



Lesson Plan

Course Title: Principles of Information Technology

Session Title: Keyboards, Mice, and Other Input Devices

Lesson Duration: 45 Minutes

Performance Objective:

Upon completion of this assignment, the student will be able to explain the importance of the input devices, how the computer accepts information from input devices, and the many tasks input devices enable you to perform on the computer.

Specific Objectives:

- Describe the function of the keyboard
- List the five steps a computer follows when accepting input from a keyboard
- Learn the preventive maintenance of the keyboard
- Describe the purpose of a mouse and the role it plays in computing
- Identify the five essential techniques for using a mouse
- Learn the preventive maintenance techniques associated with the mouse
- Identify other common input devices

Preparation

TEKS Correlations: 130.272(C)(4)

This lesson, as published, correlates to the following TEKS. Any changes/alterations to the activities may result in the elimination of any or all of the TEKS listed.

(B) identify major hardware components and their functions such as the central processor unit, input and output peripherals, and storage systems and devices;

(D) demonstrate understanding of the process of connecting peripheral devices;

(E) demonstrate proficiency in the use of a variety of input devices such as mouse, keyboard, microphone, digital camera, printer, scanner, and optical disk reader.

Instructor/Trainer

References:

Peter Norton's Introduction to Computers 4th Edition

Lesson 2: Standard Methods of Input PC Upgrade and Repair Simplified 2nd Edition

Instructional Aids:

- Keyboards, Mice, and Other Types of Inputs Presentation

- Keyboards, Mice, and Other Types of Inputs Presentation - Handouts
- Keyboards, Mice, and Other Types of Inputs Quiz
- Keyboards, Mice, and Other Types of Inputs Quiz Key
- Keyboards, Mice, and Other Types of Inputs Word Search
- Teacher-Created Labs Activities (Be creative)

Materials Needed:
Copies of the lab assignments for each student

- Equipment Needed:
- Projection system to play PowerPoint presentation
 - Personal computer with access to the Internet

Learner

Students should read appropriate curriculum material for methods of inputs, depending on the text/ curriculum being used for this course. This lesson can be taught with only the PowerPoint presentation and the equipment outlined above.

Introduction

MI	Introduction (LSI Quadrant I):
	<ul style="list-style-type: none"> • SAY, “The keyboard was one of the first peripherals to be used with computers, and it is still the primary input device for entering text and numbers. Some people believe that when computers can understand handwriting and speech, keyboarding will become unnecessary. But for now, keyboarding remains the most common way to enter text and other data into a computer.” • ASK, “Does anyone know how many keys are on a standard keyboard?” (<i>101 keys arranged in five groups</i>) • SAY, “The mouse first gained widespread recognition in 1984. A mouse lets you position the cursor anywhere on the screen quickly and easily without having to use the cursor-movement keys. You simply move the pointer to the on-screen position you want, press the mouse button, and the cursor appears at the pre-selected position.” • ASK, “What are some other advantages of using a mouse?” (<i>A mouse also allows you to create graphics such as lines, curves, and freehand shapes on the screen. The mouse and mouse-based operating systems let you choose commands from easy-to-use menus and dialog boxes so you don’t have to type.</i>) • SAY, “As handy as it is, some people do not like using a mouse or have difficulty maneuvering one. For these reasons and others, hardware makers have developed various input devices that duplicate the mouse’s functionality but interact with the user in different ways. The primary goals of these “mouse variants” are to provide ease of use while taking up less space than a mouse. They all remain stationary and can even be built into the keyboard.”

	<ul style="list-style-type: none"> • ASK, “What are some examples of other input devices?” (<i>scanners, webcam, etc.</i>)
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Outline

MI	Outline (LSI Quadrant II):	Instructor Notes:
   	<p>I. Introduction Activity</p> <p>a. Have students complete the word search to establish familiarity with important terms.</p> <p>II. Show Presentation</p> <p>a. Keyboards</p> <ol style="list-style-type: none"> 1. Introduction to the keyboard 2. Standard keyboard layout 3. Ergonomic keyboard 4. Function of a keyboard 5. Preventive maintenance of the keyboard <p>b. Mouse</p> <ol style="list-style-type: none"> 1. Introduction to the mouse 2. Mouse techniques 3. Preventive maintenance of the mouse <p>c. Variants of a mouse and other types of inputs</p> <ol style="list-style-type: none"> 1. Scanner 2. Digital camera 3. Integrated pointing device 4. Microphones 5. Touch pad 6. Pens <p>III. Have students complete the Keyboards, Mouse, & Input Device Quiz</p>	<p>Have students complete the word search before the lecture.</p> <p>Instructors can use the presentation slides, handouts, and note pages in conjunction with the following outline.</p> <p>See what input devices the students can come up with on their own.</p>

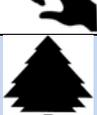
Application

MI	Guided Practice (LSI Quadrant III):
	<ul style="list-style-type: none"> • Demonstrate each lab principle. • Maintain direct supervision in the lab providing guidance when warranted. • Demonstrate the functions of the buttons of the mouse. Have students open a document, double left-click on a single word and see what happens. Have them right-click on the selected word and see what happens. Have them explain the functions of each buttons.

MI	Independent Practice (LSI Quadrant III):

	Students work individually on lab assignment; demonstrating their skills in identifying and discussing the various lab requirements and results
Summary	
MI	Review (LSI Quadrants I and IV):
	<p>Checking for understanding (Q&A Session)</p> <p>Q: How does the computer receive input from a keyboard?</p> <p>A: <i>The keyboard controller detects the keystroke. The controller places a scan code in the keyboard buffer, indicating which key was pressed. The keyboard sends the computer an interrupt request, telling the CPU to accept the keystroke.</i></p> <p>Q: What is the purpose of the mouse and the role it plays in computing?</p> <p>A: <i>The mouse is a pointing device. You use it to move a graphical pointer on the screen. The mouse can be used to issue commands, draw, and perform other types of input tasks.</i></p> <p>Q: What are other variants of input devices?</p> <p>A: <i>Track pad, integrated pointing devices, microphone, scanner, digital camera, touch pad, pen</i></p>
Evaluation	
MI	Informal Assessment (LSI Quadrant III):
	Monitor student progress during independent practice and re-teach/redirect as needed.
MI	Formal Assessment (LSI Quadrant III, IV):
	Use Keyboards, Mice and Other Input Devices Quiz and Key.
Extension	
MI	Extension/Enrichment (LSI Quadrant IV): Students that have mastered the lab assignments can peer tutor students (one-on-one) that are having difficulty with performing the lab

Icon	MI	Teaching Strategies	Personal Development Strategies
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	Verbal/ Linguistic	Lecture, discussion, journal writing, cooperative learning, word origins	Reading, highlighting, outlining, teaching others, reciting information
	Logical/ Mathematical	Problem solving, number games, critical thinking, classifying and organizing, Socratic questioning	Organizing material logically, explaining things sequentially, finding patterns, developing systems, outlining, charting, graphing, analyzing information
	Visual/Spatial	Mind-mapping, reflective time, graphic organizers, color-coding systems, drawings, designs, video, DVD, charts, maps	Developing graphic organizers, mind-mapping, charting, graphing, organizing with color, mental imagery (drawing in the mind's eye)
	Musical/ Rhythmic	Use music, compose songs or raps, use musical language or metaphors	Creating rhythms out of words, creating rhythms with instruments, playing an instrument, putting words to existing songs
	Bodily/ Kinesthetic	Use manipulatives, hand signals, pantomime, real life situations, puzzles and board games, activities, role-playing, action problems	Moving while learning, pacing while reciting, acting out scripts of material, designing games, moving fingers under words while reading
	Intrapersonal	Reflective teaching, interviews, reflective listening, KWL charts	Reflecting on personal meaning of information, studying in quiet settings, imagining experiments, visualizing information, journaling
	Interpersonal	Cooperative learning, role-playing, group brainstorming, cross-cultural interactions	Studying in a group, discussing information, using flash cards with other, teaching others
	Naturalist	Natural objects as manipulatives and as background for learning	Connecting with nature, forming study groups with like-minded people
	Existentialist	Socratic questions, real life situations, global problems/questions	Considering personal relationship to larger context

Name _____ Date _____

Keyboards, Mice, & Other Input Devices - Quiz

Multiple Choice: Select the one best answer for each of the following:

1. The following are groups of keys found on a standard keyboard EXCEPT
 - a. Modifier keys
 - b. Function keys
 - c. Alphanumeric keys
 - d. Logic keys
2. What type of keyboard can help prevent injuries from using the keyboard for long periods of time?
 - a. Ergonomic keyboard
 - b. Standard keyboard
 - c. Music keyboard
 - d. None of the above
3. After a key is pressed in the function of a keyboard, what passes the scan code to the CPU?
 - a. Keyboard buffer
 - b. Keyboard controller
 - c. System software
 - d. Control unit
4. When performing a preventive maintenance on the computer, what is the first thing you should do?
 - a. Vacuum the keyboard
 - b. Disconnect the keyboard from the computer
 - c. Dip the keyboard in soap and water
 - d. None of the above
5. The following are techniques when using a mouse EXCEPT
 - a. Right click once
 - b. Left click once
 - c. Dragging
 - d. Pushing
6. When removing lint and debris from the rods, the following can be used
 - a. Finger nail, q-tip, compressed air can
 - b. Finger nail, marker, water
 - c. Finger nail, hammer, screwdriver
 - d. None of the above

7. Examples of other input devices include
 - a. Touch screen
 - b. Pens
 - c. Digital camera
 - d. All of the above

8. MOST keyboards today are
 - a. Computer enhanced
 - b. IB Enhanced AT-style
 - c. Both of the above
 - d. Neither of the above

9. Variants of the mouse include a
 - a. Track pad
 - b. Track ball
 - c. Both of the above
 - d. Neither of the above

10. The following are ways of inputting graphics into the computer EXCEPT
 - a. Digital camera
 - b. Video camera
 - c. Printer
 - d. Scanner

Keyboards, Mice, & Other Input Devices – Quiz Key

Multiple Choice: Select the one best answer for each of the following:

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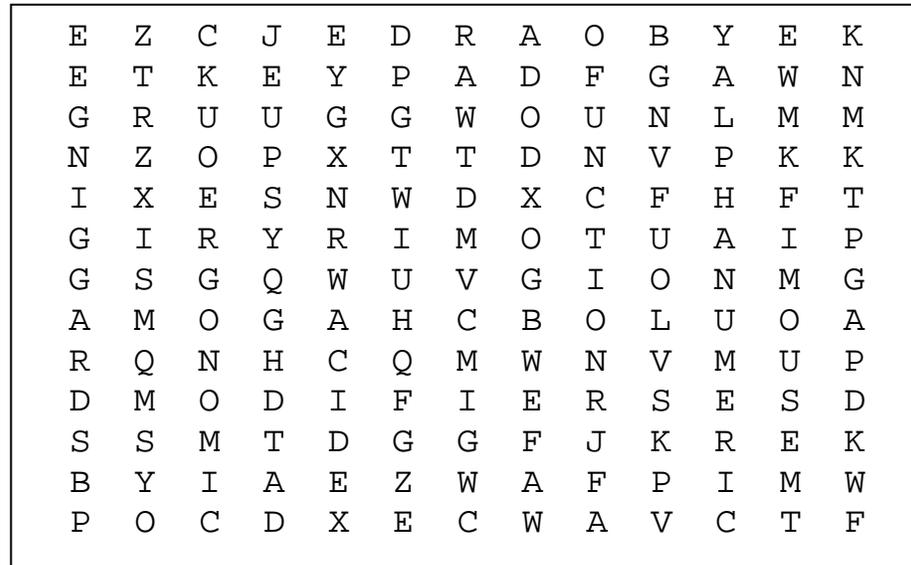
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 - d. Scanner

Name _____ Date _____

Keyboards, Mice, & Other Input Devices - Word Search

Locate each of the words in the word search below. You should become familiar with each of the terms. The words can go forward, backward, up, down, or diagonal. During the Keyboards, Mouse, & Input Devices lesson, pay attention to learn the meaning of each of these words.



- keyboard
- mouse
- input
- alphanumeric
- cursor
- modifier
- function
- keypad
- ergonomic
- dragging



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KEY

E	Z	C	J	E	D	R	A	O	B	Y	E	K
E	T	K	E	Y	P	A	D	F	G	A	W	N
G	R	U	U	G	G	W	O	U	N	L	M	M
N	Z	O	P	X	T	T	D	N	V	P	K	K
I	X	E	S	N	W	D	X	C	F	H	F	T
G	I	R	Y	R	I	M	O	T	U	A	I	P
G	S	G	Q	W	U	V	G	I	O	N	M	G
A	M	O	G	A	H	C	B	O	L	U	O	A
R	Q	N	H	C	Q	M	W	N	V	M	U	P
D	M	O	D	I	F	I	E	R	S	E	S	D
S	S	M	T	D	G	G	F	J	K	R	E	K
B	Y	I	A	E	Z	W	A	F	P	I	M	W
P	O	C	D	X	E	C	W	A	V	C	T	F

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