

# Grades 9, 10, 11, 12

Adopted 2017

## Information and Communication

1. Utilize research strategies effectively to locate appropriate digital resources across all content areas. [TCS.9-12.1](#)

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2. Practice and demonstrate the ability to evaluate resources for accuracy, perspective, credibility and relevance. [TCS.9-12.2](#)

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3. Locate and collect resources from a variety of sources and organize assets into collections for a wide range of projects and purposes. [TCS.9-12.3](#)

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4. Explore real-world issues and problems and actively pursue an understanding of them and solutions for them. [TCS.9-12.4](#)

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5. Select appropriate platforms and tools to create, share and communicate their work effectively. [TCS.9-12.5](#)

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6. Create original works or responsibly repurpose other digital resources into new creative works. [TCS.9-12.6](#)

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7. Communicate complex ideas clearly using various digital tools to convey the concepts textually, visually, graphically, etc. [TCS.9-12.7](#)

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8. Publish, present, and defend content designed for specific audiences and select platforms that will effectively convey their ideas to those audiences. [TCS.9-12.8](#)

## Computational Thinking

9. Define problems easily solved with technology-assisted methods such as data analysis, modeling or algorithmic thinking. [TCS.9-12.9](#)

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10. Find or organize relevant data and use technology to analyze and represent it in various ways to solve problems and make decisions. [TCS.9-12.10](#)

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11. Break problems into component parts, identify key pieces and use that information to problem solve. [TCS.9-12.11](#)

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12. Demonstrate an understanding of how automation works and use algorithmic thinking to develop a sequence of steps to design and test automated solutions. [TCS.9-12.12](#)

## Digital Citizenship

- 13.** Understand how to manage their digital identities and reputations within school policy, including demonstrating an understanding of how digital actions are never fully erasable. [TCS.9-12.13](#)

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- 14.** Demonstrate and advocate for positive, safe, legal and ethical habits when using technology and when interacting with others online. [TCS.9-12.14](#)

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- 15.** 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. [TCS.9-12.15](#)

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- 16.** Keep personal data private and secure, including the awareness of terms such as encryption, HTTPS, password, cookies and computer viruses; understand the limitations of data management and how data-collection technologies work. [TCS.9-12.16](#)

## Collaboration

- 25.** Use digital tools to interact with others to mutually develop a richer understanding of different perspectives and cultures. [TCS.9-12.25](#)

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- 26.** Use collaborative technologies to connect with others, including peers, experts and community members, to learn about issues and problems or to gain broader perspective. [TCS.9-12.26](#)

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- 27.** Determine their role on a team to meet goals, based on their knowledge of technology and content, as well as personal preference. [TCS.9-12.27](#)

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- 28.** Explore local and global issues and select collaborative technologies use to work with others to investigate and develop solutions. [TCS.9-12.28](#)

## Empowered Learning

- 17.** 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. [TCS.9-12.17](#)

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- 18.** Develop online networks within school policy, and customize their learning environments in ways that support their learning. [TCS.9-12.18](#)

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- 19.** Actively seek performance feedback from people, including teachers, and from functionalities embedded in digital tools to improve their learning process, and select technology to demonstrate their learning in a variety of ways. [TCS.9-12.19](#)

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- 20.** Utilize a variety of technologies efficiently and transfer their knowledge and skills to learn how to use new technologies. [TCS.9-12.20](#)

## Innovation and Design

- 21.** Engage in a design process and employ it to generate ideas, create innovative products or solve authentic problems. [TCS.9-12.21](#)

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**22. Select and use digital tools to support a design process and expand their understanding to identify constraints and trade-offs and to weight risks.** TCS.9-12.22

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**23. Design, develop, test and revise prototypes, embracing the cyclical process of trial and error and understanding problems or setbacks as potential opportunities for improvement.** TCS.9-12.23

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**24. Demonstrate an ability to persevere and handle greater ambiguity while working in collaborative teams to solve open-ended problems.** TCS.9-12.24