SPTVE COMPUTER HARDWARE SERVICING 7
Quarter 3/Week 1

I. Topic: Use Hand Tools
II. Objectives:
   1. prepare hand tools;
   2. use appropriate hand tools and test equipment; and
   3. value the importance of maintaining hand tools.

III. Brief Introduction of the Lesson
This lesson deals with the use of hand tools on the computer.

Proper tool selection

A tool is a handheld device that aids in accomplishing a task. Tools range from a traditional metal cutting part of a machine to an element of a computer program that activates and controls a particular function.

Hardware Tools - To complete hardware repairs, it is important to have a toolkit that should contain all of the necessary tools.

Electro-Static Discharge (ESD) - Tools Static electricity is easily generated by friction on carpets, tile flooring, clothing, hair, fabric, etc. The friction of moving air alone will charge suspended particles and cause the buildup of static electrical charges on people and objects in the environment.

Hand Tools - A hand tool is a device for performing work on a material or a physical system using only hands. The hand tools can be manually used employing force, or electrically powered, using an electrical current.

Cleaning Tools- Having the appropriate cleaning tools is essential when maintaining or repairing computers. Using these tools ensures that computer components are not damaged during cleaning.

Diagnostic Tools- Computers are easier to use and more dependable with each new generation of hardware and operating system update, but that doesn't mean they're problem-free.

IV. Activities:
Activity 1 - **"IDENTIFY ME"**
Directions: Identify the appropriate tool to use for each of the following. Write your answer on separate answer sheets.

_____1. Equalize the electrical charge between you and the equipment.
_____2. Tighten / loosen screw.
_____3. Tighten / loses bold with a hexagonal head.
_____4. Retrieve parts that may be hard to reach by your fingers.
_____5. Tighten / loosen a slotted screw.

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_____6. Used to bundle cables neatly inside and outside of a computer.

_____7. Used to test the integrity of circuits and the quality of electricity in computer components.

_____8. To manipulate small parts.

_____9. To strip and cut wires.

_____10. To hold screw, jumpers, fasteners and other small parts and prevents them from getting mixed together.

Activity 2 "NAME ME"

Directions: Identify the tools in the boxes. Write your answer on a separate sheet of paper.

Activity 3 "COMPLETE ME"
Directions: Complete the computer cleaning chart shown below.

COMPUTER MAINTENANCE

COMPONENTS TO CLEAN	CLEAN WITH:
Computer case and outside monitor	Mild cleaning solution and lint-free cloth (sample)
Keyboard	
Mouse	
LCD screen	
Heat sink	
RAM	

V. Assessment: (5 items only)
Directions: Write the letter of the correct answer on a separate sheet of paper.

1. Which tool is used for hardware to stand on to prevent static electricity from building up?
   A. anti-static mat   C. philips head screwdriver
   B. hex driver   D. wire cutter

2. Which tool is used to retrieve parts from a location that too small for your hand to fit?
   A. part Retriever   C. cables ties
   B. lint-free Cloth   D. flathead screwdriver

3. Which tool is used to blow away dust and debris from different computer parts without touching the components?
   A. anti-static mat   C. compressed air
   B. hex driver   D. wire cutter

4. Which tool is used to loosen or tighten slotted screws?
   A. part Retriever   C. cable ties
   B. lint-free Cloth   D. flathead screwdriver

5. Which tool is used to clean different computer components without scratching or leaving debris?
   A. part Retriever   C. cable ties
   B. lint-free Cloth   D. flathead screwdriver

VI. Reflection:

Directions: Answer the following questions. Write your answer on a separate sheet of paper.

1. What is the importance of knowing the appropriate hand tools for computer system servicing?

_____
_____
_____

2. Why is it important to know the functions and uses of hand tools?

_____
_____
_____

References:

- *k_to_12_pc_hardware_servicing_learning_module.pdf*
- http://www.bechtel.com/assets/files/Environmental/ToolboxSafetyTopics/2010/ProperToolSelection.pdf
- http://www.iml.uts.edu.au/assessment-futures/designing/assembling.html

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