

# Grades 9, 10, 11, 12

Adopted 2010

**Creativity and Innovation - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.**

**A. Apply existing knowledge to generate new ideas, products, or processes.**

Students use digital representations of existing knowledge to reflect on and extend their understanding, using a variety of digital resources to create, share and connect new ideas, products, or processes.

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**B. Create original works as a means of personal or group expression.**

Students select from a variety of digital tools to create original works for contribution to a group product or collection, integrating feedback and reflection into the creative process.

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**C. Use models and simulations to explore complex systems and issues.**

Students create, use, and manipulate digital simulations, models, or graphic representations to design and analyze complex systems and experiments, justifying decisions about the tools that would best serve the tasks.

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**D. Identify trends and forecast possibilities.**

Students use digital tools or resources to conduct research, identify patterns, interpret data, and make and defend predictions in order to present and publish innovative sustainable solutions that include perspectives from outside the classroom.

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**Communication & Collaboration - Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.**

**A. Interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.**

Students use multiple grade appropriate digital tools to publish/share ideas and resources, collaborate, and provide feedback with peers, others, and experts/mentors online.

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**B. Communicate information and ideas effectively to multiple audiences using a variety of media and formats.**

Working independently, students consider audience and purpose when creating digital products and communicating online.

Students independently select and use appropriate media for different audiences and purposes.

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**C. Develop cultural understanding and global awareness by engaging with learners of other cultures.**

Students communicate and collaborate digitally with people from other cultures (regional and global) in order to gain better awareness of differing lifestyles and societal norms.

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**D. Contribute to project teams to produce original works or solve problems**

Using digital tools, students work collaboratively and online, including in global project teams, to develop group products or solve problems.

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**Research & Information Fluency - Students apply digital tools to gather, evaluate, and use information.**

**A. Plan strategies to guide inquiry.**

Students plan and carry out an investigation, independently select the appropriate digital tools and resources, and justify their choices.

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**B. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.**

Students select and use digital tools to independently locate, organize, evaluate, synthesize, and cite sources of their information, justifying their choice of resources.

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**C. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.**

Students independently use advanced search options and strategies, evaluate the authenticity and relevance of the information sources appropriate to the specific task, and justify their choice(s) based upon their plan of inquiry.

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**D. Process data and report results.**

Students select from a variety of digital tools appropriate to processing (organizing and synthesizing) the gathered information, present their findings, and provide justification for their conclusions.

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**Critical Thinking, Problem-Solving, & Decision-Making - Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.**

**A. Identify and define authentic problems and significant questions for investigation**

Students select appropriate digital tools and resources, including online forums, social media, and information solicited from credible sources, to identify a local, state, national, or global issue, create a problem statement, and generate questions for investigation.

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**B. Plan and manage activities to develop a solution or complete a project.**

Students select and justify their choice of appropriate digital tools, including online collaborative tools, to plan and manage individual and group learning projects.

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**C. Collect and analyze data to identify solutions and/or make informed decisions.**

Students select and justify their choice of digital tools and online resources to gather, organize, and analyze data to draw a conclusion, solve a problem, make an informed decision, and/or propose a solution to an authentic audience.

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**D. Use multiple processes and diverse perspectives to explore alternative solutions.**

Students select and justify their choice of digital tools and resources to explore problems by collecting information from local and global communities with diverse perspectives, creating models and simulations to explore different scenarios, summarizing the results, and identifying, comparing, and soliciting feedback on possible solutions that could satisfy different perspectives.

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**Digital Citizenship -  
Students understand  
human, cultural, and  
societal issues related to  
technology and practice  
legal and ethical  
behavior.**

**A. Advocate and practice safe, legal, and responsible use of information and technology.**

Students adhere to school Responsible Use Policies and use resources accordingly.

Students practice responsible computing and protect systems from security risks.

Students identify the short- and long-term consequences of unsafe or inappropriate online behavior and how to protect themselves online.

Students exhibit proper etiquette in electronic communication.

Students abide by copyright and demonstrate and advocate for fair use in all work, citing sources in appropriate format.

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**B. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.**

Students select and justify digital tools to accomplish academic tasks efficiently and productively.

Students demonstrate proper online etiquette and recognize social and cultural differences as they collaborate online with peers locally and globally.

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**C. Demonstrate personal responsibility for lifelong learning.**

Students independently use technology to extend their learning beyond the school environment through the use of current and emerging technologies, including online communities and learning opportunities.

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**D. Exhibit leadership for digital citizenship.**

Students actively involve themselves in the exploration and application of new technologies, leading by example and assisting others in the local and global community.

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**Technology Operations & Concepts - Students demonstrate a sound understanding of technology concepts, systems, and operations.**

**A. Understand and use technology systems.**

Students recognize a variety of file types, and utilize appropriate applications to open, convert, optimize, transfer, and work with files.

Students integrate a variety of file types to create a document or presentation.

Students keep their systems and personal data safe and secure.

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**B. Select and use applications effectively and productively.**

Students independently select digital tools and applications, including online, to use for real-world tasks and justify the selection based on efficiency and effectiveness.

Students successfully employ data-collection technology to gather, view, analyze, and report results for content-related problems.

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**C. Troubleshoot systems and applications.**

Students communicate and problem solve technology issues using accurate terminology. They analyze and solve hardware and software problems, configure and troubleshoot hardware, software, and connectivity to optimize learning and productivity.

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**D. Transfer current knowledge to learning of new technologies.**

Students will recognize common, similar features and functions in digital environments and independently apply those to new technology experiences.

Students will analyze the capabilities and limitations of current and emerging technologies and assess the potential of these technologies to address academic, personal, social, lifelong learning, and career needs.

Students will identify successful applications in their own education.

Students will evaluate online forums - such as wikis or blogs - versus in-class discussion.