

**Howard County Public School System  
Educational Technology**

**Essential Curriculum  
Grade Five**

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

**Systems**

Objective - The student will be able to:

- a. Demonstrate knowledge of technology systems
  1. Understand that there are correct sitting, hand, arm, and fingering positions when keyboarding
  2. Identify types of files by their icons and extensions
  3. Identify strategies for managing everyday hardware and software problems

**Goal 2: Digital Citizenship – The students at grade five 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 the individual and society
  1. Explain technology's influence on the individual and society
  2. Identify examples of technology's impact on the environment
  3. Explain how technology tools have been used to meet the needs of societies
  4. Recommend ways technology can be used to meet the needs of societies

**Legal and Ethical Issues**

Objective - The student will be able to:

- a. Practice responsible and appropriate use of technology systems, software, and information
  1. Explain the purpose of and follow the acceptable use policy
  2. Work cooperatively and collaboratively with others when using technology
  3. Practice responsible use of technology systems
  4. Demonstrate proper care of equipment (such as following lab rules, handling equipment with care, appropriate printing of resources)
  5. Recognize the potential harm of intrusive applications (such as worms, viruses, spyware, pop-up windows, etc.)

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

6. Use safe and correct security procedures (such as protecting password and user ID)
- b. Demonstrate an understanding of current legal standards
  1. Comply with copyright laws and fair use provisions when using digital content
  2. Use electronic resources appropriately (such as paraphrasing)
  3. Cite electronic sources of text and digital information properly (such as MLA, APA, Chicago)
- c. Understand current online safety guidelines
  1. Understand that the Internet offers access to multiple digital communities with differing guidelines
  2. Explain safety and privacy issues related to use of the Internet
  3. Use safe and correct security procedures when working online (such as not disclosing personal information and protecting passwords)
  4. Describe procedures for exiting an inappropriate site (such as clicking the home, turning off monitor, notifying an adult)
  5. Understand the purpose of technology protection measures including filtering systems

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

**Learning**

Objective - The student will be able to:

- a. Select and use technology tools to enhance learning
  1. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills
  2. Explain why selected technology tools were selected to support learning
  3. Assess the use of the selected technology for individual learning of the specific task

**Encourage Collaboration**

Objective - The student will be able to:

- a. Select and use technology tools to encourage collaboration
  1. Use technology tools to work collaboratively within the school community
  2. Use technology tools to exchange ideas with individuals or groups outside of the school community
  3. Articulate 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. Select and use technology tools to increase productivity
  1. Explain why the selected technology tools are being used to accomplish tasks efficiently \*
  2. Create new documents to complete learning assignments and demonstrate new understanding
  3. Input and analyze information in a spreadsheet or database \*
  4. Use suitable electronic resources to refine presentations and edit texts for effective and appropriate use of language conventions, such as capitalization, punctuation, spelling, and pronunciation
  5. Use word processing technology when appropriate
  6. Collect, manipulate, analyze, and display data and information using tools, such as calculators and computers \*

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

**Communication**

Objective - The student will be able to:

- a. Select and use technology for communication
  1. Use communication tools (such as e-mail, discussion boards, online conferences, Learning Management Systems, portfolios) to gather information, share ideas, and respond to questions \*
  2. Present information independently to various audiences
  3. Evaluate the appropriateness of media formats for various purposes \*

**Expression**

Objective - The student will be able to:

- a. Select and use technology to express ideas
  1. Select and use the appropriate multimedia and publishing tools to express original ideas with print, drawings, digital images, existing or original video, sounds, and/or personal recording
  2. Present ideas and information in formats such as electronic presentations, web pages, graphic organizers, or spreadsheets that are appropriate to a specific audience \*
  3. Change, edit, and revise graphs, graphics, presentations, and word processing documents \*
  4. Evaluate student-created product design based on purpose, audience, and format \*

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

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

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

Objective - The student will be able to:

- a. Select and use information resources available through technology
  1. Select relevant information from appropriate technology resources \*
  2. Select and read to gain information from electronic personal interest materials, such as brochures, books, magazines, cookbooks, and web sites \*
  3. Apply evaluation strategies when using electronic resources (such as publication/copyright date, fact vs. fiction, source credibility, ease of use)
  4. Understand library catalog search strategies
  5. Understand search strategies for age-appropriate Web search engines/directories

### **Organize Information**

Objective - The student will be able to:

- a. Select and use technology tools to organize information
  1. Use technology tools independently to support note-taking \*
  2. Use technology tools independently to support data collection \*
  3. Explain why specific technology tools were selected to organize information \*
  4. Evaluate the use of the selected technology for the specific task \*

**Goal 6: Technology for Problem-Solving and Decision-Making: The students at grade five 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**

\* 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. Understand the Problem
  1. Use technology to help identify the type of problem and the data needed to answer that type of problem
- b. Devise a Plan
  1. Identify possible technology tools to gather data
  2. Use technology to help formulate a research question about a problem/situation that requires further study
  3. Use technology to develop a plan for how to answer questions about a problem/situation that requires further study
  4. Identify technology resources to gather information about a problem/situation that requires further study
  5. Select an appropriate technology tool to gather data
- c. Carry Out the Plan
  1. Collect data and information using technology tools.
  2. Use communication tools to gather information
  3. Apply evaluation strategies when using electronic resources
  4. Make and record observations using technology
- d. Analyze Data
  1. Analyze information using technology tools
  2. Input and analyze information in a spreadsheet or database
  3. Explain why specific technology tools were selected to organize information
- e. Communicate Conclusion
  1. Display data and information using technology tools
  2. Use communication tools to communicate conclusions
  3. Present information and conclusions in formats that are appropriate to a specific audience

### **Examine the Solution**

Objective - The student will be able to:

- a. Assess the use of the selected technology for individual learning of the specific task
- b. Evaluate the appropriateness of media formats for communicating data

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