

# Technology K-12

## Technology Core Competencies

Empowered Learner	Digital Citizen	Knowledge Constructor	Innovative Designer	Computational Thinker	Creative Communicator	Global Collaborator
Students leverage technology to take an active role in choosing, achieving and demonstrating competency in their learning goals, informed by the learning sciences	Students recognize the rights, responsibilities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical.	Students critically curate a variety of resources using digital tools to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.	Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.	Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.	Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.	Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

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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.	Students cultivate and manage their digital identity and reputation and are aware of the permanence of their actions in the digital world.	Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.	Students know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.	Students formulate problem definitions suited for technology assisted methods such as data analysis, abstract models and algorithmic thinking in exploring and finding solutions.	Students choose the appropriate platforms and tools for meeting the desired objectives of their creation or communication.	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.
Students build networks and customize their learning environments in ways that support the learning process.	Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.	Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.	Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.	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.	Students create original works or responsibly repurpose or remix digital resources into new creations.	Students use collaborative technologies to work with others, including peers, experts or community members, to examine issues and problems from multiple viewpoints.
Students use	Students demonstrate	Students curate	Students develop, test	Students break	Students communicate	Students contribute

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<p>technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.</p>	<p>an understanding of and respect for the rights and obligations of focusing and sharing intellectual property.</p>	<p>information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.</p>	<p>and refine prototypes as part of a cyclical design process.</p>	<p>problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.</p>	<p>complex ideas clearly and effectively by creating or using a variety of digital objects such as visualizations, models or simulations.</p>	<p>constructively to project teams, assuming various roles and responsibilities to work effectively toward a common goal.</p>
<p>Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.</p>	<p>Students manage their personal data to maintain digital privacy and security and are aware of data-collection technology used to track their navigation online.</p>	<p>Students build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.</p>	<p>Students exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.</p>	<p>Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.</p>	<p>Students publish or present content that customizes the message and medium for their intended audiences.</p>	<p>Students explore local and global issues and use collaborative technologies to work with others to investigate solutions.</p>