2025 Ohio's Technology Model Curriculum

2025 DRAFT

Department of Education & Workforce

Table of Contents

Back to Top

Department of Education & Workforce

Introduction to Ohio's Model Curriculum for Technology

Purpose of Ohio's Learning Standards and Model Curriculum for Technology

All school districts, community schools, and STEM schools may utilize the state standards and model curriculum [ORC 3301.079 (B)(3)]. Ohio's Learning Standards for Technology define what students need to know and be able to do in a digital world. For student standards around Technology, Ohio has adopted the International Society for Technology in Education (ISTE) Standards for Students. These standards serve both academic and workforce goals by striking a balance between knowledge, conceptual understanding, and skill development in the use of technology. The standards for each grade-band provide a clear progression of content knowledge and skills appropriate for students at that level. The Technology Standards identify specific learning goals, always with an eye toward effective and appropriate technology integration across all content areas and grade levels. The standards focus on how students learn with technology rather than learning about technology tools. The Model Curriculum for Technology is a tool that provides educators with information that clarifies the Learning Standards for Technology and sets the foundation for planning and developing instruction aligned to these standards. The model curriculum is not a full curriculum, nor is it mandated for use. It does not suggest pace, sequence, or the amount of time teachers should spend on topics.

Organization of the Grade Band Standards

Ohio's Learning Standards for Technology emphasize the skills and qualities we want for students, enabling them to engage and thrive in a connected, digital world. The standards are designed for use by educators across the curriculum with every age student, with a goal of cultivating these skills throughout a student's academic career. The standards are divided into four grade bands: Kindergarten- Grade 2, Grade 3- Grade 5, Grade 6- Grade 8, and Grade 9- Grade 12. Each grade band has seven **strands** with four **content statement indicators** per strand.

Back to Top

Strands are overarching ideas and provide seven functional and aspirational roles for students in kindergarten through grade 12 to consider and engage with technology.

Content Statement indicators further refine the topic statements to define what students should know and be able to do at each grade band.

These standards do not dictate curriculum or teaching methods. For example, while indicator A appears before indicator B in the standards for a given grade band, teachers do not need to teach indicator A before indicator B. A teacher might prefer to teach indicator A before indicator B or might choose to highlight connections by teaching indicator A and indicator B at the same time.

For example, the abbreviation 6-8.KC.1.a refers to grade band 6-8, Strand Knowledge Constructor, Content Statement indicator a.

Strand Descriptions

1. **Empowered Learner (EL)** - Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.
2. **Digital Citizen (DC)** - Students recognize the responsibilities and opportunities for contributing to their digital communities, including making safe, legal, and ethical decisions using Artificial Intelligence.
3. **Knowledge Constructor (KC)** - Students critically curate a variety of resources using digital tools, such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.
4. **Innovative Designer (ID)** - Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.
5. **Computational Thinker (CT)** - Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.
6. **Creative Communicator (CC)** - Students communicate clearly and express themselves creatively for a variety of purposes, such as AI prompt engineering, using the platforms, tools, styles, formats, and digital media appropriate to their goals.
7. **Global Collaborator (GC)** - Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Overview of the Model Curriculum for Technology

The Model Curriculum contains two sections: **Expectations for Learning** and **Content Elaborations**.

1. The **Expectations for Learning** define what students should be able to do because of instruction and guide educators to develop assessments, both formative and summative, that determine if the student has met the standard. There are three components to this section:
    - **Learning Progression**: Explains the position of the content statement within its respective learning progression, including previous and future learning.
    - **Important Concepts**: Identifies important concepts students should develop.
    - **Key Skills/Procedures**: Identifies key skills and procedures students should know and demonstrate.
2. The **Content Elaborations** clarify the meaning of the standard and help teachers to interpret the standard accurately and plan instruction. There are two components to this section:
    - **Clarifications**: Provides clarification of the content.
    - **Content Focus**: Identifies the aspects that teachers should stress with their students

Artificial Intelligence (AI)

AI is not specifically mentioned in the ISTE student standards due to the dynamic and evolving nature of technology. Rather than developing AI-specific indicators, ISTE decided to identify key skills for using AI safely, responsibly, and innovatively and updated select indicators accordingly. The standards focus on providing a framework for effective technology integration, empowering learners through technology, developing digital citizenship, and promoting meaningful, digital-age learning experiences. The Ohio Learning Standards for Technology have added language to the Digital Citizen, Knowledge Constructor, and Creative Communicator strands of the descriptions, as they are most focused on key AI skills.

Specific AI standards are available in Ohio's Computer Science Learning Standards (Artificial Intelligence Strand), adopted in 2022. In-depth guidance on these AI standards is available in Ohio's Model Curriculum for Computer Science. These standards are based on national guidelines for teaching AI in K-12, developed by the Computer Science Teachers Association (CSTA) and the Association for the Advancement of Artificial Intelligence (AAAI). These national guidelines were recommended by aiEdu, who had representation on the advisory committee for the standards revision. aiEdu partnered with Innovate Ohio on Ohio's AI Toolkit.

AI CONNECTIONS IN THE STANDARDS

DIGITAL CITIZEN STRAND	*KNOWLEDGE CONSTRUCTOR STRAND*	*CREATIVE COMMUNICATOR STRAND*
Students recognize the responsibilities and opportunities for contributing to their digital communities, ***including making safe, legal, and ethical decisions using Artificial Intelligence****.*	*Students critically curate a variety of resources using digital tools,* ***such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.***	*Students communicate clearly and express themselves creatively for a variety of purposes,* ***such as AI prompt engineering, using platforms, tools, styles, formats, and digital media appropriate to their goals.***
• Understand how AI systems collect and use data. • Recognize bias in AI-generated content. • Practice safe and ethical behavior when interacting with AI tools.	• Use AI tools to support research (e.g., summarizers, search assistants). • Evaluate AI-generated content for credibility and bias. • Use AI to organize and analyze information.	• Use AI for content creation (e.g., image generation, writing assistance). • Understand prompt engineering and tool selection. • Remix and adapt AI-generated content ethically.

Kindergarten - Grade 2

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

Code	Description	Model Curriculum
K-2.EL.1.a.	With guidance from an educator, students consider and set personal learning goals and utilize appropriate technologies that will demonstrate knowledge and reflection of the process.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students with guidance set goals and use technology to reflect on learning. In grades 3-5, students will collaborate with educators to set goals, choose tools, and revise their process. *IMPORTANT CONCEPTS* • Students begin to understand what it means to set a personal learning goal. • Students are introduced to the idea of self-directed learning. • Technology is a tool that can be used to demonstrate learning and reflect on progress. • Educator support is essential at this stage to scaffold the process. *KEY SKILLS/PROCEDURES* • Identify a learning goal. • Select age-appropriate technology tools. • Use the digital tool to document learning. • Practice reflection with prompts.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* In this indicator, the phrase *"with guidance from an educator"* emphasizes the importance of adult support in helping young learners navigate the process of setting goals and using technology. At the K–2 level, students are not expected to set complex goals or select tools on their own. Instead, educators model and scaffold these practices, guiding students through age-appropriate goal-setting conversations and helping them choose technologies that align with their learning objectives. The term *"appropriate technologies"* refers to tools that are developmentally suitable, accessible, and safe for young learners—such as drawing apps, voice recorders, or digital portfolios. When students *"demonstrate knowledge,"* it may take the form of simple artifacts like a recorded explanation, a digital drawing, or a photo of a completed task. *"Reflection of the process"* should be understood as an early introduction to metacognition, where students begin to express what they learned, how they felt about the experience, and what they might do differently next time, often with the help of sentence starters or prompts. *CONTENT FOCUS* The central focus of this indicator is to empower young learners to begin seeing themselves as active participants in their own learning journey. By introducing goal-setting and reflection early, students start to build foundational habits that support lifelong learning. Technology is not used passively but becomes a meaningful tool for capturing and communicating learning. This standard encourages educators to integrate digital tools in ways that enhance student agency, promote self-awareness, and support personalized learning. It also lays the groundwork for digital fluency by helping students explore how technology can be used to express ideas, track progress, and share their learning with others.

Code	Description	Model Curriculum
K-2.EL.1.b.	With guidance from an educator, students learn about various technologies that can be used to connect to others or make their learning environments personal and select resources from those available to enhance their learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students explore tools and begin to personalize learning with guidance. In grades 3-5, students build networks and customize environments with support. *IMPORTANT CONCEPTS* • Students understand that technology can help communicate and collaborate with others. • Students recognize that they can make choices about tools or settings that support how they learn best. • Students are introduced to the idea that they can choose from a variety of tools or materials to support their learning goals. *KEY SKILLS/PROCEDURES* • Explore different technologies. • Identify tools that can help students feel more comfortable or engaged in learning. • Practice how to use tools to connect with peers or teachers. • Make simple choices about which tools or resources to use for a task, with teacher support. **CONTENT ELABORATIONS** CLARIFICATIONS This indicator emphasizes the dual role of technology in both connecting students to others and supporting personalized learning experiences. At the K–2 level, students are not expected to independently evaluate or select tools, but rather to explore options with guidance. *"Technologies that can be used to connect to others"* may include tools like classroom messaging apps, video conferencing platforms, or collaborative digital whiteboards. *"Making their learning environments personal"* refers to helping students recognize and use tools or settings that support their individual learning needs—such as adjusting volume, using visual supports, or choosing a preferred app for practicing skills. The phrase *"select resources from those available"* means students are introduced to the idea of choice in learning, selecting from a curated set of tools or materials provided by the educator to enhance their engagement and understanding.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students begin to see technology as a means of enhancing their learning experience and building connections. It supports the development of early digital citizenship by showing students how to use technology respectfully and purposefully to interact with others. It also introduces the concept of learner agency, where students begin to make small, supported decisions about how they learn best. This standard encourages educators to create environments where students can explore different tools, reflect on their preferences, and begin to understand how technology can support both collaboration and personalization in learning.
K-2.EL.1.c.	With guidance from an educator, students recognize performance feedback from digital tools, make adjustments based on that feedback, and use age-appropriate technology to share learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students recognize and respond to feedback with guidance. In grades 3-5, students seek feedback and revise work with support. *IMPORTANT CONCEPTS* • Students understand that digital tools can provide feedback. • Students learn to make changes or improvements based on that feedback. • Students use technology to communicate what they have learned with others. *KEY SKILLS/PROCEDURES* • Identify feedback from digital tools. • Respond to feedback by trying again, revising work, or asking for help. • Use simple tech tools to share completed work or explain learning. • Practice how to revise or improve work based on digital cues or teacher guidance.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator introduces students to the concept of performance feedback in a digital context. At this age, feedback might come in the form of visual cues (like green checkmarks or red Xs), audio prompts, or simple messages from learning apps. Students are not expected to interpret complex data but should begin to recognize when a tool is signaling success or the need for improvement. *"Make adjustments based on that feedback"* means students try again, revise their work, or make a different choice in response to what the tool is telling them. Educators play a key role in helping students understand what the feedback means and how to respond. The final part of the indicator—*"use age-appropriate technology to share learning"*—emphasizes the importance of communication. Students might record a short video, take a photo of a project, or use a digital whiteboard to show what they've learned, with support from the teacher. *CONTENT FOCUS* The focus of this indicator is to help students begin to see feedback as a helpful part of learning, not just a judgment. It encourages a growth mindset by showing that mistakes or corrections are opportunities to improve. It also supports the development of digital literacy, as students learn to interpret and respond to cues from technology. Finally, it reinforces the idea that learning is meant to be shared and that technology can be a powerful tool for communicating ideas, progress, and accomplishments. This standard helps lay the foundation for reflective, self-directed learning in later grades.
K-2.EL.1.d.	With guidance from an educator, students explore a variety of technologies that will help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students explore tools and begin to transfer knowledge with guidance. In grades 3-5, students transfer learning across tools and environments with support. *IMPORTANT CONCEPTS* • Students are introduced to a range of tools that support learning. • Students understand that different tools can serve similar or complementary purposes. • Students begin to apply what they have learned in one tool or context to another.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Try different technologies. • Recognize similarities between tools. • Apply learned skills across platforms. • Discuss or demonstrate how a task completed in one tool could be done in another. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on helping students explore and compare various technologies with educator support. The phrase *"explore a variety of technologies"* means students are given opportunities to interact with multiple tools that support different aspects of learning—such as creativity, communication, or problem-solving. *"Begin to demonstrate an understanding of how knowledge can be transferred between tools"* refers to the early stages of recognizing that skills or concepts learned in one context can be applied in another. For example, a student who learns to drag and drop in a math game may later use that same skill in a digital storytelling app. Educators play a key role in making these connections explicit, helping students reflect on how tools are similar or different and how they can use what they already know to navigate new technologies. *CONTENT FOCUS* The focus of this indicator is to build flexibility and adaptability in young learners as they interact with technology. It encourages students to see digital tools not as isolated experiences, but as part of a broader learning ecosystem where knowledge and skills are transferable. This supports the development of digital fluency, where students begin to understand the functions and affordances of different tools. It also nurtures critical thinking by prompting students to make connections between tools and consider which ones best support their learning goals. Ultimately, this standard lays the groundwork for confident, independent technology use in later grades.

2. Digital Citizen

Students recognize the responsibilities and opportunities for contributing to their digital communities, including making safe, legal, and ethical decisions using Artificial Intelligence.

Code	Description	Model Curriculum
K-2.DC.2.a.	Students practice responsible use of technology through teacher-guided online activities and interactions to understand how digital space impacts their lives.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with teacher guidance, practice responsible use of technology and begin to understand how digital space affects their lives. In grades 3-5, students understand online identity and the performance of digital decisions. *IMPORTANT CONCEPTS* • Understand basic expectations for behavior when using digital tools. • Recognize that online actions have consequences and can affect others. • Begin to understand that digital spaces are part of their everyday lives. *KEY SKILLS/PROCEDURES* • Participate in teacher-led online activities. • Practice safe and respectful behavior online. • Identify examples of responsible versus irresponsible digital behavior. • Reflect on how students use technology at school and at home. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the foundational idea of digital citizenship. At the K–2 level, students are not expected to navigate the internet independently, but they do engage in teacher-guided online experiences. These might include watching videos, participating in class discussions on a digital platform, or interacting with peers through educational tools. *"Responsible use"* includes behaviors like listening during a video call, not clicking on unknown links, and treating others with kindness in digital spaces. The phrase *"understand how digital space impacts their lives"* refers to helping students begin to see that their actions online matter—just like in the real world. Educators support this understanding through modeling, discussion, and structured activities that highlight the connection between digital behavior and real-life consequences.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students begin developing a sense of responsibility and awareness in digital environments. It lays the groundwork for ethical and safe technology use by introducing the idea that digital spaces are shared, real, and impactful. Through guided experiences, students learn that their choices online—what they say, click, or share—can affect themselves and others. This standard supports the development of respectful digital habits, encourages safe exploration, and fosters early digital self-awareness that will be deepened in later grades.
K-2.DC.2.b.	With guidance from an educator, students understand how to be careful when using devices and how to be safe online, follow safety rules when using the internet, and collaborate with others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, follow safety rules, use devices carefully, and collaborate respectfully. In grades 3-5, students practice and encourage safe, legal, and ethical behavior online, with educator support. *IMPORTANT CONCEPTS* • Learn how to handle and use technology responsibly. • Understand basic internet safety rules. • Students begin to work with others in digital spaces respectfully and safely. **KEY SKILLS/PROCEDURES** • Practice safe handling of devices. • Follow classroom internet safety rules. • Participate in guided online collaboration. • Recognize unsafe situations and know when to ask an adult for help.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes the foundational habits of safe and respectful technology use. *"Being careful when using devices"* includes physical care—such as proper handling, charging, and storage—as well as responsible use, like staying on task and not changing settings without permission. *"Being safe online"* refers to understanding that the internet is a public space and that students should never share personal information (like names, addresses, or school names) without adult supervision. *"Follow safety rules"* means adhering to classroom or school guidelines for internet use, which are often taught through digital citizenship lessons or modeled during online activities. *"Collaborate with others"* introduces students to the idea that they can work together using technology, but must do so kindly, respectfully, and safely—just as they would in person. *CONTENT FOCUS* The focus of this indicator is to help students develop safe, respectful, and responsible behaviors when using technology. It supports early digital citizenship by teaching students how to care for devices, protect their personal information, and interact positively with others online. These skills are essential for building a strong foundation in digital literacy and preparing students for more independent and complex technology use in later grades. Through guided practice, students begin to understand that their actions in digital spaces have real-world consequences and that safety and kindness are just as important online as they are offline.
K-2.DC.2.c.	With guidance from an educator, students learn about ownership and sharing of information and how to respect the work of others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, learn about ownership and sharing of information and how to respect others' work. In grades 3-5, students demonstrate and encourage respect for intellectual property in both print and digital formats. *IMPORTANT CONCEPTS* • Students understand that digital work—like writing, images, or videos—belongs to someone. • Students recognize that copying or using someone else's work without permission is not respectful. • Students learn when and how it's appropriate to share content.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify their own work and the work of others. • Ask permission before using or sharing someone else's work. • Give credit in age-appropriate ways. • Practice respectful sharing. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the foundational principles of digital ownership and intellectual property. At the K–2 level, this doesn't mean citing sources in formal ways, but rather understanding that digital creations—like drawings, stories, or videos—belong to the person who made them. *"Ownership and sharing of information"* refers to helping students recognize that not everything online is free to use and that creators deserve recognition. *"Respect the work of others"* means not copying, altering, or claiming someone else's work as their own. Educators guide students through these ideas using real-life examples (e.g., "Would it be okay if someone took your drawing and said it was theirs?") and model respectful digital behavior during collaborative activities. *CONTENT FOCUS* The focus of this indicator is to build early ethical awareness in digital environments. It helps students begin to understand that digital content has creators, and those creators deserve respect—just like in the physical world. This standard supports the development of responsible digital habits, such as asking before sharing, giving credit, and valuing originality. It also lays the groundwork for more formal concepts of copyright, attribution, and digital ethics that will be developed in later grades. Through guided practice, students learn that being a good digital citizen means treating others' work with care and integrity.

Code	Description	Model Curriculum
K-2.DC.2.d.	With guidance from an educator, students demonstrate an understanding that technology is all around them and the importance of keeping their information private.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, recognize that technology is all around them and understand the importance of keeping personal information private. In grades 3-5, students understand what personal data is, how to keep it private, and how it might be shared online. *IMPORTANT CONCEPTS* • Students recognize that technology is part of everyday life, not just something used in school. • Understand that some information should not be shared online or with strangers. • Students begin to take ownership of keeping personal information safe. **KEY SKILLS/PROCEDURES** • Identify examples of technology in their environment. • Name types of personal information. • Practice safe behaviors. • Participate in discussions or activities about privacy and safety. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator helps students begin to understand that technology is integrated into many aspects of their daily lives, not just in the classroom. Educators can guide students in identifying where they see or use technology—at home, in the community, or in public spaces. The second part of the indicator—*"the importance of keeping their information private"*—focuses on helping students recognize what personal information is and why it should be protected. At this age, students are not expected to manage privacy settings or navigate complex security tools, but they should begin to understand that sharing personal details online can be unsafe. Educators play a key role in modeling safe behaviors and reinforcing the idea that students should always ask a trusted adult before sharing information or clicking on unfamiliar links.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to build awareness and foundational safety habits in young learners. It encourages students to see technology as something that exists beyond the classroom and to begin thinking critically about how they interact with it. By introducing the concept of personal privacy, this standard supports the development of responsible digital behavior and helps students understand that their information is valuable. It also fosters early digital self-protection skills, which are essential for navigating increasingly connected environments as they grow.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools, such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Code	Description	Model Curriculum
K-2.KC.3.a	With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, use teacher-provided digital tools and platforms to find information on topics of interest. In grades 3-5, students collaborate with teachers to use appropriate research techniques and locate digital resources to support learning. *IMPORTANT CONCEPTS* • Introduce students to the idea that technology can be used to find information. • Students are supported by the teacher in navigating digital tools. • Encourage curiosity by allowing students to explore topics they care about. *KEY SKILLS/PROCEDURES* • Use teacher-selected digital tools. • Ask questions or identify topics of interest. • Navigate within a classroom platform. • Gather simple facts or visuals related to a topic.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator introduces students to basic research skills in a safe, structured environment. *"With guidance from an educator"* means that students are not expected to search the open internet independently. Instead, they use pre-approved tools and resources—such as a classroom learning management system, a digital library, or a teacher-curated list of websites. The phrase *"topics of interest"* encourages student agency and engagement by allowing them to explore content that is meaningful or exciting to them. Educators model how to use digital tools to find information and support students in interpreting what they find. The focus is not on evaluating sources or conducting in-depth research, but rather on building comfort and confidence with digital inquiry. *CONTENT FOCUS* The focus of this indicator is to help students begin to see themselves as information seekers who can use technology to explore and learn. It supports the development of early research habits, such as asking questions, using digital tools purposefully, and locating basic information. This standard also encourages student curiosity and helps them make connections between their interests and the learning process. Through guided practice, students begin to understand that technology is not just for entertainment, it's a powerful tool for discovery and learning.
K-2.KC.3.b	With guidance from an educator, students become familiar with age-appropriate criteria for evaluating digital content.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, become familiar with age-appropriate criteria for evaluating digital content (e.g., "Is it true?" "Is it safe?"). In grades 3-5, students learn how to evaluate sources for accuracy, perspective, credibility, and relevance with teacher support. *IMPORTANT CONCEPTS* • Students begin to think critically about the information they see online. • Students use simple, concrete questions to assess whether content is useful, safe, or trustworthy. • Students learn to ask for help and reflect on content with teacher support.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Ask questions like: “Is this from a trusted source?”, “Does this make sense?”, “Is this safe for me?” • Compare two pieces of content with teacher support • Identify signs of trustworthy content • Recognize when something seems confusing, inappropriate, or untrue—and know to ask an adult. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the very early stages of digital content evaluation. At the K–2 level, students are not expected to independently verify sources or analyze bias. Instead, they begin to develop awareness that not all digital content is equally reliable or appropriate. *“Age-appropriate criteria”* might include questions like: “Is this something my teacher or family would say is okay?”, “Does this help me learn?”, or “Is this something I should ask about before using?” Educators model these questions and guide students through structured comparisons or discussions. The goal is to build early critical thinking habits and help students recognize that they should not automatically trust everything they see online. *CONTENT FOCUS* The focus of this indicator is to help students begin developing digital discernment — the ability to think about the quality and appropriateness of digital content. It supports the development of safe and thoughtful technology use by encouraging students to pause, reflect, and ask questions. This standard lays the foundation for more advanced evaluation skills in later grades, such as identifying credible sources, understanding bias, and verifying information. Through guided practice, students learn that being a good digital learner means not just finding information, but thinking about whether it’s helpful, safe, and trustworthy.

Code	Description	Model Curriculum
K-2.KC.3.c	With guidance from an educator, students explore a variety of teacher-selected tools to organize information and make connections to their learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance, explore teacher-selected tools to organize information and make connections to their learning. In grades 3-5, students use a variety of strategies to organize information and make meaningful connections between resources. **IMPORTANT CONCEPTS** • Students are introduced to ways of sorting, grouping, or displaying what they have learned. • Students use different digital tools to support thinking and learning. • Teachers help students relate new information to what they already know or are learning. **KEY SKILLS/PROCEDURES** • Use teacher-selected tools like graphic organizers, digital drawing apps, or multimedia slides. • Sort or categorize information. • Create simple visual representations of learning. • Discuss how new information connects to classroom topics or personal experiences. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on helping students begin to structure and make sense of information using digital tools. *"Teacher-selected tools"* ensures that students are working within a safe, age-appropriate digital environment—such as a classroom platform, app, or template. These tools might include drag-and-drop graphic organizers, digital notebooks, or apps that allow students to sort images or text. *"Organize information"* refers to helping students group, sequence, or visually represent what they've learned. *"Make connections to their learning"* means students are encouraged to relate new information to prior knowledge, classroom themes, or real-world experiences. Educators guide this process by modeling, prompting, and facilitating reflection.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to support early information literacy by helping students learn how to organize and connect ideas using digital tools. It encourages students to move beyond simply collecting facts and begin thinking about how those facts relate to each other and to their own learning. This standard also promotes visual thinking and digital expression, allowing students to represent their understanding in creative and developmentally appropriate ways. Through guided exploration, students begin to see digital tools as supports for thinking, not just for consuming content.
K-2.KC.3.d	With guidance from an educator, students explore real-world issues and problems and share their ideas about them with others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION (CONNECTED TO K-2.KC.3.C)* In grades K-2, students, with guidance, explore real-world issues and share their ideas with others. In grades 3-5, students explore real-world problems and collaborate with others to find answers or solutions. *IMPORTANT CONCEPTS* • Students are introduced to age-appropriate issues that affect their communities or the world. • Students are encouraged to express their thoughts and solutions using digital tools. • Teachers support students in exploring topics through discussion, media, and teacher-facilitated activities. *KEY SKILLS/PROCEDURES* • Explore real-world topics. • Ask questions and express opinions about problems or needs. • Use digital tools to share ideas. • Participate in classroom discussions or collaborative projects related to real-world themes. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the idea that learning can be connected to real-world issues, even at a young age. *"Explore real-world issues and problems"* means students engage with topics that are meaningful and understandable to them—such as caring for the environment, helping others, or staying healthy. These explorations are guided by the educator, who selects developmentally appropriate content and facilitates discussion. *"Share their ideas with others"*

Code	Description	Model Curriculum
		emphasizes the importance of communication and collaboration. Students might draw a picture, record a message, or contribute to a class project that expresses their thinking. The goal is not to solve complex problems, but to begin developing awareness, empathy, and voice. *CONTENT FOCUS* The focus of this indicator is to help students begin to see themselves as active participants in their communities and the world. It nurtures curiosity, empathy, and early civic thinking by connecting classroom learning to real-life issues. This standard also supports digital expression and collaboration, as students use technology to share their ideas in creative and meaningful ways. Through guided exploration, students learn that their voices matter and that they can contribute to conversations about the world around them—even in small, age-appropriate ways.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.

Code	Description	Model Curriculum
K-2.ID.4.a	With guidance from an educator, students ask questions, suggest solutions, test ideas to solve problems, and share their learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students ask questions, suggest solutions, test ideas, and share learning. In grades 3-5, students use a design process to define problems, develop solutions, and communicate results. *IMPORTANT CONCEPTS* • Students are introduced to the idea that they can identify and work through problems. • Students are encouraged to use the process of questioning, imagining, testing, and improving. • Students share ideas and learning with others.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Ask questions to understand a problem. • Brainstorm possible solutions with peers or the teacher. • Use simple materials or digital tools to test ideas. • Reflect on what worked and what didn't, and share results through drawings, recordings, or presentations. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the creative problem-solving process in a developmentally appropriate way. *"With guidance from an educator"* means that students are supported throughout the process—from identifying a problem to sharing their solution. The focus is not on perfect outcomes but on engaging in the process of thinking, trying, and learning. *"Ask questions"* refers to helping students clarify the problem. *"Suggest solutions"* encourages brainstorming and creativity. *"Test ideas"* means trying out a solution using available tools or materials, and *"share their learning"* emphasizes the importance of communicating what they discovered, even if the solution didn't work as expected. *CONTENT FOCUS* The focus of this indicator is to nurture creative confidence and resilience in young learners. It encourages students to see themselves as innovators and problem-solvers, capable of thinking critically and trying new ideas. This standard supports the development of design thinking habits, such as curiosity, iteration, and reflection. It also promotes collaboration and communication, as students work with others and share their learning in meaningful ways. Through guided experiences, students begin to understand that problem-solving is a process—and that learning happens through exploration, not just getting the "right" answer.

Code	Description	Model Curriculum
K-2.ID.4.b	Students use age-appropriate digital and non-digital tools to design something and are aware of the step-by-step process of designing.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students use tools to design and are aware of the design process. In grades 3-5, students apply the design process independently to create and refine products or solutions. *IMPORTANT CONCEPTS* • Students understand that creating something involves steps—from planning to building to improving. • Students use both digital and non-digital tools. • Students are encouraged to bring their ideas to life through design. *KEY SKILLS/PROCEDURES* • Use tools like drawing apps, coding platforms, building materials, or craft supplies to create a product or solution. • Follow or discuss a step-by-step process. • Document or explain the design process with teacher support. • Reflect on what students made and how they made it. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes process over product. Students are not expected to master complex design systems, but they should begin to understand that designing is a sequence of steps. Educators guide students through this process using age-appropriate language and tools. *"Age-appropriate digital and non-digital tools"* might include apps, as well as physical materials like building blocks, cardboard, or markers. *"Awareness of the step-by-step process"* means students can talk about or show what they did first, next, and last—even if the steps are simple. The goal is to help students begin thinking like designers: planning, creating, testing, and improving. *CONTENT FOCUS* The focus of this indicator is to help students develop early design thinking skills by engaging in hands-on, creative problem-solving. It supports multimodal learning, allowing students to express ideas through both digital and physical media. This standard also encourages metacognition, as students begin to reflect on how they created something—not just what they created.

Code	Description	Model Curriculum
		Through guided experiences, students learn that designing is a thoughtful, iterative process that involves planning, trying, and improving.
K-2.ID.4.c	Students use a design process to develop ideas or creations and test their designs and redesign them if necessary.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students test and redesign their creations. In grades 3-5, students iterate on their designs based on testing, feedback, and reflection. *IMPORTANT CONCEPTS* • Students understand that creating something involves planning, testing, and improving. • Students learn that it is okay—and even expected—to revise and improve a design. • Students apply ideas to create something new or solve a challenge. *KEY SKILLS/PROCEDURES* • Follow a simple design process. • Develop ideas through drawing, building, or using digital tools. • Test creations to see if they work as intended. • Make changes based on observations or feedback. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator builds on earlier design experiences by emphasizing iteration—the idea that designs can and should be improved. *"Use a design process"* means students are guided through a structured approach to creating something, often with visual or verbal prompts. This might include drawing a plan, building a model, testing it, and then making changes. *"Test their designs"* refers to trying out their creations to see if they meet the intended goal (e.g., "Does the bridge hold weight?" "Does the animation move the way I wanted?"). *"Redesign them if necessary"* encourages students to reflect on what didn't work and try again—an essential part of developing a growth mindset.

Code	Description	Model Curriculum
		K-2.ID.4.b focuses on helping students become aware of the steps involved in designing something using age-appropriate digital and non-digital tools. It emphasizes exploration and understanding that design follows a process. In contrast, K-2.ID.4.c moves students into actively applying that process—developing ideas, testing their designs, and making improvements. While 4.b is about recognizing the steps, 4.c is about using those steps to solve problems through iteration and reflection. *CONTENT FOCUS* The focus of this indicator is to help students understand that design is a process of learning and improvement. It supports the development of resilience, creativity, and critical thinking by encouraging students to test their ideas and revise them based on results. This standard also reinforces the idea that failure is part of learning, and that trying again is a valuable and expected step in the design process. Through hands-on experiences, students begin to internalize the mindset of a designer: thoughtful, curious, and always willing to improve.
K-2.ID.4.d	Students demonstrate perseverance when working to complete a challenging task.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students demonstrate perseverance when completing challenging tasks. In grades 3-5, students persist through challenges, revise strategies, and reflect on their learning process. *IMPORTANT CONCEPTS* • Students continue to work through difficulties or setbacks. • Students understand that mistakes are part of learning. • Students stay focused and committed to finishing a challenge. *KEY SKILLS/PROCEDURES* • Try different strategies when something doesn't work. • Ask for help or use resources when stuck. • Stay engaged with a task even when it is difficult or takes time. • Reflect on what helped them persist and succeed.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes the social-emotional side of innovation and problem-solving. *"Demonstrate perseverance"* means students are encouraged to keep trying, even when a task is hard or doesn't go as planned. This could be during a design challenge, a coding activity, or a creative project. Educators support this by modeling positive self-talk, celebrating effort, and creating a classroom culture where mistakes are seen as learning opportunities. The focus is not on completing the task perfectly, but on sticking with it, showing resilience, and learning from the process. *CONTENT FOCUS* The focus of this indicator is to help students develop grit, resilience, and a positive attitude toward challenges. It reinforces the idea that innovation often involves trial and error, and that persistence is a key part of success. This standard supports both academic and personal growth by encouraging students to take risks, learn from failure, and celebrate progress. Through guided experiences, students begin to internalize the belief that they can overcome obstacles and complete meaningful work.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Code	Description	Model Curriculum
K-2.CT.5.a	With guidance from an educator, students identify a problem and select appropriate technology tools to explore and find solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students identify problems and select tools to explore solutions. In grades 3-5, students define problems, independently choose and use digital tools to develop, and test solutions.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students recognize that a challenge or need exists. • Students understand that different technology tools can help solve different types of problems. • Students use tools with teacher support to investigate and address the problem. *KEY SKILLS/PROCEDURES* • Identify a simple, age-appropriate problem. • Explore teacher-provided tools. • Choose a tool that fits the task. • Use the selected tool to explore or attempt a solution. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the early stages of computational thinking by helping them connect problems with purposeful technology use. *"With guidance from an educator"* means students are supported in both identifying the problem and selecting tools. *"Identify a problem"* could be as simple as needing to communicate an idea, organize information, or complete a task. *"Select appropriate technology tools"* refers to choosing from a set of teacher-curated options that are safe, accessible, and developmentally appropriate. The emphasis is not on mastering the tool, but on making a thoughtful choice and using it to explore or solve the problem. *CONTENT FOCUS* The focus of this indicator is to help students begin to see technology as a problem-solving tool. It supports the development of early decision-making and reasoning skills, as students learn to match tools to tasks. This standard also encourages curiosity and experimentation, as students explore how different tools can help them understand or address a challenge. Through guided practice, students begin to build confidence in using technology purposefully and flexibly.

Code	Description	Model Curriculum
K-2.CT.5.b	With guidance from an educator, students analyze age-appropriate data and look for similarities to identify patterns and categories.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students analyze data to find patterns and categories. In grades 3-5, students collect, organize, and analyze data to identify trends and support conclusions. *IMPORTANT CONCEPTS* • Students are introduced to the idea that information can be collected, examined, and interpreted. • Teachers help students identify similarities, trends, or repeated elements in data. • Students group data based on shared characteristics. *KEY SKILLS/PROCEDURES* • Collect or view simple data sets. • Identify similarities or differences. • Group items or information into categories. • Use visual tools like charts, pictographs, or sorting activities to organize and interpret data. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to basic data literacy in a developmentally appropriate way. *"Analyze age-appropriate data"* means working with simple, concrete information that students can relate to—such as favorite foods, daily temperatures, or types of transportation. *"Look for similarities"* encourages students to compare and contrast data points, while *"identify patterns and categories"* helps them begin to organize information meaningfully. Educators guide this process by modeling how to observe, sort, and discuss data, often using visual supports and hands-on activities. The goal is not statistical analysis but recognizing structure and meaning in information. *CONTENT FOCUS* The focus of this indicator is to help students develop early analytical thinking skills by engaging with data in a hands-on, visual, and meaningful way. It supports the development of computational thinking by encouraging students to observe, compare, and organize information. These foundational skills prepare students for more complex data analysis in later grades and help them begin to see how data can be used to understand the world around them.

Code	Description	Model Curriculum
		Through guided exploration, students learn that data isn't just numbers—it's a tool for discovering patterns and making sense of information.
K-2.CT.5.c	With guidance from an educator, students break a problem into parts and identify ways to solve the problem.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students break problems into parts and identify solutions. In grades 3-5, students decompose problems and develop step-by-step plans or algorithms to solve them. *IMPORTANT CONCEPTS* • Students learn to break a larger problem into smaller, more manageable parts. • Students identify steps or actions needed to solve each part of a problem. • Students understand that solving a problem often involves multiple steps. *KEY SKILLS/PROCEDURES* • Identify the main problem and discuss what makes it challenging. • Break the problem into smaller parts. • Brainstorm possible solutions for each part. • Use visual tools like checklists, diagrams, or storyboards to organize steps. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to decomposition, a foundational concept in computational thinking. *"Break a problem into parts"* means helping students look at a task or challenge and identify the smaller steps needed to complete it. For example, if the problem is to create a class book, students might identify steps like choosing a topic, writing a page, illustrating it, and putting the pages together. *"Identify ways to solve the problem"* refers to brainstorming or selecting strategies for each part. Educators guide this process by modeling how to think through a problem step-by-step and encouraging students to reflect on their approach.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students develop structured thinking and problem-solving strategies. It supports the development of computational thinking habits, such as breaking down complex tasks and approaching them methodically. This standard also encourages collaboration and planning, as students often work together to identify steps and solutions. Through guided experiences, students begin to understand that big problems can be solved more easily when they are broken into smaller, manageable parts.
K-2.CT.5.d	Students understand how technology makes a task easier or repeatable and can identify real-world examples.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students understand how technology makes tasks easier or repeatable. In grades 3-5, students explain how automation and digital tools improve efficiency and solve real-world problems. *IMPORTANT CONCEPTS* • Students recognize that technology can help us do things faster or more easily. • Students understand that some tasks can be repeated consistently using technology. • Students connect classroom learning to everyday examples of technology use. *KEY SKILLS/PROCEDURES* • Identify tasks that are made easier by technology. • Recognizing tools that repeat actions. • Compare manual versus technology-assisted methods. • Share examples from home, school, or community where technology simplifies tasks. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator helps students begin to understand why we use technology, not just how. *"Makes a task easier or repeatable"* refers to the idea that technology can save time, reduce effort, or perform the same action multiple times without error. For example, a student might notice that a printer can make many copies of a paper quickly, or that a coding app can make a character repeat a dance move. *"Real-world examples"* should be familiar and concrete—like using a microwave to heat food, a vacuum robot to clean, or a digital timer to track time. Educators guide students in making these connections through discussion, demonstration, and reflection.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students develop awareness of the purpose and impact of technology in everyday life. It supports computational thinking by encouraging students to observe how tasks can be automated or made more efficient. This standard also fosters real-world relevance, helping students connect classroom learning to the tools and systems they encounter at home and in their communities. Through guided exploration, students begin to see technology not just as entertainment, but as a tool that helps people solve problems and work more effectively.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes, such as AI prompt engineering, using platforms, tools, styles, formats, and digital media appropriate to their goals.

Code	Description	Model Curriculum
K-2.CC.6.a	With guidance from an educator, students choose different tools for creating something new or for communicating with others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students choose tools to create or communicate. In grades 3-5, students select and justify the use of digital tools to effectively communicate ideas to different audiences. *IMPORTANT CONCEPTS* • Students understand that different tools serve different purposes. • Students use technology to make something original. • Students share ideas, feelings, or information with others using digital tools. *KEY SKILLS/PROCEDURES* • Explore a variety of teacher-approved tools. • Choose a tool based on the task. • Create original content. • Share work with classmates, families, or teachers in appropriate ways.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator introduces students to the idea that technology can be used for both creation and communication. *"With guidance from an educator"* means students are supported in exploring and selecting tools that are safe, age-appropriate, and aligned with the learning goal. *"Choose different tools"* emphasizes that students are not just using one familiar app but are beginning to make purposeful choices based on what they want to create or communicate. The focus is not on mastering complex tools, but on developing awareness of how different tools can help them express themselves or share ideas. *CONTENT FOCUS* The focus of this indicator is to help students begin to see themselves as digital creators and communicators. It supports the development of digital fluency by encouraging students to explore, compare, and select tools that fit their needs. This standard also promotes student voice and choice, allowing learners to express themselves in ways that are meaningful and developmentally appropriate. Through guided experiences, students begin to understand that technology is not just for consuming content, it's a powerful way to create and connect.
K-2.CC.6.b	Students use digital tools to create original works.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students use digital tools to create original works. In grades 3-5, students create original digital content that demonstrates understanding and creativity. *IMPORTANT CONCEPTS* • Students understand that technology can be used to make something new. • Students create content that reflects the student's own ideas, voice, or imagination. • Students apply age-appropriate digital tools to express creativity. *KEY SKILLS/PROCEDURES* • Use drawing, storytelling, video, or audio tools to create something new. • Make choices about content, visuals, and format to reflect personal ideas. • Combine text, images, sound, or movement to communicate a message or tell a story. • Share creations with peers, teachers, or families in appropriate ways.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes creation over consumption. Students are not just using technology to watch or play—they are using it to make something original. *"Digital tools"* may include apps or drawing and video tools that are developmentally appropriate. *"Original works"* means the content is student-generated, even if it uses templates or guided formats. The focus is on student voice and creativity, not technical perfection. Educators support this by providing tools, modeling possibilities, and encouraging students to express their ideas in unique ways. *CONTENT FOCUS* The focus of this indicator is to help students see themselves as digital creators who can use technology to express their thoughts, stories, and ideas. It supports the development of creative confidence, digital fluency, and communication skills. This standard also encourages authentic expression, allowing students to explore their interests and identities through digital media. Through guided experiences, students learn that technology is a powerful tool for making and sharing their own original work.
K-2.CC.6.c	With guidance from an educator, students share ideas in multiple ways — visual, audio, etc.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students share ideas in multiple formats. In grades 3-5, students communicate clearly and creatively using a variety of digital formats and media. *IMPORTANT CONCEPTS* • Students understand that ideas can be shared through different formats—visual, audio, written, or spoken. • Students use technology to communicate in creative and meaningful ways. • Students begin to consider how to share ideas clearly with others. *KEY SKILLS/PROCEDURES* • Create and share content using different media. • Choose a format that fits the message or audience. • Combine media types. • Practice how to present or explain ideas using digital tools.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes flexibility in communication. *"Share ideas in multiple ways"* means students are encouraged to express themselves using a variety of formats—not just writing or speaking. These might include visual (drawings, photos), audio (recordings, music), or multimedia (videos, slideshows). *"With guidance from an educator"* ensures that students are supported in choosing appropriate tools and formats, and in understanding how to use them effectively. The goal is not technical mastery but developing comfort and confidence in expressing ideas through different modes. *CONTENT FOCUS* The focus of this indicator is to help students become versatile communicators who can use technology to share their thinking in creative, engaging ways. It supports the development of digital literacy, self-expression, and audience awareness. This standard also encourages students to explore how different formats can enhance their message and make their ideas more accessible to others. Through guided practice, students learn that communication is not one-size-fits-all—and that they have many tools at their disposal to make their voices heard.
K-2.CC.6.d	With guidance from an educator, students select technology to share their ideas with different people.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students select technology to share ideas with different people. In grades 3-5, students adapt their communication strategies and tools based on audience and purpose. *IMPORTANT CONCEPTS* • Students understand that different people may need different formats or tools to receive information. • Students choose technology based on who the message is for and how it will be shared. • Students use technology to connect with others meaningfully.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify the audience. • Select a tool that fits the audience and message. • Create and share content using the selected tool. • Reflect on how and why they chose that tool for that audience. Content Elaborations *CLARIFICATIONS* This indicator emphasizes intentional communication. *"Select technology to share their ideas with different people"* means students begin to understand that how they share something may depend on who they're sharing it with. For example, a student might record a video message for their family but use a drawing app to explain an idea to a classmate. *"With guidance from an educator"* ensures that students are supported in making these decisions and using the tools safely and appropriately. The focus is on matching the tool to the audience and purpose, not on technical complexity. *CONTENT FOCUS* The focus of this indicator is to help students become thoughtful communicators who use technology to connect with others in meaningful ways. It supports the development of digital citizenship, audience awareness, and communication strategy. This standard also encourages students to think about the why and how of sharing—not just the what. Through guided experiences, students learn that communication is more effective when it's tailored to the audience and that technology offers many ways to make that happen.

7. Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Code	Description	Model Curriculum
K-2.GC.7.a.	With guidance from an educator, students use technology tools to work with friends and with people outside their neighborhood, city, and beyond.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students use technology to work with others beyond their local community. In grades 3-5, students use digital tools to collaborate with diverse teams and contribute to shared projects. *IMPORTANT CONCEPTS* • Students understand that technology allows people to work together, even from far away. • Students begin to recognize that they can connect with people outside their immediate environment. • Students use safe, age-appropriate platforms to interact and collaborate. *KEY SKILLS/PROCEDURES* • Participate in teacher-guided activities that involve working with classmates or partner classrooms. • Use tools like class blogs, video messages, or shared documents to communicate ideas. • Learn how to take turns, listen, and contribute respectfully to digital spaces. • Identify similarities and differences between themselves and others in different places. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to the idea that technology can connect people across distances. *"With guidance from an educator"* ensures that all interactions are safe, structured, and developmentally appropriate. *"Use technology tools to work with friends and with people outside their neighborhood, city, and beyond"* means students may collaborate with peers in their own classroom or participate in projects with students from other schools, regions, or even countries—always under teacher supervision. The focus is on building communication and collaboration skills, not on independent online interaction.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students begin developing a global mindset and understand the collaborative power of technology. It supports the development of digital citizenship, communication skills, and cultural awareness. Through guided experiences, students learn that they can share ideas, learn from others, and work together—even with people they've never met in person. This standard lays the foundation for respectful, inclusive, and meaningful digital collaboration in later grades.
K-2.GC.7.b.	With guidance from an educator, students use technology to communicate with others and to look at problems from different perspectives.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students communicate and consider different perspectives. In grades 3-5, students engage in respectful digital dialogue and consider multiple viewpoints when solving problems. *IMPORTANT CONCEPTS* • Students use technology to share ideas and interact with others. • Students begin to understand that people may experience things differently. • Engaging in structured, teacher-supported conversations or projects. *KEY SKILLS/PROCEDURES* • Use tools like video calls, class blogs, or shared documents to communicate with peers or partner classrooms. • Listen to or read others' ideas and ask questions to understand different viewpoints. • Participate in discussions about how people in other places might think, live, or solve problems differently. • Reflect on how their own ideas compare or connect with others'. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes communication and empathy in digital spaces. *"Use technology to communicate with others"* means students are supported in using safe, age-appropriate tools to share ideas and learn from others. *"Look at problems from different perspectives"* introduces the idea that people may approach challenges in different ways based on their experiences, culture, or environment. Educators guide students in recognizing and respecting these differences

Code	Description	Model Curriculum
		through structured activities—such as comparing classroom routines with a partner school or discussing how weather affects people in different regions. The goal is not deep cultural analysis, but early exposure to diverse viewpoints. *CONTENT FOCUS* The focus of this indicator is to help students become thoughtful, respectful communicators who are open to learning from others. It supports the development of global awareness, empathy, and collaborative problem-solving. This standard also encourages students to see communication as a two-way exchange—where listening and understanding are just as important as sharing. Through guided experiences, students begin to appreciate that technology can help them connect with people who think, live, or learn differently from themselves.
K-2.GC.7.c.	With guidance from an educator, students take on different team roles and use age-appropriate technologies to complete projects.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students take on team roles and use technology to complete projects. In grades 3-5, students take initiative in team roles and use collaborative tools to plan, create, and complete group work. *IMPORTANT CONCEPTS* • Students understand that working together means sharing responsibilities. • Students learn that different people contribute in different ways to a shared goal. • Students use digital tools to support group work and project completion. *KEY SKILLS/PROCEDURES* • Participate in group projects with assigned or chosen roles. • Use tools like shared slides, drawing apps, or classroom platforms to contribute to a team task. • Practice turn-taking, listening, and helping others in a digital workspace. • Reflect on their role and how it helped the team succeed. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes collaborative learning supported by technology. *"Take on different team roles"* means students are introduced to the idea that everyone has a part to play in a group project,

Code	Description	Model Curriculum
		and that roles can vary depending on the task. These roles are often assigned or modeled by the teacher to ensure balance and understanding. *"Use age-appropriate technologies to complete projects"* refers to using tools that allow students to contribute digitally—such as adding a slide to a group presentation, recording a message, or drawing a diagram. The focus is on participation, cooperation, and contribution, not on mastering complex tools. *CONTENT FOCUS* The focus of this indicator is to help students develop collaboration and communication skills in a digital context. It supports the development of teamwork, responsibility, and digital fluency, while also reinforcing the idea that technology can support shared goals. This standard encourages students to see themselves as part of a learning community where everyone's contributions matter. Through guided experiences, students learn how to work together respectfully and effectively using technology.
K-2.GC.7.d.	With guidance from an educator, students use age-appropriate technologies to work together to understand problems and suggest solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance, students use technology to understand problems and suggest solutions. In grades 3-5, students use digital tools to investigate global or local issues and propose informed, collaborative solutions. *IMPORTANT CONCEPTS* • Students work with others to explore and address a shared challenge. • Students use digital tools to support communication, idea-sharing, and solution-building. • Students engage in teacher-supported exploration or real-world or classroom-based problems. *KEY SKILLS/PROCEDURES* • Participate in group discussions or digital activities to explore a problem. • Use tools like shared documents, drawing apps, or video messages to brainstorm and record ideas. • Listen to others' ideas and build on them to suggest possible solutions. • Reflect on the group's process and the solution they developed together.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes collaboration with a purpose—not just working together but working together to solve something. *"Use age-appropriate technologies"* means students are supported in using safe, simple tools that allow them to contribute ideas, respond to others, and document their thinking. *"Work together to understand problems"* involves discussing what the problem is and why it matters, while *"suggest solutions"* encourages creativity, empathy, and teamwork. Educators guide the process by framing the problem, facilitating discussion, and helping students use the tools effectively. *CONTENT FOCUS* The focus of this indicator is to help students develop collaborative thinking and digital teamwork skills. It supports the development of critical thinking, communication, and empathy, while reinforcing the idea that technology can help people work together to make a difference. This standard also encourages students to see themselves as active participants in problem-solving, even at a young age. Through guided experiences, students learn that their ideas matter—and that working together with technology can lead to meaningful solutions.

Grade 3 – Grade 5

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

Code	Description	Model Curriculum
3-5.EL.1.a.	Students develop learning goals in collaboration with an educator, select the technology tools to achieve them, and reflect on and revise the learning process as needed to achieve goals.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students considered and set personal learning goals and utilized appropriate technologies that demonstrated knowledge and reflection of the process, with guidance from an educator. In grades 3-5, students develop learning goals in collaboration with an educator, select the technology tools to achieve them, and reflect on and revise the learning process as needed to achieve goals. In grades 6-8, students will independently set learning goals, select and use appropriate digital tools to achieve them, and regularly reflect on and revise their learning process to improve outcomes. *IMPORTANT CONCEPTS* • Students begin to take more ownership of their learning by co-creating goals with educators. • Students learn to evaluate and choose digital tools that align with their learning goals and learning styles. • Students are introduced to the idea that learning is iterative and, with reflection, can lead to improvement. • Students begin to understand their role in managing their own learning process. *KEY SKILLS/PROCEDURES* • Collaborate with a teacher to set specific, measurable learning goals. • Explore and select digital tools that support their goal. • Use selected tools to complete tasks or demonstrate learning. • Reflect on their progress using journals, checklists, or digital portfolios. • Revise their approach or tools based on feedback or self-assessment.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator marks a shift from teacher-directed to student-involved learning. While students still need guidance, they are now expected to actively participate in setting goals and choosing tools that help them meet those goals. The phrase *"reflect on and revise the learning process"* means students are beginning to think critically about what's working and what's not—whether that's the tool they chose, the strategy they used, or the goal itself. Educators support this by modeling reflection, prompting revision, and encouraging students to try new approaches when needed. *CONTENT FOCUS* The focus of this indicator is to develop student agency and metacognition. It supports the transition from passive to active learning by helping students understand that they can shape their learning journey. This standard also promotes digital fluency, as students begin to make informed decisions about which tools best support their goals. Through guided practice, students learn that learning is not a one-time event but a process that can be improved through thoughtful reflection and adjustment.
3-5.EL.1.b.	With the oversight and support of an educator, students build a network of experts and peers within school policy and customize their environments to enhance their learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with guidance from an educator, students learned about various technologies that can be used to connect to others or make their learning environments personal and select resources from those available to enhance their learning. In grades 3-5, with the oversight and support of an educator, students build a network of experts and peers within school policy and customize their environments to enhance their learning. In grades 6-8, students will independently develop and maintain a network of experts and peers to support their learning and customize their learning environments to meet their needs and preferences.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students understand that connecting with others—both peers and experts—can support and deepen learning. • Students recognize the importance of safe, respectful, and policy-aligned interactions in digital spaces. • Students begin to take initiative in adjusting tools, settings, and environments to support individual learning needs. *KEY SKILLS/PROCEDURES* • Identify and connect with peers and trusted adults using school platforms. • Participate in collaborative learning spaces. • Customize digital environments. • Reflect on how their learning environment and network support their academic growth. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator builds on early exposure to personalization and connection by encouraging students to actively participate in building a learning network. *"With the oversight and support of an educator"* means students are not doing this independently but are making choices within a safe, structured framework. *"Build a network of experts and peers"* refers to engaging with classmates, teachers, and other approved individuals to ask questions, share ideas, and collaborate. *"Customize their environments"* includes both physical and digital adjustments that help students learn more effectively—such as using headphones, changing display settings, or organizing digital tools. *CONTENT FOCUS* The focus of this indicator is to help students develop collaborative learning habits and begin to take ownership of their learning environments. It supports the development of digital citizenship, self-advocacy, and personalized learning strategies. This standard also encourages students to see learning as a social and adaptable process, where they can seek support, share knowledge, and make choices that help them succeed. Through guided practice, students begin to understand that they are not alone in their learning—and that technology can help them connect, adapt, and thrive.

Code	Description	Model Curriculum
3-5.EL.1.c.	Students seek feedback from both people and features embedded in digital tools and use age-appropriate technology to share learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K–2, with guidance from an educator, students recognized performance feedback from digital tools, adjusted based on that feedback, and used age-appropriate technology to share learning. In grades 3–5, students seek feedback from both people and features embedded in digital tools and use age-appropriate technology to share learning. In grades 6–8, students will actively seek, evaluate, and apply feedback from multiple sources—including peers, educators, and digital tools—to improve their learning and communicate their understanding using a variety of digital formats. *IMPORTANT CONCEPTS* • Students understand that feedback—whether from people or digital tools—can help improve learning. • Students recognize and interpret feedback features in educational technology. • Students use technology to share what they have learned in meaningful, age-appropriate ways. *KEY SKILLS/PROCEDURES* • Seek and respond to feedback from teachers, peers, and digital tools. • Use embedded feedback features to revise or improve work. • Choose appropriate tools to share learning outcomes. • Reflect on how feedback helped shape their final product or understanding. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator builds on early exposure to feedback by encouraging students to actively seek it out and use it to improve their work. *"Feedback from both people and features embedded in digital tools"* includes teacher comments, peer suggestions, and automated responses from learning platforms. Students are expected to interpret and apply this feedback with increasing independence. *"Use age-appropriate technology to share learning"* means students are using tools that match their developmental level and the purpose of the task—whether that's a narrated slideshow, a digital drawing, or a short video explanation.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus of this indicator is to help students develop a growth mindset and digital communication skills. It supports the development of self-regulated learning, where students learn to reflect, revise, and share their work with intention. This standard also promotes digital fluency, as students become more comfortable navigating feedback systems and using technology to express their understanding. Through guided practice, students learn that feedback is not just something they receive, it's something they can seek, interpret, and use to grow.
3-5.EL.1.d.	Students explore age-appropriate technologies and begin to transfer their learning to different tools or learning environments.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K–2, with guidance from an educator, students explored a variety of technologies to help them in their learning and begin to demonstrate an understanding of how knowledge can be transferred between tools. In grades 3–5, students explore age-appropriate technologies and begin to transfer their learning to different tools or learning environments. In grades 6–8, students will independently select and apply knowledge and skills across multiple tools and learning environments to support their learning goals. *IMPORTANT CONCEPTS* • Students understand that different tools can be used to accomplish similar tasks. • Students apply what they have learned in one context or tool to another. • Students begin to adjust to new tools or environments with increasing independence. *KEY SKILLS/PROCEDURES* • Explore and compare multiple digital tools. • Identify similarities and differences between tools. • Apply previously learned skills in new tools or platforms. • Reflect on which tools work best for different tasks or learning environments. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator builds on early exposure to multiple tools by encouraging students to begin transferring their learning across platforms and contexts. *"Explore age-appropriate technologies"* means students are still being introduced to new tools, but with more independence and purpose. *"Begin to transfer their learning"* refers to recognizing that skills like typing,

Code	Description	Model Curriculum
		organizing, or presenting can be applied in different tools—even if the interface or format changes. Educators support this by prompting students to make connections between tools and by encouraging experimentation and reflection. *CONTENT FOCUS* The focus of this indicator is to help students develop digital adaptability and fluency. It supports the development of transferable skills, which are essential for navigating an ever-changing digital landscape. This standard also encourages critical thinking, as students begin to evaluate which tools best support their learning goals. Through guided practice and increasing independence, students learn that technology is not just a set of isolated tools; it is a flexible system they can navigate and apply across different learning environments.

2. Digital Citizen

Students recognize the responsibilities and opportunities for contributing to their digital communities, including making safe, legal, and ethical decisions using Artificial Intelligence.

Code	Description	Model Curriculum
3-5.DC.2.a.	Students demonstrate an understanding of the role an online identity plays in the digital world and learn the permanence of their decisions when interacting online.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K–2, students practiced responsible use of technology through teacher-guided online activities and interactions to understand how digital space impacts their lives. In grades 3–5, students demonstrate an understanding of the role an online identity plays in the digital world and learn the permanence of their decisions when interacting online. In grades 6-8, students will manage their digital identities and reputations by applying strategies that protect their data and reflect responsible, ethical behavior in online environments. *IMPORTANT CONCEPTS* • Students understand that how they present themselves online contributes to their digital reputation. • Students recognize that online actions—posts, comments, likes—can be permanent and traceable.

Code	Description	Model Curriculum
		• Students begin to think critically about how their behavior affects themselves and others in digital spaces. *KEY SKILLS/PROCEDURES* • Identify what makes up an online identity. • Discuss how online actions can be seen by others and may last a long time. • Reflect on how they want to be perceived online and what choices support that. • Practice safe and respectful behavior in digital environments. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator builds on early exposure to responsible use by helping students understand the concept of digital identity. *"Demonstrate an understanding of the role an online identity plays"* means students begin to recognize that their online presence is shaped by what they share and how they behave. *"Learn the permanence of their decisions"* refers to the idea that digital content can be copied, shared, or stored—even if deleted. Educators support this by using real-life examples, modeling appropriate behavior, and facilitating discussions about digital choices and consequences. *CONTENT FOCUS* The focus of this indicator is to help students develop digital self-awareness and responsibility. It supports the development of ethical digital citizenship by encouraging students to think before they post, share, or comment. This standard also lays the foundation for managing digital reputations in later grades. Through guided exploration and reflection, students learn that their online identity reflects who they are—and that they have the power to shape it through thoughtful, respectful choices.
3-5.DC.2.b.	Students practice and encourage others in safe, legal, and ethical behavior when using technology and interacting online, with guidance from an educator.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K–2, students began learning and following basic rules for safe and ethical technology use. With consistent guidance from educators, they started to understand that their actions in digital spaces can affect themselves and others. In grades 3-5, students begin to model appropriate behavior for peers and encourage others to do the same. In grades 6-8, students will demonstrate a more independent and proactive understanding of digital responsibility, including the understanding of concepts like intellectual property, digital law, and ethical decision-making.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students understand that online actions have real-world consequences. • Students recognize right from wrong in digital spaces. • Students begin to understand laws around digital content, privacy, and intellectual property. • Students encourage others to act responsibly online. *KEY SKILLS/PROCEDURES* • Follow and explain rules for safe and ethical technology use. • Identify examples of unsafe, illegal, or unethical online behavior. • Encourage peers to act responsibly and respectfully online. • Report inappropriate or unsafe digital behavior to a trusted adult. • Begin to understand and respect ownership of digital content. • Use age-appropriate strategies to protect personal information and privacy. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes the transition from personal compliance to peer influence. Students are not only expected to follow digital rules but also to begin recognizing their role in shaping a positive digital culture. The phrase *"with guidance from an educator"* signals that students are still developing these skills and need structured support to navigate ethical and legal complexities. Educators should provide opportunities for students to discuss real-world scenarios, reflect on digital choices, and practice responsible behaviors in authentic contexts. *CONTENT FOCUS* The focus of this indicator is on developing awareness and agency—students begin to see themselves as contributors to a safe and respectful online community. Instruction should integrate digital ethics into everyday learning, helping students connect their online actions to broader social and legal expectations. This sets the stage for more sophisticated digital advocacy and ethical reasoning in middle school.

Code	Description	Model Curriculum
3-5.DC.2.c.	Students learn about, demonstrate, and encourage respect for intellectual property with both print and digital media when using and sharing the work of others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students recognized that creative work belongs to someone, and with guidance, they learned to ask permission before using others' work and began to understand the idea of giving credit. In grades 3-5, students develop a more concrete understanding of intellectual property. They learn that both print and digital media are protected by rules and expectations, and with educator support, they begin to demonstrate respect for others' work by crediting sources, avoiding plagiarism, and encouraging peers to do the same. In grades 6-8, students will deepen their understanding of copyright, fair use, and creative commons licensing by appropriately citing sources, seeking permission when needed, and making informed decisions about how they use and share content. *IMPORTANT CONCEPTS* • Students recognize that creative work belongs to its creator. • Students understand that both print and digital media are protected by intellectual property rights. • Students demonstrate respect for others' work by giving credit and not copying without permission. • Students encourage peers to follow ethical practices when using and sharing content. • Students begin to understand the consequences of plagiarism and misuse of content. *KEY SKILLS/PROCEDURES* • Identify examples of intellectual property in both print and digital formats. • Give credit to authors, artists, and creators when using their work. • Avoid copying or using others' work without permission. • Use age-appropriate citation tools or formats. • Encourage classmates to respect ownership of creative work. • Recognize the difference between original and copied work.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator focuses on helping students understand that creative work has ownership, whether it's a book, a photo, a video, or a piece of writing. Students should *"learn about"* concepts like copyright, plagiarism, and fair use. At this stage, students are not expected to master formal citation styles but should begin to *"demonstrate"* this understanding by acknowledging sources, using content with appropriate permissions, and choosing media labeled for reuse. Educators should provide clear examples and model how to give credit in age-appropriate ways. The goal is to build a foundation for ethical content use and to foster a culture of respect for creators. Encouraging students to reflect on how they would feel if their own work were used without permission can help personalize the concept. *CONTENT FOCUS* This indicator emphasizes ethical participation in digital and print environments. Students begin to internalize the idea that ideas and creations have value and that respecting intellectual property is part of being a responsible digital citizen. Instruction should integrate opportunities for students to use, share, and credit content across subject areas, reinforcing the importance of ethical behavior in all learning contexts.
3-5.DC.2.d.	Students demonstrate an understanding of what personal data is, how to keep it private, and how it might be shared online.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students began to recognize what personal information is and understand that it should not be shared online without adult permission. In grades 3-5, students develop a clearer understanding of what constitutes personal data and begin to understand how this data can be shared, tracked, or misused online, and they learn strategies to protect their privacy. In grades 6-8, students understand how data is collected, stored, and used by digital platforms, and they apply strategies to limit data sharing.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students identify what personal data is and why it is important to protect. • Students understand how personal data can be collected, shared, or tracked online. • Students apply strategies to keep their personal information private. • Students recognize situations where sharing personal data may be unsafe. • Students begin to understand how digital tools and platforms use personal data. *KEY SKILLS/PROCEDURES* • Define and give examples of personal data. • Identify safe versus unsafe scenarios for sharing personal information. • Use privacy settings and secure passwords with adult guidance. • Recognize when a website or app is requesting personal data. • Ask for help from a trusted adult when unsure about sharing information online. • Understand the concept of a digital footprint and how it can grow over time. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on helping students recognize and protect their personal data, such their full name, address, phone number, birthdate, school name, and login credentials, in increasingly complex digital environments. Students are beginning to use a wider range of digital tools and platforms, many of which collect data in subtle ways. Educators should provide real-world examples (e.g., online forms, game logins, app permissions) to help students understand how data is shared and what they can do to protect it. The goal is not to instill fear, but to build awareness and agency so students can make informed choices and seek adult support when needed. *CONTENT FOCUS* The focus is on understanding the mechanisms behind data collection and sharing. Instruction should focus on practical strategies for protecting personal information and developing critical thinking about how and when to share data. This foundation prepares students for more advanced digital literacy and privacy management in middle school.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools, such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Code	Description	Model Curriculum
3-5.KC.3.a.	Students collaborate with a teacher to employ appropriate research techniques to locate digital resources that will help them in their learning process.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students explored digital resources with teacher guidance, and they learned to ask questions and use simple search tools to find information related to classroom topics. In grades 3-5, students begin to collaborate with a teacher to use appropriate research techniques. In grades 6-8, students will learn advanced search techniques to locate information and begin to synthesize information from multiple digital resources. *IMPORTANT CONCEPTS* • Students understand that digital tools can help them find information to support learning. • Students learn to use keywords and filters to improve search results. • Students begin to evaluate whether a digital resource is useful or appropriate. • Students collaborate with teachers to plan and carry out research tasks. • Students recognize that not all digital information is equally reliable. *KEY SKILLS/PROCEDURES* • Use search engines or databases with teacher support. • Identify and use relevant keywords for a research question. • Navigate websites or digital tools to locate information. • Evaluate whether a source is appropriate for the task. • Work with a teacher to plan steps in a digital research process. • Begin to organize and record information from digital sources. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on developing foundational research skills in a digital environment. Students are not expected to conduct independent research yet, but they should begin to understand how to ask questions, search effectively, and evaluate basic relevance of sources. The phrase *"collaborate with a teacher"* emphasizes that this is a guided process, where educators model and scaffold

Code	Description	Model Curriculum
		research strategies. Instruction should include opportunities to practice using search tools, reflect on the quality of sources, and connect digital research to real classroom learning. *CONTENT FOCUS* This content statement focuses on building confidence and competence in using digital tools to support inquiry. Instruction should emphasize collaboration, guided exploration, and purposeful searching, helping students see research as a process that supports curiosity, problem-solving, and academic growth.
3-5.KC.3.b.	Students learn how to evaluate sources for accuracy, perspective, credibility, and relevance.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with guidance from an educator, learned to ask simple questions when looking at digital content. In grades 3-5, students learn to consider whether a source is accurate, credible, relevant to their topic, and if it reflects a particular perspective or bias, with teacher support. In grades 6-8, students will apply critical thinking to evaluate sources independently. *IMPORTANT CONCEPTS* • Students understand that not all digital information is accurate or trustworthy. • Students learn to evaluate sources for credibility and relevance to their learning goals. • Students begin to recognize bias and perspective in digital content. • Students compare multiple sources to determine which are most useful. • Students understand that evaluating sources is part of being a responsible digital learner. *KEY SKILLS/PROCEDURES* • Ask questions about who created a source and why. • Check if information is current, accurate, and appropriate to the topic. • Identify signs of bias or opinion in a source. • Compare two or more sources on the same topic. • Use teacher-provided checklists or rubrics to evaluate digital content. • Discuss findings with peers or teachers to refine understanding. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on helping students move beyond accepting all digital information at face value. At this stage, students are developing the ability to ask critical questions about the sources

Code	Description	Model Curriculum
		they use. They are not expected to conduct full-scale source analysis independently. Students should assess whether a source is *accurate* (factually correct and supported by evidence), *credible* (produced by a trustworthy and knowledgeable author or organization), *relevant* (directly related to the topic or question at hand), and reflective of a particular *perspective* (recognizing bias, point of view, or purpose). Educators should model evaluation strategies, provide structured tools (like checklists), and guide students in comparing sources. This builds the foundation for more sophisticated media literacy in later grades. *CONTENT FOCUS* The focus is on helping students begin to understand that not all sources are equal, and that evaluating information is a key part of learning in a digital world. Instruction should focus on developing habits of inquiry, encouraging students to question what they read, and helping them build confidence in selecting trustworthy sources. This supports both academic research and responsible digital citizenship
3-5.KC.3.c.	Using a variety of strategies, students organize information and make meaningful connections between resources.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students learned to collect and group information with teacher support. In grades 3-5, students independently organize information using a variety of strategies and learn to make connections between multiple sources. In grades 6-8, students will evaluate how different resources contribute to their understanding, identify gaps or contradictions, and begin to construct arguments or narratives based on their findings. *IMPORTANT CONCEPTS* • Students understand that organizing information helps them learn and remember it. • Students use different strategies to sort, group, and represent information. • Students make connections between ideas from multiple sources. • Students begin to synthesize information to build deeper understanding. • Students recognize that different sources can complement or contrast each other.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Use graphic organizers to sort and connect ideas. • Take notes from digital sources using teacher-supported strategies. • Identify common themes or patterns across multiple resources. • Compare and contrast information from different sources. • Use digital tools to organize and present findings. • Reflect on how different pieces of information relate to the research question or topic. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes the transition from collecting information to organizing and connecting it. Students are expected to gather information from multiple sources—such as books, websites, videos, and interviews—and use strategies like notetaking, graphic organizers, categorizing, and summarizing to organize that information effectively. Students should also be guided to make meaningful connections between ideas, identifying patterns, relationships, or themes across different resources. This helps them build deeper understanding and supports the creation of well-informed responses, projects, or arguments. Educators should model how to group related ideas, highlight key points, and draw connections between sources. *CONTENT FOCUS* This content statement focuses on the student beginning to see research as more than just gathering facts—they learn to analyze, connect, and structure information in meaningful ways. Instruction should support the development of flexible strategies for organizing content and encourage students to reflect on how different sources contribute to their understanding. These skills are foundational for academic writing, project-based learning, and digital literacy.
3-5.KC.3.d.	Students explore real-world problems and issues and collaborate with others to find answers or solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students learned to ask questions about the world around them and explore simple problems with teacher guidance. In grades 3-5, students begin to investigate real-world problems that are meaningful to them—such as environmental issues, school needs, or community challenges. They work with classmates and teachers to gather information, discuss possible solutions, and take small actions. In grades 6-8, students will conduct research,

Code	Description	Model Curriculum
		evaluate solutions, and may engage with community members or digital platforms to share their ideas. *IMPORTANT CONCEPTS* • Students understand that real-world problems can be explored through research and collaboration. • Students recognize that their ideas and actions can contribute to solutions. • Students learn to work with others to investigate issues and share perspectives. • Students begin to connect classroom learning to real-life contexts. • Students develop empathy and awareness of local and global challenges. *KEY SKILLS/PROCEDURES* • Ask questions about real-world issues that affect their lives or communities. • Work in teams to research and discuss possible solutions. • Use digital tools to gather and share information. • Participate in collaborative projects or presentations. • Reflect on how their learning connects to real-world challenges. • Communicate findings or ideas to peers, teachers, or the school community. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes authentic learning through inquiry and collaboration. Students are not expected to solve complex global problems, but they should begin to explore issues that are relevant and meaningful to them. Educators should guide students in identifying age-appropriate problems, using digital tools to investigate, and working together to brainstorm or present solutions. The focus is on engagement, empathy, and empowerment—helping students see that their voices and ideas matter in the real world. *CONTENT FOCUS* This content statement focuses on the student beginning to see research as more than just gathering facts—they learn to analyze, connect, and structure information in meaningful ways. Instruction should support the development of flexible strategies for organizing content and encourage students to reflect on how different sources contribute to their understanding. These skills are foundational for academic writing, project-based learning, and digital literacy.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.

Code	Description	Model Curriculum
3-5.ID.4.a	Students explore and practice how a design process works to generate ideas, consider solutions, plan to solve a problem, or create innovative products that are shared with others.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with teacher guidance, students began to brainstorm ideas, draw simple plans, and create basic models or representations of their solutions. In grades 3-5, students learn to generate ideas, consider multiple solutions, and plan steps to solve a problem or create a product. They may use digital or physical tools to build and share their creations. In grades 6-8, students will apply a structured design process to solve complex problems. *IMPORTANT CONCEPTS* • Students understand that problems can be solved through a creative design process. • Students learn to generate and refine ideas to address a challenge. • Students plan and organize steps to bring a solution or product to life. • Students recognize that design is iterative and may involve testing and revising. • Students share their ideas and creations with others for feedback or celebration. *KEY SKILLS/PROCEDURES* • Brainstorm multiple ideas to solve a problem. • Select and plan a solution using drawings, lists, or digital tools. • Use materials or technology to create a prototype or product. • Test and revise designs based on observations or feedback. • Collaborate with peers during the design process. • Share final products through presentations, displays, or digital platforms. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes learning through doing. Students are not expected to master engineering or design thinking frameworks, but they should begin to experience the design process as a flexible, creative approach to solving problems. Educators should provide open-ended challenges and guide students through steps such as brainstorming ideas, identifying problems or needs, planning and testing solutions, and refining their work based on feedback. The focus is on process over product, helping students build confidence in their ability to innovate and iterate.

Code	Description	Model Curriculum
		CONTENT FOCUS Students begin to see themselves as makers and thinkers who can use a process to turn ideas into real solutions. Instruction should support exploration, planning, and iteration, and provide opportunities for students to share their work with peers or broader audiences. This builds foundational skills for innovation and prepares students for more complex design challenges in later grades.
3-5.ID.4.b	Students use digital and non-digital tools to plan and manage a design process.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students used simple tools to express their ideas and plan basic solutions. In grades 3-5, students intentionally select and use tools, both digital and non-digital, to plan, organize, and manage their design process. In grades 6-8, students will independently choose and integrate a variety of tools to support complex design processes *IMPORTANT CONCEPTS* • Students understand that tools can support planning, organizing, and managing a design process. • Students learn to choose tools that match the task or stage of the design process. • Students use tools to document their thinking and track progress. • Students recognize that both digital and non-digital tools have value in the design process. • Students begin to revise and refine their plans using feedback or reflection. *KEY SKILLS/PROCEDURES* • Use drawing tools, graphic organizers, or planning templates to outline ideas. • Use digital tools to plan or prototype. • Create and revise plans based on feedback or testing. • Track progress using checklists, journals, or digital logs. • Choose tools that support different stages of the design process. • Reflect on how tools helped or hindered the design process. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes tool fluency and purposeful planning. Students are not expected to master professional design software, but they should begin to select and use tools intentionally to

Code	Description	Model Curriculum
		support their creative process. Educators should expose students to a variety of tools and help them reflect on which ones are most effective for different tasks. The goal is to build confidence and flexibility in using tools to plan, manage, and improve their work—whether they're designing a digital game, a physical model, or a classroom solution. *CONTENT FOCUS* The focus is on strategic tool use in the design process. Students begin to understand that planning and managing a project is just as important as the final product. Instruction should support tool exploration, project organization, and reflection, helping students build habits that support creativity, persistence, and problem-solving. These skills are foundational for future innovation and collaborative work.
3-5.ID.4.c	Students engage in a cyclical design process to develop prototypes and reflect on the role that trial-and-error plays.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with teacher support, explored simple cycles of create–test–revise, often through play, building, or storytelling. In grades 3-5, students create prototypes, test their ideas, and revise based on what they learn. They begin to reflect on how trial-and-error helps improve their work and understand that failure is part of the process. In grades 6-8, students will apply structured design cycles (e.g., design thinking, engineering design process) to solve more complex problems. They will document iterations, gather feedback, and refine their prototypes with increasing independence. *IMPORTANT CONCEPTS* • Students understand that design is a process that involves testing and revising. • Students recognize that trial-and-error is a valuable part of learning and innovation. • Students learn to reflect on what works and what doesn't in their prototypes. • Students begin to see failure as an opportunity to improve. • Students use feedback and observations to guide revisions.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Create and test prototypes using available materials or digital tools. • Observe and record what happens during testing. • Identify what needs to be improved or changed. • Revise designs based on feedback or results. • Reflect on how changes improved the outcome. • Participate in multiple cycles of design and revision. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes the iterative nature of design—students are encouraged to try, fail, reflect, and try again. The goal is not to create perfect products, but to help students understand that improvement comes through cycles of testing and revision. Educators should create a classroom culture where mistakes are valued as learning opportunities and where students are supported in reflecting on their process. Prototypes can be physical, digital, or conceptual, and the design cycle should be flexible and age-appropriate. *CONTENT FOCUS* The focus is on the idea that design is not linear, it's a process of continuous improvement. Instruction should support hands-on exploration, structured reflection, and growth mindset, helping students build confidence in their ability to learn from failure and refine their ideas. These habits are essential for creative problem-solving and innovation in all disciplines.
3-5.ID.4.d	Students demonstrate perseverance when working with open-ended problems.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students engaged with open-ended tasks that have more than one solution and learned to keep trying, even when something does not work right away. In grades 3-5, students recognize that open-ended problems require time, effort, and revision. They learn to stick with a task, even when it becomes difficult or uncertain. In grades 6-8, students will demonstrate resilience and independence when tackling complex, open-ended problems.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students understand that open-ended problems may not have one correct answer. • Students learn that perseverance is essential to solving complex or unfamiliar challenges. • Students recognize that setbacks are part of the learning and design process. • Students develop strategies to stay engaged and motivated during difficult tasks. • Students reflect on their effort and growth over time. *KEY SKILLS/PROCEDURES* • Stay focused on a task even when it becomes challenging. • Try different approaches when the first solution doesn't work. • Ask for help or collaborate when stuck. • Reflect on what was difficult and how they overcame it. • Use feedback to improve work. • Celebrate progress and effort, not just final outcomes. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes the mindset and habits that support innovation. Open-ended problems often involve uncertainty, ambiguity, and trial and error—students need to learn that struggle is part of the process. Educators should model perseverance, provide encouragement, and create a classroom culture where effort and persistence are valued. Students should be given opportunities to reflect on their growth and recognize that learning happens through persistence, not just quick success. *CONTENT FOCUS* The focus is to understand that creative problem-solving takes time and effort, and that setbacks are not failures but opportunities to learn. Instruction should support a growth mindset, reflective thinking, and strategies for overcoming obstacles, helping students build the confidence and stamina needed for innovation and lifelong learning.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Code	Description	Model Curriculum
3-5.CT.5.a.	Students explore or solve problems by selecting technology for data analysis, modeling, and algorithmic thinking, with guidance from an educator.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with educator guidance, learned to use technology to organize information, identify patterns, and solve simple problems. In grades 3-5, students, with the guidance of an educator, begin to select and use technology tools—such as spreadsheets, simulations, or coding platforms—to analyze data, model ideas, or apply algorithmic thinking. In grades 6-8, students will independently apply computational thinking strategies to solve complex problems. They use technology to collect, analyze, and visualize data, build models or simulations, and design algorithms to automate tasks or test solutions. *IMPORTANT CONCEPTS* • Students understand that technology can support problem-solving through data analysis and modeling. • Students begin to apply algorithmic thinking to explore or solve problems. • Students recognize that different tools can be used for different types of problems. • Students learn to choose appropriate tools with guidance. • Students begin to connect computational thinking to real-world applications. *KEY SKILLS/PROCEDURES* • Use digital tools to organize and analyze data. • Explore simple models to represent real-world systems or ideas. • Follow or create basic algorithms. • Select tools with teacher support based on the problem or task. • Reflect on how technology helped solve or explore the problem. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to computational thinking as a problem-solving strategy. While students are not expected to master complex coding or data science, they should begin to use technology purposefully to explore patterns, test ideas, and think logically. Educators play a key role

Code	Description	Model Curriculum
		in guiding tool selection and modeling how to break problems into steps. The emphasis is on exploration and foundational understanding, not technical mastery. *CONTENT FOCUS* The focus is to see how tools like spreadsheets, simulations, and coding platforms can help them analyze information and model solutions. Instruction should support guided exploration, cross-curricular connections, and hands-on practice with tools that promote algorithmic thinking and data literacy.
3-5.CT.5.b.	Students select effective technology to represent data.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students, with educator guidance, learned to use simple tools to create visual representations of data they collect or observe. In grades 3-5, students learn to choose the type of representation that best communicates their findings and supports their learning goals. In grades 6-8, students will independently evaluate and select the most effective tools and formats to analyze, visualize, and communicate data. *IMPORTANT CONCEPTS* • Students understand that data can be represented in different visual formats. • Students learn that the way data is displayed affects how it is understood. • Students begin to match the type of data with the most effective representation. • Students use technology to create clear and accurate data visuals. • Students recognize that data visuals help communicate ideas and findings. *KEY SKILLS/PROCEDURES* • Collect or organize data for a specific purpose. • Choose appropriate tools. • Select the best type of visual for the data. • Create and label data visuals clearly and accurately. • Interpret and explain what the data shows. • Revise visuals for clarity or accuracy based on feedback.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator focuses on data representation as a communication tool. Students are not expected to master complex data analysis, but they should begin to understand how data is displayed matters. Educators should provide opportunities for students to explore different types of data visuals and discuss which formats are most effective for different purposes. The emphasis is on clarity, accuracy, and intentionality in choosing tools and formats. *CONTENT FOCUS* The focus is to see data not just as numbers, but as information that can be organized and shared using technology. Instruction should support tool exploration, visual literacy, and critical thinking about how data is used to inform and persuade. These skills are foundational for STEM learning and digital fluency.
3-5.CT.5.c.	Students break down problems into smaller parts, identify key information, and propose solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with teacher support, students learned to talk through steps, ask questions, and try different approaches to reach a solution. In grades 3-5, students learn to decompose problems into smaller, manageable parts, identify key information, and propose logical solutions. In grades 6-8, students will independently apply problem decomposition, pattern recognition, and abstraction to solve multi-step problems. *IMPORTANT CONCEPTS* • Students understand that large problems can be solved by breaking them into smaller parts. • Students learn to identify the most important information needed to solve a problem. • Students begin to apply logical reasoning to propose solutions. • Students recognize that multiple solutions may exist for a single problem. • Students use tools or strategies to organize and communicate their thinking. *KEY SKILLS/PROCEDURES* • Break a problem into smaller, manageable steps. • Identify relevant versus irrelevant information. • Use graphic organizers, flowcharts, or lists to plan a solution. • Propose one or more possible solutions based on the information.

Code	Description	Model Curriculum
		• Explain their reasoning and process to others. • Revise their approach if the solution does not world. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to computational thinking as a structured approach to problem-solving. The focus is on decomposition—breaking problems into parts—and logical reasoning. Students are not expected to write code or solve highly technical problems, but they should begin to think like problem-solvers: identifying what matters, organizing their thoughts, and proposing solutions. Educators should model this process and provide real-world, age-appropriate problems that encourage students to practice and reflect on their strategies. *CONTENT FOCUS* The focus is on developing the mindset and strategies needed to tackle complex tasks by breaking them down, analyzing information, and proposing thoughtful solutions. Instruction should support visual thinking, collaborative problem-solving, and reflection, helping students build confidence in their ability to approach challenges methodically.
3-5.CT.5.d.	Students understand and explore basic concepts related to automation, patterns, and algorithmic thinking.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students recognized patterns and sequences in everyday tasks and digital tools. In grades 3-5, students explore how automation works, such as how machines or programs follow instructions to complete tasks and begin to create or follow basic algorithms using unplugged activities, coding platforms, or robotics tools. In grades 6-8, students will apply algorithmic thinking to design and test more complex solutions. *IMPORTANT CONCEPTS* • Students understand that automation involves following a set of instructions to complete tasks. • Students recognize and use patterns to solve problems or create solutions. • Students begin to think algorithmically—breaking tasks into ordered steps. • Students explore how computers and machines use algorithms to function. • Students begin to understand the logic behind simple programming structures.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify and describe patterns in data, behavior, or systems. • Follow or create step-by-step instructions (algorithms) to complete a task • Use coding platforms to build simple programs. • Explore automation through robotics, simulations, or digital tools. • Use "if…then…" logic or loops in basic coding activities. • Reflect on how automation is used in everyday life. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator introduces students to core computational thinking concepts that underpin coding, robotics, and digital systems. The focus is on exploration and foundational understanding, not technical mastery. Students should have opportunities to play with logic, build simple programs, and observe how automation works in real-world contexts. Educators should use unplugged activities, visual programming tools, and hands-on experiences to make abstract concepts concrete and engaging. *CONTENT FOCUS* The focus is on students beginning to see how patterns, sequences, and algorithms are used to solve problems and power technology. Instruction should support hands-on exploration, visual programming, and real-world connections, helping students build the mindset and skills needed for future learning in computer science and STEM fields.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes, such as AI prompt engineering, using platforms, tools, styles, formats, and digital media appropriate to their goals.

Code	Description	Model Curriculum
3-5.CC.6.a.	Students recognize and utilize the features and functions of a variety of creation or communication tools.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, with teacher guidance, students explored basic digital tools to express ideas and learned to use simple features like typing, inserting images, or recording audio. In grades 3-5, students intentionally select and use a variety of digital tools to create and communicate ideas, learning how different tools serve different purposes and audiences. In grades 6-8, students will independently choose and combine tools to create polished, purpose-driven products. *IMPORTANT CONCEPTS* • Students understand that different tools have different features and purposes. • Students learn to select tools that match their communication goals. • Students explore how features enhance communication. • Students begin to use tools with increasing independence and creativity. • Students recognize that digital tools can be used to inform, persuade, entertain, or explain. *KEY SKILLS/PROCEDURES* • Use word processors, slide tools, drawing apps, or video/audio tools to create content. • Explore and apply features such as text formatting, image insertion, voice recording, or layout design. • Choose tools based on the task. • Organize content clearly using headings, bullet points, or visual structure. • Combine media elements to enhance communication. • Reflect on how tool choice affects the message and audience understanding. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes tool exploration and purposeful use. Students are not expected to master professional-level software, but they should begin to recognize the capabilities of different tools and use them to express ideas effectively. Educators should provide opportunities for students

Code	Description	Model Curriculum
		to experiment with a range of tools, compare features, and reflect on how those features support communication. The focus is on building digital fluency and creative confidence. *CONTENT FOCUS* The focus is on students beginning to move from passive consumers to active creators, using technology to share ideas, tell stories, and present information. Instruction should support tool exploration, media literacy, and audience awareness, helping students build a foundation for effective digital communication across content areas.
3-5.CC.6.b.	Students create original works and learn strategies for remixing or repurposing to create new artifacts.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students created simple original works using digital tools and, with guidance, combined elements. In grades 3-5, students will create original digital works and are introduced to the concept of remixing or repurposing—taking existing content and transforming it into something new. In grades 6-8, independently create and remix digital content using a variety of tools and formats. *IMPORTANT CONCEPTS* • Students understand that they can use digital tools to create original content. • Students learn that remixing involves transforming existing content into something new. • Students explore strategies for combining, adapting, or reimaging digital media. • Students begin to develop a creative voice through digital expression. • Students create that digital creation can involve both originality and transformation. *KEY SKILLS/PROCEDURES* • Use digital tools to create original works. • Combine text, images, audio, or video to express ideas. • Remix existing content to create new meaning. • Adapt or repurpose content for a different audience or purpose. • Reflect on how their choices affect the message or impact of their work. • Begin to understand the importance of giving credit when using other's work.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator includes two key components: "*create original works*" and "*learn strategies for remixing or repurposing.*" Educators should interpret this as a progression from original creation to transformative use of existing content. "Original works" may include student-generated stories, presentations, videos, or digital art. "Remixing or repurposing" refers to the practice of taking existing content—such as images, audio clips, or templates—and modifying or combining them to create something new and meaningful. This could involve changing the format (e.g., turning a written report into a video), combining multiple sources into a new product, or adding personal commentary or interpretation. Educators should provide safe, copyright-friendly resources and model how to transform content ethically and creatively. The goal is to help students see themselves as active creators, not just consumers, of digital content. *CONTENT FOCUS* The focus is on students beginning to understand that communication can involve both original creation and creative adaptation. Instruction should support hands-on creation, media exploration, and reflection on creative choices. This helps students build confidence in their ability to express ideas, tell stories, and communicate meaningfully using digital tools.
3-5.CC.6.c.	Students create digital artifacts to communicate ideas visually and graphically.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students began to use simple digital tools to express ideas visually and, with guidance, learned to pair images with text or voice to communicate meaning. In grades 3-5, students begin to intentionally create digital artifacts—such as infographics, posters, diagrams, or multimedia presentations—that communicate ideas visually and graphically. In grades 6-8, students will apply visual design principles more independently, evaluate the effectiveness of their visuals, and revise based on feedback. *IMPORTANT CONCEPTS* • Students understand that visuals can enhance communication and understanding. • Students learn to use digital tools to create visual representations of ideas. • Students explore how layout, color, and imagery affect meaning and clarity. • Students begin to design with audience and purpose in mind. • Students recognize that visual communication is a powerful form of expression.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Use digital tools to create visual content. • Combine text, images, icons, and shapes to represent ideas. • Organize content using layout principles. • Choose visuals that support and clarify the message. • Create infographics, posters, diagrams, or visual stories. • Reflect on how visuals impact the audience's understanding. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator focuses on visual communication through digital creation. The phrase *"create digital artifacts"* refers to any digital product—such as a graphic, presentation, or visual story—that conveys information or ideas. *"Communicate ideas visually and graphically"* means students are expected to go beyond text and use visual elements intentionally to enhance meaning. Educators should provide opportunities for students to explore design tools, visual storytelling, and media creation, while modeling how to make design choices that support clarity and engagement. The emphasis is not on artistic skill, but on effective communication through visuals. *CONTENT FOCUS* This content statement focuses on students beginning to understand that how something looks affects how it is understood. Instruction should support design thinking, tool exploration, and audience awareness, helping students build the skills to communicate clearly and creatively in a digital world.
3-5.CC.6.d.	Students learn about audiences and consider their expected audience when creating digital artifacts and presentations.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students learned that their work may be seen by others, and, with teacher support, they learned to share their ideas clearly and respectfully. In grades 3-5, students begin to consider who will view or interact with their digital artifacts and adjust their content, tone, and format accordingly. In grades 6-8, students will analyze audience characteristics, choose appropriate tools and formats, and adapt their message, tone, and design to suit different contexts. *IMPORTANT CONCEPTS* • Students understand that digital communication should be shaped by the intended audience.

Code	Description	Model Curriculum
		• Students learn that different audiences require different tones, formats, and level of detail. • Students begin to make intentional choices to improve clarity and engagement. • Students recognize that audience awareness is part of being an effective communicator. • Students reflect on how their work is received and understood by others. *KEY SKILLS/PROCEDURES* • Identify the intended audience for a digital artifact or presentation. • Choose appropriate language, visuals, and tone for the audience. • Adjust content to match the audience's background knowledge or interests. • Use tools and formats that are accessible and engaging for the audience. • Reflect on how audience needs influenced design and communication choices. • Practice presenting or sharing work with different audiences. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes audience awareness as a key component of digital communication. The phrase *"learn about audiences"* means students begin to explore who their audience is, what that audience values or expects, and how to tailor their message accordingly. The phrase *"consider their expected audience"* signals that students are not just creating for themselves or their teacher—they are beginning to think like communicators, making choices that improve clarity, tone, and engagement for others. Educators should provide opportunities for students to create for real or simulated audiences, compare how different audiences might respond to the same message, and reflect on how their choices affect understanding. This builds the foundation for purposeful, audience-centered communication in both academic and real-world contexts. *Note: Ohio's Learning Standards for English Language Arts introduce the consideration of "audience" in the Production and Distribution Writing Strand beginning in grade 4.* *CONTENT FOCUS* The focus is on students beginning to understand that effective communication is not one-size-fits-all. Instruction should support audience analysis, message adaptation, and reflection, helping students become thoughtful, intentional communicators who can tailor their work to meet the needs of different viewers, readers, or listeners.

7. Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Code	Description	Model Curriculum
3-5.GC.7.a.	Students use digital tools to work with friends and people from different backgrounds or cultures.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students began to use digital tools to connect and share ideas with classmates and familiar adults. In grades 3-5, students use digital tools to collaborate with peers and others from diverse backgrounds, learning to communicate respectfully and work together toward shared goals. In grades 6-8, students will use digital tools to collaborate with global audiences, contributing to group projects and learning from diverse perspectives in authentic, purposeful ways. *IMPORTANT CONCEPTS* • Students understand that digital tools can connect them with people from different places and cultures. • Students learn to collaborate respectfully with others who may have different experiences or viewpoints. • Students recognize that teamwork can happen across distances using technology. • Students explore how digital communication can build understanding and empathy. *KEY SKILLS/PROCEDURES* • Use tools like shared documents, video calls, or discussion boards to collaborate. • Communicate respectfully and clearly with peers from different backgrounds. • Participate in group projects or exchanges with students from other schools or communities. • Ask questions and share ideas in ways that show curiosity and respect. • Reflect on what they learned from working with others who have different perspectives. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes the social and cultural dimensions of digital collaboration. The phrase *"use digital tools to work with friends and people from different backgrounds or cultures"* means students are not only collaborating with familiar peers but are also beginning to engage with diverse voices and experiences. Educators should interpret this as an opportunity to introduce global awareness and digital citizenship through collaborative projects, virtual exchanges,

Code	Description	Model Curriculum
		or shared digital spaces. The focus is not on mastering tools, but on building respectful communication habits and learning how to work together across differences using technology. *CONTENT FOCUS* This content statement focuses on students beginning to understand that technology allows them to connect with others beyond their immediate environment, and that these connections can enrich their learning. Instruction should support safe, respectful digital communication and collaborative problem-solving in both local and global contexts.
3-5.GC.7.b.	Students use collaborative technologies to connect with others, including peers, experts, and community members, to explore different points of view on various topics.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students began to use digital tools to share ideas with classmates and listen to others' perspectives with teacher support. In grades 3-5, students use collaborative technologies to connect with peers, experts, and community members to explore different viewpoints on classroom topics or real-world issues. In grades 6-8, students will use digital platforms to engage in dialogue with different audiences, compare perspectives, and reflect on how different viewpoints shape understanding. *IMPORTANT CONCEPTS* • Students understand that technology can connect them with people who have different experiences and ideas. • Students learn that exploring multiple perspectives deepens understanding. • Students begin to value respectful dialogue and inquiry. • Students recognize that experts and community members can contribute to their learning. • Students develop curiosity about how others think and why. *KEY SKILLS/PROCEDURES* • Use collaborative tools to connect with others. • Ask thoughtful questions and listen actively to different viewpoints. • Participate in virtual exchanges, interviews, or classroom partnerships. • Compare and contrast perspectives on a topic. • Reflect on how new ideas influence their thinking. • Practice respectful communication in digital spaces.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* This indicator emphasizes purposeful digital collaboration to explore different perspectives. The phrase *"use collaborative technologies"* refers to tools that allow students to interact, share, and co-create with others—such as video calls, shared documents, or online discussion platforms. The phrase *"connect with others, including peers, experts, and community members"* expands the audience beyond classmates to include authentic voices from outside the classroom. Finally, *"explore different points of view"* signals that the goal is not just to exchange information, but to engage in dialogue, ask questions, and consider multiple perspectives. Educators should provide structured opportunities for students to connect with others—locally or globally—and guide them in reflecting on how those interactions shape their understanding. *CONTENT FOCUS* This content statement focuses on students beginning to see that learning is enriched when they engage with others who think differently. Instruction should support safe, respectful communication, critical thinking about different viewpoints, and real-world connections that help students become thoughtful, empathetic collaborators in a global society.
3-5.GC.7.c.	Students perform a variety of roles within a team using age-appropriate technology to complete a project or solve a problem.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students worked with classmates on shared tasks using simple digital tools, with guidance from an educator. In grades 3-5, students take on different roles within a team and use age-appropriate technology to collaborate on projects or solve problems. In grades 6-8, students will independently manage roles, responsibilities, and digital tools to collaborate effectively on complex, goal-oriented tasks. *IMPORTANT CONCEPTS* • Students learn to set and articulate clear, personal learning goals. • Students develop the ability to choose and manage digital tools that support their learning. • Students reflect on their learning experiences to identify successes and areas for improvement. • Students take ownership of their learning by using technology intentionally and effectively.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Write and articulate clear, measurable goals. • Identify and select appropriate digital tools. • Manage time and resources using technology. • Reflect on learning outcomes and adjust strategies accordingly. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes collaborative problem-solving and project-based learning using digital tools. The phrase *"perform a variety of roles within a team"* means students are expected to actively participate in group work, not just observe or follow along. Roles may be assigned or chosen and should rotate to give students experience with different responsibilities. The phrase *"using age-appropriate technology"* refers to tools that support collaboration—such as shared slides, documents, planning apps, or classroom platforms. Educators should provide structured opportunities for teamwork, model effective collaboration, and guide students in using tools to communicate, organize, and produce shared work. The focus is on developing collaboration skills, digital fluency, and a sense of shared responsibility. *CONTENT FOCUS* This content statement focuses on students beginning to understand that successful collaboration requires active participation, clear communication, and shared effort. Instruction should support role-based teamwork, project planning, and reflection, helping students build the interpersonal and technical skills needed to work effectively with others in both local and global contexts.
3-5.GC.7.d.	Students work with others using collaborative technologies to explore local and global issues.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades K-2, students discussed classroom or community topics with peers using simple digital tools and teacher guidance. In grades 3-5, students use collaborative technologies to work with others in exploring local and global issues, developing awareness of how these issues affect different people and places. In grades 6-8, students will engage in collaborative inquiry and action around local and global issues, using digital tools to research, communicate, and propose solutions with diverse partners.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students develop empathy and global awareness through digital collaboration. • Students understand that technology can help them learn about and discuss real-world issues. • Students begin to explore how local and global issues affect people differently. • Students learn that collaboration can lead to deeper understanding and shared solutions. • Students recognize that their voices and actions can contribute to positive change. *KEY SKILLS/PROCEDURES* • Use collaborative tools to explore issues with others. • Participate in discussions about topics like the environment, health, or community needs. • Ask questions and share ideas respectfully with peers from different places or backgrounds. • Compare how an issue affects people locally and globally. • Work with others to brainstorm or present possible solutions. • Reflect on what they learned from the collaboration. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator emphasizes collaborative inquiry into real-world issues using digital tools. The phrase *"work with others"* means students are expected to actively participate in group exploration, not just observe. *"Using collaborative technologies"* refers to tools that allow students to communicate, co-create, and share ideas—such as shared slides, discussion platforms, or virtual exchanges. *"Explore local and global issues"* signals that students should engage with authentic topics that matter to them and others, such as environmental concerns, cultural traditions, or community challenges. Educators should provide structured opportunities for students to connect with peers or partners beyond the classroom, guide respectful dialogue, and help students reflect on how their learning connects to the broader world. *CONTENT FOCUS* This content statement focuses on students understanding that they are part of a larger world, and that technology allows them to learn from and with others about shared challenges. Instruction should support real-world connections, cross-cultural dialogue, and student voice, helping learners see themselves as contributors to their communities and the global society.

Grade 6 – Grade 8

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

Code	Description	Model Curriculum
6-8.EL.1.a.	Students articulate personal learning goals, select and manage appropriate technologies to achieve them and reflect on their successes and areas of improvement in working toward their goals.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students set learning goals and used digital tools to monitor progress. In grades 6-8, students articulate goals, choose and manage technologies to meet them, and reflect on outcomes. In grades 9-12, students will independently set and revise learning goals, strategically select digital tools, and evaluate the effectiveness of their learning process. *IMPORTANT CONCEPTS* • Students develop and clearly express learning goals. • Students identify, evaluate, and choose digital tools that align with their goals. • Students take initiative and responsibility for their learning. • Students reflect on what worked, what did not, and why, and use this insight to improve future learning experiences. *KEY SKILLS/PROCEDURES* • Set and articulate personal learning goals that are clear, purposeful, and measurable. • Select appropriate digital tools that align with learning goals and support task completion. • Manage and organize technology use effectively to stay on track and troubleshoot issues. • Monitor progress and reflect on what strategies and tools are working or need adjustment. • Communicate and document learning through reflections, portfolios, or presentations. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*articulate personal learning goals*" means that students should be able to clearly express what they want to learn, why it matters to them, and how they plan to achieve it. Educators should support students in developing goal-setting skills that are specific, measurable, and relevant to their academic or personal growth. The phrase "*select and manage appropriate*

Code	Description	Model Curriculum
		technologies" emphasizes that students are not just using digital tools but are making thoughtful choices about which tools best support their goals—such as using a project management app to track progress or a research tool to gather information. Educators should provide opportunities for students to explore a variety of tools and guide them in evaluating their usefulness. Finally, "*reflect on their successes and areas of improvement*" encourages students to think critically about their learning process. This reflection should be structured and ongoing, helping students recognize what strategies worked, what didn't, and how they can improve. Educators can facilitate this by incorporating regular check-ins, digital portfolios, or journaling activities. *CONTENT FOCUS* The focus of this indicator is on empowering students to become self-directed learners who can navigate the digital landscape with intention and confidence. It supports the development of lifelong learning habits by integrating goal-setting, technology use, and reflective thinking. Educators should guide students in identifying meaningful goals, exploring a variety of digital tools, and developing routines for evaluating their progress. This standard lays the groundwork for students to become independent learners who can adapt and thrive in a technology-rich world.
6-8.EL.1.b.	Students identify and develop online networks within school policy and customize their learning environments in ways that support their learning, in collaboration with an educator.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students explored online resources and learning tools with guidance. In grades 6-8, students begin to build online learning networks and personalize their digital environments with educator support. In grades 9-12, students will independently cultivate online learning networks and fully customize digital environments to enhance learning. *IMPORTANT CONCEPTS* • Students learn to identify and connect with online learning communities and resources. • Students understand how to personalize digital tools and platforms to support their learning needs. • Students collaborate with educators to ensure their online activity aligns with school policies. *KEY SKILLS/PROCEDURES* • Identify safe and appropriate learning networks. • Customize digital learning environments.

Code	Description	Model Curriculum
		• Collaborate with educators to evaluate and select tools and networks. • Apply school policy and digital safety guidelines when engaging online. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*identify and develop online networks within school policy*" means that students should be guided to find and engage with online communities or platforms that enhance their learning—such as educational forums, peer collaboration tools, or subject-specific resources—while adhering to district-approved tools and digital safety protocols. Educators should help students evaluate the credibility, safety, and relevance of these networks. The phrase "*customize their learning environments*" refers to students adjusting settings, layouts, or tools in digital platforms (like learning management systems or productivity apps) to better suit their learning preferences. This could include changing font sizes, organizing content, or setting reminders. The final phrase, "i*n collaboration with an educator,*" highlights the importance of teacher guidance in helping students make informed, safe, and effective choices in their digital learning journey. *CONTENT FOCUS* This indicator focuses on helping students become active participants in shaping their digital learning experiences. It encourages them to explore and engage with online networks that can support their academic growth, while also learning how to personalize their digital environments to meet their individual needs. Educators play a key role in this process by modeling responsible digital behavior, guiding students in evaluating online resources, and ensuring that all activities align with school policies. The goal is to empower students to take initiative in their learning while developing the skills to navigate digital spaces safely and effectively.

Code	Description	Model Curriculum
6-8.EL.1.c.	Students actively seek performance feedback from people, including teachers, and from functionalities embedded in digital tools to improve their learning process, and they select technology to demonstrate their learning in a variety of ways.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students received and responded to feedback from teachers and digital tools with guidance. In grades 6-8, students actively seek feedback from people and digital tools to improve learning and choose technology to showcase their understanding. In grades 9-12, students will independently seek, analyze, and apply feedback from diverse sources and strategically select digital tools to demonstrate learning in personalized and innovative ways. *IMPORTANT CONCEPTS* • Students learn to actively seek and use feedback from both people and digital tools. • Students understand how feedback can guide improvement in their learning process. • Students choose appropriate technologies to demonstrate their learning. • Students explore multiple ways to represent their understanding using digital tools. *KEY SKILLS/PROCEDURES* • Request and interpret feedback from teachers, peers, and mentors. • Use embedded feedback features in digital tools. • Reflect on feedback to revise work or adjust learning strategies. • Selecting and using technology to present learning in varied formats. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*actively seek performance feedback from people, including teachers*" means students are encouraged to initiate feedback conversations, not just wait for them. Educators should model how to ask for specific, constructive feedback and create a classroom culture where feedback is welcomed and valued. The phrase "*from functionalities embedded in digital tools*" refers to features like real-time spelling and grammar suggestions, progress tracking, or rubric-based scoring in learning platforms. Educators should help students understand how to interpret and apply this feedback to improve their work. The final phrase, "*select technology to demonstrate their learning in a variety of ways*," emphasizes student choice and creativity in how they show what they know—whether through multimedia presentations, digital storytelling, coding projects, or other formats. Educators should provide opportunities for students to explore different tools and guide them in selecting the most effective one for their learning goals and audience.

Code	Description	Model Curriculum
		CONTENT FOCUS This indicator emphasizes the development of feedback literacy and digital expression. Students are expected to take initiative in seeking feedback and using it to refine their learning process. At the same time, they are encouraged to explore and select technologies that allow them to demonstrate their understanding in diverse and meaningful ways. The dual focus on feedback and digital expression supports deeper learning, self-awareness, and creativity. Educators play a key role in scaffolding these skills by modeling effective feedback practices, integrating digital tools that provide actionable insights, and offering students voice and choice in how they present their learning.
6-8.EL.1.d.	Students are able to navigate a variety of technologies and transfer their knowledge and skills to learn how to use new technologies.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students used familiar technology and began to apply known skills to explore new tools with support. In grades 6-8, students independently navigate different technologies and apply prior knowledge to learn new tools. In grades 9-12, students will confidently and efficiently adapt to emerging technologies by transferring and expanding their digital skills across platforms and contexts. *IMPORTANT CONCEPTS* • Students learn to confidently use a range of digital tools and platforms. • Students develop the ability to apply what they already know to learn new technologies. • Students understand that digital skills are transferable across tools and contexts. • Students build adaptability and resilience when encountering unfamiliar technology. *KEY SKILLS/PROCEDURES* • Navigate interfaces and features of various digital tools. • Recognize patterns and similarities between tools to apply known skills. • Troubleshoot and problem-solve when learning new technologies. • Use help resources to independently learn new tools.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*navigate a variety of technologies*" means that students should be comfortable using different types of digital tools—such as word processors, presentation software, coding platforms, or learning management systems. Educators should provide exposure to a range of tools and encourage exploration. The phrase "*transfer their knowledge and skills*" refers to students applying what they've learned from one tool or experience to another. For example, if a student knows how to format text in one program, they should be able to apply that skill in a new program with a similar function. Educators should highlight these transferable skills and encourage students to make connections between tools. The phrase "*to learn how to use new technologies*" emphasizes that students should not rely solely on direct instruction but should develop strategies for independent learning—such as using tutorials, experimenting, or asking for help when needed. *CONTENT FOCUS* This indicator focuses on building digital adaptability and independence. It encourages students to become confident users of technology who can transfer their existing knowledge to new and unfamiliar tools. Rather than teaching each tool in isolation, educators should emphasize the underlying skills and concepts that apply across platforms—such as navigation, formatting, collaboration, and problem-solving. By fostering a mindset of exploration and resilience, this standard prepares students to thrive in a constantly evolving digital world where learning new technologies is a lifelong skill.

2. Digital Citizen

Students recognize the responsibilities and opportunities for contributing to their digital communities, including making safe, legal, and ethical decisions using Artificial Intelligence.

Code	Description	Model Curriculum
6-8.DC.2.a.	Students manage their digital identities and reputations within school policy, including demonstrating an understanding of how digital actions are never fully erasable.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to understand that their online actions contribute to their digital identity and that these actions can have lasting effects. In grades 6-8, students actively manage their digital identities and reputations, recognizing that digital actions are permanent and must align with school policy. In grades 9-12, students will take full ownership of their digital presence, making informed decisions to shape their online reputations and understanding the long-term impact of their digital footprint. *IMPORTANT CONCEPTS* • Students learn to manage their digital identities and reputations responsibly. • Students understand that online actions contribute to a lasting digital footprint. • Students recognize that digital content is difficult to erase and may have long-term consequences. • Students align their digital behavior with school policies and ethical standards. *KEY SKILLS/PROCEDURES* • Identify elements that contribute to a digital identity. • Evaluate the potential impact of online actions on personal reputation. • Apply school policy and digital citizenship principles to online behavior. • Practice safe, respectful, and responsible communication in digital spaces. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*manage their digital identities and reputations*" means students should be aware of how their online presence—such as social media activity, usernames, and shared content—reflects on them and can influence how others perceive them. Educators should help students understand that their digital identity is shaped by both what they post and how they interact online. The phrase "*within school policy*" emphasizes that students must follow district guidelines for appropriate technology use, including acceptable use policies and codes of conduct.

Code	Description	Model Curriculum
		The final phrase, "*demonstrating an understanding of how digital actions are never fully erasable,*" highlights the importance of permanence in the digital world. Students should be taught that even deleted content can be archived, screenshotted, or retrieved, and that their digital footprint can affect future opportunities. Educators should use real-world examples and discussions to help students internalize this concept. *CONTENT FOCUS* The focus is on developing students' awareness and responsibility in managing their digital presence. As students begin to engage more independently online, they must understand that their actions contribute to a digital footprint that can follow them into high school, college, and beyond. Educators play a key role in guiding students to reflect on their digital choices, understand the implications of permanence, and build a positive and respectful online identity.
6-8.DC.2.b.	Students demonstrate and advocate for positive, safe, legal, and ethical habits when using technology and when interacting with others online.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned the rules for safe and responsible technology use and began to recognize ethical and legal considerations. In grades 6-8, students consistently demonstrate and begin to advocate for safe, legal, and ethical technology use in their own behavior and with peers. In grades 9-12, students will actively promote positive digital citizenship, including addressing unethical or unsafe behavior in digital spaces. *IMPORTANT CONCEPTS* • Students learn to use technology in ways that are safe, respectful, and responsible. • Students understand the legal and ethical implications of their digital actions. • Students will develop the ability to advocate for positive digital behavior among peers. • Students recognize the importance of empathy, kindness, and integrity in online interactions. *KEY SKILLS/PROCEDURES* • Practice safe online behaviors. • Follow copyright, fair use, and acceptable use policies. • Demonstrate respectful communication in digital environments. • Encourage peers to act responsibly and ethically online.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*demonstrate and advocate for positive, safe, legal, and ethical habits*" means students are not only expected to follow good digital practices themselves but also to encourage others to do the same. Educators should help students understand what these habits look like in real-world scenarios—such as citing sources, reporting cyberbullying, or using strong passwords. The phrase "*when using technology and when interacting with others online"* expands the focus beyond tool use to include digital communication and collaboration. This includes social media, discussion boards, group chats, and other online spaces where students engage with others. Educators should provide opportunities for students to role-play or reflect on digital dilemmas and model how to respond with integrity and empathy. *CONTENT FOCUS* The focus is on digital responsibility and leadership. It encourages students not only to behave ethically and safely online but also to take an active role in promoting those values within their communities. As students become more socially connected through technology, they must learn to navigate complex digital interactions with care and awareness. Educators should integrate discussions about digital ethics, online safety, and legal responsibilities into instruction, while also empowering students to speak up and support others in making positive digital choices.
6-8.DC.2.c.	Students demonstrate and advocate for an understanding of intellectual property with both print and digital media — including copyright, permission, and fair use — by creating a variety of media products that include appropriate citation and attribution elements.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students recognized the importance of giving credit and followed basic citation practices with guidance. In grades 6-8, students demonstrate and advocate for proper use of intellectual property by applying copyright, permission, and fair use principles in their own media creations. In grades 9-12, students will independently apply advanced understanding of intellectual property laws and licensing, and model ethical use of content in complex, multimedia projects. *IMPORTANT CONCEPTS* • Students learn to respect intellectual property rights in both print and digital formats. • Students understand the concepts of copyright, permission, and fair use. • Students apply proper citation and attribution practices in their own work. • Students advocate for ethical use of media by modeling and promoting responsible practices.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify when and how to cite sources in digital and print media. • Understand the difference between copyright-protected and public domain content. • Apply fair use guidelines when incorporating media into projects. • Create original media products that include attribution and permissions when necessary. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate and advocate for an understanding of intellectual property*" means students should not only apply copyright and citation practices in their own work but also encourage others to do the same. Educators should provide opportunities for students to discuss and model ethical media use. The inclusion of "*both print and digital media*" highlights that these practices apply across all formats—whether students are using a book excerpt, an online image, or a video clip. The phrase "*including copyright, permission, and fair use*" refers to the legal and ethical frameworks that govern how content can be used. Educators should teach students how to determine if content is protected, when permission is needed, and how to apply fair use principles. Finally, "*creating a variety of media products that include appropriate citation and attribution elements*" emphasizes that students should practice these skills in real-world contexts—such as presentations, videos, blogs, or infographics—using consistent and accurate citation formats. *CONTENT FOCUS* The focus is on developing students' ethical and legal understanding of content use in a digital world. As students increasingly create and share media, they must learn to respect the intellectual property of others and understand the rules that govern content use. This includes knowing when they need permission, how to apply fair use, and how to properly cite sources. Educators should integrate these concepts into project-based learning, encouraging students to create original work while modeling responsible media use. By doing so, students not only protect themselves legally but also contribute to a culture of respect and integrity in digital spaces.

Code	Description	Model Curriculum
6-8.DC.2.d.	Students demonstrate an understanding of what personal data is and how to keep it private and secure, including the awareness of terms such as encryption, HTTPS, password, cookies, and computer viruses; they also understand the limitations of data management and how data-collection technologies work.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned what personal data is and how to protect it using basic privacy and security practices. In grades 6-8, students demonstrate a deeper understanding of personal data, digital security concepts, and how data is collected and managed. In grades 9-12, students will critically evaluate data privacy practices, understand the implications of data collection, and make informed decisions about their digital footprint and security. *IMPORTANT CONCEPTS* • Students learn what personal data is and why it must be protected. • Students understand key digital security terms such as encryption, HTTPS, cookies, and computer viruses. • Students recognize how data is collected, stored, and used by digital systems. • Students understand the limitations of data privacy and the importance of managing their digital footprint. *KEY SKILLS/PROCEDURES* • Identify personal data. • Use secure practices such as strong passwords, recognizing secure websites (HTTPS), and avoiding suspicious links. • Explain how cookies and data trackers work. • Understand how viruses and malware can compromise data. • Evaluating privacy settings and terms of service on digital platforms. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate an understanding of what personal data is and how to keep it private and secure*" means students should be able to identify what constitutes personal information and take steps to protect it—such as not oversharing online, using privacy settings, and creating strong passwords. Educators should provide real-life examples and scenarios to help students practice these skills. The inclusion of terms like "*encryption, HTTPS, password, cookies, and computer viruses*" indicates that students should not only recognize these terms but also understand their function in protecting or compromising data. For example, they should know that HTTPS indicates a

Code	Description	Model Curriculum
		secure website and that cookies track user behavior. The final part, "*understand the limitations of data management and how data-collection technologies work*," encourages students to think critically about how their data is used by websites, apps, and services—even when privacy settings are enabled. Educators should guide students in exploring how companies collect and use data, and what users can and cannot control. *CONTENT FOCUS* The focus is on building students' digital privacy awareness and data literacy. As students increasingly interact with digital platforms, they must understand what personal data is, how it can be protected, and how it is collected and used by others. This includes both technical knowledge (e.g., recognizing secure websites, understanding cookies) and critical thinking (e.g., evaluating privacy policies, understanding data trade-offs). Educators should integrate these concepts into digital citizenship lessons, helping students develop habits that protect their privacy and security while also fostering a deeper understanding of the digital systems they use every day.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools, such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Code	Description	Model Curriculum
6-8.KC.3.a.	Students demonstrate and practice the ability to effectively use research strategies to locate appropriate digital resources in support of their learning.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned to use basic search strategies to find digital resources with guidance. In grades 6-8, students independently apply effective research strategies to locate relevant, credible digital resources that support their learning. In grades 9-12, students will refine and adapt research strategies to evaluate, compare, and synthesize digital resources from diverse sources for academic and real-world purposes. *IMPORTANT CONCEPTS* • Students learn to use search engines and databases effectively to find information. • Students understand how to choose appropriate keywords and refine search queries. • Students evaluate the relevance and credibility of digital resources. • Students will apply research strategies to support inquiry and learning goals.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Use advanced search techniques. • Identify credible sources based on authorship, purpose, and accuracy. • Select resources that are appropriate for the task, audience, and learning objective. • Practice persistence and flexibility in refining search strategies. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate and practice the ability to effectively use research strategies*" means students should not only know how to search for information but also apply and refine those strategies regularly. Educators should model and scaffold research processes, encouraging students to reflect on what works and what doesn't. The phrase "*to locate appropriate digital resources*" emphasizes that students must be able to judge whether a source is relevant, reliable, and suitable for their learning purpose—not just find any information. This includes distinguishing between opinion and fact, identifying bias, and recognizing trustworthy domains. The final part, "*in support of their learning*," highlights that research should be purposeful and connected to academic or personal inquiry. Educators should help students frame research questions and guide them in selecting sources that deepen understanding. *CONTENT FOCUS* This content statement focuses on building students' digital research literacy. It encourages them to move beyond surface-level searching and develop thoughtful, strategic approaches to finding information online. As students encounter an overwhelming amount of digital content, they must learn to navigate it critically and efficiently. Educators should provide structured opportunities for students to practice research skills in authentic contexts—such as inquiry projects, problem-solving tasks, or multimedia presentations. By doing so, students gain confidence in their ability to locate and use information that supports their learning goals.

Code	Description	Model Curriculum
6-8.KC.3.b.	Students practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility, and relevance.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned to recognize whether information is accurate and appropriate for their learning needs with guidance. In grades 6-8, students independently evaluate digital resources for accuracy, perspective, credibility, and relevance. In grades 9-12, students will critically analyze and compare multiple sources, identifying bias, reliability, and contextual relevance to support complex learning tasks. *IMPORTANT CONCEPTS* • Students learn to verify the accuracy of information found in digital resources. • Students understand how to identify the perspective or bias of a source. • Students evaluate the credibility of authors and publishers. • Students determine whether a resource is relevant to their learning goals or research questions. *KEY SKILLS/PROCEDURES* • Cross-reference facts across multiple sources to confirm accuracy. • Identify the author's point of view or bias and its impact on the information presented. • Assessing the credibility of a source based on authorship, publication, and evidence. • Judge whether a resource is appropriate for the topic, audience, and purpose. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*evaluate resources for accuracy*" means students should verify that the information they find is factually correct and supported by evidence. Educators should teach students how to cross-check facts using multiple reliable sources. The term "*perspective*" refers to the point of view or bias present in a resource. Students should be able to identify whether a source presents a balanced view or is trying to persuade or influence the reader. The word "*credibility*" involves assessing the trustworthiness of the source—who created it, what their qualifications are, and whether the source is known for reliable information. Finally, "*relevance*" means students should determine whether the resource directly supports their learning goals or research questions. Educators can support this by modeling how to ask, "Is this useful for what I'm trying to learn or show?"

Code	Description	Model Curriculum
		CONTENT FOCUS The focus is on developing students' critical thinking and information evaluation skills. This includes not only checking facts but also understanding the motivations behind a source and whether it fits their learning needs. Educators should provide structured opportunities for students to evaluate sources in context—such as during research projects, media analysis, or current events discussions. By practicing these skills, students become more thoughtful, independent learners who can navigate digital information with confidence and integrity.
6-8.KC.3.c.	Students locate and collect resources from a variety of sources and organize assets into collections for a wide range of projects and purposes.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned to gather information from a few sources and begin to organize it with guidance. In grades 6-8, students independently locate, collect, and organize resources from diverse sources to support a variety of learning tasks. In grades 9-12, students will curate, synthesize, and manage complex collections of resources from multiple media and formats for academic, personal, and professional purposes. *IMPORTANT CONCEPTS* • Students learn to gather information from a variety of digital and print sources. • Students understand how to organize collected resources in meaningful ways. • Students develop the ability to curate content for different academic tasks and learning goals. • Students recognize the importance of using diverse sources to support deeper understanding. *KEY SKILLS/PROCEDURES* • Search for and select resources from websites, databases, videos, podcasts, and print materials. • Use digital tools to organize resources. • Group and label resources by topic, purpose, or project. • Evaluate the usefulness of collected resources for specific tasks.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*locate and collect resources from a variety of sources*" means students should be able to find information from multiple formats and platforms—such as websites, online databases, videos, podcasts, and books. Educators should encourage students to go beyond a single search engine and explore diverse perspectives. The phrase "*organize assets into collections*" refers to the process of grouping and managing resources in a way that supports learning—such as creating folders, digital notebooks, or curated lists. This helps students keep track of what they've found and how it connects to their goals. The final part, "f*or a wide range of projects and purposes*," emphasizes that these skills should be applied across different contexts—research papers, presentations, creative projects, or inquiry-based learning. Educators should provide opportunities for students to practice organizing resources in ways that are purposeful and adaptable. *CONTENT FOCUS* The focus is on developing students' ability to gather and manage information effectively. As students engage in increasingly complex learning tasks, they need to be able to locate high-quality resources and organize them in ways that support their thinking and productivity. This includes not only finding information but also curating it, deciding what to keep, how to categorize it, and how to retrieve it when needed. Educators should model and scaffold these practices, integrating them into research projects, collaborative work, and digital portfolios. By mastering these skills, students become more independent, organized, and strategic learners.
6-8.KC.3.d.	Students explore real-world issues and problems and actively pursue an understanding of them and solutions for them.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students learned to ask questions about real-world issues and explore them with guidance. In grades 6-8, students independently investigate real-world problems and seek to understand and address them through research and inquiry. In grades 9-12, students will engage in sustained inquiry into complex global and local issues, proposing and implementing innovative, research-based solutions.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students learn to identify and investigate real-world problems that matter to them or their communities. • Students develop the ability to ask meaningful questions and conduct research to understand issues deeply. • Students explore possible solutions using digital tools and collaborative strategies. • Students recognize the value of inquiry and problem-solving in making a positive impact. *KEY SKILLS/PROCEDURES* • Identify and frame real-world issues or questions. • Conduct research using credible sources to understand the issue. • Analyzing causes, effects, and perspectives related to the problem. • Brainstorm and propose potential solutions using digital tools and collaboration. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*explore real-world issues and problems*" means students should engage with authentic, relevant topics—such as environmental concerns, social justice, public health, or local community challenges. Educators should encourage students to choose issues that are meaningful to them and provide opportunities for inquiry-based learning. The phrase "*actively pursue an understanding of them*" emphasizes that students should go beyond surface-level awareness by researching, asking questions, and analyzing multiple perspectives. Finally, "*and solutions for them*" highlights the importance of moving from understanding to action. Students should be encouraged to think creatively and critically about how problems might be addressed, even if they can't implement the solutions themselves. Educators can support this by guiding students through design thinking, problem-solving frameworks, or project-based learning experiences. *CONTENT FOCUS* The focus of this indicator is on student-driven inquiry and problem-solving. It encourages learners to connect their academic work to real-world contexts, fostering a sense of purpose and agency. By exploring issues that matter to them, students develop research, critical thinking, and collaboration skills while also building empathy and civic awareness. Educators should create space for students to investigate authentic problems, support them in gathering and analyzing information, and guide them in proposing thoughtful, informed solutions.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.

Code	Description	Model Curriculum
6-8.ID.4.a	Students engage in a design process and employ it to generate ideas, create innovative products, or solve authentic problems.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students followed a guided design process to create solutions or products. In grades 6-8, students independently apply a design process to generate ideas, develop innovative products, or solve real-world problems. In grades 9-12, students will refine and adapt design processes to address complex challenges, iterating and improving solutions through testing and feedback. *IMPORTANT CONCEPTS* • Students learn to use a structured design process to guide their thinking and creativity. • Students understand how to generate and refine ideas to solve real-world problems. • Students develop the ability to create original, innovative products or solutions. • Students recognize the value of iteration, feedback, and reflection in the design process. *KEY SKILLS/PROCEDURES* • Apply the steps of a design process. • Brainstorm and evaluate multiple ideas or approaches. • Create prototypes or models to test solutions. • Reflect on outcomes and revise based on feedback or results. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*engage in a design process*" means students should follow a structured approach to problem-solving—such as design thinking, engineering design, or another iterative model. Educators should introduce and model the steps of the process, encouraging students to move through them flexibly and reflectively. The phrase "*employ it to generate ideas*" emphasizes that the process is not just about solving problems but also about fostering creativity and innovation. Students should be encouraged to brainstorm freely and explore multiple possibilities. The phrase "*create innovative products*" refers to original or improved solutions, which could be physical, digital, or conceptual. Finally, "*solve authentic problems*" means students should apply

Code	Description	Model Curriculum
		their design thinking to real-world or personally meaningful challenges. Educators can support this by integrating project-based learning and encouraging student voice and choice in problem selection. *CONTENT FOCUS* This content statement focuses on empowering students as creative problem-solvers and makers. It encourages students to use structured design processes to think critically, generate ideas, and develop solutions that are meaningful and relevant. Whether students are designing a product, building a prototype, or developing a digital solution, the emphasis is on innovation, iteration, and real-world application. Educators should provide opportunities for students to engage in open-ended challenges, collaborate with peers, and reflect on their process.
6-8.ID.4.b	Students select and use digital tools to support a design process and expand their understanding to identify constraints and trade-offs and weigh risks.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students used digital tools with guidance to support simple design tasks and began to recognize basic limitations. In grades 6-8, students independently choose and use digital tools to support the design process and begin to analyze constraints, trade-offs, and risks. In grades 9-12, students will strategically select and integrate digital tools to optimize design outcomes, fully evaluating constraints, trade-offs, and potential risks in complex problem-solving. *IMPORTANT CONCEPTS* • Students learn to select digital tools that align with specific stages of the design process. • Students understand how to identify and respond to constraints. • Students evaluate trade-offs between different design choices. • Students assess potential risks and make informed decisions during the design process. *KEY SKILLS/PROCEDURES* • Choose appropriate digital tools for ideation, prototyping, or testing. • Identify limitations such as time, cost, or tool capabilities. • Comparing design options and weighing pros and cons. • Anticipate and mitigate risks.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*select and use digital tools to support a design process*" means students should be able to choose tools that match the needs of each phase—such as brainstorming apps for ideation, modeling software for prototyping, or spreadsheets for analyzing results. Educators should expose students to a variety of tools and guide them in making purposeful selections. The phrase "*expand their understanding to identify constraints and trade-offs*" refers to students learning to recognize the real-world limitations that affect design—like limited time, budget, or technical feasibility—and how different choices may involve compromises. Finally, "*weigh risks*" means students should consider potential downsides or unintended consequences of their design decisions. Educators can support this by encouraging students to reflect on their process, test their ideas, and revise based on what they learn. *CONTENT FOCUS* The focus is on strategic thinking and decision-making within the design process. It encourages students to go beyond simply creating something—to think critically about how and why they are designing, what tools they are using, and what limitations or risks they must consider. By integrating digital tools thoughtfully and evaluating their options, students develop a deeper understanding of how design works in real-world contexts. Educators should provide opportunities for students to engage in open-ended challenges where they must make choices, justify them, and reflect on the outcomes.
6-8.ID.4.c	Students engage in a design process to develop, test, and revise prototypes, embracing the cyclical process of trial and error and understanding problems or setbacks as potential opportunities for improvement.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students followed a guided design process to create and improve simple prototypes with support. In grades 6-8, students independently use a design process to develop, test, and revise prototypes, viewing setbacks as part of the learning process. In grades 9-12, students will refine and iterate complex prototypes using data, feedback, and reflection, demonstrating resilience and innovation through continuous improvement.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students learn to use a design process to create and improve prototypes. • Students understand that testing and revising are essential parts of innovation. • Students develop resilience by viewing failure as a learning opportunity. • Students recognize that iteration leads to stronger, more effective solutions. *KEY SKILLS/PROCEDURES* • Build and test prototypes using digital or physical tools. • Gather feedback and data from testing. • Analyze results to identify areas for improvement. • Revise and refine prototypes through multiple iterations. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*engage in a design process to develop, test, and revise prototypes*" means students should follow a structured, iterative approach to creating solutions—whether digital, physical, or conceptual. Educators should guide students through cycles of building, testing, and improving their work. The phrase "*embracing the cyclical process of trial and error*" emphasizes that students should expect and accept that their first attempt may not succeed. Instead of seeing failure as a stopping point, they should see it as a natural and valuable part of the process. Finally, "*understanding problems or setbacks as potential opportunities for improvement*" encourages a growth mindset. Educators can support this by celebrating iteration, modeling reflective thinking, and creating a classroom culture where risk-taking and revision are encouraged. *CONTENT FOCUS* This content statement focuses on developing students' resilience, creativity, and problem-solving through iterative design. It encourages students to move beyond one-and-done thinking and instead embrace a mindset of continuous improvement. By engaging in cycles of prototyping, testing, and refining, students learn that innovation is a process—not a product. Educators should provide open-ended challenges that allow for multiple solutions and iterations, and they should emphasize reflection and feedback as essential tools for growth.

Code	Description	Model Curriculum
6-8.ID.4.d	Students demonstrate the ability to persevere and handle greater ambiguity as they work to solve open-ended problems.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to persist through challenges with support and explore multiple solutions to simple problems. In grades 6-8, students independently persevere through uncertainty and complexity while solving open-ended problems. In grades 9-12, students will embrace ambiguity and complexity, demonstrating resilience and adaptability in solving real-world, open-ended challenges. *IMPORTANT CONCEPTS* • Students learn to persist through challenges and setbacks during problem-solving. • Students develop comfort with uncertainty and incomplete information. • Students explore multiple pathways to solving open-ended problems. • Students recognize that ambiguity is a natural part of innovation and creative thinking. *KEY SKILLS/PROCEDURES* • Manage frustration and stay engaged when solutions are not immediately clear. • Explore and test multiple approaches to a problem. • Reflect on failed attempts and use them to inform new strategies. • Work through complex or ill-defined problems with patience and flexibility. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate the ability to persevere"* means students should continue working through challenges even when they encounter failure or difficulty. Educators should model and reinforce a growth mindset, helping students see setbacks as part of the learning process. The phrase "*handle greater ambiguity*" refers to students becoming more comfortable when problems don't have clear instructions, single answers, or guaranteed outcomes. This is especially important in real-world problem-solving, where uncertainty is common. Finally, "*solve open-ended problems*" emphasizes that students should be working on tasks that allow for multiple solutions or approaches. Educators can support this by designing learning experiences that are inquiry-based, student-driven, and authentic.

Code	Description	Model Curriculum
		CONTENT FOCUS This content statement focuses on building resilience, adaptability, and creative confidence in students. It encourages them to persist through uncertainty and complexity—skills that are essential for innovation and real-world problem-solving. By engaging with open-ended problems, students learn to tolerate ambiguity, explore multiple solutions, and reflect on their process. Educators should create a supportive environment where students feel safe to take risks, make mistakes, and try again.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Code	Description	Model Curriculum
6-8.CT.5.a.	Students practice defining problems to solve by computing for data analysis, modeling, or algorithmic thinking.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to identify simple problems and explore how technology can help solve them using basic data or steps. In grades 6-8, students define more complex problems and apply computing strategies such as data analysis, modeling, or algorithmic thinking to explore solutions. In grades 9-12, students will independently define real-world problems and design computational solutions using advanced data analysis, simulations, and algorithm development. *IMPORTANT CONCEPTS* • Students learn to clearly define problems that can be addressed using computational methods. • Students understand how to use data, models, or algorithms to explore and solve problems. • Students develop the ability to break down complex problems into manageable parts. • Students recognize the value of computational thinking in real-world problem-solving. *KEY SKILLS/PROCEDURES* • Identify and articulate a problem that can be addressed with technology. • Select appropriate computational strategies. • Decompose problems into smaller, logical steps. • Use digital tools to analyze data or simulate outcomes.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*practice defining problems to solve*" means students should be regularly engaged in identifying challenges or questions that can be addressed through computational methods. Educators should guide students in framing problems clearly and meaningfully. The phrase "*by computing for data analysis, modeling, or algorithmic thinking*" refers to the use of digital tools and logical processes to explore and solve problems. For example, students might analyze a dataset to identify trends, build a model to simulate a system, or create an algorithm to automate a task. Educators should introduce these strategies through real-world examples and scaffold students' understanding of when and how to apply each one. *CONTENT FOCUS* The focus is on developing students' ability to think computationally when approaching problems. It encourages them to define problems in ways that can be explored using data, models, or algorithms—skills that are foundational in STEM fields and increasingly relevant across disciplines. Educators should provide opportunities for students to engage in inquiry-based learning where they identify problems, explore computational approaches, and reflect on their process.
6-8.CT.5.b.	Students find or organize data and use technology to analyze and represent it to solve problems and make decisions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to collect and organize simple data sets and use basic tools to display information. In grades 6-8, students independently find or organize data and use digital tools to analyze and visualize it to support problem-solving and decision-making. In grades 9-12, students will collect, clean, and analyze complex data sets using advanced tools and techniques to draw conclusions and inform real-world decisions. *IMPORTANT CONCEPTS* • Students learn to locate or generate data relevant to a problem or question. • Students understand how to organize data in ways that make it easier to analyze. • Students use digital tools to analyze patterns, trends, and relationships in data. • Students represent data visually to support conclusions and decision-making.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Collect or source data from surveys, experiments, or online databases. • Organize data using spreadsheets, tables, or databases. • Analyze data using functions, filters, or graphing tools. • Create visual representations to communicate findings. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*find or organize data*" means students should be able to either locate existing data (e.g., from online sources or class experiments) or collect their own and then structure it in a way that supports analysis—such as using spreadsheets or tables. Educators should guide students in identifying reliable data sources and organizing data logically. The phrase "*use technology to analyze and represent it*" refers to using digital tools like spreadsheets, data visualization software, or coding platforms to explore patterns, trends, or relationships. Finally, "*to solve problems and make decisions*" emphasizes that data analysis should be purposeful—students should use their findings to draw conclusions, support arguments, or inform choices. Educators can support this by embedding data tasks into real-world scenarios or project-based learning. *CONTENT FOCUS* The focus is on developing students' data literacy and analytical thinking. It encourages them to use data not just as information, but as a tool for inquiry, problem-solving, and decision-making. By learning to collect, organize, analyze, and visualize data, students gain essential skills for academic success and real-world applications. Educators should provide opportunities for students to work with authentic data sets, explore digital tools for analysis, and present their findings in meaningful ways.
6-8.CT.5.c.	Students break problems into component parts, identify key pieces, and use that information to problem-solve.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to break simple problems into smaller steps with guidance. In grades 6-8, students independently decompose problems, identify essential elements, and use that understanding to develop solutions. In grades 9-12, students will apply advanced decomposition strategies to complex, real-world problems and design efficient, scalable solutions.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students learn to break down complex problems into smaller, manageable parts. • Students identify the most important elements of a problem. • Students use decomposition to guide their problem-solving strategies. • Students understand that solving big problems often starts with understanding the smaller ones. *KEY SKILLS/PROCEDURES* • Decompose a problem into logical steps or stages. • Identify patterns, repeated elements, or dependencies. • Prioritize key components that influence the outcome. • Use diagrams, flowcharts, or outlines to visualize problem structure. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*break problems into component parts*" refers to the computational thinking skill of decomposition—students should be able to take a complex task and divide it into smaller, more manageable steps. Educators can support this by modeling how to break down a problem using visual tools or collaborative discussion. The phrase "*identify key pieces*" means students should be able to distinguish between essential and non-essential information. This helps them focus their efforts on what matters most. Finally, "*use that information to problem-solve*" emphasizes that decomposition is not an end in itself, it's a strategy that supports effective, structured problem-solving. Educators should encourage students to use their breakdown of the problem to develop and test solutions. *CONTENT FOCUS* The focus is on developing students' ability to think logically and systematically. Decomposition is a foundational skill in computational thinking and problem-solving across disciplines. By learning to break problems into parts and identify what matters most, students become more efficient, strategic thinkers. Educators should provide opportunities for students to practice decomposition in a variety of contexts—such as coding, writing, math, or project planning.

Code	Description	Model Curriculum
6-8.CT.5.d.	Students demonstrate an understanding of how automation works and use algorithmic thinking to design and automate solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to understand simple automation (e.g., sequences or loops) and follow basic algorithms. In grades 6-8, students demonstrate how automation functions and apply algorithmic thinking to design and automate solutions to problems. In grades 9-12, students will design, test, and refine complex automated systems using advanced algorithmic structures and programming concepts. *IMPORTANT CONCEPTS* • Students learn how automated systems function and where they are used in the real world. • Students understand the role of algorithms in driving automation. • Students apply algorithmic thinking to design step-by-step solutions. • Students use digital tools or programming environments to automate tasks or solve problems. *KEY SKILLS/PROCEDURES* • Explain how automation works in systems like robotics, smart devices, or software. • Design algorithms using logical sequences, conditionals, and loops. • Use block-based or text-based coding tools to build automated solutions. • Test and refine automated processes based on feedback or performance. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate an understanding of how automation works*" means students should be able to explain how machines or systems perform tasks automatically—such as how a thermostat adjusts temperature or how a robot follows programmed instructions. Educators can support this with real-world examples and hands-on activities. The phrase "*use algorithmic thinking*" refers to the process of breaking down a task into a logical sequence of steps that can be followed by a machine. This includes using loops, conditionals, and variables. Finally, "*to design and automate solutions*" emphasizes that students should not only understand automation but also apply it—by creating their own automated processes using coding platforms or digital tools. Educators should provide opportunities for students to build, test, and refine their own automated solutions in meaningful contexts.

Code	Description	Model Curriculum
		CONTENT FOCUS The focus is on developing students' understanding of automation and their ability to think algorithmically. It encourages them to explore how automated systems work and to design their own solutions using logical, step-by-step thinking. Whether through robotics, coding, or simulations, students learn to automate tasks and solve problems efficiently. Educators should integrate hands-on, project-based learning that allows students to experiment with automation tools and reflect on how algorithms shape the digital world.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes, such as AI prompt engineering, using platforms, tools, styles, formats, and digital media appropriate to their goals.

Code	Description	Model Curriculum
6-8.CC.6.a	Students select appropriate platforms and tools to create, share, and communicate their work effectively.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students, with guidance, used teacher-selected tools to create and share their work. In grades 6-8, students independently choose appropriate digital platforms and tools to create, share, and communicate their ideas effectively. In grades 9-12, students will strategically select and adapt tools and platforms to suit audience, purpose, and context in a variety of communication scenarios. *IMPORTANT CONCEPTS* • Students learn to evaluate and choose digital tools that best support their communication goals. • Students understand how different platforms serve different audiences and purposes. • Students develop the ability to create and share content using a variety of media formats. • Students recognize the importance of clarity, tone, and format in digital communication. *KEY SKILLS/PROCEDURES* • Compare and select tools based on task requirements. • Use digital platforms to share work. • Adjust communication style and format for different audiences. • Ensure accessibility and clarity in digital presentations.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*select appropriate platforms and tools*" means students should be able to evaluate the features and limitations of various digital tools and choose the one that best fits their purpose—whether it's presenting, collaborating, or publishing. Educators should expose students to a range of tools and guide them in making informed choices. The phrase "*to create, share, and communicate their work*" emphasizes that students are not just producing content, but also distributing and presenting it in ways that are meaningful and effective. Finally, "*effectively*" highlights the importance of intentionality—students should consider audience, tone, format, and clarity when choosing how to communicate. Educators can support this by modeling effective communication strategies and providing feedback on students' tool selection and presentation choices. *CONTENT FOCUS* The focus is on empowering students to be thoughtful, strategic digital communicators. It encourages them to move beyond passive tool use and instead make intentional choices about how they create and share their work. By selecting the right tools and platforms, students learn to tailor their communication to different audiences and purposes. Educators should provide opportunities for students to explore a variety of media formats and communication contexts—such as persuasive presentations, informational videos, or collaborative documents.
6-8.CC.6.b	Students create original works or responsibly repurpose other digital resources into new creative works.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students created original digital content and began to combine existing resources with guidance. In grades 6-8, students independently create original works and ethically remix or adapt digital content to produce new, creative expressions. In grades 9-12, students will design sophisticated, original or remixed digital works that demonstrate advanced creativity, purpose, and ethical use of source material. *IMPORTANT CONCEPTS* • Students learn to create original digital content using various tools and media. • Students understand how to reuse or remix existing digital resources ethically.

Code	Description	Model Curriculum
		• Students develop the ability to transform existing content into something new and meaningful. • Students recognize the importance of attribution and respecting intellectual property when repurposing content. *KEY SKILLS/PROCEDURES* • Create original digital works. • Locate and select digital resources that can be reused under appropriate licenses. • Remix or adapt content to create something new while maintaining proper attribution. • Use digital tools to combine text, images, audio, and video in creative ways. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*create original works*" refers to students producing their own digital content from scratch—such as writing a script, designing a graphic, or composing music. Educators should provide students with opportunities to express themselves creatively using a variety of digital tools. The phrase "*responsibly repurpose other digital resources*" means students may use existing content (e.g., images, video clips, sound effects) but must do so ethically—respecting copyright, using content with appropriate licenses, and giving credit. Finally, "*into new creative works*" emphasizes that students should not simply copy or reuse content, but transform it, adding their own ideas, perspectives, or interpretations. Educators can support this by teaching copyright, fair use, and Creative Commons, and by modeling how to remix content responsibly. *CONTENT FOCUS* The focus is on fostering creativity and ethical digital production. It encourages students to be both original creators and thoughtful curators of digital content. In today's media-rich world, students must learn not only how to make something new but also how to build upon existing work in respectful and innovative ways. Educators should provide opportunities for students to explore digital storytelling, multimedia production, and remix culture, while also reinforcing the importance of attribution and intellectual property.

Code	Description	Model Curriculum
6-8.CC.6.c	Students communicate complex ideas clearly using various digital tools to convey the concepts textually, visually, graphically, etc.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to use digital tools to share ideas using text and simple visuals with guidance. In grades 6-8, students independently use a variety of digital tools to clearly communicate complex ideas through multiple formats (text, visuals, graphics, etc.). In grades 9-12, students will strategically select and integrate multiple digital formats to communicate nuanced ideas effectively to diverse audiences. *IMPORTANT CONCEPTS* • Students learn to express complex ideas using multiple forms of digital communication. • Students understand how to match communication formats to the message and audience. • Students develop the ability to clarify and enhance meaning through multimedia elements. • Students recognize the importance of clarity, structure, and design in digital communication. *KEY SKILLS/PROCEDURES* • Use digital tools to create text-based, visual, and graphic content. • Organize and structure information for clarity and impact. • Enhance communication with visuals such as charts, icons, or illustrations. • Tailor communication style and format to suit the complexity of the idea and the needs of the audience. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*communicate complex ideas clearly*" means students should be able to take abstract, detailed, or multi-step concepts and present them in a way that others can easily understand. Educators should support this by teaching students how to break down ideas and structure their communication logically. The phrase "*using various digital tools*" refers to the use of platforms and applications that support multimedia communication—such as presentation software, video editors, graphic design tools, or collaborative documents. Finally, "*to convey the concepts textually, visually, graphically, etc.*" emphasizes the importance of multimodal communication. Students should be encouraged to combine text with visuals, diagrams, or other media to enhance understanding and engagement. Educators can model how to use these tools effectively and provide feedback on clarity and design.

Code	Description	Model Curriculum
		CONTENT FOCUS This indicator focuses on developing students' ability to communicate clearly and creatively using digital media. It encourages them to think critically about how to present complex ideas in ways that are accessible and engaging. By using a variety of formats, including text, visuals, graphics, etc., students learn to enhance their message and reach different audiences. Educators should provide opportunities for students to practice multimodal communication in authentic contexts, such as explaining a scientific process, presenting a historical argument, or pitching a solution to a real-world problem.
6-8.CC.6.d	Students publish or present content designed for specific audiences and select platforms that will effectively convey their ideas to those audiences.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students shared their work using teacher-selected tools and began to consider audience with guidance. In grades 6-8, students independently design content for specific audiences and choose platforms that best support their message and goals. In grades 9-12, students will strategically tailor content and platform choices to meet the needs of diverse audiences, purposes, and contexts. *IMPORTANT CONCEPTS* • Students learn to identify and understand the needs and expectations of different audiences. • Students understand how to tailor content to suit a specific audience's interests, background, and purpose. • Students develop the ability to choose platforms that best support their communication goals. • Students recognize the importance of audience awareness in digital publishing and presentation. *KEY SKILLS/PROCEDURES* • Analyze audience characteristics. • Adapt tone, format, and content to suit the intended audience. • Select appropriate platforms for publishing or presenting. • Use feedback to refine content and presentation for clarity and impact.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*publish or present content designed for specific audiences*" means students should intentionally shape their message to meet the needs of a particular group—such as peers, teachers, community members, or online viewers. Educators should help students consider factors like tone, vocabulary, and format when preparing content. The phrase "*select platforms that will effectively convey their ideas*" emphasizes that students should not only focus on what they say, but also where and how they say it. For example, a formal presentation might be best suited for a slideshow, while a creative project might be better shared through a video or blog. Educators can support this by introducing a variety of platforms and helping students evaluate which ones are most effective for their goals. *CONTENT FOCUS* This content statement focuses on audience-centered communication and purposeful platform selection. It encourages students to think critically about how to best reach and engage their intended audience, whether through writing, visuals, or multimedia. By considering both content and delivery, students learn to be strategic communicators who can adapt their message for different contexts. Educators should provide opportunities for students to publish or present their work in authentic settings—such as class exhibitions, digital portfolios, or community showcases—and guide them in making thoughtful choices about how and where to

7. Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Code	Description	Model Curriculum
6-8.GC.7.a.	Students use digital tools to interact with others to develop a richer understanding of different perspectives and cultures.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to use digital tools to communicate with peers and explored how people live and think differently around the world. In grades 6-8, students deepen their use of digital tools to engage in meaningful interactions that help them understand diverse perspectives and cultural contexts. In grades 9-12, students will apply digital collaboration to critically examine

Code	Description	Model Curriculum
		global issues, challenge assumptions, and contribute to cross-cultural understanding and solutions. *IMPORTANT CONCEPTS* • Students use digital platforms to communicate and collaborate with individuals from different backgrounds. • Students engage in respectful dialogue to explore cultural perspectives. • Students reflect on how digital interactions can broaden understanding of global diversity. *KEY SKILLS/PROCEDURES* • Select appropriate digital tools for communications. • Practice digital etiquette and cultural sensitivity. • Ask thoughtful questions and actively listen to others' viewpoints. • Compare and contrast cultural practices and beliefs. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*use digital tools to interact*" refers to purposeful, two-way communication—such as video calls, collaborative platforms, or discussion forums—rather than passive consumption of content. The word "*interact*" implies active engagement, where students are not just observing but participating in dialogue or shared activities. The goal is to "*develop a richer understanding*", which means going beyond surface-level facts to gain deeper insight into how people from different backgrounds think, live, and experience the world. Finally, "*different perspectives and cultures*" means that students should be exposed to and reflect on viewpoints that differ from their own, fostering empathy, global awareness, and critical thinking. Educators should guide students in navigating these interactions with respect, curiosity, and cultural sensitivity. *CONTENT FOCUS* This content statement focuses on helping students become globally aware digital citizens who can use technology to build bridges across cultures. This includes designing learning experiences where students collaborate with peers from different regions or countries, participate in global projects, or analyze digital content created by people from different backgrounds. The emphasis is on developing intercultural competence through digital interaction, which prepares students for a connected and diverse world.

Code	Description	Model Curriculum
6-8.GC.7.b.	Students use collaborative technologies to connect with others, including peers, experts, and community members, to learn about issues and problems or to gain a broader perspective.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to use digital tools to connect with classmates and others in their school or local community to explore shared interests or simple problems. In grades 6-8, students expand their use of collaborative technologies to engage with a wider network, including peers, experts, and community members, to investigate real-world issues and broaden their understanding. In grades 9-12, students will independently initiate and manage digital collaborations with diverse audiences to co-create solutions, conduct research, and contribute to global conversations on complex issues. *IMPORTANT CONCEPTS* • Students use collaborative technologies to connect with a variety of audiences. • Students engage in dialogue or projects that explore real-world issues or problems. • Students seek out diverse perspectives to deepen understanding. *KEY SKILLS/PROCEDURES* • Identify appropriate digital platforms for collaboration. • Communicate effectively with different audiences. • Ask relevant questions and contribute meaningfully to discussions. • Synthesize information from multiple perspectives. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*collaborative technologies*" refers to digital tools that support real-time or asynchronous teamwork. The inclusion of "*peers, experts, and community members*" emphasizes the importance of engaging with a range of voices, both within and beyond the classroom. The purpose of these connections is to "*learn about issues and problems*", which means students should be exploring authentic, relevant topics that matter to them or their communities. The phrase "*gain a broader perspective*" reinforces the value of hearing from others with different experiences or expertise. Educators should support students in navigating these interactions respectfully and productively, while also helping them reflect on how these collaborations shape their thinking.

Code	Description	Model Curriculum
		CONTENT FOCUS This content statement focuses on students becoming active participants in collaborative learning networks. This includes designing opportunities for students to connect with individuals outside their immediate circles—such as interviewing a local official about a community issue, collaborating with students in another state or country, or engaging with a scientist on an environmental topic. The focus is on using technology not just to communicate, but to co-learn and co-investigate. These experiences help students develop empathy, critical thinking, and digital citizenship skills, while also reinforcing the idea that learning is a social and connected process.
6-8.GC.7.c.	Students determine their role in a team to meet goals, based on their knowledge of technology and content and personal preference.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students began to recognize different roles in group work and try out various responsibilities when using technology to complete tasks. In grades 6-8, students intentionally choose roles within a team based on their strengths in technology, content knowledge, and personal interests to help achieve shared goals. In grades 9-12, students will take initiative in defining and refining their roles in collaborative teams, aligning responsibilities with their expertise and the needs of the group to maximize productivity and innovation. *IMPORTANT CONCEPTS* • Students identify and select a team role that aligns with their strengths and interests. • Students contribute to group goals by applying relevant technology and content knowledge. • Students reflect on how their role supports the team's success. *KEY SKILLS/PROCEDURES* • Self-assess strengths in technology and subject matter. • Understand different roles in collaborative settings. • Communicate role choices and responsibilities clearly to teammates. • Adapt roles as needed to support team dynamics and project goals. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*determine their role*" emphasizes student agency—they are not simply assigned a task but are expected to make thoughtful decisions about how they can best contribute. The reference to "*knowledge of technology and content*" means students should consider both their technical

Code	Description	Model Curriculum
		skills (e.g., using digital tools, troubleshooting, designing) and their understanding of the subject matter when selecting a role. "*Personal preference*" acknowledges that motivation and interest also play a part in effective collaboration. This standard encourages students to reflect on their strengths, communicate their choices, and take ownership of their contributions within a team setting. *CONTENT FOCUS* This content statement focuses on students developing collaborative self-awareness, the ability to recognize their own skills, interests, and how they can best support a team. Educators should provide structured opportunities for students to explore different roles in group projects and reflect on their experiences. This might include rotating roles, using role cards, or having students complete self-assessments before group work begins. The emphasis is on intentional role selection that supports both individual growth and team success, preparing students for real-world collaboration where understanding one's role is key to achieving shared goals.
6-8.GC.7.d.	Students select collaborative technologies and use them to work with others to investigate and develop solutions related to local and global issues.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 3-5, students used teacher-selected digital tools to work with classmates on simple projects that explore local topics or problems. In grades 6-8, students independently choose appropriate collaborative technologies to work with others in exploring and addressing both local and global issues. In grades 9-12, students will lead collaborative efforts using advanced digital tools to co-design, implement, and evaluate solutions to complex, real-world challenges across diverse communities. *IMPORTANT CONCEPTS* • Students select and use digital tools to collaborate with others. • Students investigate real-world issues that affect their communities or the world. • Students develop and propose solutions through teamwork and digital collaboration. *KEY SKILLS/PROCEDURES* • Evaluate and select appropriate collaborative technologies. • Research local and global issues. • Collaborate with peers to brainstorm, plan, and develop solutions.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*select collaborative technologies*" highlights student autonomy in choosing tools that best support their goals. The emphasis on "*work with others*" reinforces the importance of teamwork and shared responsibility. The verbs "*investigate and develop solutions*" suggest a process that includes inquiry, analysis, and creative problem-solving. Finally, the reference to "*local and global issues*" encourages students to think both within their immediate communities and beyond, fostering a sense of civic responsibility and global awareness. Educators should support students in identifying meaningful issues, selecting appropriate tools, and engaging in collaborative problem-solving processes. *CONTENT FOCUS* This content statement focuses on empowering students to become solution-oriented collaborators who can use technology to address real-world challenges. Educators can design project-based learning experiences where students identify a local or global issue—such as environmental sustainability, access to clean water, or digital equity—and work in teams to research the problem and propose actionable solutions. The emphasis is on student choice, authentic collaboration, and purposeful use of technology. These experiences help students build digital fluency, critical thinking, and teamwork skills while also fostering a sense of agency and global citizenship.

Grade 9- Grade 12

1. Empowered Learner

Students leverage technology to take an active role in choosing, achieving, and demonstrating competency in their learning goals, informed by the learning sciences.

Code	Description	Model Curriculum
9-12.EL.1.a.	Students articulate and set personal learning goals, develop strategies leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began identifying personal learning goals and using digital tools to monitor their progress. In grades 9–12, they take greater ownership by setting clear goals, selecting and applying technology-based strategies, and reflecting on their learning to improve outcomes. *IMPORTANT CONCEPTS* • Students set and articulate personal learning goals. • Students use technology to develop and apply strategies to achieve learning goals. • Students reflect on the learning process to improve outcomes. *KEY SKILLS/PROCEDURES* • Articulate and document personal learning goals. • Select and apply appropriate digital tools. • Monitor progress and adjust strategies. • Reflect on successes and challenges to inform future learning. **CONTENT ELABORATIONS** *CLARIFICATIONS* This indicator uses the phrase "*articulate and set personal learning goals*," which emphasizes that students should not only define their goals but also be able to clearly express them—verbally or in writing. The phrase "*develop strategies leveraging technology*" highlights the expectation that students will intentionally select and use digital tools (such as apps, platforms, or devices) to support their learning process. The final part, "*reflect on the learning process itself to improve learning outcomes*," shifts the focus from just completing tasks to engaging in metacognitive practices—thinking about how they learn, evaluating the effectiveness of their strategies, and adjusting to enhance future performance. This reflection is not just about what was learned, but

Code	Description	Model Curriculum
		how it was learned, and how technology played a role in that process. *CONTENT FOCUS* Instruction should support students in becoming self-directed learners who use technology to manage and enhance their learning. Educators should provide structured opportunities for goal-setting, strategy development, and reflection, while introducing a variety of digital tools that can support these processes.
9-12.EL.1.b.	Students build networks and customize their learning environments in ways that support the learning process.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began exploring digital tools and environments to support their learning and started connecting with others in safe, structured ways. In grades 9–12, students take a more active role by intentionally building learning networks and tailoring their digital environments to meet their individual learning needs and preferences. *IMPORTANT CONCEPTS* • Students connect with peers, educators, experts, and communities through digital platforms to support academic and personal growth. • Students select and organize tools, apps, and settings that align with individual learning styles, goals, and accessibility needs. • Students engage with diverse resources that enhance understanding and expand learning. *KEY SKILLS/PROCEDURES* • Identify and use platforms, like forums, social learning sites, and professional networks. • Curate digital tools and resources that align with learning goals. • Manage digital spaces. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*build networks*" refers to students actively seeking out and engaging with individuals, communities, and resources, both locally and globally, that can support their learning. This could include following experts on social media, joining online forums, or participating in virtual study groups. "*Customize their learning environments*" means students are expected to adapt digital tools and platforms to suit their learning styles and goals, such as organizing their digital workspace, choosing apps that support focus, or adjusting settings for accessibility. The emphasis is on

Code	Description	Model Curriculum
		intentionality: students are not just using technology but shaping it to enhance their learning experience. *CONTENT FOCUS* Instruction should encourage students to explore and evaluate digital tools and communities that can support their learning. Educators can guide students in identifying trustworthy sources, managing their digital presence, and creating personalized digital environments that foster engagement, collaboration, and academic growth.
9-12.EL.1.c.	Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began using digital tools to receive feedback and share their work with others. In grades 9–12, students take a more proactive role by intentionally seeking feedback through technology and using it to refine their work, while also choosing diverse digital formats to demonstrate their learning. *IMPORTANT CONCEPTS* • Students use digital tools to seek and apply feedback. • Students improve work based on feedback received. • Students demonstrate learning through multiple digital formats. • Students engage in iterative improvement using technology. *KEY SKILLS/PROCEDURES* • Use platforms to gather feedback. • Analyze and apply feedback to revise work. • Select appropriate digital formats. • Practice digital collaboration and communication. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*seek feedback*" emphasizes that students are not passively receiving input but are actively using technology to request and engage with feedback from teachers, peers, or external audiences. "*Informs and improves their practice*" means that students are expected to reflect on the feedback and revise their work, accordingly, showing growth over time. The second part, "*demonstrate their learning in a variety of ways*," encourages students to move beyond

Code	Description	Model Curriculum
		traditional assessments and use digital tools to creatively express their understanding—through multimedia, interactive presentations, or other formats that align with their strengths and learning goals. *CONTENT FOCUS* Instruction should support students in using technology to engage in meaningful feedback cycles and to present their learning in diverse, authentic ways. Educators can model how to give and receive constructive feedback digitally and provide opportunities for students to choose how they demonstrate mastery using various digital tools and media.
9-12.EL.1.d.	Students understand the fundamental concepts of how technology works, demonstrate the ability to choose and use current technologies effectively, and are adept at thoughtfully exploring emerging technologies.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began developing a foundational understanding of how technology functions and practiced using common tools to support learning. In grades 9–12, students deepen their understanding of technological systems, make informed decisions about which tools to use, and begin exploring new and emerging technologies with curiosity and critical thinking. *IMPORTANT CONCEPTS* • Students understand core principles of how digital technologies function. • Students select and use current technologies effectively for learning and productivity. • Students explore and evaluate emerging technologies thoughtfully and responsibly. • Students adapt to new tools and platforms as they evolve. *KEY SKILLS/PROCEDURES* • Explain basic concepts such as hardware/software interactions, networks, and data flow. • Evaluate and select appropriate tools for specific tasks. • Stay informed about new technologies. • Practice safe, ethical, and critical use of unfamiliar or emerging tools. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*understand the fundamental concepts of how technology works*" refers to students having a conceptual grasp of how digital systems operate—such as how data is stored and transferred, how software interacts with hardware, and how networks function. "*Demonstrate the*

Code	Description	Model Curriculum
		ability to choose and use current technologies effectively" means students are expected to evaluate the purpose and functionality of available tools and select those that best meet their needs. The final part, "*adept at thoughtfully exploring emerging technologies*," encourages students to engage with new tools not just for novelty, but with curiosity, caution, and critical thinking—considering their potential impact, usefulness, and ethical implications. *CONTENT FOCUS* Instruction should help students build both conceptual and practical fluency with technology. Educators should provide opportunities for students to explore how technology works, make informed choices about the tools they use, and critically engage with new technologies as they emerge. This prepares students to be adaptable, responsible users and innovators in a rapidly evolving digital world.

2. Digital Citizen

Students recognize the responsibilities and opportunities for contributing to their digital communities, including making safe, legal, and ethical decisions using Artificial Intelligence.

Code	Description	Model Curriculum
9-12.DC.2.a.	Students manage their digital identity, understand the lasting impact of their online behaviors on themselves and others, and make safe, legal, and ethical decisions in the digital world.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began developing awareness of their digital presence and learned to engage in safe and respectful online behavior. In grades 9–12, students take greater responsibility for shaping and managing their digital identity, recognizing the long-term consequences of their actions, and making informed, ethical decisions in increasingly complex digital environments. *IMPORTANT CONCEPTS* • Students manage and shape a positive digital identity. • Students understand the permanence and impact of online behavior. • Students make safe, legal, and ethical decisions in digital spaces. • Students recognize how digital actions affect both self and others. *KEY SKILLS/PROCEDURES* • Curate online profiles and content to reflect personal values and goals. • Evaluate the consequences of digital footprints.

Code	Description	Model Curriculum
		• Apply digital citizenship principles to real-world scenarios. • Understand laws and ethical guidelines related to digital spaces. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*manage their digital identity*" refers to students actively shaping how they are perceived online—through social media, digital portfolios, and other online interactions. This includes being intentional about what they post, share, and engage with. "*Understand the lasting impact of their online behaviors*" emphasizes that digital actions—whether positive or negative—can have long-term consequences for college, careers, and relationships. The final part, "*make safe, legal, and ethical decisions in the digital world*," requires students to apply knowledge of digital safety (e.g., protecting personal information), legality (e.g., respecting intellectual property), and ethics (e.g., treating others with respect) to their online behavior. *CONTENT FOCUS* Instruction should help students critically examine their digital presence and understand how their online behavior can influence their future. Educators should provide real-world examples and scenarios that allow students to practice making ethical decisions, evaluate digital risks, and build a responsible digital identity. This prepares students to navigate digital spaces with integrity, awareness, and confidence.
9-12.DC.2.b.	Students demonstrate empathetic, inclusive interactions online and use technology to contribute responsibly to their communities.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students learned to engage respectfully with others online and began recognizing the importance of digital etiquette and kindness. In grades 9–12, students are expected to go further by demonstrating empathy and inclusivity in digital interactions and using technology as a tool for civic engagement and positive community impact. *IMPORTANT CONCEPTS* • Students engage in respectful, empathetic, and inclusive communication online. • Students recognize and respond to diverse perspectives in digital spaces. • Students use technology to support and improve local, global, or digital communities. • Students promote digital culture through responsible participation.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Practice active listening and respectful dialogue in online discussions. • Identify and address bias, exclusion, or harmful behavior in digital spaces. • Participate in digital civic activities. • Use collaborative tools to support community initiatives. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*demonstrate empathetic, inclusive interactions online*" means students are expected to engage with others in ways that show understanding, respect, and openness to different backgrounds and viewpoints. This includes avoiding harmful language, recognizing bias, and fostering a sense of belonging in digital communities. The second part, "*use technology to contribute responsibly to their communities*," emphasizes action—students should apply their digital skills to make a positive difference, whether by raising awareness, organizing events, or supporting causes. This indicator encourages students to see themselves as digital citizens with the power and responsibility to shape their communities for the better. *CONTENT FOCUS* Instruction should help students develop the social and emotional skills needed for inclusive digital communication and empower them to use technology for civic and community engagement. Educators can provide opportunities for students to collaborate on digital projects that address real-world issues, practice inclusive communication strategies, and reflect on the impact of their digital actions on others.
9-12.DC.2.c.	Students safeguard their well-being by being intentional about what they do online and how much time they spend online.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began to recognize how their online habits affect their well-being and learned basic strategies for managing screen time and digital distractions. In grades 9–12, students are expected to take greater ownership of their digital wellness by making intentional choices about their online activities and developing healthy, balanced technology use habits. *IMPORTANT CONCEPTS* • Students make intentional choices about online activities. • Students monitor and manage screen time and digital habits.

Code	Description	Model Curriculum
		• Students understand the impact of digital behavior on mental, emotional, and physical health. • Students develop strategies for maintaining digital balance and well-being. *KEY SKILLS/PROCEDURES* • Track and reflect on time spent online. • Setting personal boundaries and goals for digital use. • Identify signs of digital fatigue or overuse. • Practice mindfulness and self-regulation in digital environments. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*safeguard their well-being*" refers to students taking proactive steps to protect their mental, emotional, and physical health in relation to their digital lives. This includes recognizing when online activity becomes overwhelming or harmful and knowing how to respond. "*Being intentional about what they do online*" means students should critically evaluate the purpose and value of their digital interactions—choosing activities that support learning, creativity, or connection rather than passive or harmful consumption. "*How much time they spend online*" highlights the importance of balance—students should be aware of their screen time and develop habits that support a healthy lifestyle, including offline activities, rest, and face-to-face interactions. *CONTENT FOCUS* Instruction should help students reflect on their digital habits and understand how those habits affect their overall well-being. Educators can support students in developing personalized strategies for managing screen time, setting digital boundaries, and making mindful choices about their online engagement. This prepares students to lead balanced, healthy lives in a technology-rich world.
9-12.DC.2.d.	Students take action to protect their digital privacy on devices and manage their personal data and security while online.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students were introduced to the importance of protecting personal information and began learning basic strategies for online safety. In grades 9–12, students are expected to take more independent and proactive steps to secure their digital privacy, manage their personal data, and

Code	Description	Model Curriculum
		understand the broader implications of digital security. *IMPORTANT CONCEPTS* • Students protect personal data and digital privacy across devices and platforms. • Students understand risks associated with data sharing and online tracking. • Students use tools and settings to manage privacy and security. • Students make informed decisions about digital consent and data ownership. *KEY SKILLS/PROCEDURES* • Adjust privacy settings on devices, browsers, and apps. • Use strong passwords, multi-factor authentication, and secure connections. • Identify phishing attempts, scams, and unsafe websites. • Review and manage data permissions and digital footprints. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*take action to protect their digital privacy*" emphasizes that students must go beyond awareness and actively implement strategies to safeguard their personal information. This includes configuring privacy settings, using secure passwords, and being cautious about what they share online. "*Manage their personal data and security while online*" means students should understand how their data is collected, stored, and used by websites and apps—and take steps to control that process. This indicator also implies a growing awareness of digital consent, data ownership, and the ethical implications of data sharing in a connected world. *CONTENT FOCUS* Instruction should empower students to take control of their digital privacy and security. Educators can provide hands-on experiences with privacy tools, simulate real-world scenarios involving data risks, and guide students in developing personal data management plans. The goal is to help students become informed, responsible digital citizens who can navigate the digital world safely and confidently.

3. Knowledge Constructor

Students critically curate a variety of resources using digital tools, such as Artificial Intelligence chatbots, to construct knowledge, produce creative artifacts, and make meaningful learning experiences for themselves and others.

Code	Description	Model Curriculum
9-12.KC.3.a	Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6-8, students used advanced search techniques to locate information using digital learning tools and resources. In grades 9-12, students use advanced search and filtering techniques to locate information using digital learning tools and resources. *IMPORTANT CONCEPTS* • Students develop and follow a structured research plan. • Students use a variety of digital tools and databases to locate credible information. • Students tailor research strategies to fit the purpose and scope of the inquiry. • Students apply research skills to both academic and creative pursuits. *KEY SKILLS/PROCEDURES* • Formulate research questions and keywords. • Select appropriate search engines, databases, and digital libraries. • Use advanced search techniques. • Organize and document sources effectively. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*plan and employ effective research strategies*" emphasizes that students should not approach research randomly—they are expected to think critically about their goals, develop a plan, and choose tools and methods that align with their purpose. "*To locate information and other resources*" includes both traditional academic sources (e.g., scholarly articles, databases) and creative or multimedia resources (e.g., images, videos, datasets). The phrase "*for their intellectual or creative pursuits*" broadens the scope beyond school assignments, encouraging students to apply research skills to personal interests, passion projects, or real-world problem-solving.

Code	Description	Model Curriculum
		CONTENT FOCUS Instruction should help students become strategic and independent researchers. Educators can guide students in developing research questions, selecting appropriate tools, and evaluating the quality and relevance of sources. Emphasis should be placed on applying research skills across disciplines and contexts, including creative projects, inquiry-based learning, and real-world investigations.
9-12.KC.3.b	Students evaluate the accuracy, perspective, credibility, and relevance of information, media, data, or other resources.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began learning how to assess the credibility of sources and identify bias in digital content. In grades 9–12, students are expected to apply more advanced critical thinking skills to evaluate not only the trustworthiness of sources but also the accuracy, perspective, and relevance of a wide range of information types, including media and data. *IMPORTANT CONCEPTS* • Students evaluate the accuracy of information by checking for factual correctness and consistency across sources. • Students assess the credibility of sources by considering authorship, publication, and evidence. • Students analyze the perspective or bias present in information and media. • Students determine the relevance of information to the research question or task. *KEY SKILLS/PROCEDURES* • Cross-reference multiple sources to verify facts. • Identify author credentials and organizational affiliations. • Detect bias, propaganda, or misinformation. • Apply evaluation frameworks. • Filter out irrelevant or low-quality sources. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*evaluate the accuracy, perspective, credibility, and relevance*" signals a comprehensive and nuanced approach to information literacy. "*Accuracy*" refers to whether the information is factually correct and supported by evidence. "*Perspective*" involves recognizing the point of view or

Code	Description	Model Curriculum
		bias that may shape how information is presented. "*Credibility*" requires students to consider the trustworthiness of the source, including the author's expertise and the publication's reputation. "*Relevance*" means determining whether the information directly supports the student's purpose or inquiry. This indicator expects students to be discerning consumers of information in an age of abundant and often conflicting content. *CONTENT FOCUS* Instruction should help students develop a critical lens for evaluating all types of information they encounter. Educators can model evaluation strategies, provide practice with real-world examples, and encourage students to question the reliability and intent behind the content they use. This prepares students to make informed decisions, avoid misinformation, and engage in responsible research and media consumption.
9-12.KC.3.c	Students curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began gathering and organizing digital content to support learning and simple presentations. In grades 9–12, students are expected to curate more purposefully—selecting, organizing, and synthesizing digital resources to create collections that reflect deeper understanding, draw conclusions, or communicate complex ideas. *IMPORTANT CONCEPTS* • Students curate digital content with purpose and intention. • Students use digital tools to organize and present information. • Students create collections that reflect meaningful patterns, themes, or conclusions. • Students demonstrate understanding through synthesis of diverse resources. *KEY SKILLS/PROCEDURES* • Select relevant and credible digital resources. • Use tools such as digital portfolios, multimedia presentations, or curation platforms. • Organize content by theme, chronology, or argument. • Annotate or contextualize artifacts to show connections and insights. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*curate information from digital resources*" means students are not just collecting

Code	Description	Model Curriculum
		content—they are thoughtfully selecting and organizing it to serve a specific purpose. "*Using a variety of tools and methods*" encourages flexibility and creativity in how students gather and present information, whether through visual, textual, or interactive formats. The goal is to create "*collections of artifacts*"—such as images, articles, videos, or data—that are not random but intentionally grouped to "*demonstrate meaningful connections or conclusions*." This indicator emphasizes synthesis, critical thinking, and communication through digital media. *CONTENT FOCUS* Instruction should guide students in moving beyond simple information gathering to purposeful curation. Educators can model how to use digital tools to organize and annotate content and provide opportunities for students to create collections that reflect their understanding of a topic or issue. This supports deeper learning and helps students develop skills in digital storytelling, research synthesis, and knowledge construction.
9-12.KC.3.d	Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories, and pursuing answers and solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began investigating real-world problems using digital tools and were introduced to basic inquiry and problem-solving strategies. In grades 9–12, students are expected to take a more active and independent role in exploring complex issues, generating original ideas, and applying research and critical thinking to develop informed solutions. *IMPORTANT CONCEPTS* • Students investigate real-world issues using digital tools and resources. • Students develop original ideas, hypotheses, or theories based on inquiry. • Students pursue solutions through research, experimentation, or collaboration. • Students apply knowledge to authentic, meaningful contexts. *KEY SKILLS/PROCEDURES* • Identify and frame real-world problems or questions. • Conduct in-depth research using credible sources. • Synthesize information to develop theories or propose solutions. • Collaborate with others to refine ideas and take action. • Communicate findings through digital media or presentations.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*build knowledge by actively exploring real-world issues and problems*" emphasizes student-driven inquiry into authentic topics that matter beyond the classroom. This could include social, environmental, economic, or technological challenges. "*Developing ideas and theories*" means students are expected to go beyond gathering facts—they should analyze, interpret, and generate original thinking. Finally, "*pursuing answers and solutions*" highlights the application of knowledge: students should use what they learn to propose or implement solutions, demonstrating initiative, creativity, and critical thinking. This indicator supports deeper learning through inquiry, relevance, and action. *CONTENT FOCUS* Instruction should encourage students to engage with real-world problems that are meaningful to them and their communities. Educators can support this by guiding students through inquiry-based learning, project-based learning, or design thinking processes. The goal is to help students become curious, informed, and empowered problem-solvers who use knowledge to make a difference.

4. Innovative Designer

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful, or imaginative solutions.

Code	Description	Model Curriculum
9-12.ID.4.a.	Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6-8, students documented how technology can impact efficiency and analyzed how tools and processes can alter the natural and human-designed worlds. Students also examined how components of a system interrelate and how changes in one part of a system can impact other parts of that system. In grades 9-12, students explore and document how systems theory includes the concepts of system dynamics, systems thinking and computational thinking.

Code	Description	Model Curriculum
		IMPORTANT CONCEPTS • Students understand and apply a structured design process. • Students generate and refine ideas through brainstorming and prototyping. • Students test theories and evaluate outcomes. • Students create innovative solutions or artifacts that address authentic problems. *KEY SKILLS/PROCEDURES* • Identify problems or opportunities for innovation. • Use design frameworks to guide problem-solving. • Prototype, test, and refine ideas. • Document the design process and reflect on outcomes. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*know and use a deliberate design process*" emphasizes that students should be familiar with and intentionally apply a structured approach to problem-solving—such as design thinking, the engineering design process, or other iterative models. "*Generating ideas, testing theories, creating innovative artifacts, or solving authentic problems*" outlines the range of applications for the design process. Whether students are developing a product, exploring a scientific theory, or addressing a real-world issue, they are expected to move through stages of ideation, experimentation, and refinement. This indicator highlights creativity, critical thinking, and purposeful innovation. *CONTENT FOCUS* Instruction should immerse students in hands-on, inquiry-based learning experiences where they can apply design processes to real-world challenges. Educators should introduce various design models, provide opportunities for iteration and feedback, and encourage students to reflect on their process and outcomes. The goal is to help students become confident, creative problem-solvers who can turn ideas into impactful solutions.

Code	Description	Model Curriculum
9-12.ID.4.b.	Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began using digital tools to support simple design tasks and were introduced to the concept of constraints and trade-offs. In grades 9–12, students are expected to independently choose appropriate digital tools to plan, organize, and manage complex design processes while accounting for real-world limitations and making informed decisions about potential risks. *IMPORTANT CONCEPTS* • Students select appropriate digital tools to support each phase of the design process. • Students plan and manage design tasks using digital platforms. • Students identify and work within design constraints. • Students evaluate and take calculated risks to improve innovation and outcomes. *KEY SKILLS/PROCEDURES* • Use project-management tools to organize tasks and timelines. • Apply design constraints to guide decision-making. • Weigh potential risks and benefits of design choices. • Iterate and adjust plans based on feedback or limitations. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*select and use digital tools*" emphasizes student agency in choosing the right tools for planning, organizing, and executing a design process—this could include collaborative platforms, prototyping software, or digital whiteboards. "*Plan and manage a design process*" means students are expected to take ownership of the workflow, from ideation to execution, using digital tools to track progress and coordinate tasks. The inclusion of "*design constraints and calculated risks*" reflects real-world problem-solving: students must consider limitations (such as time, cost, or technical feasibility) and make thoughtful decisions about when and how to take risks that could lead to innovation or improvement. *CONTENT FOCUS* Instruction should help students develop project management and decision-making skills within the context of design. Educators can introduce tools and strategies for planning and tracking

Code	Description	Model Curriculum
		progress, while also guiding students in identifying constraints and evaluating risks. This prepares students to manage complex, real-world projects with confidence and adaptability.
9-12.ID.4.c.	Students develop, test, and refine prototypes as part of a cyclical design process.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began creating simple prototypes and learned to revise their work based on feedback. In grades 9–12, students are expected to engage in a more structured, iterative design process—developing functional prototypes, testing them in real or simulated environments, and refining their designs based on data, feedback, and reflection. *IMPORTANT CONCEPTS* • Students develop prototypes that represent ideas or solutions. • Students test prototypes to gather data and feedback. • Students refine designs through iterative cycles of improvement. • Students use failure and feedback as tools for learning and innovation. *KEY SKILLS/PROCEDURES* • Create low- or high-fidelity prototypes using digital or physical tools. • Conduct user testing or simulations to evaluate performance. • Analyze test results and feedback to identify areas for improvement. • Iterate designs based on evidence and reflection. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase **"***develop, test, and refine prototypes*" outlines a full cycle of design thinking. "*Develop*" refers to creating a tangible or digital representation of an idea—this could be a model, mock-up, or working version. "*Test*" means students must evaluate how well the prototype meets the intended goals, often through user interaction, data collection, or performance analysis. "*Refine*" emphasizes the importance of iteration—students are expected to revise and improve their prototypes based on what they learn during testing. The phrase "*as part of a cyclical design process*" reinforces that this is not a one-time event but an ongoing loop of improvement, central to innovation and problem-solving.

Code	Description	Model Curriculum
		CONTENT FOCUS Instruction should immerse students in hands-on, iterative design experiences where they can bring ideas to life through prototyping. Educators should support students in using feedback and testing as learning tools, encouraging a mindset that values revision and resilience. This prepares students to approach challenges with creativity, persistence, and a willingness to improve through iteration.
9-12.ID.4.d.	Students exhibit a tolerance for ambiguity, perseverance, and the capacity to work with open-ended problems.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began encountering open-ended tasks and learned to persist through challenges with guidance. In grades 9–12, students are expected to independently navigate uncertainty, persist through setbacks, and approach complex, open-ended problems with confidence and flexibility. *IMPORTANT CONCEPTS* • Students embrace ambiguity and uncertainty as part of the creative and problem-solving process. • Students demonstrate perseverance when facing challenges or failure. • Students approach open-ended problems with curiosity and adaptability. • Students reflect on setbacks as opportunities for growth and learning. *KEY SKILLS/PROCEDURES* • Manage frustration and maintain motivation during complex tasks. • Iterate and revise work in response to challenges. • Apply flexible thinking and multiple strategies to solve problems. • Reflect on the process and adapt the approach as needed. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase **"***tolerance for ambiguity*" refers to students' ability to remain engaged and productive even when outcomes are uncertain or problems lack clear solutions. "*Perseverance*" emphasizes the importance of sustained effort, especially when facing obstacles or failure. "*Capacity to work with open-ended problems*" means students are expected to explore multiple pathways, generate original ideas, and adapt their thinking as they uncover new information or encounter unexpected results. This indicator highlights the mindset and habits of resilient, creative thinkers who thrive in

Code	Description	Model Curriculum
		complex, real-world contexts. *CONTENT FOCUS* Instruction should foster a classroom culture that values experimentation, risk-taking, and resilience. Educators can design learning experiences that include open-ended challenges, encourage reflection on failure, and celebrate persistence. The goal is to help students build the confidence and mindset needed to tackle complex problems with creativity and determination.

5. Computational Thinker

Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Code	Description	Model Curriculum
9-12.CT.5.a.	Students formulate problem definitions suited for technology-assisted methods such as data analysis, abstract models, and algorithmic thinking in exploring and finding solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began identifying problems and exploring how technology could help solve them using basic data and logical reasoning. In grades 9–12, students are expected to define problems more precisely and strategically, aligning them with technology-based approaches like data analysis, modeling, and algorithmic thinking to explore and develop solutions. *IMPORTANT CONCEPTS* • Students define problems clearly and precisely. • Students align problem definitions with appropriate technology-assisted methods. • Students understand when and how to apply data analysis, modeling, or algorithms. • Students use computational thinking to explore and solve complex problems. *KEY SKILLS/PROCEDURES* • Break down complex problems into manageable components. • Identify which aspects of a problem can be addressed through technology. • Select appropriate computational methods. • Frame problems in ways that support digital or automated solutions.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase **"***formulate problem definitions*" emphasizes the importance of clearly articulating what needs to be solved—this includes identifying constraints, goals, and variables. "*Suited for technology-assisted methods*" means students should recognize when a problem can be effectively addressed using tools like data analysis (e.g., spreadsheets, databases), abstract models (e.g., simulations, diagrams), or algorithmic thinking (e.g., step-by-step procedures or logic flows). This indicator encourages students to think critically about the nature of a problem and to match it with the most effective digital strategies for exploration and solution. *CONTENT FOCUS* Instruction should help students develop the ability to define problems in ways that lend themselves to computational solutions. Educators can guide students through real-world scenarios where they must identify problems, determine which parts can be addressed with technology, and choose appropriate methods to explore solutions. This prepares students to approach challenges with a problem-solving mindset grounded in computational thinking.
9-12.CT.5.b.	Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began collecting and organizing data using basic digital tools and learned to interpret simple visualizations. In grades 9–12, students are expected to independently locate or generate relevant data, apply analytical tools to uncover patterns or insights, and represent findings in meaningful ways to support decision-making and problem-solving. *IMPORTANT CONCEPTS* • Students identify or collect data relevant to a specific problem or inquiry. • Students use digital tools to analyze data and extract meaningful insights. • Students represent data visually. • Students use data to inform decisions, support arguments, or solve problems. *KEY SKILLS/PROCEDURES* • Locate or generate datasets from reliable sources. • Use spreadsheets, data analysis software, or coding tools. • Apply statistical or computational methods to interpret data.

Code	Description	Model Curriculum
		• Create visual representations that clearly communicate findings. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase **"***collect data or identify relevant data sets*" means students should either gather their own data (e.g., through surveys, experiments, or observations) or locate existing datasets that are appropriate for their inquiry. "*Use digital tools to analyze them*" refers to applying software or platforms to sort, filter, calculate, or visualize data in ways that reveal patterns or trends. "*Represent data in various ways*" emphasizes the importance of communicating findings clearly—through graphs, charts, dashboards, or other visual formats. The goal is to "*facilitate problem-solving and decision-making*," meaning students should use data not just for display, but to support conclusions, justify choices, or guide actions. *CONTENT FOCUS* Instruction should help students become confident and critical users of data. Educators can provide opportunities for students to work with real-world datasets, explore digital analysis tools, and create visualizations that support inquiry and decision-making. This prepares students to use data as a powerful tool for understanding and solving complex problems in academic, civic, and professional contexts.
9-12.CT.5.c.	Students break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began practicing decomposition—breaking down simple problems—and identifying relevant information to support basic solutions. In grades 9–12, students are expected to apply these skills to more complex systems, using abstraction and modeling to understand relationships, predict outcomes, and support decision-making. *IMPORTANT CONCEPTS* • Students decompose complex problems into smaller, manageable parts. • Students identify and extract essential information from large or complex datasets or scenarios. • Students develop descriptive models to represent systems or processes. • Students use models to analyze, explain, or solve problems.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Apply decomposition to isolate variables or components. • Filter out irrelevant data or noise to focus on key elements. • Create visual or conceptual models to represent systems. • Use models to test hypotheses, predict outcomes, or communicate understanding. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*break problems into component parts*" refers to the computational thinking skill of decomposition—analyzing a complex issue by dividing it into smaller, more manageable elements. "*Extract key information*" means identifying the most relevant data or variables needed to understand or solve the problem. "*Develop descriptive models*" involves creating representations—such as diagrams, simulations, or conceptual frameworks—that help visualize how parts of a system interact. These models are not necessarily mathematical; they are tools for understanding complexity and supporting reasoning. This indicator emphasizes abstraction, systems thinking, and the use of models to support problem-solving. *CONTENT FOCUS* Instruction should help students build fluency in breaking down complex problems and using models to make sense of systems. Educators can provide real-world scenarios that require students to identify key components, organize information, and represent their thinking visually or conceptually. This prepares students to tackle multifaceted challenges using structured, analytical approaches.
9-12.CT.5.d.	Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students were introduced to basic automation concepts and practiced creating simple sequences or instructions using coding or logic-based tools. In grades 9–12, students are expected to deepen their understanding of how automation functions and apply algorithmic thinking to design, implement, and test automated solutions to real-world problems. *IMPORTANT CONCEPTS* • Students understand the principles behind automation and how it is used in digital systems. • Students apply algorithmic thinking to break down tasks into logical, ordered steps.

Code	Description	Model Curriculum
		• Students design and test automated processes or systems. • Students use automation to improve efficiency, accuracy, or scalability. *KEY SKILLS/PROCEDURES* • Write or design algorithms using flowcharts, pseudocode, or programming languages. • Use tools such as coding platforms, robotics kits, or automation software. • Test and debug automated solutions. • Evaluate the effectiveness and efficiency of automated processes. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*understand how automation works*" refers to students grasping the underlying logic and structure of automated systems—how machines or software follow programmed instructions to perform tasks without continuous human input. "*Use algorithmic thinking*" means students should be able to break down problems into a logical sequence of steps that can be followed by a computer or automated system. "*Create and test automated solutions*" emphasizes hands-on application: students should design and implement processes that can run automatically, then test and refine them to ensure they function as intended. This indicator supports computational fluency and prepares students for real-world applications of automation in fields like computer science, engineering, and business. *CONTENT FOCUS* Instruction should provide students with opportunities to explore and build automated systems using algorithmic thinking. Educators can introduce coding, robotics, or workflow automation tools and guide students through the process of designing, testing, and refining automated solutions. The focus is on helping students understand how automation can solve problems efficiently and how to think like a computer when designing those solutions.

6. Creative Communicator

Students communicate clearly and express themselves creatively for a variety of purposes, such as AI prompt engineering, using platforms, tools, styles, formats, and digital media appropriate to their goals.

Code	Description	Model Curriculum
9-12.CC.6.a.	Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began using a variety of digital tools to create and share content, often with guidance on which tools to use. In grades 9–12, students are expected to independently evaluate and select the most effective platforms and tools based on their communication goals, audience, and context. *IMPORTANT CONCEPTS* • Students evaluate the purpose and audience of a communication or creation. • Students select digital tools and platforms that align with the intended message and format. • Students understand the strengths and limitations of different tools. • Students use technology strategically to enhance clarity, engagement, and impact. *KEY SKILLS/PROCEDURES* • Compare features of tools. • Match tools to communication goals. • Adapt content to fit the conventions of different platforms. • Make intentional choices about format, tone, and delivery. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*choose the appropriate platforms and tools*" emphasizes student agency and decision-making in the creative process. Rather than defaulting to familiar tools, students are expected to evaluate their options and select those that best serve their communication goals. "*Meeting the desired objectives*" means students must consider the purpose of their message—whether it's to inform, persuade, entertain, or collaborate—and choose tools that support that purpose effectively. This indicator encourages thoughtful, strategic use of technology to enhance communication and creativity.

Code	Description	Model Curriculum
		CONTENT FOCUS Instruction should help students become discerning users of digital tools by encouraging them to think critically about the relationship between message, audience, and medium. Educators can provide opportunities for students to explore a range of platforms, reflect on their effectiveness, and justify their choices. This prepares students to communicate effectively and creatively in diverse digital contexts.
9-12.CC.6.b.	Students create original works or responsibly repurpose or remix digital resources into new creations.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began creating digital content and were introduced to the concept of remixing existing resources while respecting copyright and attribution. In grades 9–12, students are expected to independently create original digital works or ethically repurpose existing content—demonstrating creativity, critical thinking, and respect for intellectual property. *IMPORTANT CONCEPTS* • Students create original digital content using a variety of tools and media. • Students ethically remix or repurpose existing digital resources. • Students understand and apply copyright, fair use, and attribution practices. • Students use digital creation as a means of expression, communication, or problem-solving. *KEY SKILLS/PROCEDURES* • Design original works. • Source and cite digital content appropriately. • Edit, combine, or transform existing media into something new. • Use digital tools to enhance originality and creativity. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*create original works*" refers to students producing unique digital content that reflects their ideas, voice, or perspective. "*Responsibly repurpose or remix*" means students may use existing digital materials—such as images, audio, or video—but must do so ethically, respecting copyright laws and giving proper credit. This indicator encourages both originality and creative transformation, while reinforcing the importance of digital ethics and intellectual property rights.

Code	Description	Model Curriculum
		Students should understand the difference between inspiration and appropriation, and how to navigate that boundary responsibly. *CONTENT FOCUS* Instruction should support students in expressing themselves through digital creation while also teaching them how to ethically use and transform existing content. Educators can introduce copyright and Creative Commons concepts, model proper attribution, and provide opportunities for students to create both original and remixed works. This prepares students to be both creative producers and responsible digital citizens.
9-12.CC.6.c.	Students communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models, or simulations.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began using digital tools to present ideas and information, often with support. In grades 9–12, students are expected to independently select and use digital formats—such as visualizations, models, or simulations—to clearly and effectively communicate complex or abstract ideas to a specific audience. *IMPORTANT CONCEPTS* • Students communicate complex or abstract ideas using digital media. • Students select appropriate digital formats to enhance clarity and understanding. • Students use visualizations, models, or simulations to represent data, systems, or concepts. • Students tailor communication to the audience and purpose. *KEY SKILLS/PROCEDURES* • Create infographics, charts, or data visualizations to explain patterns or relationships. • Design models to represent processes or structures. • Use simulations to demonstrate dynamic systems or predict outcomes. • Organize and present digital content in a logical, audience-appropriate format. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "*communicate complex ideas clearly and effectively*" emphasizes the importance of clarity, structure, and audience awareness when presenting sophisticated or abstract content. "*Creating or using a variety of digital objects*" means students may either design their own

Code	Description	Model Curriculum
		digital representations or leverage existing tools and resources to support their message. Examples include data visualizations to show trends, simulations to model real-world systems, or conceptual diagrams to explain relationships. This indicator encourages students to use digital media not just for decoration, but as a strategic tool to enhance understanding and engagement. *CONTENT FOCUS* Instruction should help students develop the ability to translate complex ideas into accessible, engaging digital formats. Educators can provide opportunities for students to explore different types of digital representations, evaluate their effectiveness, and apply them in authentic contexts. This prepares students to be clear, creative communicators in academic, professional, and civic settings.
9-12.CC.6.d.	Students publish or present content that customizes the message and medium for their intended audiences.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began sharing digital content with others and learned to consider basic audience needs. In grades 9–12, students are expected to tailor both the message and the medium to suit specific audiences and purposes, demonstrating intentionality in how they communicate and present their work. *IMPORTANT CONCEPTS* • Students customize content to suit the needs, interests, and expectations of a specific audience. • Students choose appropriate formats and platforms for publishing or presenting. • Students adapt tone, style, and structure to enhance audience engagement and understanding. • Students use digital tools to publish or present content effectively and professionally. *KEY SKILLS/PROCEDURES* • Identify audience characteristics. • Select appropriate tools. • Revise content for clarity, tone, and relevance. • Use multimedia elements to enhance communication and engagement.

Code	Description	Model Curriculum
		CONTENT ELABORATIONS *CLARIFICATIONS* The phrase "*publish or present content*" refers to students sharing their work with an audience beyond the classroom—whether through digital platforms, live presentations, or multimedia formats. "*Customizes the message and medium*" means students must make intentional choices about how they communicate, tailoring their language, tone, format, and delivery method to best reach and resonate with their intended audience. This indicator emphasizes audience awareness, communication strategy, and the ability to use digital tools to amplify voice and impact. *CONTENT FOCUS* Instruction should help students become thoughtful communicators who understand how to adapt their message and medium for different audiences and purposes. Educators can provide opportunities for students to publish or present their work in authentic contexts, receive feedback, and reflect on how their choices affect audience engagement. This prepares students to communicate effectively in academic, professional, and civic settings.

7. Global Collaborator

Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Code	Description	Model Curriculum
9-12.GC.7.a.	Students 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.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students began using digital tools to collaborate with peers and were introduced to the idea of global perspectives. In grades 9–12, students are expected to intentionally connect with diverse individuals and communities through digital platforms, engaging in meaningful dialogue and collaboration that fosters mutual understanding and shared learning. *IMPORTANT CONCEPTS* • Students use digital tools to connect with individuals from diverse backgrounds and cultures. • Students engage in respectful, inclusive communication that values different perspectives. • Students collaborate across cultural and geographic boundaries to enhance learning. • Students develop global awareness and empathy through digital interaction.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify and use platforms for global collaboration. • Practice cultural sensitivity and inclusive communication. • Participate in cross-cultural projects or discussions. • Reflect on how diverse perspectives influence understanding and problem-solving. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase "use digital tools to connect with learners from a variety of backgrounds and cultures" emphasizes the importance of global connectivity—students are expected to go beyond local collaboration and engage with peers from different regions, cultures, or experiences. "Engaging with them in ways that broaden mutual understanding and learning" means students should not only share their own perspectives but also listen actively, ask questions, and seek to understand others. This indicator promotes empathy, cultural competence, and the use of technology to build bridges across differences. *CONTENT FOCUS* Instruction should provide students with opportunities to engage in authentic, cross-cultural digital interactions. Educators can facilitate global collaboration projects, virtual exchanges, or partnerships with classrooms in other regions. The goal is to help students develop global awareness, communication skills, and a deeper appreciation for diverse perspectives through meaningful digital engagement.
9-12.GC.7.b.	Students use collaborative technologies to work with others, including peers, experts, or community members, to examine issues and problems from multiple viewpoints.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students begin by using collaborative tools to connect with others and explore diverse perspectives. By grades 9–12, they deepen this practice by intentionally engaging with a broader range of collaborators—such as experts and community members—to critically examine complex issues from multiple viewpoints. *IMPORTANT CONCEPTS* • Students engage in meaningful collaboration using digital tools. • Students seek out and consider different perspectives. • Students analyze real-world issues through dialogue and shared inquiry.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Use platforms like shared documents, discussion forums, or video conferencing tools to collaborate. • Formulate thoughtful questions to guide inquiry. • Practice active listening and respectful communication. • Synthesize multiple viewpoints to inform understanding or solutions. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase *"use collaborative technologies to work with others"* emphasizes that students are not working in isolation—they are expected to engage in active, purposeful collaboration using digital tools. The inclusion of *"peers, experts, or community members"* broadens the scope of collaboration beyond the classroom, encouraging students to connect with individuals who bring different experiences and expertise. The goal is to *"examine issues and problems from multiple viewpoints,"* which means students should not only gather multiple opinions but also critically analyze them to deepen their understanding of complex topics. *CONTENT FOCUS* Instruction should focus on authentic, inquiry-based collaboration that connects students with real-world voices and perspectives. Teachers should facilitate opportunities for students to engage with diverse collaborators—locally and globally—using digital tools and guide them in analyzing how different viewpoints shape understanding and decision-making.
9-12.GC.7.c.	Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students begin by participating in collaborative group work and learning how to share responsibilities. By grades 9–12, they are expected to take initiative, adapt to different roles, and contribute meaningfully to the success of a team project. *IMPORTANT CONCEPTS* • Students collaborate in digital or face-to-face project teams. • Students take on and rotate through various roles. • Students work toward shared goals with accountability and purpose.

Code	Description	Model Curriculum
		KEY SKILLS/PROCEDURES • Identify and accept team roles based on strengths and needs. • Practice time management and task delegation. • Provide constructive feedback and support to peers. • Use collaborative tools to manage workflow and communication. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase *"contribute constructively to project teams"* emphasizes that students should not only participate but do so in a way that adds value—through ideas, effort, and collaboration. The standard also states that students should *"assume various roles and responsibilities,"* which means they are expected to be flexible and capable of adapting to different team dynamics. Finally, the goal is to *"work effectively toward a common goal,"* highlighting the importance of shared purpose, mutual accountability, and successful project outcomes. *CONTENT FOCUS* Instruction should emphasize team-based learning where students experience the full cycle of collaboration—from planning and role assignment to execution and reflection. Teachers should provide structured opportunities for students to practice leadership, accountability, and adaptability in both digital and in-person environments.
9-12.GC.7.d.	Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.	**EXPECTATIONS FOR LEARNING** *LEARNING PROGRESSION* In grades 6–8, students begin by identifying issues and discussing them with others using digital tools. By grades 9–12, they are expected to take a more active role in investigating solutions, applying critical thinking and collaboration to address both local and global challenges. *IMPORTANT CONCEPTS* • Students identify and research real-world problems. • Students collaborate with others to explore and evaluate possible solutions. • Students use digital tools to support inquiry and communication. *KEY SKILLS/PROCEDURES* • Conduct research on social, environmental, or economic issues. • Use collaborative platforms to share findings and brainstorm.

Code	Description	Model Curriculum
		• Engage in problem-solving discussions with different partners. • Evaluate the feasibility and impact of proposed solutions. **CONTENT ELABORATIONS** *CLARIFICATIONS* The phrase *"explore local and global issues"* encourages students to think both within their communities and beyond, recognizing the interconnectedness of challenges like the digital divide, youth mental health, or access to education. The standard also states that students should *"use collaborative technologies to work with others to investigate solutions,"* which means they are not just learning about problems, they are actively engaging in solution-oriented inquiry. This involves using digital tools to communicate, gather input, and co-create ideas with peers, experts, or community members. *CONTENT FOCUS* Instruction should center on problem-based learning that connects students to real-world issues and empowers them to act. Teachers should guide students in using technology to collaborate across boundaries, encouraging empathy, innovation, and civic responsibility as they explore and propose meaningful solutions.

Career Connections

Career Connections in this model curriculum are organized by grade band, providing an example per grade band that include more than one Technology strand. In this way, teachers can see how these connections relate to key technology attitudes, knowledge, and skills in each strand and progress by grade band. Again, these are a suggested starting point for educators and can be modified or expanded.

CAREER AWARENESS K-2

Lesson Plan: Technology at Work: Exploring Jobs in Our Community

Objective: Students will learn about careers that use technology, explore personal values, and create a digital poster or slide that connects a chosen career to their personal values. Students will also practice safe and respectful use of technology tools.

Standards:

- K-2.DC.2.c. With guidance from an educator, students learn about ownership and sharing of information and how to respect the work of others.
- K-2.KC.3.a. With guidance from an educator, students use digital tools and resources, contained within a classroom platform or otherwise provided by the teacher, to find information on topics of interest.
- K-2.KC.3.c. With guidance from an educator, students explore a variety of teacher-selected tools to organize information and make connections to their learning.
- K-2.CC.6.a. With guidance from an educator, students choose different tools for creating something new or for communicating with others.
- K-2.CC.6.b. Students use digital tools to create original works.
- K-2.CC.6.c. With guidance from an educator, students share ideas in multiple ways — visual, audio, etc.

Content-Specific Vocabulary:

- Career
- Digital tools
- Value
- Respect
- Safety

Introduction:

1. Begin with a discussion: “What jobs do you know that use technology?”
2. Show short videos or images of professionals in different careers, like a graphic designer, robotics engineer, doctor, or teacher.
3. Explain that technology is part of many jobs and that values can help us choose what jobs we might like.
4. Discuss safety when using technology, handling devices carefully, protecting personal information, and being respectful online.

Anticipatory Activity:

1. Ask students to share one thing they like to do.
2. Connect these interests to values and explain how they relate to jobs.

Activity 1: Exploring Careers

1. Have students explore a set of teacher-curated resources about technology-based jobs.
2. Students complete a simple tool to organize the career name, tools used, what the person does, and the values (what is important to the person) that match the job.

Activity 2: Design and Share

1. Students create a digital slide to communicate a career that they are interested in, using a teacher-created template. The students add the career name, a picture, and the sentence "I care about [value] because [reason], and this job uses technology to [career task]."
2. Students add links to where they found their pictures and information for their slide.
3. Students share their slide on a classroom platform that can be shared with other students and teachers in their school.

Conclusion:

1. Summarize the lesson by highlighting how technology helps people in many jobs and how our values guide what we might enjoy doing.
2. Encourage students to think about how they can use technology to accomplish the things that are important to them.

Assessment:

1. Observe students' participation and engagement during the activities.
2. Assess their ability to locate information about a topic of interest and present the information using a digital tool.
3. Provide feedback on their technology awareness, digital citizenship, creativity, and communication.

CAREER EXPLORATION 3-5

Lesson Plan: Designing a Recycling Awareness Campaign as a Marketing Team

Objective: Students will collaborate in simulated marketing teams to design a campaign that encourages recycling in the school cafeteria. They will follow a design process, assign roles, and use technology to create and present.

Standards:

- 3-5.ID.4.a. Students explore and practice how a design process works to generate ideas, consider solutions, plan to solve a problem, or create innovative products that are shared with others.
- 3-5.ID.4.b. Students use digital and non-digital tools to plan and manage a design process.
- 3-5.CC.6.c. Students create digital artifacts to communicate ideas visually and graphically.
- 3-5.GC.7.c. Students perform a variety of roles within a team using age-appropriate technology to complete a project or solve a problem.
- 3-5.GC.7.d. Students work with others using collaborative technologies to explore local and global issues.

Content-Specific Vocabulary:

- Design process
- Campaign
- Collaboration
- Marketing
- Roles (Project Manager, Research Analyst, Graphic Designer, Content Creator, Presenter)

Introduction:

1. Introduce the local issue: “Our school cafeteria has low recycling rates. How can we encourage students to recycle more?”
2. Explain the design process steps: define the problem, collect information, generate ideas, consider solutions, receive feedback, and improve design.
3. Discuss how marketing teams work together to solve problems creatively.

Anticipatory Activity:

1. Show a short video of a community campaign.
2. Ask: “What makes these campaigns effective? How do they grab attention?”
3. Hold a short discussion to discuss ideas.

Activity 1: Learn about Marketing Careers

1. Introduce marketing as a career field. Discuss what marketing is, why it is important, and the skills marketers use.
2. Students form teams of 4-5, then learn about and select roles based on their interests.
3. Record roles in a collaborative digital tool.

Activity 2: Simulated Work Environment Experience

1. The Research Analyst gathers data and shares with the team. The team brainstorms campaign ideas, choosing from digital or non-digital tools to organize ideas.
2. The Graphic Designer creates visuals using a digital tool, and the Content Creator drafts slogans, announcements, or social media-style posts.
3. The Project Manager organizes tasks in a digital collaboration tool.
4. Teams prepare a short pitch for their campaign.

Conclusion:

1. Teams present their campaign to the class, acting as the school board.
2. The school board gives feedback, and the team takes notes on how they might improve their campaigns.
3. Students reflect on how the design process helped in the creation of the campaign and how their role contributed to the completion of the campaign.
4. Discuss how technology supported collaboration.

Assessment:

1. Observe students' participation and engagement during the activities.
2. Assess their ability to follow the design steps, fulfill their roles, and use technology effectively. Assess if their campaigns were creative, clear, and actionable.
3. Provide feedback on their process, collaboration, and problem-solving while using technology.

CAREER PREPARATION 6-8

Lesson Plan:

Objective: Students will research a technology career of interest, set SMART goals to build required skills, and participate in a mock interview, demonstrating their learning through digital tools and self-reflection.

Standards:

- 6-8.EL.1.a. Students articulate personal learning goals, select and manage appropriate technologies to achieve them and reflect on their successes and areas of improvement in working toward their goals
- 6-8.EL.1.c. Students actively seek performance feedback from people, including teachers, and from functionalities embedded in digital tools to improve their learning process, and they select technology to demonstrate their learning in a variety of ways.
- 6-8.KC.2.a. Students demonstrate and practice the ability to effectively use research strategies to locate appropriate digital resources in support of their learning.
- 6-8.KC.3.b. Students practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility, and relevance.
- 6-8.CC.6.a.

Content-Specific Vocabulary:

- SMART Goal
- Mock Interview
- Candidate
- Digital Portfolio

Introduction:

1. Begin by asking students, "Why do employers care about interviews?"
2. Explain that interviews are not just about answering questions; they show how prepared and goal-oriented a candidate is.
3. Connect this to the day's lesson where students will learn how to set meaningful goals and practice communicating those goals in a mock interview, just like real job candidates.

Anticipatory Activity:

1. In pairs, students use a digital research tool to find basic information on a chosen career.
2. Prompt them to gather information about the role, required skills, and typical educational paths.

Activity 1: Goal Setting and Digital Portfolio

1. Explain to students the components of a SMART goal. Students create their own SMART goal related to a skill needed in their chosen career.
2. Students design a digital portfolio to organize the information they found in the anticipatory activity and use for the mock interview.

Activity 2: Mock Interview

1. Students work in pairs to record a 5-minute mock interview using a video recording platform.
2. In the interview, students will explain their chosen career and required skills, share their SMART goal and why it matters, use appropriate visual tools to clarify their answers, and engage the audience.
3. Peers will provide constructive feedback on clarity and professionalism. Students note this feedback in the digital portfolio under a "Reflection" section.

Conclusion:

1. Gather as a class to discuss how the goal-setting helped them prepare for the interview and how feedback improves their work.

Assessment:

1. Observe students' participation and engagement during the activities.
2. Assess SMART goals for quality and clarity, documentation of feedback and reflection, and effective technology use for communication.
3. Provide feedback on their goal-setting, use of feedback for improvement, and clear communication of ideas.

CAREER PARTICIPATION 9-12

Lesson Plan:

Objective: Students will simulate a real-world engineering project by designing, building, and programming a robot to automate a warehouse task. They will work in assigned roles to complete a client request, applying computational thinking and iterative design. Students will reflect on how their skills and aptitudes align with careers in robotics, automation, and engineering.

Standards:

- 9-12.ID.4.c. Students develop, test, and refine prototypes as part of a cyclical design process.
- 9-12.CT.5.d. Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.
- 9-12.GC.7.c. Students contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.
- 9-12.GC.7.d. Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.

Content-Specific Vocabulary:

- Algorithm
- Control Structure
- Loop

- Sensor
- Prototype
- Iteration

Introduction:

1. Invite a guest speaker from a logistics or robotics company.
2. Discuss how automation impacts warehouse operations and the roles involved in such projects.

Anticipatory Activity:

1. Students complete a career interest survey.
2. In small groups, they share results and identify which roles (Project Manager, Programmer, Hardware Engineer, Quality Assurance Tester) in the upcoming project align with their strengths.

Activity 1: Client Brief and Design

1. Students are hired as junior engineers at a logistics company. The client needs a robot that can (1) navigate a grid representing a warehouse floor, (2) pick up and deliver packages to designated zones, and (3) avoid obstacles.
2. Distribute a "Client Request Document" with specifications and constraints.
3. Assign roles: Project Manager, Programmer, Hardware Engineer, Quality Assurance (QA) Tester.
4. Students discuss constraints and plan tasks for each member of the team.
5. Create a workflow diagram showing the robot's path and tasks, then sketch a prototype.

Activity 2: Build and Code

1. Hardware Engineer assembles the robot using kit components.
2. Programmer develops code using loops, conditionals, and Boolean logic.
3. Project Manager tracks progress and updates the timeline.
4. QA Tester observes build and coding for compliance with specifications.

Activity 3: Testing and Iteration

1. Students conduct an initial run of their robot on the warehouse grid while the QA Tester records performance data.
2. Teams discuss issues and brainstorm fixes.
3. Repeat tests until the robot meets client requirements.

Conclusion:

1. Students demonstrate their robot to the whole class, explain how their design meets client requirements, and how their role contributed to the team.

Assessment:

1. Observe students' participation and engagement during the activities.
2. Assess the use of a cyclical design process, the sequence of steps to create an automated solution, and the ability to constructively contribute to a team.
3. Provide feedback on their collection and analysis of performance data to improve designs, application of algorithmic thinking in the code, and collaboration and communication within assigned roles.

Acknowledgments