: Use collaborative digital resources to examine issues and problems from diverse local and global perspectives.</p>	<p>GC2.a.1.e: Use pre-selected digital tools to communicate with others and to look at problems from diverse local and global perspectives.</p>	<p>GC2.a.2.i: Select and utilize collaborative digital tools to connect with others - including peers, experts and community members - to explore diverse local and global perspectives.</p>	<p>GC2.a.3.m: Leverage collaborative digital tools to connect with others - including peers, experts, and community members - to learn about issues and problems or to gain diverse local and global perspectives.</p>	<p>GC2.a.4.h: Leverage collaborative digital tools to work with others - including peers, experts and community members - to learn about issues and problems and to solicit diverse local and global perspectives to discuss solutions for social change.</p>
<p>GC2.b: Explore local and global issues and use collaborative digital resources to investigate and develop solutions.</p>	<p>GC2.b.1.e: Use pre-selected digital tools to work together to understand issues and recommend solutions.</p>	<p>GC2.b.2.i: Collaborate with others using digital tools to explore local and global issues and solutions.</p>	<p>GC2.b.3.m: Select and use collaborative digital tools to work with others to explore local and global issues and investigate solutions.</p>	<p>GC2.b.4.h: Explore and analyze local and global issues and leverage collaborative digital tools to work with others to investigate, develop, and actualize solutions.</p>

Global Collaborator (GC)

Standard: GC1 - use digital tools to broaden their perspectives and enrich their learning with culturally responsive practices by collaborating and working effectively with local and global teams.

GC1.a Digital tools to connect with learners: Use tools, such as video conferencing, chats, virtual field trips, multiplayer online game, email and social media, to connect with other students from around the world.

GC1.a Engage to broaden understanding and learn: Connected global learners know to how to respectfully reach out, listen and work with others from different cultures to meet specific learning objectives, for example, engaging with digital pen pals, telecollaborative global projects, social action projects, translation software/apps, synchronous/asynchronous collaborative platforms, open-education resources and school global partnerships.

GC2.a Collaborative technologies: Applications that facilitate teamwork and collaboration between students and experts around the globe, for example, knowledge sharing tools, videoconferencing, digital project spaces/sites, chats, collaborative schedulers.

GC2.a Examine issues from multiple viewpoints: Engage in conversations and debate through the lens of different cultural, geographic, demographic and personal perspectives, such as online debates, discussion forums, telementoring and personal learning networks.

GC1.b Contribute constructively: Facilitate or engage in collegial feedback, manage timelines and scope of project, engage team decision-making, contribute in ways that are measurable.

Standard: GC2 -Students use digital tools to connect with a global network of learners and engage with issues that impact local and global communities.

GC2.a Assuming various roles and responsibilities: Practice communication skills by experiencing different roles, for example, team lead, subject-matter expert, beta tester, timekeeper, notetaker or scheduler.

GC2.b Explore local and global issues: Virtual field trips, research projects, e-pals and action projects using digital tools.

GC2.b Investigate solutions: The ability to address and potentially solve significant problems in students' communities and around the world, both independently and in- collaboration with others.