1 TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR GRADES K-12

1. The technology integration standards may include skills for:
   a. empowered learners
   b. digital citizens
   c. knowledge constructors
   d. innovative designers
   e. computational thinkers
   f. creative communicators
   g. global collaborators
   h. reflective users
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR KINDERGARTEN

1. The empowered learner content standards for kindergarten are that each student will:
   a. explore a variety of technologies that will help them in their learning

2. The digital citizen content standards for kindergarten are that each student will:
   a. explore appropriate use of devices
   b. explore sharing of information and how to respect the work of others
   c. explore the importance of keeping their information private

3. The innovative designer content standards for kindergarten are that each student will:
   a. explore a design process with digital and non-digital tools

4. The computational thinker content standards for kindergarten are that each student will:
   a. explore how technology is used to make a task easier
1. The empowered learner content standards for first grade are that each student will:
   a. explore a variety of technologies that will help them in their learning
2. The digital citizen content standards for first grade are that each student will:
   a. practice responsible use of technology
   b. explore appropriate use of devices and how to be safe online
   c. explore sharing of information and how to respect the work of others
   d. explore the importance of keeping their information private
3. The innovative designer content standards for first grade are that each student will:
   a. explore digital and non-digital tools to design a product
   b. explore a design process to develop ideas or creations
4. The computational thinker content standards for first grade are that each student will:
   a. explore breaking down a problem into parts and identify ways to solve the problem
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR SECOND GRADE

1. The empowered learner content standards for second grade are that each student will:
   a. explore a variety of technologies that will help them in their learning

2. The digital citizen content standards for second grade are that each student will:
   a. practice responsible use of technology
   b. explore appropriate use of devices and how to be safe online
   c. explore ownership of information and how to respect the work of others
   d. explain the importance of keeping their information private

3. The knowledge constructor content standards for second grade are that each student will:
   a. explore a variety of tools to organize information

4. The innovative designer technology content standards for second grade are that each student will:
   a. use digital and non-digital tools to design a product
   b. use a design process to develop ideas or creations

5. The computational thinker content standards for second grade are that each student will:
   a. break down a problem into parts and identify ways to solve the problem
   b. explain how technology can make a task easier

6. The creative communicator content standards for second grade are that each student will:
   a. explore different tools for creating something new or for communicating with others
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR THIRD GRADE

1. The empowered learner content standards for third grade are that each student will:
   a. set personal learning goals and use appropriate technologies that will demonstrate knowledge
   b. recognize how knowledge can be transferred between tools

2. The digital citizen content standards for third grade are that each student will:
   a. identify and practice responsible use of technology
   b. identify appropriate use of devices and how to be safe online
   c. identify ownership of information and how to respect the work of others
   d. recognize the importance of keeping their information private

3. The knowledge constructor content standards for third grade are that each student will:
   a. identify digital tools and resources to find information on topics of interest
   b. explore sources for accuracy, credibility, and relevance
   c. identify a variety of tools to organize information

4. The innovative designer content standards for third grade are that each student will:
   a. define questions, find solutions, test ideas to solve problems and share their learning
   b. use digital and non-digital tools to design a product with a step-by-step design process

5. The computational thinker content standards for third grade are that each student will:
   a. define a problem and select appropriate technology tools to explore and find solutions
   b. evaluate data in order to identify patterns and categories
   c. break down problems into smaller parts, identify key information, and propose solutions
   d. evaluate how technology is used to make a task easier or repeatable

6. The creative communicator content standards for third grade are that each student will:
   a. use strategies for remixing or repurposing resources to create new works
   b. create digital objects to communicate ideas visually and graphically
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR FOURTH GRADE

1. The empowered learner content standards for fourth grade are that each student will:
   a. develop learning goals and choose the appropriate technology tools to achieve them
   b. explore technologies and transfer their learning to different tools or learning environments

2. The digital citizen content standards for fourth grade are that each student will:
   a. recognize the role an online identity plays in the digital world and in real life
   b. practice safe, legal and ethical behavior when using technology and interacting online
   c. define ownership of intellectual property and appropriate sharing of information
   d. identify what personal data is, the importance of keeping it private, and how it might be shared online

3. The knowledge constructor content standards for fourth grade are that each student will:
   a. use research techniques to locate digital resources
   b. evaluate sources for accuracy, perspective, cultural sensitivity, credibility, and relevance
   c. use a variety of strategies to organize information and make meaningful connections between resources

4. The innovative designer technology content standards for fourth grade are that each student will:
   a. practice using digital and non-digital tools to plan and manage a design process
   b. practice using a cyclical design process to develop prototypes and reflect on the role that trial and error play

5. The computational thinker content standards for fourth grade are that each student will:
   a. explore or solve problems by selecting technology, analyzing data, and creating models
   b. break down problems into smaller parts, identify key information, and propose solutions
   c. explore basic concepts related to automation, patterns, and algorithmic thinking

6. The creative communicator content standards for fourth grade are that each student will:
   a. identify the features and functions of a variety of creation or communication tools
   b. create original works by practicing strategies for remixing or repurposing
   c. create digital objects to communicate ideas visually and graphically

7. The global collaborator content standards for fourth grade are that each student will:
   a. identify digital tools to work with friends and people from different backgrounds or cultures
   b. identify collaborative technologies to connect with others, including peers, experts and community members, to explore different points of view on various topics
   c. practice working with others using collaborative technologies
8. The reflective user content standards for fourth grade are that each student will:
   a. evaluate personal preferences for use of technology tools for different tasks or purposes
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR FIFTH GRADE

1. The empowered learner content standards for fifth grade are that each student will:
   a. develop learning goals, select the technology tools to achieve them, and reflect on and revise the learning process as needed to achieve goals
   b. transfer their learning to different tools or learning environments

2. The digital citizen content standards for fifth grade are that each student will:
   a. demonstrate an understanding of the role an online identity plays in the digital world and permanence of their decisions when interacting online
   b. engage in safe, legal and ethical behavior when using technology and interacting online
   c. demonstrate respect for intellectual property when using and sharing the work of others
   d. explain what personal data is, how to keep it private, and how it might be shared online

3. The knowledge constructor content standards for fifth grade are that each student will:
   a. employ appropriate research techniques to locate digital resources
   b. evaluate sources for accuracy, perspective, cultural sensitivity, credibility, and relevance
   c. organize information and make meaningful connections between resources

4. The innovative designer technology content standards for fifth grade are that each student will:
   a. use a design process to generate ideas, consider solutions, solve a problem or create innovative products
   b. use digital and non-digital tools to plan and manage a design process
   c. use a cyclical design process to develop prototypes and reflect on the role that trial and error play

5. The computational thinker content standards for fifth grade are that each student will:
   a. explore or solve problems by selecting technology for data analysis, modeling and algorithmic thinking
   b. break down problems into smaller parts, identify key information, and propose solutions
   c. identify basic concepts related to automation, patterns, and algorithmic thinking

6. The creative communicator content standards for fifth grade are that each student will:
   a. identify and use the features of a variety of creation or communication tools
   b. use a variety of strategies for remixing or repurposing to create new works
   c. create digital objects to communicate ideas visually and graphically

7. The global collaborator content standards for fifth grade are that each student will:
   a. use appropriate digital tools to work with friends and people from different backgrounds or cultures
   b. perform a variety of roles within a team using age-appropriate technology to complete a project or solve a problem
8. The reflective user content standards for fifth grade are that each student will:
   a. evaluate personal preferences for use of technology tools for different tasks or purposes
TECHNOLOGY INTEGRATION CONTENT STANDARDS FOR SIXTH - EIGHTH GRADES

1. The empowered learner content standards for sixth- eighth grades are that each student will:
   a. define 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
   b. navigate a variety of technologies and transfer their knowledge and skills to learn how to use new technologies

2. The digital citizen content standards for sixth-eighth grades are that each student will:
   a. manage their digital identities and reputations, including demonstrating an understanding of how digital actions are permanent and never fully erasable
   b. demonstrate positive, safe, legal and ethical habits when using technology and when interacting with others online
   c. demonstrate and model the use of intellectual property of print and digital media, including copyright, permission and fair use, by creating a variety of media products that include appropriate citation and attribution elements
   d. demonstrate how to keep personal data secure and understand how data-collection technologies work

3. The knowledge constructor content standards for sixth-eighth grades are that each student will:
   a. use research strategies effectively to locate appropriate digital resources in support of their learning
   b. evaluate resources for accuracy, perspective, cultural sensitivity, credibility and relevance
   c. locate and collect resources from a variety of sources and organize into collections for a range of projects and purposes

4. The innovative designer technology content standards for sixth-eighth grades are that each student will:
   a. engage in design processes to generate ideas, create innovative products, or solve problems
   b. select and use digital tools to support design processes, identify constraints and trade-offs, and weigh risks
   c. engage in design processes to develop, test and revise prototypes, use the cyclical process of trial and error, and understanding problems or setbacks as potential opportunities for improvement

5. The computational thinker content standards for sixth-eighth grades are that each student will:
   a. investigate and practice solving problems by using data analysis, modeling or algorithmic thinking
b. organize data and use technology to display, analyze, solve problems, and make decisions

c. break down problems into component parts, identify key pieces and use that information to problem solve

d. demonstrate an understanding of how automation works and use algorithmic thinking to design and automate solutions

6. The creative communicator content standards for sixth-eighth grades are that each student will:

   a. select appropriate platforms and tools to create, share, and communicate their work
   b. create original works or responsibly remix and repurpose other digital resources into new creative works
   c. communicate complex ideas clearly using various digital tools to convey the concepts textually, visually, or graphically

7. The global collaborator content standards for sixth-eighth grades are that each student will:

   a. identify and use collaborative technologies to connect with others, including peers, experts, and community
   b. determine their role on a team to meet goals, based on their knowledge of technology and content, as well as personal preference

8. The reflective user content standards for sixth-eighth grades are that each student will:

   a. examine historical, cultural, and social impacts of technology innovations on individuals and groups, including American Indians
   b. explain how technology innovations influence their individual technology tool and resource preferences
1. The empowered learner content standards for ninth-twelfth grades are that each student will:
   a. set personal learning goals, develop strategies leveraging technology to achieve them, and reflect on the learning process to improve learning outcomes
   b. build networks and customize their learning environments in ways that support their learning process
   c. use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways
   d. demonstrate the ability to choose, use, and troubleshoot current technologies, and transfer their knowledge to explore emerging technologies

2. The digital citizen content standards for ninth-twelfth grades are that each student will:
   a. cultivate and manage a positive digital identity and reputation
   b. engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices
   c. respect the rights and obligations of creating, using, and sharing intellectual property
   d. manage their personal data to maintain digital privacy and security

3. The knowledge constructor content standards for ninth-twelfth grades are that each student will:
   a. use research strategies to locate information and resources for their intellectual or creative pursuits
   b. evaluate the accuracy, perspective, cultural sensitivity, credibility, and relevance of information, media, data, or other resources
   c. curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions

4. The innovative designer technology content standards for ninth-twelfth grades are that each student will:
   a. initiate a deliberate design process for generating ideas, testing theories, creating innovative artifacts, or solving authentic problems
   b. select and use digital tools to plan and manage a design process that considers design constraints and calculated risks
   c. develop, test and refine prototypes as part of a cyclical design process

5. The computational thinker content standards for ninth-twelfth grades are that each student will:
   a. identify problems suited for technology-assisted methods for data analysis, abstract models, and algorithmic thinking
b. 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

c. break down problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving

d. explain how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions

6. The creative communicator content standards for ninth-twelfth grades are that each student will:

a. choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication

b. create original works or responsibly repurpose or remix digital resources into new creative works

c. communicate complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations

d. publish, present, and defend content that customizes the message and medium for their intended audiences

7. The global collaborator content standards for ninth-twelfth grades are that each student will:

a. identify and 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

b. identify and use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints

c. contribute constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal

8. The reflective user content standards for ninth-twelfth grades are that each student will:

a. evaluate historical, cultural, and social impacts of technology innovations on individuals and groups, including American Indians

b. explain how technology innovations influence their individual technology tool and resource preferences
1. In general, a basic program in technology education shall:
   a. meet the following conditions:
      i. development of skills that lead to lifelong pursuits;
      ii. provide opportunities for authentic application, work experience, and articulation with postsecondary education
      iii. integrate and transfer technology skills across grade levels, content areas, and programs
      iv. provide access to emerging technology across grade levels, content areas, and programs
   b. include the following practices:
      i. full progression of skills and knowledge from basic to advanced
      ii. full integration of technology competencies with academic knowledge in a contextual setting
      iii. include whole group, teacher-led, or personalized instruction