

A major component of the NETS project is the development of a general set of profiles describing information and technology (ICT) literate students at key developmental points in their precollege education. The profiles highlight a few important types of learning activities students might engage in as the new NETS•S are implemented. We hope these examples will bring the standards to life and demonstrate the variety of activities possible. The profiles are divided into four grade ranges. Because grade-level designations vary in different countries, we also provide age ranges.

The numbers in the parentheses after each item identify the standards (1–6) most closely linked to the activity described. Each activity may relate to one indicator, to multiple indicators, or to the overall standards referenced.

1. **Creativity and Innovation**
2. **Communication and Collaboration**
3. **Research and Information Fluency**
4. **Critical Thinking, Problem Solving, and Decision Making**
5. **Digital Citizenship**
6. **Technology Operations and Concepts**

- [Grades PK–2 \(Ages 4–8\)](#)
- [Grades 3–5 \(Ages 8–11\)](#)
- [Grades 6–8 \(Ages 11–14\)](#)
- [Grades 9–12 \(Ages 14–18\)](#)

### **Grades PK–2 (Ages 4–8)**

The following experiences with technology and digital resources are examples of learning activities students might engage in during PK–2 (ages 4–8):

1. Illustrate and communicate original ideas and stories using digital tools and media-rich resources. (1,2)
2. Identify, research, and collect data on an environmental issue using digital resources and propose a developmentally appropriate solution. (1,3,4)
3. Engage in learning activities with learners from multiple cultures through email and other electronic means. (2,6)
4. In a collaborative work group, use a variety of technologies to produce a digital presentation or product in a curriculum area. (1,2,6)
5. Find and evaluate information related to a current or historical person or event using digital resources. (3)
6. Use simulations and graphical organizers to explore and depict patterns of growth, such as the life cycles of plants and animals. (1,3,4)
7. Demonstrate safe and cooperative use of technology. (5)
8. Independently apply digital tools and resources to address a variety of tasks and problems. (4,6)
9. Communicate about technology using developmentally appropriate and accurate terminology. (6)
10. Demonstrate the ability to navigate in virtual environments such as electronic books, simulation software, and websites. (6)

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**Grades 3–5 (Ages 8–11)**

The following experiences with technology and digital resources are examples of learning activities students might engage in during grades 3–5 (ages 8–11):

1. Produce a media-rich digital story about a significant local event based on first-person interviews. (1,2,3,4)
2. Use digital imaging technology to modify or create works of art for use in a digital presentation. (1,2,6)
3. Recognize bias in digital resources while researching an environmental issue with guidance from the teacher. (3,4)
4. Select and apply digital tools to collect, organize, and analyze data to evaluate theories or test hypotheses. (3,4,6)
5. Identify and investigate a global issue and generate possible solutions using digital tools and resources (3,4)
6. Conduct science experiments using digital instruments and measurement devices. (4,6)
7. Conceptualize, guide, and manage individual or group learning projects using digital planning tools with teacher support. (4,6)
8. Practice injury prevention by applying a variety of ergonomic strategies when using technology. (5)
9. Debate the effect of existing and emerging technologies on individuals, society, and the global community. (5,6)
10. Apply previous knowledge of digital technology operations to analyze and solve current hardware and software problems. (4,6)

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**Grades 6–8 (Ages 11–14)**

The following experiences with technology and digital resources are examples of learning activities students might engage in during grades 6–8 (ages 11–14):

1. Describe and illustrate a content-related concept or process using a model, simulation, or concept-mapping software. (1,2)
2. Create original animations or videos documenting school, community, or local events. (1,2,6)
3. Gather data, examine patterns, and apply information for decision making using digital tools and resources. (1,4)
4. Participate in a cooperative learning project in an online learning community. (2)
5. Evaluate digital resources to determine the credibility of the author and publisher and the timeliness and accuracy of the content. (3)
6. Employ data-collection technology, such as probes, handheld devices, and geographic mapping systems, to gather, view, analyze, and report results for content-related problems. (3,4,6)
7. Select and use the appropriate tools and digital resources to accomplish a variety of

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|     | tasks and to solve problems. (3,4,6)   |
| 8.  | Use collaborative electronic authoring tools to explore common curriculum content from multicultural perspectives with other learners. (2,3,4,5) |
| 9.  | Integrate a variety of file types to create and illustrate a document or presentation. (1,6)   |
| 10. | Independently develop and apply strategies for identifying and solving routine hardware and software problems. (4,6)                             |

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### **Grades 9–12 (Ages 14–18)**

The following experiences with technology and digital resources are examples of learning activities students might engage in during grades 9–12 (ages 14–18):

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| 1.  | Design, develop, and test a digital learning game to demonstrate knowledge and skills related to curriculum content. (1,4)   |
| 2.  | Create and publish an online art gallery with examples and commentary that demonstrate an understanding of different historical periods, cultures, and countries. (1,2)                    |
| 3.  | Select digital tools or resources to use for a real-world task and justify the selection based on their efficiency and effectiveness. (3,6)  |
| 4.  | Employ curriculum-specific simulations to practice critical-thinking processes. (1,4)  |
| 5.  | Identify a complex global issue, develop a systematic plan of investigation, and present innovative sustainable solutions. (1,2,3,4)   |
| 6.  | Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs. (4,5,6) |
| 7.  | Design a website that meets accessibility requirements. (1,5)  |
| 8.  | Model legal and ethical behaviors when using information and technology by properly selecting, acquiring, and citing resources. (3,5)  |
| 9.  | Create media-rich presentations for other students on the appropriate and ethical use of digital tools and resources. (1,5)  |
| 10. | Configure and troubleshoot hardware, software, and network systems to optimize their use for learning and productivity. (4,6)  |