Lesson 3 - Network Devices

In this lesson, students will learn about the different network devices and their roles in a network. They will be able to identify and explain the functions of routers, modems, switches, and access points. Through guided and independent practice, students will construct their own network maps, considering the placement and configuration of the components. The lesson will conclude with an exit ticket to assess students' understanding of network device functions.

Objectives:

- Students will be able to identify the role of a router, modem, switch, and access point.

- Students will be able to identify devices on a network map based on their role within an example network.

- Students will be able to construct a network map by placing provided components in the proper location.

Materials:

- Whiteboard or projector

- Markers or chalk

- Network map templates (printed or digital)

- Network components (router, modem, switch, access point)

- Sticky notes or labels

Bell-Ringer Activity:

- Display a network map on the board or projector.

- Ask students to identify the different devices they see on the network map.

- Discuss briefly what each device does and its role in a network.

Introduction:

- Begin by explaining the importance of understanding the different devices that make up a network.

- Discuss how each device has a specific role and contributes to the overall functionality of the network.

- Emphasize the importance of proper placement and configuration of these devices for optimal network performance.

Direct Instruction:

- Introduce the four main devices: router, modem, switch, and access point.

- Explain the role of each device in a network:

- Router: Connects multiple networks and directs traffic between them.

- Modem: Connects the network to the internet service provider (ISP).

- Switch: Connects devices within a network and allows them to communicate with each other.

- Access Point: Provides wireless connectivity to devices within a network.

- Use visual aids and diagrams to help students understand the function of each device.

Guided Practice:

- Provide students with network map templates and sticky notes or labels representing the different network components.

- Instruct students to place the components in the proper location on the network map based on their roles.

- Circulate the classroom to provide guidance and answer any questions.

Independent Practice:

- Assign students to create their own network map using the provided components.

- Encourage students to be creative and think about the specific needs and layout of their network.

- Remind students to label each component and indicate its role within the network.

Exit Ticket:

- Distribute a short quiz or worksheet to assess students' understanding of the different network devices and their roles.

- Include questions that require students to identify devices on a network map and explain their functions.

Closure:

- Review the main concepts covered in the lesson, including the roles of routers, modems, switches, and access points.

- Emphasize the importance of understanding these devices in order to effectively set up and manage a network.

- Encourage students to continue exploring and learning about networking concepts to further enhance their understanding.