Connecting the World: Understanding Networks

Learning objective: I can explain how computer networks transmit data and identify the purpose of key hardware components.

About 15 minutes. Grown-up tip: Ask your child to identify which devices in your home are connected to your Wi-Fi router.

Read each question carefully. Use the word bank to help you identify technical terms. Example: A 'server' is a powerful computer that provides services or resources to other computers on a network.

Word bank: Network · Server · Client · Switch · Router · Packet · Wireless

1. Kit the fox is setting up a small network for a village library. Define what a 'network' is and why it is useful for the library computers to be connected. (2 marks)

2. What is the specific role of a 'router' when data travels from the internet into the library's local network? Give one reason. (2 marks)

3. Data is often broken down into smaller pieces before it is sent across a network. What are these small pieces of data called? (1 mark)

4. Explain the difference between a 'client' computer and a 'server' in a school network. Use an example to support your answer. (3 marks)

5. If a school decides to stop using wires and switch to a fully wireless network, what is one potential benefit and one potential challenge they might face? (2 marks)

Draw: Kit the fox pointing at a diagram of computers connected by cables to a central switch in a library setting.

Extension challenge: Research how a 'firewall' protects a network. Write a short paragraph explaining why it is like a security guard for the school's computer system.

I did it! **Name: _____** **Date: _____**

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