Hilliard City Schools
Technology
Standards for Preschool Students

Hilliard City Schools
Vision for Technology

Technology will enhance meaningful learning, communication, and collaboration in our school district as well as in our ever-changing society. Through effective utilization of technology we will:
  o learn and work more effectively
  o demonstrate capabilities creatively
  o solve challenging problems
  o make data-driven decisions
  o collect and analyze information with more insight
  o develop higher-level thinking skills through real world experiences
  o collaborate and communicate with others through a global environment

Updated Spring 2009
The Hilliard Technology Standards are intended to outline what students should know and be able to do at each level throughout their education. These activities and skills should be integrated into their existing curriculum work; it is not meant to be an add-on or separate activity. The performance indicators are intended to be a baseline, and they can be taught at an earlier age. The Hilliard Technology Standards for Students are organized around the newly revised National Technology Standards by ISTE. The Grade Level Indicators are based on the Ohio Academic Content Standards for Technology.

The Standards
Standard 1: Creativity and Innovation
Standard 2: Communication and Collaboration
Standard 3: Research and Information Fluency
Standard 4: Critical Thinking, Problem Solving, Decision Making
Standard 5: Digital Citizenship
Standard 6: Technology Operations and Concepts
Hilliard City Schools Technology Standards for Students 2009

Teaching and Learning
"Curriculum integration with the use of technology involves the infusion of technology as a tool to enhance learning in a content area or multidisciplinary setting. The technology enables students to learn in ways not previously possible." (ISTE 2000)

Although these technology standards have been compiled into a single document, they should be taught by integrating them into all areas of the curriculum. The knowledge and skills featured in this document can be taught in any order, with multiple standards and benchmarks being addressed in a single lesson or unit.

Resources
Hilliard City School District provides a variety of resources to create a foundation for classroom technology integration. Educational technologists lead the selection of educational software and hardware for the district and work with classroom teachers to provide classroom support and unit development. Each classroom is outfitted with the appropriate number of computers as well as grade-level software and building-level peripherals. In addition the staff has access to professional development offered within the district and through outside sources. There are a number of other resources for integrating technology located on the Insider in the Curriculum section.

Assessment
First and foremost, students should be evaluated on their knowledge of content. The evaluation of technology should be secondary in the learning process. Technology use should be evaluated by noting its effectiveness in demonstrating student learning. An evaluation rubric that examines both content and technology use should be weighted, with content areas receiving more significant emphasis than technology use. Student self-assessment of content and technology use is also recognized as a valuable tool in the learning process.

Key to Concept Progress
Student's progress on the Grade Level Indicators is mapped at each grade level.

I= Introduce- Students will be introduced to the skill or activity.
D= Develop- Students will continue to develop the skill or activity.
A= Apply Independently- Students will be able to function independently using this skill or activity and be able to extend their knowledge in this area.

Acknowledgements
Sincere appreciation is extended to the staff who helped to revise the Technology Standards 2009. For a complete list see: www.hilliardschools.org/departments/technology.cfm
Resources that helped to inform this document:
The National Technology Standards are found at www.iste.org/NETS/
The Ohio Academic Content Standards for Technology are from www.ode.state.oh.us
Standard 1: Creativity and Innovation

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:

a. apply existing knowledge to generate new ideas, products, or processes.

b. create original works as a means of personal or group expression.

c. use models and simulations to explore complex systems and issues.

d. identify trends and forecast possibilities.

Enduring Understandings
I. Technology can be used to create innovative products.
II. Technology can be used to present information.

Essential Questions
• How can technology be used to create innovative products? Why?
• How can technology be used to present information?

• Identify tool icons (paint, draw, text)
• Use tool icons to allow access to that action
• Explore basic drawing and graphic tools
• Generate ideas for pictures
• Create basic pictures
• Tell about pictures (e.g.- label)
• Create own thought and express that idea to make sense of graphics and pictures
• Answer questions to make sense of graphics and pictures
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.

Students:

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

b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.

c. develop cultural understanding and global awareness by engaging with learners of other cultures.

d. contribute to project teams to produce original works or solve problems.

Enduring Understandings

I. Use of digital media and online learning environments can develop cultural understanding and global awareness.

II. Technology can be used as a tool to communicate information and ideas effectively.

III. Technology can be used as a collaborative device to solve problems and increase productivity.

Essential Questions

- In what ways can we engage with others globally? How does this increase cultural understanding and global awareness?
- How do you determine what media and format to use to communicate information and ideas effectively to multiple audiences?
- How does technology enhance communication?
- How does the use of technology allow for better problem solving through collaboration?
- How can technology be used as a collaborative device that increases productivity?

- Learn to record using microphone (internal or external)
- Use voice when recording icon is selected
- Speak loud enough to be heard on recording
Standard 3: Research and Information Fluency
Students apply digital tools to gather, evaluate, and use information. Students:
- plan strategies to guide inquiry.
- locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
- evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
- process data and report results.

Enduring Understandings
I. Effective navigation of the Internet leads to locating reliable & relevant resources.
II. It is necessary to evaluate digital information to determine reliability.
III. Information needs to be organized coherently in order to draw accurate conclusions.
IV. Effective communication requires relevant evidence.
V. Valid conclusions are drawn from analyzing and interpreting data.

Essential Questions
- How do you use a search engine/database to effectively navigate the Internet?
- How do you construct and effective Internet search?
- How do you determine validity and relevancy of Internet content?
- Why is it important to use a variety of resources to validate information?
- Why is it important to organize your information?
- How do you determine what media and format to use to communicate information and ideas effectively to multiple audiences?
- What technology tools, such as spreadsheets/databases, can be used to analyze, interpret and communicate findings?

- Visually identify graphics on template
- Use electronic graphic organizer to sort information (e.g.- sorting by function)
- Use mouse to resize graphics (move to 6)
- Make sense of information in graphic organizer with teacher assistance
Standard 4: 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. Students:

a. identify and define authentic problems and significant questions for investigation.
b. plan and manage activities to develop a solution or complete a project.
c. collect and analyze data to identify solutions and/or make informed decisions.
d. use multiple processes and diverse perspectives to explore alternative solutions.

Enduring Understandings

I. Technology can be used to identify problems and potential solutions.
II. Selecting and using the appropriate technology can enhance problem solving.
III. Informed decisions can be made by using multiple processes and diverse perspectives.

Essential Questions

∞ How does technology help us identify and solve problems?
∞ How do you select which technology tool is most appropriate to use in collecting, organizing and analyzing information to solve a given problem?
∞ How can using a variety of technology resources lead to problem-solving and innovation?

• Identify problems and tools that can solve them (e.g. how to backspace, erase, undo, and start a new page)
Standard 5: Digital Citizenship
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior as stated in the Network Acceptable Use Policy. Students:

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.
d. exhibit leadership for digital citizenship.

<table>
<thead>
<tr>
<th>Enduring Understandings</th>
<th>Essential Questions</th>
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</thead>
<tbody>
<tr>
<td>I. A good digital citizen practices safe, legal and ethical behavior when using technology.</td>
<td>∞ How can I keep my personal information safe when using online tools? What are the consequences of not doing so?</td>
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<tr>
<td>II. Technology is a global communication tool that promotes collaboration, learning, and productivity.</td>
<td>∞ How can I legally use information and media from the Internet? What are the consequences of not doing so?</td>
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- Practice responsible use of technology (e.g. gentle with mouse, gentle with keys, do not touch screen, clean hands first, and do not close laptop)
Standard 6: Technology Operations and Concepts
Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

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.

Enduring Understandings
I. Technology is a productivity tool.
II. Data can be stored and manipulated in many ways.
III. Current knowledge and skills can be used to find solutions to roadblocks that occur while using technology.
IV. Good keyboarding promotes efficient use of technology.

Essential Questions
≈ Which technology tools work best to solve the current problem? How can you use technology as a productivity tool to communicate a solution?
≈ How can students utilize digital tools to locate, manipulate and store information?
≈ How can students apply current knowledge to troubleshoot problems that occur while using technology?
≈ How does good keyboarding promote efficient use of technology?

- Identify and know the terms used to describe them (mouse, laptop, screen, and keyboard).
- Report problems and errors to adult.
- Report when graphic/drawing is finished, needs saved, or needs printed.
- Demonstrate keyboarding knowledge.
  - Find letters in their name
  - Find delete key
  - Find spacebar to wake up
  - Use appropriate amount of pressure (keyboard and mouse)
- Demonstrate mouse manipulation.
  - Finger isolation- index finger
  - Eye hand coordination (moving the mouse moves the arrow)
  - Picking up the mouse will not move the arrow.
  - Watching the arrow while moving mouse.
  - Click, hold and drag
  - Click and release