DEPARTMENT OF EDUCATION- NATIONAL CAPITAL REGION
SCHOOLS DIVISION OF PASAY CITY

MODULE IN TLE 9 (COMPUTER SYSTEM SERVICING)
First Grading / Week 2 / Day 2

Name of Student: _____   Grade and Section: _____
Name of Teacher: _____

Objectives:
Obtain materials, tools, and testing devices needed to carry out the work and check for correct operation and safety.

- *Identify and use appropriate materials, tools and testing devices used in assembling computer hardware.*
- *Classify the materials, tools, and testing devices according to their function and uses.*

WHAT TO KNOW

Lesson: Materials, Tools and Testing Devices

These are the following materials needed in assembling computer hardware	
Connectors - It is used to connect external devices to the computer system.	Wires and Cables - It is used to connect computers for network
Manuals - These provide you instructions for certain operation or task.	Reference book - These are books that will provide you topics about networking or related books on computer.
Computer Storage Media - These help you in saving data and providing backup for your files such as diskette, compact disc, flash drives and memory cards.	Cable Tie - It is used to bundle cables neatly inside and outside of a computer.

These are the following tools/ testing devices needed in assembling computer hardware	
Screwdrivers – Flat Screwdriver is used to fasten negative slotted screws. – Philips Screwdriver is used to fasten positive slotted screws.	Pliers – Side Cutter Pliers is used for cutting and trimming of connecting wires or terminal leads in the circuit board. – Long Nose Pliers is used for holding, bending, and stretching the lead of electronics component and connecting wire.
Soldering Iron/Gun - It is used to join two or more metal conductors with the support of soldering lead melted around it.	Handheld Vacuum - It is used for cleaning sensitive parts of the computer.
LAN Tester - For RJ11, 12 and 45, designed to test most network cable wiring.	Magnifying glass - It is a device made in glass with handle, to exaggerate or to increase the apparent size of an object

REFERENCES FOR FURTHER ENHANCEMENT
- Book/Module: TLE ICT Computer Hardware Servicing 9, page 61
- Book/Module: TLE CSS NCII Install and Configure Computer Systems, page 31
- Book/Module: TLE CHS Configuring Computer Systems and Networks, page 16
- YouTube: https://www.youtube.com/watch?v=Cv8-TsSKEhY

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Anti-static Wrist Strap - It absorbs the static electricity of the material when being hold by the hands.		Tweezers - It is used to hold the small sensitive part of the computer.	
Anti-static Mat - A floor mat or ground mat that safeguards an individual or piece of equipment like a Computer from an electrostatic discharge (ESD).		Paint Brush - It can be used for cleaning dust and other small debris.	
Anti-static Bag - It is a bag used for storing electronic components, which are prone to damage caused by electrostatic discharge (ESD).		Compressed Air -it is often used to clean delicate and sensitive things, such as keyboards or components inside the computer.	
Air Blower - It is used to blow away dust and debris from different parts without touching the components.		Anti-static Spray - It is a liquid spray that can be used to eliminate static electricity and prevent static cling.	

T A K E   N O T E

Apply safety precautions when handling the materials, tools and testing devices for safe keeping purposes and long-lasting use.

Now that you can identify the different tools used in installing and configuring computer system, let us classify them according to their function and uses.

- **Anti-static device** is any device that reduces, dampens, or otherwise inhibits electrostatic discharge
- **Hand tool** is a tool held in the hand and operated without electricity or other power
- **Cleaning tool** is what you use for any cleaning in and out of the computer system
- **Testing Device** is the process of ensuring the quality and functionality of any electronic device.
- **Material** is an adaptable system of guidelines, components, and tools that support the best practices of user.

Tools / Testing Device

HAND TOOLS:
- Screwdrivers
- Pliers
- Soldering Iron
- Tweezer
- Magnifying Glass

ANTI-STATIC DEVICES:
- Anti-static Wrist Strap
- Anti-static Mat
- Anti-static Bag
- Anti-static Spray

TESTING DEVICE:
- LAN Tester
- Multi-tester

CLEANING TOOLS:
- Paint Brush
- Compressed Air
- Air Blower
- Handheld Vacuum

Materials
- Connectors
- Wires and Cables
- Manual
- Reference Book
- Cable Tie
- Computer Storage Device

W H A T   T O   P R O C E S S

EXERCISE 1: INSIGHT

Directions: Express your insights or opinion about the following questions.

1. For somebody who always works (do troubleshooting) with computers, what tools do you usually use? How often do you use them?
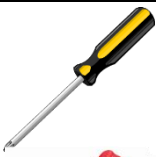
_____
_____
_____

2. Computers should be protected from static electricity to prevent component malfunction. What anti-static devices can you utilize to avoid such malfunction?

_____
_____
_____

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EXERCISE 2: CLASSIFY

Directions: Name the following materials and tools; classify them according to their function (Hand Tool, Anti-Static Device, Cleaning Tool, Testing Device, Material.); and give the uses of each tool.

Name	Classification	Uses
1. _____	_____	_____
2. _____	_____	
3. _____	_____	
4. _____	_____	
5. _____	_____	

EXERCISE 3: ENUMERATE

Directions: Enumerate the following tools according to their uses and function.

Hand Tools	Anti-static Devices	Materials
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.

THINGS TO REMEMBER!
Materials, Tools and Testing Devices
1. Material is an adaptable system of guidelines for user.
2. Anti-static device is any device that reduces inhibits electrostatic discharge.
3. Hand tool is a tool held in the hand and operated without electricity or other power.
4. Cleaning tool is used in cleaning the computer system.
5. Testing Device is the process of ensuring the quality and functionality of any electronic device.

EVALUATION: IDENTIFY

Directions: Identify what is being asked. Write your answer on the space provided.

_____ 1. It is a tool used to hold the small sensitive parts of computer.
_____ 2. A device made in glass with handle, to exaggerate or to increase the apparent size of an object.
_____ 3. It is a bag used for storing electronic components, which are prone to damage caused by electrostatic discharge (ESD).
_____ 4. It is a tool used for cutting and trimming of connecting wires or terminal leads in the circuit board.
_____ 5. It is a tool used to join two or more metal conductors with the support of soldering lead melted around it.
_____ 6. It is a material used to organize wires and cables used in connecting computers to avoid tangling.
_____ 7. These are the materials that are used in saving data and providing backup for your files such as diskette, compact disc, flash drives and memory cards.
_____ 8. A floor mat or ground mat that safeguards an individual or piece of equipment like a computer from an electrostatic discharge (ESD).
_____ 9. It is a reference material that provides you instructions for certain operation or task.
_____ 10. It is a tool used for holding, bending, and stretching the lead of electronics component and connecting wire

Prepared by:

JONALYN O. ROSARIO
Pasay City North High School
Tramo Campus