

Kit's Network Investigation Log

Learning objective: To understand how computer networks work, including the purpose of servers, clients, and the internet as a network of networks.

Help Kit the fox map out how information travels. Use this log to define the components of a network and explain how they connect to one another. Think about how your own school network or home Wi-Fi might function.

Word bank: Server · Client · Router · Connection · Data · Network · Internet · Hardware

1. The Basic Components: Define what a 'Client' and a 'Server' are in a network. Explain the role each plays in sharing information. (4 marks)

2. The Role of the Router: Kit says a router acts like a traffic controller. Justify why a network needs a router to function correctly. (3 marks)

3. Network Benefits: Compare and contrast working on a single, isolated computer versus working on a networked computer. Why is a network more useful? (4 marks)

4. Explain why it is important for networks to have security protocols. What might happen if a network did not have any protection? (3 marks)

5. The Internet: How would you describe the difference between a small local network (like in a classroom) and the global internet? (3 marks)

6. Creative Design: If you were designing a new network for a library, what hardware would you need to include and where would you place the server? Justify your layout. (4 marks)

Extension challenge: Research a real-world network failure. Write a short paragraph explaining the impact it had on the people using it and propose a solution to prevent the same issue from happening again.