



Republic of the Philippines
Department of Education
REGION III
SCHOOLS DIVISION OFFICE OF NUEVA ECija

LEARNING ACTIVITY SHEET

SPECIAL PROGRAM IN ICT 7 OFFICE PRODUCTIVITY 7

First Quarter, Week 1

Name of Learner: _____ Date: _____

Grade Level /Section: _____

Introduction to Computing

BACKGROUND INFORMATION FOR LEARNERS

Technology becomes integral part of our lives nowadays. It includes but not limited to the use of computer and other communication devices. But despite of these, are we familiar of what a computer is? What are the different hardware components of computer, its characteristics, limitations, and uses?

WHAT IS A COMPUTER?

A *computer* is an electronic multipurpose device that receives, process, displays and stores data. It process data to create information. *Data* is a collection of unorganized facts, including words, numbers, pictures, and sounds. *Information* is the result of processed data that are organized with its meaning and use.

CHARACTERISTICS OF COMPUTER

Computer is an electronic device which is used to store the data, as given instructions it gives result quickly and accurately. It becomes man's brainpower extension because of the characteristics such as *speed, accuracy, storage capacity, diligence, versatility, power of remembering, no IQ and no feeling.*

LIMITATIONS OF COMPUTER

1. Dependence on Prepared Instructions
2. Inability to Derive Meanings from Objects
3. Inability to Generate Information
4. It Cannot Correct Wrong Instructions



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ORGANIZATION OF COMPUTER

It is concerned on understanding of the basic computer hardware structure together with peripheral devices. It realizes the computer operational units and their interconnections to form the computer system.

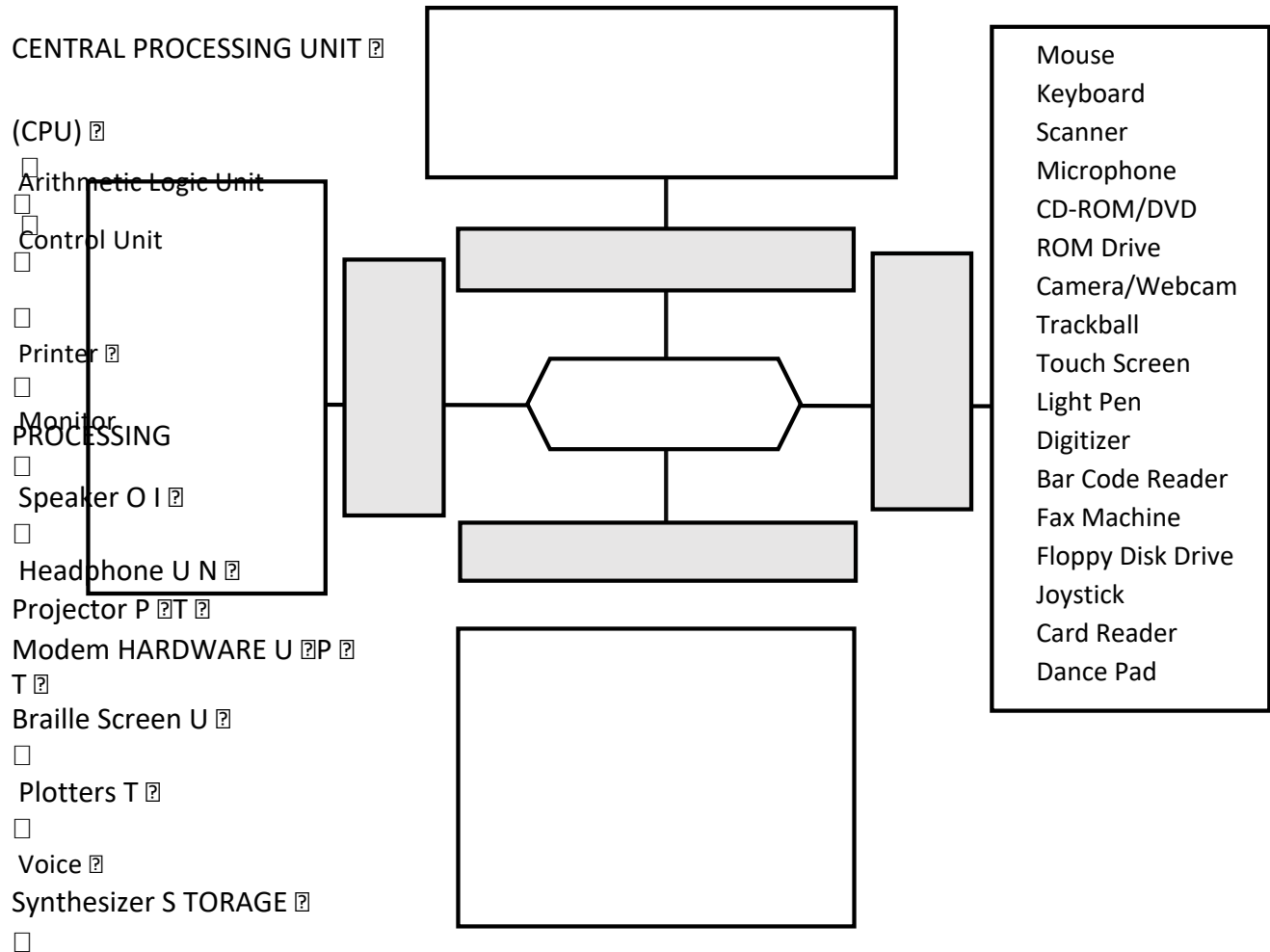


Figure 1. The Basic Organization of a Computer System and its Hardware Components

- Primary Storage
- Secondary Storage
- Optical Discs
- Hard Disk
- Flash drive
- Magnetic Tape
- Floppy Disk



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CENTRAL PROCESSING UNIT (CPU)

The Central Processing Unit (CPU) or simply referred as *processor*, the brain and heart of the computer. Inside the computer system, the processing is mostly performed by the CPU. It is considered as the most important element in a computer system. It processes the data and produces output, which may store by an application or displayed on the screen.

The CPU has two components, namely:

1. *Arithmetic Logic Unit (ALU)* - performs arithmetic and logical operations.
2. *Control Unit (CU)* - lets the computer's logic unit, memory, as well as both input and output devices know how to respond to instructions received from a program.

Registers are the internal memory units of CPU that contain information used in the Arithmetic Logic Unit (ALU) processing.

COMPUTER PERIPHERALS

These devices are the computer external taking in information, allowing the computer to put out information in visible and audible form.

Without peripherals, communication with computer would be far more limited.

Peripheral devices can be external or internal. There are many different peripheral devices, but they fall into the following general categories:

A. INPUT DEVICES

□

Refer to the physical pieces of computer hardware used for sending data or instructions into computer.



Source: www.examplesof.net

Figure 2. Example of Input Devices



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B. OUTPUT DEVICES

It provides and displays output from the computer.



Source: www.examplesof.net

Figure 3. Example of Output Devices

C. INPUT/OUTPUT DEVICES

Perform both input and output functions, such as computer data storage device including a disk drive, USB flash drive, memory card, and tape drive, smart board and a touch screen. Gadgets such as digital watches, smartphones, and tablet computers have interfaces which allow them to be used as computer peripheral devices.

D. STORAGE DEVICES

Aside from the different devices attached on a computer, there are also called storage devices. This device is used to store, port and extract information either in permanent or semi-permanent form.

Types of Storage Devices

1. Primary storage devices

They are usually design in smaller size but in data access these devices have the fastest speed. Primary storage device includes the RAM, graphic card memory and cache memory. *Primary storage* is also called as main storage, main memory or internal memory.



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Secondary storage devices

They are usually having large storage capacity and are usually used to store data permanently. Secondary storage devices include the hard disk drive, optical disc drive and flash drive. A *secondary storage* device is being known as an auxiliary storage device or external storage.



Source: <http://storagedevicesdiana-keyla.blogspot.com/2010/10/storage-device-definition-and-types-of.html>

Figure 4. Example of Storage Devices

MODULATOR-DEMODULATOR (MODEM)

A modem is a hardware component that enables computer to connect over the internet through devices like router or switch to transmit data over telephone or cable lines in the form of analog waves.



Source: ComputerNetworkingNotes.com

Figure 5. Example of Modems



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LEARNING COMPETENCY

To identify the different physical characteristics, limitations and parts of a computer.

ACTIVITIES

ACTIVITY 1

Directions: Write *CHARACTERISTIC* if the statement refers to the characteristics of computer and *LIMITATION* if it corresponds to the limitations of computer. Write your answer on the space provided for before the number.

- _____ Computers are better than human beings in performing voluminous and repetitive jobs.
1. _____ The computer cannot generate information on its own.
_____ Computer can remember data for us.
- _____ It gives accurate result since it is programmed.
2. _____ The computer performs only what it is programmed to do and nothing less. Computers work at an incredible speed. A powerful computer is
3. _____ capable of
_____ performing about 3-4 million simple instructions per second.
4. _____ Computer has no feelings, and unable to recognize and respond to
5. _____ living objects. Computer can be used to perform completely different types of work at the same
_____ time.
6. _____ Computer will do exactly what is only instructed to do. It cannot
- _____ 10. decipher the correct instructions from the wrong instructions. It does
_____ not have the ability
7. _____ to select and perform only the right ones.
8. _____ Today's computers can store large volumes of data. A piece of
_____ information stored in the computer can never be forgotten and can be
_____ retrieved instantly.
9. _____





Directions: The puzzle below consists of hidden computer hardware components. Encircle all the computer components backward, vertically, horizontally or diagonally.

REVEAL THE HARDWARE COMPONENTS OF COMPUTER

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1. _____
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6. _____
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10. _____



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11. _____
12. _____
13. _____
14. _____
15. _____

ACTIVITY 3

Directions: Group the hardware components identified in Activity 2 as input devices, output devices, processing device and/or storage devices. Write your answer on the provided circle.

Output Devices

Input Devices

Processing Device

Storage Devices



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REFLECTION

What do you think are the importance of the different computer devices?

REFERENCES

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