WEEKLY LESSON NOTES – B7

WEEK 7

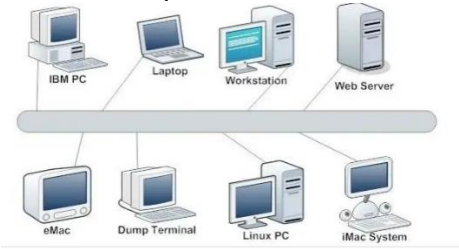
Date: 24th JUNE, 2022	**DAY:**	**Subject:** Computing	
Duration:		**Strand:** Communication Networks	
Class: B7	**Class Size:**	**Sub Strand:** Computer Networks	
Content Standard: B7.3.1.1 Identify the concept of computer networking for global communications.	**Indicator:** B7.3.1.1.1 Draw diagrams to illustrate features of the network topologies (Bus, Star, Ring, Mesh)		**Lesson:** 1 of 2
Performance Indicator: Learners can draw diagrams to illustrate features of the network topologies	**Core Competencies:** DL5.1: Ability to ascertain when information is needed and be able to identify, locate, evaluate and effectively use it to solve a problem.		
Reference: Computing Curriculum P.g. 16-18			

Activities For Learning & Assessment	**Resources**	**Progression**
Starter (5 mins) Using questions and answers, revise the previous lesson with learners. Display pictures or show a video of people communicating using phones, text messaging, video conferencing, etc. Help learners understand how they are all connected to each other. Share performance indicators and introduce the lesson. ***Main (35 mins)*** Engage learners to explore key hardware for setting up network systems (such as server, client, hub, switch, cable etc.)	Pictures of network topologies, sketch diagram, projector	the various media through which people communicate. Identifying major components that help computers to communicate. Learning how to draw diagrams to illustrate features of the network topologies

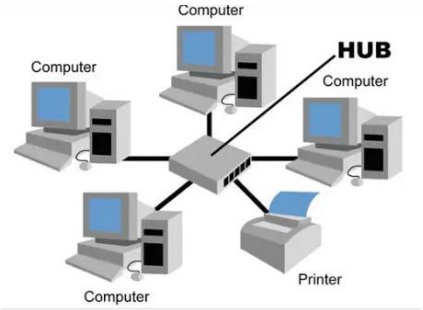
Network Diagram-Typical Simple Home Network

Show learners diagrams of various setups to explain network topologies.

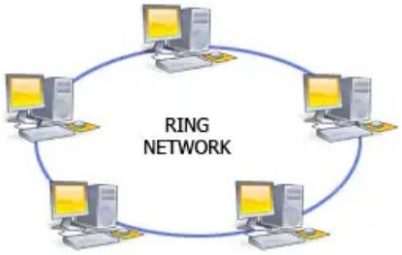
Bus – is a communication system that transfers data between components inside a computer or between computers.



Star – in a star network, each computer is connected by its own cable directly to the server.



Ring – in a ring network, all the computers are to one another in a circle.



Mesh – is a network setup where each computer and network device is interconnected with one another.

Let learners discuss the features of each network topology.

Have learners present in groups, diagrams of well-elaborated network topologies.
Allow learners to sketch the topologies to deepen their understanding.

Reflection (10 mins)
We have learnt how to draw diagrams to illustrate features of the network topologies.

Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson.

Homework/Project Work/Community Engagement Suggestions

- Learners are to work in groups to design well-elaborated network topologies and present them in class
- Using play dough and sticks, form/design the types of network topologies.

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Class: B7	**Class Size:**	**Sub Strand:** Computer Networks	
Content Standard: B7.3.1.1 Identify the concept of computer networking for global communications	**Indicator:** B7.3.1.1.2 Describe types of networks.		**Lesson:** 2 of 2
Performance Indicator: Learners can describe the types of networks.	**Core Competencies:** DL5.1: Ability to ascertain when information is needed and be able to identify, locate, evaluate and effectively use it to solve a problem.		
Reference: Computing Curriculum P.g. 16-18			

Activities For Learning & Assessment	**Resources**	**Progression**
Starter (5 mins) Using questions and answers, revise the previous lesson with learners. Share performance indicators and introduce the lesson. ***Main (35 mins)*** Brainstorm learners for the meaning of Network. *A network is the collection of two or more computers and hardware components that are linked together such as that they can communicate using wire or wireless technology.* Have learners discuss the two forms of network. • ***Wired network*** *is a network that uses network cables or wires to connect the computers in the network. It is called Cable Network.* • ***Wireless Network*** *– this doesn't not use wires or cables to connect computers in a network. It uses wireless technologies such as GPRS, EDGE, WIFi, WiMax, HSPA, infrared and Bluetooth.*	Pictures of network topologies, sketch diagram, projector	Describing the types of networks

Guide learners to explain the various types of networks available. (e.g. PAN, LAN, MAN, WAN, WLAN, INTERNET, etc.) • *The International Network (Internet) : Internet is a global network connecting millions of computers that communicate using wire or wireless technology.* • *Local Area Network (LAN): Is a network of computers that are geographical close together (in a single building) such as school building, computer laboratory, office building, etc.* • *Wide Area Network (WAN): Is a combination of two or more Local Area Networks (LANs). The computers are farther apart and are connected by telephone lines or radio waves.* • *Personal Area Network (PAN) is the network around a person for his/her personal use. PAN involves the use of USB cables, Bluetooth or Infrared in connecting the computers for communication.* • *Home Area Network (HAN) is the network of digital devices in a user's home. Devices may include computer, printer, mobile devices, game consoles, remote control, etc.* • *Campus Area Network (CAN) is a network within a limited geographical area such as university campus, company, government agency, etc.* • *Metropolitan Area Network (MAN) is a network that spans a city or a metropolitan area.* • *Intranet is a restricted private network within an organization that is only used by authorized users.* • *Extranet is a private network of an organization or company or bank that can be accessed by customers. It uses Internet technology to securely share part of a business's information or operations* with suppliers, vendors, partners, customers or other businesses. ***Reflection (10 mins)*** We have learnt the types of networks. Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.		

Homework/Project Work/Community Engagement Suggestions
• What is Network? • Differentiate between wired and wireless network. • Explain the following terms PAN, WLAN, WAN, LAN.
Cross-Curriculum Links/Cross-Cutting Issues
None
Potential Misconceptions/Student Learning Difficulties
The facilitator/teacher can arrange to use a nearby Senior High School (SHS) ICT laboratory