

**Howard County Public School System  
Educational Technology**

**Essential Curriculum  
Grade One**

**Goal 1: Technology Systems – The students at grade one will develop foundations in the understanding and uses of technology systems**

**Systems**

Objective - The student will be able to:

- a. Understand the uses of technology systems
  1. Recognize and identify the function of the major hardware components in a computer system
  2. Identify and use functions represented by symbols and icons commonly found in applications
  3. Use the keyboard to type letters and numbers and know how to use special key functions

**Goal 2: Digital Citizenship – The students at grade one will demonstrate an understanding of the history of technology and its impact on society, and practice ethical, legal, and responsible use of technology to assure safety**

**Technology and Society**

Objective - The student will be able to:

- a. Explain how technology affects individuals and institutions (home and school)
  1. Recognize that technologies (such as computers, calculators, television, cameras, PDAs, CD-ROM, and DVD) have influenced daily life, past and present
  2. Identify examples of how technology has affected the environment, past and present
  3. Identify how technology tools have been and are used to meet people's needs

**Legal and Ethical Issues**

Objective - The student will be able to:

- a. Practice responsible and appropriate use of technology systems, software, and information
  1. Understand and follow the acceptable use policy
  2. Work cooperatively and collaboratively with others when using technology in the classroom
  3. Recognize responsible use of technology systems and software

\* Indicates the objective could be part of the problem solving and decision-making process indicated in Goal 6

4. Demonstrate proper care of equipment (such as following lab rules, handling equipment with care)
  5. Recognize the potential harm of intrusive applications (such as viruses, pop-up windows, etc.)
  6. Use safe and correct security procedures (such as protecting password and user ID)
- b. Demonstrate an understanding of current legal standards
    1. Explore and discuss social and ethical behaviors when using technology (such as appropriate copying and pasting, giving credit for ideas, and identifying sources)
    2. Discuss the importance of having access to current, accurate information
  - c. Understand current online safety guidelines
    1. Discuss safety issues related to use of the Internet
    2. Recognize safe practices when working online
    3. Recognize and understand the purpose of technology protection measures including filtering systems

**Goal 3: Technology for Learning and Collaboration – The students at grade one will use a variety of technologies for learning and collaboration**

**Learning**

Objective - The student will be able to:

- a. Use and understand how technology enhances learning
  1. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills
  2. Describe ways selected technology tools are being used to support learning
  3. Reflect and discuss, as part of a larger group, on the appropriateness of the selected technology for the given task \*

**Collaboration**

Objective - The student will be able to:

- a. Use and understand how technology encourages collaboration
  1. Participate in class lessons using technology for brainstorming and shared writing
  2. Participate in a class lesson using technology tools to collect, display, and interpret data \*
  3. Reflect and discuss the advantages of collaboration supported by technology tools

**Increase Productivity**

Objective - The student will be able to:

\* Indicates the objective could be part of the problem solving and decision-making process indicated in Goal 6

- a. Use and understand how technology increases productivity
  - 1. Describe ways the selected technology tools are being used to support learning goals
  - 2. Use templates provided by the teacher to complete learning assignments
  - 3. Edit work created using concept mapping, word processing, or presentation software
  - 4. Collect, analyze, and display data and information using electronic tools (such as calculators, spreadsheets and graphing programs) \*
  - 5. Identify electronic sources of information on a topic \*
  - 6. Use teacher-identified resources to collect information using print and non-print resources as a class or in a small group \*

**Goal 4: Technology for Communication and Expression – The students at grade one will use technology to communicate information and express ideas using various media formats**

**Communication**

Objective - The student will be able to:

- a. Use and explain how technology is used for communication
  - 1. Identify technology tools that help gather information, share ideas, and respond to questions \*
  - 2. Use technology tools identified by the teacher to communicate with various audiences
  - 3. Present information, with assistance, to various audiences including school and community
- b. Use and explain the variety of media formats
  - 1. Identify various media formats to communicate and share ideas (such as CD, DVD, VHS, digital, and analog)
  - 2. Use various media formats, with assistance, to communicate and share ideas.

**Expression**

Objective - The student will be able to:

- a. Use and understand how technology can be used to express ideas
  - 1. Use multimedia tools to express original ideas with print, drawings, digital images, existing video, sounds, and/or personal recordings
  - 2. Prepare writing and data for display with tools such as visual organizer, word processing, or multimedia software \*

**Goal 5: Technology for Information Use and Management: The students at grade one will use technology to locate, evaluate, gather, and organize information and data.**

**Locate, Evaluate, and Gather Information/Data**

\* Indicates the objective could be part of the problem solving and decision-making process indicated in Goal 6

Objective - The student will be able to:

- a. Explore and use age-appropriate information resources available through technology
  1. Select relevant information from teacher-selected technology resources (such as databases, library catalogs, and electronic reference materials) \*
  2. Explain evaluation strategies when using electronic resources (such as publication date, fact vs. fiction, author, ease of use)
  3. Collect data using technology \*

### **Organize Information/Data**

Objective - The student will be able to:

- a. Use technology tools to organize information
  1. Participate, as part of a class, in organizing information using technology tools (such as graphic organizers and slide presentations) \*
  2. Describe how technology tools are used to organize information/collect data \*
  3. Reflect, as part of a larger group, on the appropriateness of the selected technology tool(s) for organizing information\*

**Goal 6: Technology for Problem-Solving and Decision-Making: The students at grade one will demonstrate the ability to use technology and develop strategies to solve problems and make informed decisions**

### **Components of a Problem Solving Process Supported by Technology**

- a. Investigate Problems and Propose Solutions
  1. Understand the Problem
  2. Devise a Plan
  3. Carry Out the Plan
  4. Analyze Data
  5. Communicate Conclusion
- b. Examine the Solution

**The components of the problem solving process are the same for all disciplines and across all grade levels. Academic rigor comes from the complexity of the problem and the technology used to solve the problem.**

### **Investigate Problems and Propose Solutions**

Objective - The student will be able to:

- a. Understand the Problem
  1. With the guidance of the teacher, students use technology to help identify the type of problem and the data needed to answer that type of problem

\* Indicates the objective could be part of the problem solving and decision-making process indicated in Goal 6

- b. Devise a Plan
  - 1. With the guidance of the teacher, use technology to record questions
  - 2. Identify which technology tools can be used to gather observations of a subject
- c. Carry Out the Plan
  - 1. Identify technology tools that help gather information
  - 2. Participate in a class lesson using technology tools to collect data
  - 3. Use electronic tools to collect data
  - 4. Identify electronic sources of information
  - 5. Select relevant information from appropriate technology resources
  - 6. Describe how technology tools are used to collect data
- d. Analyze Data
  - 1. Participate in a class lesson using technology tools to interpret data
  - 2. Use electronic tools to analyze data
  - 3. Describe how technology tools are used to organize data
- e. Communicate Conclusion
  - 1. Participate in a class lesson using technology tools to display data
  - 2. Use electronic tools to display data
  - 3. Identify various media formats to communicate information
  - 4. Use various media formats, with assistance, to communicate conclusions

### **Examine the Solution**

Objective - The student will be able to:

- a. Reflect and discuss, as part of a larger group, on the appropriateness of the selected technology for the given task
- b. Reflect and discuss the advantages of using technology tools to gather, analyze, and communicate conclusions

\* Indicates the objective could be part of the problem solving and decision-making process indicated in Goal 6