Computer Technology: Literacy and Usage

SECOND 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 develop basic keying skills (alpha numeric and special characters) in using keyboard using the touch system.

Accomplishments
2.1.1.   Students will demonstrate an understanding of the nature and operation of technology systems.
  a. Identify the computer as a machine that helps people work and play.
  b. Identify and use input devices such as a disk drive, mouse, keyboard, CD-Drive, etc.
  c. Identify and use output devices such as a disk drive, monitor, printer, CD-Drive, etc.
  d. List the rules for the proper care of computer equipment
  e. Demonstrate proper care for computer and other technologies properly.
  f. Use and apply appropriate computer and keyboarding terminology.
  g. Explore basic navigation of the operating system as it relates to applications used on the computer.
  h. Differentiate between the operating system and an application/program.
  i. OPTIONAL – If available, use a computer program, such as LOGO to demonstrate how computers use instruction

2.1.2.   Students will exhibit a proficiency in the use of technology.
  a. Demonstrate proper sequence for turning on and turning off computers and other technologies.
  b. Operate a mouse (click, double-click, click and drag, click and hold/draw.
  c. Open/Launch a program/application from an icon
  d. Quit a program/application.
  e. Follow directions in a menu-driven program.
  f. Minimize and maximize windows.
  g. Operate stroll bars.

h. Print, save and reopen documents/files with teacher guidance.

2.1.3. Students will develop basic keying skills (alpha/numeric and symbol characters) in using keyboard using the touch system.
   a. Use the correct hand and body position while applying the proper touch method of keying for the home row keys (A, S, D, F, J,K, L, ;); Row above (Q,W,E,R,T,Y,U,I,O,P,[,], \); and Row below (Z,X,C,V,B,N,M,",", ".", /).
   b. Use appropriate hand pressure on mouse and keyboard.
   c. Operate special purpose keys (return/enter, spacebar, esc, arrows, shift, backspace).
   d. Know the relative position of the alpha/numeric keys.
   e. Color a drawing of the keyboard indicating which finger should operate which keys.
   f. Key words consisting of letters utilizing the home row keys, the row below and the row above using the proper touch keying technique for the development of speed.
   g. Proofread and correct errors using backspace, delete, undo, erase.

Performance Indicators

By the end of the second grade the student will be able to

- use input devices (e.g., mouse, keyboard, remote control) and output devices (e.g., monitor, printer) to successfully operate computers, VCRs, audiotapes, and other technologies.
- use keyboarding skills to produce grade appropriate projects.
- use a variety of media and technology resources for directed and independent learning activities.
- communicate about technology using developmentally appropriate and accurate terminology.
- use developmentally appropriate multimedia resources (e.g., interactive books, educational software, multimedia encyclopedias) to support learning.

Sample Performance Tasks

a. Using pictures of the various parts of a computer (e.g. disk drive, CPU, monitor, keyboard, mouse, etc.) and word cards, students match the words with the pictures and tell what each part does. Using a checklist to evaluate this task, proficiency would include student application of this knowledge to components of a real computer.
b. Using a checklist, students will demonstrate how to turn on the computer, open a designated program, exit that program, and shut down the computer with teacher supervision. Proficiency of this task is met when all items on the list are completed.

c. Using a word-processing and drawing program, students write statements, use computer drawing tools to illustrate their statements, and print them out for presentation to the class. Using a rubric to evaluate this task, proficiency will show accurate use of word-processing, drawing and printing.

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 literacy, and software.
2.3   Students will develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
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Accomplishments
2.2.1. Students will understand the ethical, cultural, and societal issues related to technology.
   a. Demonstrate the safe use of electronic technologies.
   b. Identify, discuss and visually represent uses of technology in the community (bar codes, scanners, handheld, etc.).
   c. Identify the influence and effects of technology on everyday life and learning.
   d. Respect the privacy of others.

2.2.2. Students will practice responsible use of technology systems, information literacy, and software.
   a. Understand and follow classroom rules for technology use.
   b. Discuss the Acceptable Use Policy.
   c. Recognize the importance of supervised use of technology.
   d. Identify and discuss appropriate and safe behaviors online.
   e. Notify the teacher immediately if an inappropriate website appears when using the internet.
   f. Know how "pop-up" windows happen and not to respond to them.

2.2.3. Students will develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
   a. Respect the rights of others.

b. Recognize that technology can be used to assist learning.
c. Discuss ownership of computer-created work.
d. Use teacher selected Internet resources to locate, discuss, and compare information about the local community.

Performance Indicators
By the end of the second grade the student will be able to:
- work cooperatively and collaboratively with peers, family members, and others when using technology.
- demonstrate positive social and ethical behaviors when using technology.
- practice responsible use of technology systems and software.

Sample Performance Task
a. Using pictures from magazines, newspapers, and/or drawings, students will make posters of the different ways computers are used in their lives. The students will then display and explain their choices of pictures.
b. Student will participate in a classroom discussion of responsible use of technology systems and information literacy.

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
3.3. enhanced models, prepare publications, and produce other creative works.

Accomplishments
2.3.1. Students will use technology tools to enhance learning, increase productivity, and promote creativity.
a. Use the computer and technology resources to practice learning skills such as computer puzzles, matching games, logical thinking programs, etc.
b. Follow directions in a menu-driven program.
c. Identify and explain the function of the icons used in the various programs.
d. Recognize, discuss, and use word processing as a tool to enter, edit, print, and save assignments.
e. Use and discuss basic word processing terms/concepts such as desktop, menu/tool bar, document, text, etc.

f. Use a prepared spreadsheet to enter/edit data and observe the changes that occur to make predictions.
g. Use an age appropriate spreadsheet application to enter, display data as a class/group.
h. Identify various sources of data.

2.3.1. 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. Use text, paint, and/or drawing tools to create simple documents.
c. Recognize that different software programs are design for specific purposes.
d. Recognize the characteristics of multimedia (text, audio, images, video, etc.).
e. Identify and discuss multimedia terms/concepts (slide/card, link/button, text box, navigate, transition) as a class/group.
f. Create a simple graph/chart from data in a spreadsheet.
g. Explore the navigation of software utilized in the classroom.

Performance Indicators:
By the end of the second grade the student will be able to:

- Use a variety of media and technology resources for directed and independent learning activities.
- Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
- Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.

Sample Performance Task

a. *Using a word-processing and drawing program, students write statements, use computer drawing tools to illustrate their statements, and print them out for presentation to the class. Using a rubric to evaluate this task, proficiency will show accurate use of word-processing, drawing and printing.*
b. Following teacher instruction on entering data and making a chart, students will make a graph. This activity will be evaluated through a teacher observation checklist with proficiency shown by the printed graph.

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.
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Accomplishments
      2.4.1. Students will use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences.
          a. Recognize and discuss telecommunications as a way to share information electronically.
          b. Use multimedia software to communicate information and ideas.
          c. Use the computer as a writing tool.
      2.4.2. Students will use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
          a. Experiment with basic formatting options in a word processor to produce a publication for each of the following: a student, a teacher, a friend, and a parent.
          b. Suggest ways telecommunications can be used to share information electronically.
          c. Explore the use of multimedia software to enhance the communication of information and ideas.

Performance Indicators:
By the end of the second grade the student will be able to:

- Use a variety of media and technology resources for directed and independent learning activities.
- Create developmentally appropriate multimedia products with support from teachers, family members, or student partners.
- Use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.

Sample Performance Task

      a. Using a word-processing and drawing program, students write statements, use computer drawing tools to illustrate their statements, and print them out for presentation to the class. Using a rubric to evaluate this task, proficiency will show accurate use of word-processing, drawing and printing.

      b. Following teacher instruction on entering data and making a chart, students will make a graph. This activity will be evaluated through a teacher observation checklist with proficiency shown by the printed graph.

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.
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Accomplishments
    2.5.1. Students will use technology to locate, evaluate, and collect information from a variety of sources.
        a. Use electronic reference tools as a resource.
        b. Evaluate acquired information for usefulness

    2.5.2. Students will use technology tools to process data and report results.
        a. Use electronic reference tools as a resource, such as a simple database/spreadsheet
        b. Acquire information from a computer.
        c. Identify the need for data to be organized.
        d. Develop a small basic data base.
        e. Develop a small basic spreadsheet.
        f. Use the computer as a writing tool.

    2.5.3. Students will evaluate and select new information resources and technological
        a. Choose an application based on its appropriateness for specific tasks.
        b. Evaluate acquired information for usefulness.
        c. Explore the gathering of information using a variety of electronic resources, including but not limited to the Internet.

d. Perform an Internet search under the direction and supervision of a teacher.

Performance Indicators

By the end of the second grade the student will be able to:

- use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.

Sample Performance Task

- Given a question or a topic related to any content area, the student will use developmentally appropriate technology to respond to the question or collect information on the topic. Proficiency will be determined using a rubric developed by the teacher.

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

2.6.1. Students will use technology resources for solving problems and making informed decisions.
   a. Recognize that computers were created to assist in solving problems. (Computer History)
   b. Recognize that the computer relies on sequential steps in order to perform tasks.
   c. Use a step-by-step process for solving a problem.
      1. Order specific steps in the solution of a problem.
      2. Choose the proper steps in the solution of a problem.
      3. Choose and order the steps in the solution of a problem
   d. Use teacher selected websites to acquire information related to a given problem.
      1. Analyze the information gathered
      2. Collaborate with the teacher/student to reach a decision based on the information gathered.

3. OPTIONAL – If available, use a computer program, such as LOGO to demonstrate how computers use instruction.

2.6.2. Students will employ technology in the development of strategies for solving problems in the real world.
   a. Use the computer and technology resources to gather information on different ways to solve a specific problem.
   b. Use developmentally appropriate software to follow sequential directions and proper steps to solve a problem for a given simple task.
   c. Use multimedia software to express ideas, strategies use, and solution for a given problem and/or task.
   d. Use some method of storyboarding to create a presentation on the steps used to solve the problem.

Performance Indicators:
By the end of the second grade the student will be able to:
- use technology resources (e.g., puzzles, logical thinking programs, writing tools, digital cameras, drawing tools) for problem solving, communication, and illustration of thoughts, ideas, and stories.

Sample Performance Task
   a. Students will use the internet with teacher's assistance to examine selected websites to acquire information and illustrate thoughts, ideas, or stories with multimedia software.
   b. Using a checklist, students will demonstrate how to turn on the computer, open a designated program, exit that program, and shut down the computer with teacher supervision. Proficiency of this task is met when all items on the list are completed.
   c. Using a word-processing and drawing program, students write statements, use computer drawing tools to illustrate their statements, and print them out for presentation to the class. Using a rubric to evaluate this task, proficiency will show accurate use of word-processing, drawing and printing.