



COMPUTER SYSTEM SERVICING G10
QUARTER 1–WEEK 4: COMPUTER ASSEMBLY AND DISASSEMBLY PROCEDURES

Name of Learner: _____

Date: _____

Grade & Section: _____

Teacher: _____

MOST ESSENTIAL LEARNING COMPETENCY (MELC): Obtain necessary network materials in accordance with established procedures and check against system requirements. (TLE_IACSS9- 12SUCN-IVa-j-33)

Objectives:

1. Identify the hardware to be assembled and disassembled
2. Recognize the significant of following the procedures
3. Perform the basic skills that are necessary to assemble and disassemble a PC



TEACH ME

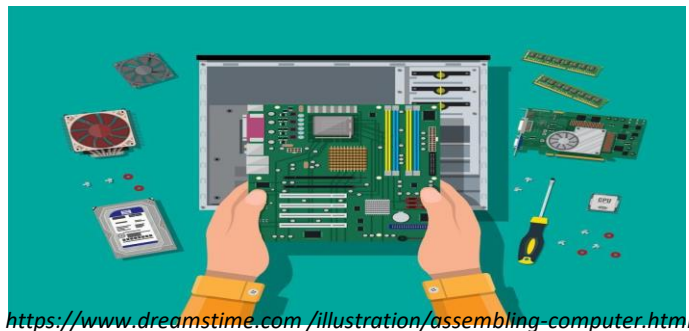
Learning Task 1:

Assembling and disassembling a computer's system unit is not as difficult as many people think when they see it open for the first time. Once you know the basics, you will find that pulling a computer apart is like a walk through a park on a sunny day. Make sure to follow the step-by-step procedures to establish a routine for complete and efficient PC servicing.

You won't need many tools to assemble a computer, in fact the only one you must have is the screwdriver, but if you can get most of the following together, you'll find things go a little easier.

Picture it out!

Look closely at the picture. Can you make a conclusion on what the image is all about?



<https://www.dreamstime.com/illustration/assembling-computer.html>

Learning Task 2:

Assembling and disassembling a computer's system unit is not as difficult as many people think when they see it open for the first time. Once you know the basics, you will find that pulling a computer apart is like a walk through a park on a sunny day. Make sure to follow the step-by-step procedures to establish a routine for complete and efficient PC servicing.

You won't need many tools to assemble a computer, in fact the only one you must have is the screwdriver, but if you can get most of the following together, you'll find things go a little easier.

DISASSEMBLING OF COMPUTER

Before starting computer disassembly, make sure you have the tools you need and they're all close by and handy and be sure to have a container to keep the screws in so you have them when you want to put things back together.

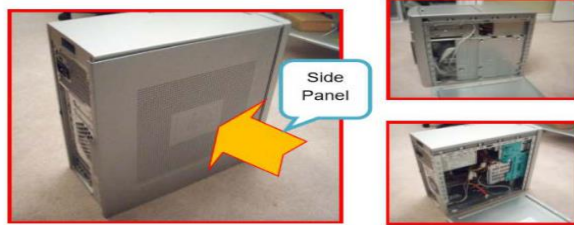
Step 1. Unplugging

The first thing you do is to unplug every cable that is plugged in to your computer. That includes the cables such as Power, USB, Mouse, Keyboard, Internet, Ethernet, Modem, etc. Just unplug all the cables for safety purposes.



Step 2. Opening the Outer Shell/Case

First, unscrew the four screws at the back of the computer. On most computer cases, there will be large knobs that you can unscrew by hand or by screwdriver on the back-right side of the computer. The left side has small screws because on that side you can't access much on the side.



Step 3. Removing the System Fan

First, unplug the fan from the motherboard. You can find the plug by following the wire from the fan. It should be labeled "SYS_FAN1". Next, you will have to unscrew the fan from the outside. You should now be able to lift the fan out of the PC.



Step 4. Removing the CPU Fan

The CPU fan is located right on top of the CPU heat sink, which is a large piece of metal with fins on the top. The CPU fan plugs into the motherboard in an awkward place that is hard to access. But just follow the wires and you should easily find it. It is labelled "CPU FAN1". To remove the fan from the heat sink, remove the four screws securing it in place.

Step 5. Removing the Power Supply

Unplug every wire coming from the power supply. You must disconnect the motherboard (very large connector/plug), CD/DVD drive(s) power, internal hard drive power and portable hard drive slot power.



Step 6. Removing the CD/ DVD Drive(s)

Unplug the IDE or SATA cable from the back of the drive. Once that is completed, pull on the tab securing the drive-in place, then push it out from the inside.

Step 7. Removing the Hard Disk Drive

Unplug the connector at the back of the slot and unplug the other end from the motherboard. Also unplug the SATA cable from the motherboard and the hard drive. The portable hard drive slot is secured the same way the CD/DVD drive is, with a tab. Pull on the tab, then slide the slot out.



Step 8. Removing the Memory/RAM

To remove the RAM, push down on both tabs holding the RAM in place, which are located at both ends of the RAM.

Step 9. Removing the Motherboard

The motherboard has seven screws holding it to the frame, which are indicated by large white circles around them. Remove them and then lift the motherboard out of the frame.



ASSEMBLING OF COMPUTER

Before you start, take an inventory of your parts. Do not begin assembling your computer if you don't have everything you need. Begin the step-by-step process once you are ready with everything you need.

Step 1. Prepare your workplace

1. Take Inventory:
2. Make Space, Make Time:
3. Prepare Grounding Protection:
4. Have the Drivers Ready:

Step 2. Install the Motherboard

Step 3. Install the CPU

Step 4. Install the CPU Heat Sink

Plug the CPU fan's power connector into the proper connector on the motherboard.

Step 5. Install Memory (RAM Modules) and Expansion Cards

Step 6. Install the Drives

Step 7. Connect the Power Supply

1. First, plug the large ATX power connector from your power supply into the matching port on your motherboard.
2. Locate the smaller, square processor power connector (you cannot miss it - it is the one sprouting the yellow and black wires) and attach it to the motherboard. Note: your connector is usually located near the processor.
3. Attach each of the tiny leads from the power and reset switches, the hard-disk activity lights, the PC speaker, and any front-panel USB and Firewire ports to the corresponding pin on your motherboard. The needle-nose pliers are useful for manipulating small pieces.



Step 8. Put in the side panel.



LEARN MORE

Learning Task 3:

SEQUENCING PROCEDURES. Arrange the following steps to disassemble a computer system unit. Mark the step as 1 if it is the first step, 2 if second, 3 if third and so on...

Personal Computer Disassembly

- _____ 1. Remove the data cables and power connectors.
- _____ 2. Remove the memory and expansion cards.
- _____ 3. Remove the side panel.
- _____ 4. Remove the CPU.
- _____ 5. Fully shut down and unplug the computer.
- _____ 6. Remove the motherboard.
- _____ 7. Remove the drives.
- _____ 8. Remove the outside peripherals from the back panel.
- _____ 9. Remove the heat sink and fan.
- _____ 10. Remove the power supply.

Learning Task 4:

Directions: Answer the following questions in the space provided.

1. What do you think is the main reason why we should never exert too much force when attaching the cables of PC parts? Explain your answer.

2. What is the essence of following the correct procedures in connecting the PC parts?



EVALUATE NOW






SUMMATIVE ASSESSMENT

A. WRITTEN TASK

I. Directions. Read each question and their corresponding answers carefully and completely. Choose the answer that best fits the statement.

- _____ 1. Which of the following is used to give supply to the motherboard?
A. 20/24 pin molex connector B. Data cable C. IDE cable
- _____ 2. The following is the wiring of front panel EXCEPT ONE.
A. HDD LED B. RESET SW C. SWITCH ON
- _____ 3. Which of the following are the wires that you need to disassemble first in computer?
A. Back panel wires B. Data cable C. Front panel wires
- _____ 4. The following are the internal drives of a computer EXCEPT ONE.
A. Flash drive B. Hard disk drive C. Optical drive
- _____ 5. The CPU fan is _____
A. plugged into the motherboard for power
B. powered directly by the power supply
C. self-powered

II. Directions. Identify the name of the given ports and write it on the box provided below.

	1 <div style="border: 1px solid black; width: 150px; height: 70px; margin-top: 5px;"></div>		2 <div style="border: 1px solid black; width: 150px; height: 70px; margin-top: 5px;"></div>		3 <div style="border: 1px solid black; width: 150px; height: 70px; margin-top: 5px;"></div>
	4 <div style="border: 1px solid black; width: 180px; height: 70px; margin-top: 5px;"></div>		5 <div style="border: 1px solid black; width: 150px; height: 70px; margin-top: 5px;"></div>		

B. PERFORMANCE TASK

Create your own flowchart showing the proper PC assembly and disassembly procedures. Make sure to indicate all the important part of the process. Use accurate flowchart symbols.

Rubrics for Scoring				
	4	3	2	1
Following directions	All directions were followed.	You followed most directions.	You followed some directions.	None of the directions were followed.
Use of creativity	You used your own ideas and imagination	You used your own ideas most of the time.	You used some imagination.	You did not use your own ideas or imagination.
Effort	You took your time and worked hard	You worked hard for most of the time	You put a small effort	You rushed through and did not work hard
Quality of work	Very clear, complete and concise.	Clear, mostly complete and concise	Mostly clear and could be a little more concise	Unclear, incomplete and not concise

References:

TESDA Computer Hardware Servicing Module
<https://www.instructables.com/id/Computer-Assembly/>
<https://www.currentbuild.com/assemble-pc-build-1.php>
<https://www.hardwaresecrets.com/quiz/pc-assembly/>