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

MODULE IN TLE 9 (COMPUTER SYSTEM SERVICING)

First Grading / Week 1 / Day 4

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

Objectives:

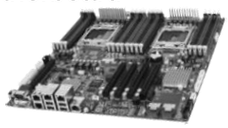
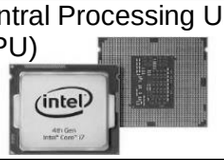
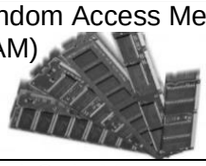
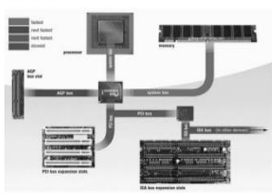
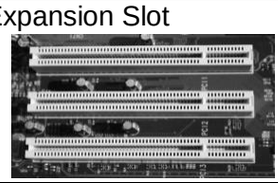
Assemble computer hardware in accordance with established procedures and system requirements.

- ***Familiarize with computer components and devices in assembling computer hardware.***
- ***Identify the various computer hardware components and devices in assembling computer hardware.***

Lesson: Computer Components and Devices

Taking this lesson is quite difficult if you are not familiar with the basic and simple things that computer have. It is very important to know the different devices attached to the computer system and each device plays an important role, without each other computer system will not work properly.

The physical, touchable, electronic and mechanical parts of a computer are called the hardware which is composed of different devices attached to the computer. Below are the basic sets of devices found in most Personal Computers.

System Unit 	The system unit also known as a "tower" or "chassis" is a box-like case that houses the motherboard, processor, memory and other internal components of the computer. All other computer system devices, such as monitor, keyboard, and mouse are also linked directly into the system unit.
Motherboard 	A motherboard, sometimes called mainboard or system board, is one of the most essential parts of a computer system. It holds together many of the crucial components of a computer, including the processor, memory chips, expansion cards and connectors for input and output devices.
Central Processing Unit (CPU) 	The CPU is the processor and known as the brain of the computer. It controls and manipulates data to produce information. It is also responsible for interpreting and executing most of the commands from the computer.
Random Access Memory (RAM) 	RAM (known as read write memory/main memory/primary memory) is a computer memory that connects directly to the CPU. RAM is a volatile storage since it loses its contents when the computer power is turned off.
Read-Only Memory (ROM) 	It refers to memory chips storing permanent data and instructions. ROM is usually nonvolatile; The contents are not lost when the computer is turned off.
Buses 	Bus allows the various devices inside and attached to the system unit to communicate with each other. It enables data flow between the various system components and peripheral devices. *Two types of Bus:* System Bus - is part of the motherboard and connects the CPU to main memory. Expansion Bus - allows the CPU to communicate with peripheral devices.
Expansion Slot 	An expansion slot is a socket on the motherboard that can hold an adapter card.

REFERENCES FOR FURTHER ENHANCEMENT

- Book: PC Assembly and Troubleshooting, page 10
- Book: Understanding PC Hardware, page 51
- Book: TLE ICT Computer Hardware Servicing 9, page 43
- YouTube: https://www.youtube.com/watch?v=xSj0C9MCNNk

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Adapter Card 	An adapter card, also called expansion card, is a circuit board that enhances functions of a component of the system unit and/or provides connections to peripherals, and it can also add devices or capabilities to the computer. Examples: MODEM, Sound Card, Video Card/Graphics Card, Network Card
Power Supply Unit (PSU) 	The power supply is an electronic device that supplies electric energy to the computer; It converts the wall outlet AC power into low-voltage DC power. Built into the power supply is a fan that keeps the power supply cool.
Hard Disk Drive 	A hard disk drive (sometimes abbreviated as hard drive, HD, or HDD) is a non-volatile memory that permanently stores and retrieves data on a computer. All computers have a hard drive installed in them, which is used to store files for the operating system and application software.
Optical Disk Drive 	An optical disc drive (ODD) is a disc drive that uses laser technology or electromagnetic waves within the visible light spectrum as part of the process of reading and writing data to or from optical discs. Three types of Optical Drives: Compact Disc (CD), Digital Versatile Disc (DVD) and Blu-ray Disc (BD)
Digital Versatile Disk 	A DVD is a type of optical media used for storing digital data. It is the same size as a CD, but has a larger storage capacity.

WHAT TO PROCESS

EXERCISE 1: REVEAL THE PARTS

Directions: In the puzzle below, look for the fifteen hidden computer devices in all directions including backward.

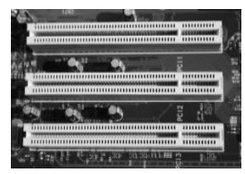
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____

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

EXERCISE 2: NAME THE DEVICE

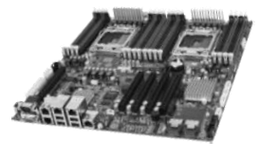
Directions: Name the devices of computer system being shown in the picture below.






1. _____ 2. _____ 3. _____ 4. _____ 5. _____




6._____ 7. _____ 8. _____ 9. _____ 10. _____

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EXERCISE 3: MATCH UP

Directions: Match Column A with Column B and write your answer on the space provided.

A	B
_____1. Brain of computer	a. Adapter Card
_____2. Expansion Card	b. Central Processing Unit (CPU)
_____3. Read/Write Memory	c. Expansion Bus
_____4. System Board	d. Expansion Slot
_____5. Uses laser technology	e. Motherboard
_____6. Supplies electric energy to computer	f. Optical Drive
_____7. Non-volatile memory	g. Power Supply Unit
_____8. Tower or Chassis of computer	h. Random Access Memory (RAM)
_____9. Allows CPU to communicate with peripheral devices	i. Read Only Memory
_____10. A socket that holds an adapter card.	j. System Unit

EXERCISE 4: UTILIZE THE VIDEO

Directions: Utilize the internet and the website www.professormesser.com, view the video regarding parts of the computer. Use the URL below. After watching the videos, answer the following questions:

1. What are the different types of motherboard shown in the video?
2. What are the different types of CPU?

URL: https://www.professormesser.com/free-a-plus-training/220-801/an-overview-of-motherboard-types/
https://www.professormesser.com/free-a-plus-training/220-801/an-overview-of-cpu-socket-types/

THINGS TO REMEMBER!

Computer Devices

1. System Unit, Motherboard, Central Processing Unit (CPU), Read Only Memory, Random Access Memory (RAM), Read Only Memory (ROM), Expansion Bus, Expansion Slot, Adapter Card, Power Supply Unit (PSU), Hard Disk Drive (HDD), Optical Drive, Digital Versatile Disc (DVD)

EVALUATION: MULTIPLE CHOICE

Directions: Read each question carefully and encircle the letter of your best answer.

1. It is a socket on the motherboard that can hold an adapter card.
   a. Expansion Bus b. Expansion Card c. Expansion Slot d. System Bus
2. A box-like case that houses the motherboard, processor, memory and other internal components.
   a. Adapter Card b. Motherboard c. Processor d. System Unit
3. It is one of the most essential parts of a computer system. It holds together many of the crucial components of a computer, processor and memory chips
   a. Central Processing Unit c. Processor
   b. Motherboard d. System Unit
4. It is the computer component that's responsible for interpreting and executing most of the commands from the computer's other hardware and software.
   a. Adapter Card c. Motherboard
   b. Central Processing Unit d. System Unit
5. It is a computer memory that connects directly to the CPU.
   a. Non-Volatile Memory c. Read Only Memory
   b. Random Access Memory d. Volatile Memory
6. It is a non-volatile memory which contents are not lost when the computer is turned off.
   a. Main Memory c. Random Access Memory
   b. Primary Storage d. Read Only Memory
7. It converts mains AC to low-voltage regulated DC power for the internal components of a computer.
   a. Adapter Card c. Power Supply Unit
   b. Hard Disk Drive d. Processor
8. A storage device that uses laser technology to read data on the optical media.
   a. Compact Disc c. Hard Disk Drive
   b. Digital Versatile Disc d. Optical Disk Drive
9. It is a non-volatile storage device where operating system and application software are being saved.
   a. Digital Versatile Disc c. Optical Disk Drive
   b. Hard Disk Drive d. Processor
10. It is a computer bus which connects the CPU to main memory.
    a. Expansion Bus c. Expansion Slot
    b. Expansion Card d. System Bus

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

ANSWER KEY

EXERCISE 1: REVEAL THE PARTS

(In any order)

1. Adapter
2. Expansion Bus
3. Read Only Memory
4. System Unit
5. Processor
6. Volatile
7. Non-Volatile
8. Power Supply
9. Hard Drive
10. Expansion Slot
11. Optical Drive
12. Bluray Disc
13. System Bus
14. Motherboard
15. Memory

EXERCISE 2: NAME THE DEVICE

1. Power Supply Unit
2. System Unit
3. Read Only Memory
4. Expansion Slot
5. Optical Disk Drive
6. Adapter Card
7. Digital Versatile Disc
8. Hard Disk Drive
9. Motherboard
10. Random Access Memory

EXERCISE 3: MATCH UP

1. b
2. a
3. h
4. e
5. f
6. g
7. i
8. j
9. c
10. d

EXERCISE 4: UTILIZE THE VIDEO

1. What are the different types of motherboard shown in the video?
   - ATX Motherboard stands for Advanced Technology Extended
   - Micro-ATX Motherboard
   - ITX Motherboard
2. What are the different types of CPU?
   - Pentiums
   - Pentium 4
   - Intel Core 2 Duo
   - Intel Core i7s
   - Xeon processor
   - Celeron processors
   - AM2 processors
   - AM2+ processors
   - AM3 processor

EVALUATION: MULTIPLE CHOICE

1. C
2. D
3. B
4. B
5. B
6. D
7. C
8. D
9. B
10. D