

Computer Technology: Literacy and Usage

FIFTH GRADE

Standard 1.0

Students will understand basic operations and concepts of technology.

Learning Expectations

- 1.1. Students will demonstrate an understanding of the nature and operation of technology systems.
- 1.2. Students will exhibit a proficiency in the use of technology.
- 1.3. Students will demonstrate proper keyboarding skills using the touch system of keying..

Accomplishments

- 5.1.1. Students will demonstrate an understanding of the nature and operation of technology systems.
 - a. Use and apply appropriate computer terminology.
 - b. Exhibit proper posture and fingering techniques at the keyboard.
 - c. Work with more than one software application at a time.
- 5.1.2. Students will exhibit a proficiency in the use of technology.
 - a. Use and apply appropriate computer terminology.
 - b. Understand the differences in file formats and compatibility.
 - c. Recognize telecommunications as a way to share information electronically.
 - d. Develop skills in using function keys and keyboard short cuts.
- 5.1.3. Students will develop basic skills (alpha numeric and special characters) in using keyboard using the touch system
 - a. Exhibit proper posture and fingering techniques for the alphanumeric keyboard.
 - b. Use and apply appropriate keyboarding terminology.
 - c. Review and demonstrate proper touch-keying techniques for all alpha, numeric and symbol keys.
 - d. Apply the touch-keying system to develop basic skills on the alphanumeric keyboard at a rate of 20 gross words per minute (GWAM) for a 2 minute straight copy timed writing.
 - e. Key a simple letter to include alpha, numeric, and appropriate symbol keys such as periods, question marks, etc.

Performance Indicators:

By the end of the fifth grade the student is able to

- Use keyboards and other common input and output devices (including adaptive devices when necessary) efficiently and effectively.
- Key at a rate of 20 gross words per minute using the proper touch-keying

techniques on a 2 minute timed writing.

- Key a simple letter with two paragraphs with no more than two mistakes.
- Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide.

Sample Performance Task

- Using any word processing or keyboard program the students will take a timed keying test to determine their gross words per minute.

Standard 2.0

Students will understand the importance of social, ethical, and human issues associated with technology.

Learning Expectations

- 2.1 Students will understand the ethical, cultural, and societal issues related to technology.
- 2.2 Students will practice responsible use of technology systems, information, and software.
- 2.3 Students will develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.

Accomplishments

- 5.2.1. Students will understand the ethical, cultural, and societal issues related to technology.
 - a. Adhere to software licensing agreements and respect the electronic work of other individuals.
 - b. Obey the copyright laws and accurately record information source.
 - c. Discuss the advantages and disadvantages of the use of technology.
 - d. Recognize the need for equal access to materials and resources.
 - e. Recognize the need for specific access to assistive devices.
- 5.2.2. Students will practice responsible use of technology systems, information, and software.
 - a. Adhere to software licensing agreements and respect the electronic work of other individuals
 - b. Practice and respect the copyright laws and accurately record information source
 - c. Follow Acceptable Use Guidelines as set by local school district
 - d. Discuss the impact of viruses as to the advantages and disadvantages of the use of technology
 - e. Know and use rules of "Netiquette."
- 5.2.3. Students will develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
 - a. Analyze the advantages and disadvantages of the use of technology with respect to personal safety, ethics, and efficiency.

- b. Practice safe use of the electronic equipment.

Performance Indicators:

By the end of the fifth grade the student is able to:

- Discuss common uses of technology in daily life and the advantages and disadvantages those uses provide.
- Discuss basic issues related to responsible use of technology and describe personal consequences of inappropriate use.

Sample Performance Tasks

- a. Classroom discussion of Acceptable Use Policy.
- b. Using a word processor briefly describe the advantages and disadvantages technology has brought to our lives. Essays scored to a rubric.
- c. Compose and key an essay concerning the impact of technology on our daily lives.

Standard 3.0

Students will use technology productivity tools.

Learning Expectations

- 3.1 Students will use technology tools to enhance learning, increase productivity, and promote creativity.
- 3.2 Students will use productivity tools to collaborate in constructing technology-enhanced models, prepare publications, and produce other creative works.

Accomplishments

- 5.3.1. Students will use technology tools to enhance learning, increase productivity, and promote creativity.
 - a. Use subject specific information gathered through technology resources for a variety of curriculum subjects.
 - b. Create presentations for various subject related assignments.
 - c. Use simulation software and tutorial software to assist with learning.
 - d. Use on-line help and documentation (help buttons/menus/guides, readme files, Ask an Expert web sites, electronic tech support).
- 5.3.2. Students will use productivity tools to collaborate in constructing technology enhanced models, prepare publications, and produce other creative works.
 - a. Use the computer and technology resources to practice learning skills in relation to other subject areas such as math, science, English, etc.
 - b. Recognize that different software programs are design for specific purposes.
 - c. Use the characteristics of multimedia (text, audio, images, video, etc.) in presentations
 - d. Identify and discuss multimedia terms/concepts (slide/card, link/button, text box, navigate, transition) as a class/group.

- e. Use a age appropriate web authoring tool to compose text, create hyperlinks, and add relevant multimedia.
- f. Explore the navigation of software utilized in the classroom.
- g. Correctly perform the following basic skills in word processing and spreadsheet programs.

Performance Indicators:

By the end of the fifth grade the student is able to:

- Use general purpose productivity tools and peripherals to support personal productivity, remediate skill deficits, and facilitate learning throughout the curriculum.
- Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.

Sample Performance Task

- Students will create independent and collaborative multimedia products using a variety of presentation tools to be scored by classroom created rubric.

Standard 4.0

Students will use technology communications tools.

Learning Expectations

- 4.1 Students will use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
- 4.2 Students will use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

Accomplishments

- 5.4.1. Students will use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
 - a. Use communication tools to participate in projects.
 - b. Explore effective ways to demonstrate ideas (font, color, background/white space, graphics, and sound to ensure that products are appropriate for the communication media including multimedia screen displays, Internet documents, and printed materials).
 - c. Publish information in a variety of media including, but not limited to, printed copy, monitor display, Internet documents, and video.
 - d. Use presentation software to communicate with specific audiences.
 - e. Select representative student products to be collected and stored in an electronic evaluation tool.
 - f. Participate in the creation of technology assessment tools such as checklists, timelines, or rubrics.

- 5.4.2. Students will use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
- a. Demonstrate sensitivity to appropriate language use when communicating.
 - b. Explore principles of design (proportion, balance, contrast, rhythm, emphasis, unity, etc.), in creating a presentation/document.
 - c. Use appropriate applications, including, but not limited to spreadsheets and databases to develop charts and graphs by using data from various sources.
 - d. Publish information in a variety of media including, but not limited to, printed copy, monitor display, Internet documents, and video.
 - e. Use presentation software to communicate with specific audiences.
 - f. Integrate various media (video tape, CD-ROM, laserdisc, digital sources, internet, etc. in a multimedia presentation.
 - g. Select representative student products to be collected and stored in an electronic evaluation tool.
 - h. Evaluate student products for relevance to the assignment or task.
 - i. Be aware that file size is important, plan, organize and save multimedia files with attention to file size and media storage.

Performance Indicators:

By the end of the fifth grade the student is able to:

- Use technology tools (e.g., multimedia authoring, presentation, Web tools, digital cameras, scanners) for individual and collaborative writing, communication, and publishing activities to create knowledge products for audiences inside and outside the classroom.
- Use telecommunications efficiently to access remote information, communicate with others in support of direct and independent learning, and pursue personal interests.
- Use telecommunications and online resources (e.g., e-mail, online discussions, Web environments) to participate in collaborative problem-solving activities for the purpose of developing solutions or products for audiences inside and outside the classroom.

Sample Performance Task

- Given a topic the student will choose the appropriate software and hardware to effectively communicate to a given audience.

Standard 5.0

Students will select and use appropriate technology research tools.

Learning Expectations

- 5.1 Students will use technology to locate, evaluate, and collect information from a variety of sources.
- 5.2 Students will use technology tools to process data and report results.
- 5.3 Students will evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.

Accomplishments

- 5.5.1. Students will use technology to locate, evaluate, and collect information from a variety of sources.
 - a. Perform simple searches to acquire information such as text, audio, video, graphics, and online help, using CD-ROM and online databases.
 - b. Apply appropriate electronic search strategies in the acquisition of information including keyword and Boolean (and, or, not) search strategies.
 - c. Select appropriate strategies to navigate and access information on local area networks (printer, local servers, CD-ROM towers...) and wide area networks (Internet, WWW, telecommunications...) for research and resource sharing.
 - d. Distinguish between statements of fact and opinion.
 - e. Evaluate resources for accuracy, authority, reliability, currency and relevance.
- 5.5.2. Students will use technology tools to process data and report results.
 - a. Create an outline for a report using information from resources and reference sources..
 - b. Synthesize information using word processing, databases, and/or spreadsheets.
- 5.5.3. Students will evaluate and select new information resources and technological innovations based on the appropriateness for specific tasks.
 - a. Perform searches to acquire information such as text, audio, video, graphics, and online help, using CD-ROM and online databases.
 - b. Apply appropriate electronic search strategies in the acquisition of information including keyword and Boolean (and, or, not) search strategies.
 - c. Evaluate acquired information for validity and usefulness.
 - d. Select appropriate strategies to navigate and access information on local area networks (printer, local servers, CD-ROM towers...) and wide area networks (Internet, WWW, telecommunications...) for research and resource sharing.

Performance Indicators:

By the end of the fifth grade the student is able to:

- Use a variety of technology resources for problem solving, self-directed learning, and extended learning activities.
- Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.

Sample Performance Task:

- Use technology resources to research then create a product on a given topic.

Standard 6.0

Students will utilize technology problem-solving and decision-making tools.

Learning Expectations

- 6.1 Students will use technology resources for solving problems and making informed decisions.
- 6.2 Students will employ technology in the development of strategies for solving problems in the real world.

Accomplishments

- 5.6.1. Students will use technology resources for solving problems and making informed decisions.
 - a. Determine the usefulness and appropriateness of electronic information and apply critical analysis to resolve conflicts (discrepancies between sources) and validate information.
 - b. Use software programs with audio, video, and graphics to enhance learning experiences
 - c. Use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia.
 - d. Use a variety of data types including text, graphics, digital audio, and video.
 - e. Use communication tools to participate in projects (e.g. telephone, fax machine, email)
 - f. Use software features, such as built-in or on-line help.
 - g. Use software features, such as slide show previews, to evaluate a final product.
 - h. Use a graphical organizer and/or outliner to categorize, make connections, and visually display relationships (cause and effect, Venn Diagrams and hierarchical organization).
- 5.6.2. Students will employ technology in the development of strategies for solving problems in the real world.
 - a. Determine the usefulness and appropriateness of electronic information and apply critical analysis to resolve conflicts (discrepancies between sources) and validate information.
 - b. Use software programs with audio, video, and graphics to enhance learning experiences.
 - c. Use appropriate software to express ideas and solve problems including the use of word processing, graphics, databases, spreadsheets, simulations, and multimedia.
 - d. Use a variety of data types including text, graphics, digital audio, and video.
 - e. Use communication tools to participate in projects (e.g., telephone, fax machine, email).
 - f. Use interactive technology environments, such as simulations, electronic science or mathematics laboratories, virtual museum field trips, or on-line interactive lessons, to extend learning.
 - g. Use software features, such as built-in or on-line help.

- h. Use software features, such as slide show previews, to evaluate a final product.
- i. OPTIONAL – If available, use a computer program, such as LOGO/HTML to demonstrate how computers use instruction.

Performance Indicators:

By the end of the fifth grade the student is able to:

- Use technology resources for problem solving, self-directed learning, and extended learning activities.
- Determine which technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
- Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources.

Sample Performance Task:

- a. Share student performance based products using a variety of tools and electronic devices.
- b. Given teacher selected sites the student will evaluate the validity and bias of the information on a given topic.