



Republic of the Philippines
Department of Education
National Capital Region
Schools Division Office – Muntinlupa City

**SPECIAL PROGRAM IN TECHNICAL VOCATIONAL EDUCATION (SPTVE)
COMPUTER SYSTEMS SERVICING 9 Q3-W1**

I. Topic: Computer Network Concepts

II. Objectives:

1. identify types of network;
2. differentiate types of network and;
3. explain how computer network works.

III. Brief Introduction of the Lesson

What is a computer Network?

A network is any collection of independent computers that communicate with one another over a shared network medium. A computer network is a collection of two or more connected computers. When these computers are joined in a network, people can share files and peripherals such as modems, printers, tape backup drives, or CD-ROM drives. When networks at multiple locations are connected using services available from phone companies, people can send e-mail, share links to the global Internet, or conduct video conferences in real time with other remote users. When a network becomes open sourced it can be managed properly with online collaboration software. As companies rely on applications like electronic mail and database management for core business operations, computer networking becomes increasingly more important.

Every network includes:

- At least two computers Server or Client workstation.
- Networking Interface Card's (NIC)
- A connection medium, usually a wire or cable, although wireless communication between networked computers and peripherals is also possible.
- Network Operating system software, such as Microsoft Windows NT or 2000, Novell NetWare, Unix and Linux.

Types of Computer Network

LAN (Local Area Network) A network is any collection of independent computers that communicate with one another over a shared network medium.

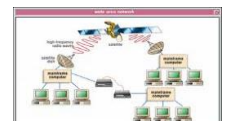


A **PAN** (Personal Area Network) is a computer network that enables communication between computer devices near a person.



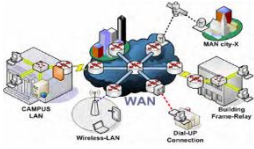
A **CAN** (Campus Area Network) is a network of multiple interconnected local area networks (LAN) in a limited geographical area.

A **global area network** (GAN) refers to a **network** composed of different interconnected **networks** that cover an unlimited geographical **area**.





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A **wide area network** (WAN) is a telecommunications **network** that extends over a large geographical **area** for the primary purpose of **computer networking**.

The **Internet** is a system of linked networks that are worldwide in scope and facilitate data communication services such as remote login, file transfer, electronic mail, the World Wide Web and newsgroups.

An **intranet** is a private network utilizing Internet-type tools, but available only within that organization.

VPN (Virtual Private Network) VPN uses a technique known as tunneling to transfer data securely on the Internet to a remote access server on your workplace network.

IV. Activities:

Activity 1

Directions: Match column A with those in column B.

COLUMN A

- __1. LAN
- __2. WAN
- __3. MAN
- __4. CAN
- __5. PAN
- __6. WAN
- __7. NETWORK
- __8. VPN

COLUMN B

- a. metropolitan area network
- b. global area network
- c. campus area network
- d. personal area network
- e. local area network
- f. virtual private network
- g. wide area network
- h. interconnected group of computers

Activity 2

A: Let's do some survey in your home. Copy the question and answer it on a separate sheet of paper

1. Do you have internet connection at home?
___yes
___no / none
2. What type of Network connection do you use?
___ WIFI / wireless network / Broadband (No Telephone Line)
___ cable (using wired network / PLDT Home DSL)
___ mobile data
3. How many can connect to the network?
___ 1-3
___ 4-6

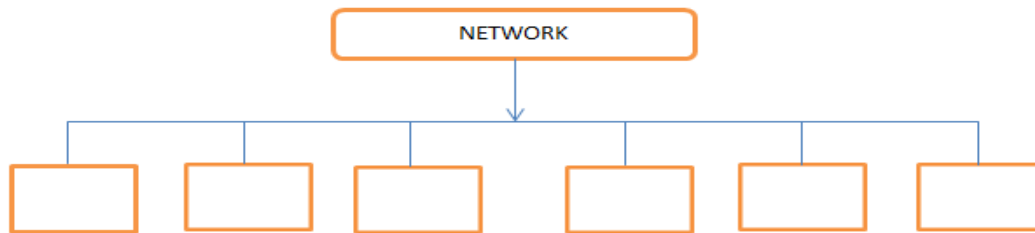
Please refer to number 1. Why do you think that computer network is essential nowadays?

B: Classify the different types of network.



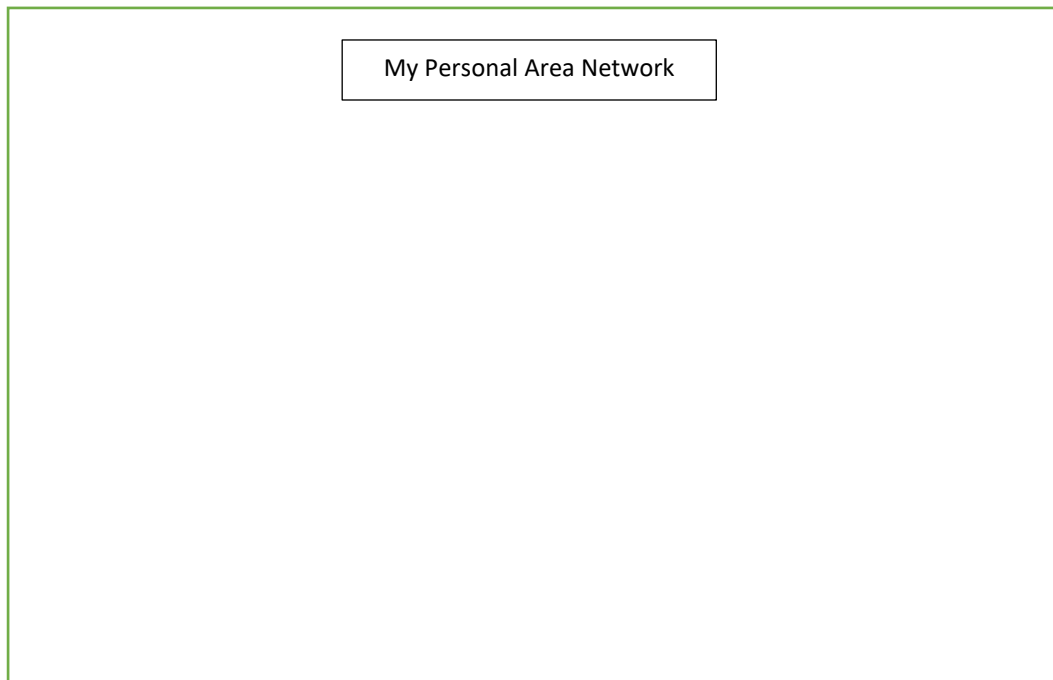


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Activity 3

Create your own Personal Area Network layout. Connect at least (10) ten devices in your network either it is mobile data, wifi or cable form.



V. Assessment:






1. The internet is an example of a _____ Network.
 - A. Wide Area
 - B. World Area
 - C. Wide Architecture
 - D. World Wide
2. Which network covers the smallest geographic area?
 - A. Personal Area Network
 - B. Wide Area Network
 - C. Local Area Network
 - D. Metropolitan Area Network
3. What is the acronym for LAN?
 - A. Local Area Network
 - B. Local Access Network
 - C. Line and Networking
 - D. Line-less Networking
4. Arrange the Following Types of Networks according to their size, from largest to smallest?
 - A. LAN,WAN,MAN
 - B. WAN, LAN, MAN
 - C. MAN,LAN,WAN
 - D. WAN, MAN, LAN
5. A computer _____ is a collection of two or more connected computers.
 - A. Internet
 - B. Network
 - C. Wide Area Network
 - D. server

2. Among the different types of network, which one is the best network you might want to have at home? Why?

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