Computer Technology Standards of Learning for Virginia's Public Schools Grades K-2

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Board of Education
Commonwealth of Virginia

Computer Technology Standards of Learning

Introduction

> *As the new century has unfolded, various studies have postulated about*
> *the likely competencies that will be needed in the workplace of tomorrow;*
> *one consistent conclusion is that technology will be integrated into every*
> *facet of business and life.*
>
> *The* Educational Technology Plan for Virginia: 2010-15 *focuses primarily*
> *on one specific component of 21st century skills—information and*
> *communications technology (ICT) literacy. The most recognized definition*
> *for this topic was formulated in 2002 by the International ICT Literacy*
> *Panel: "ICT literacy is using digital technology, communications tools,*
> *and/or networks to access, manage, integrate, evaluate, and create*
> *information in order to function in a knowledge society."*
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> *Educational Technology Plan for Virginia: 2010-15*

The Computer Technology Standards of Learning define the essential knowledge and skills necessary for students to access, manage, evaluate, use, and create information responsibly using technology and digital resources. They provide a framework for digital literacy and include the progressive development of technical knowledge and skills, intellectual skills for thinking about and using information, and skills needed for working responsibly and productively both individually and within groups. Digital literacy is not an end in itself but lays the foundation for deep and continuous learning. It focuses on using technology to learn rather than learning about technology.

To become technologically proficient, students must develop these skills through integrated activities across all K-12 content areas. These skills should be introduced and refined collaboratively by all K-12 teachers as an integral part of the learning process. Teachers can use these standards as guidelines for planning technology-based activities in which students achieve success in learning and communication—preparing them to meet the challenges of today's knowledge-based society.

Grades K-2

Basic Operations and Concepts

C/T K-2.1   Demonstrate an operational knowledge of various technologies.
   A.   Use various types of technology devices to perform learning tasks.
      • Use a keyboard, mouse, touchscreen, touchpad, and other input devices to interact with a computer.
      • Use appropriate buttons, gestures, menu choices, and commands to manipulate the computer when completing learning tasks.
   B.   Communicate about technology with appropriate terminology.
      • Use basic technology vocabulary as needed.

C/T K-2.2   Identify and use available technologies to complete specific tasks.
   A. Identify the specific uses for various types of technology and digital resources.
      • Identify the difference between hardware and software.
      • Create a text document.
      • Open and read an electronic book.
      • Create a digital image.
   B. Use content-specific tools, software, and simulations to complete projects.
      • Use tools in various content areas as appropriate.

Social and Ethical Issues

C/T K-2.3   Make responsible decisions—grounded in knowledge of digital safety and security best practices—that pertain to various digital communication tools and methods.
   A.   Demonstrate knowledge of school policies for using computers and other technologies.
      • Be able to articulate what is allowed and what is not allowed at school when using technology.
   B.   Understand the importance of protecting personal information and passwords.
      • Communicate an understanding of the basic principles of online safety.
      • Follow procedures that protect safety and security as outlined in the division's acceptable use policy.
   C.   Understand the basic principles of the ownership of ideas.
      • Identify digital information as being produced by people—either as individuals or as part of a group or organization.
   D. Identify and model responsible behaviors when using information and technology.
      • Identify strategies to address bullying situations involving electronic devices.

Technology Research Tools

C/T K-2.4   Plan and apply strategies for gathering information, using a variety of tools and sources, and reflect on alternate strategies that might lead to greater successes in future projects.
A. Identify information in various formats.
- Recognize that information may be presented as printed text, electronic text, audio, video, or images.
B. Identify available sources of information.
- Be able to name and use sources of information available at school and outside the school.

Thinking Skills, Problem Solving, and Decision Making
C/T K-2.5   Practice reasoning skills when gathering and evaluating data.
A. Recognize that technology can be used to solve problems and make informed decisions.
- Communicate how a decision was made based on assistance from a technology tool.
B. Use technology tools to assist with problem solving.
- Demonstrate how technology can be used to investigate and solve problems in various content areas.

Technology Communication Tools
C/T K-2.6   Communicate effectively with others (e.g., peers, teachers, experts) in collaborative learning situations.
A. Use technology tools for individual and collaborative writing, communication, and presentation activities.
- Use word processing to practice writing skills.
- Use common graphic and presentation tools when preparing and providing presentations.
B. Recognize tools useful for communication.
- Identify how different technologies appeal to different senses.