

Instructional Technology

Fifth Grade

Essential Curriculum

Standard 1. 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 using the Engineering Design Process (EDP).
- b. Create original works as a means of personal or group expression using various software applications.
- c. Use digital models and simulations to explore.
- d. Identify trends and forecast possibilities.

Standard 2. Communication and 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.
 - i. Collaborate in pairs or groups to develop technology-based presentations or products for content-related topics using digital audio, photos, images, video, or charts (e.g., interact independently or in groups via videoconferencing or blogging with young adult authors, musicians, artists, or scientists to collaborate on a multimedia product).
- b. Communicate information and ideas effectively to multiple audiences using a variety of media and formats.
 - i. Create and edit products in a variety of media environments (e.g., presentations, newsletter, video, annotated calendar, wiki) to effectively communicate individual and group curriculum activities, ideas, or results to multiple audiences.
- c. Develop cultural understanding and global awareness by engaging with learners of other cultures.
 - i. Use technology communications tools (e.g., online forums, blogs, email, text messaging, chat, voice over IP (VoIP), videoconferencing) to interact with students or experts from other cultures, communities, or countries on a collaborative, content-specific activity or project.
- d. Contribute to project teams to produce original works or solve problems.
 - i. Working in pairs or small groups with assigned roles, use digital tools to explore specific subject-related concepts or content and present problem solutions or create original works using appropriate tools (e.g., animation and drawing software, visual data tools, graphic organizers, simulation development tools, programming languages, video camera, editing software, music software).

Standard 3. Research and Information Fluency

Students apply digital tools to gather, evaluate, and use information.

- a. Plan strategies to guide inquiry.
 - i. Select and use information resources available through technology.
- b. Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
 - i. Select relevant information from appropriate technology resources.
 - ii. Select and read to gain information from electronic personal interest materials, such as brochures, books, magazines, cookbooks, and web sites.
 - iii. Understand search strategies for age-appropriate Web search engines/directories.
- c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
 - i. Apply evaluation strategies when using electronic resources (such as publication/copyright date, fact vs. fiction, source credibility, ease of use).
 - ii. Use technology tools independently to support note-taking.
 - iii. Evaluate the use of the selected technology for the specific task.
- d. Process data and report results.
 - i. Use technology tools independently to support data collection.
 - ii. Identify, obtain, and use information from electronic data sources from the internet.
 - iii. Explain why specific technology tools were selected to organize information.

Standard 4. Critical Thinking, Problem Solving, and 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.
 - i. Use technology to help identify the type of problem and the data needed to answer that type of problem.
 - ii. Identify possible technology tools to gather data.
 - iii. Use technology to help formulate a research question about a problem/situation that requires further study.
 - iv. Identify technology resources to gather information about a problem/situation that requires further study.
- b. Plan and manage activities to develop a solution or complete a project.
 - i. Display data and information using technology tools.
 - ii. Assess the use of the selected technology for individual learning of the specific task.
- c. Collect and analyze data to identify solutions and/or make informed decisions.
 - i. Select an appropriate technology tool to gather data.
 - ii. Collect data and information using technology tools.
 - iii. Use communication tools to gather information.
 - iv. Analyze information using technology tools.
 - v. Input and analyze information in a spreadsheet or database.
 - vi. Present information and conclusions in formats that are appropriate to a specific audience.
- d. Use multiple processes and diverse perspectives to explore alternative solutions.
 - i. Apply evaluation strategies when using electronic resources.

- ii. Explain why specific technology tools were selected to organize information.
- iii. Evaluate the appropriateness of media formats for communicating data.

Standard 5. 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.
- b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
- c. Demonstrate personal responsibility for lifelong learning.
 - i. Comprehend the scope of one's digital footprint and its impact on their future. Identify the digital locations visited on an average day; tracking digital footprints on a short-term basis. Identify the different ways the Internet can be used.
 - ii. Identify appropriate ways to share information via each method.
 - iii. Demonstrate the ability to protect their privacy and online reputation.
- d. Exhibit leadership for digital citizenship.
 - i. Model positive behaviors online
 - ii. Identify appropriate responses to cyber bullying situations.

Standar 6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations.*

- a. Understand and use technology systems.
- b. Select and use applications effectively and productively.
- c. Troubleshoot systems and applications.
- d. Transfer current knowledge to learning of new technologies.
- e. Apply appropriate keyboarding practices.

* Refer to [Technology Literacy Checklist](#) for Grade 5.