**Network components**

These descriptions describe the role of different network components in enabling communication and resource-sharing within a network.

Think about how these might have similarities and relate to the ancient First Nations trading routes.

Nodes (devices)

Devices such as computers, smartphones, printers and servers that are connected to a network. They enable communication and resource-sharing among users.

Cables/connections

Physical pathways that carry data between devices on a network. They can be wired (ethernet cables) or wireless (wi-fi).

Routers

Devices that connect different networks together. They determine the best path for data to travel between networks and ensure data reaches its destination.

Switches

Networking devices that connect multiple devices within a local area network (LAN). They manage data traffic by directing data only to the intended recipient device.

Firewalls

Security devices or software that monitor and control incoming and outgoing network traffic. They protect the network from unauthorised access and cyber threats.

Servers

Powerful computers that provide services to client computers on a network. They can host websites, store files, manage emails and run applications.

Wireless Access Points (WAPs)

Devices that allow wireless devices to connect to a wired network using wi-fi. They provide wireless connectivity within a specific area or coverage area.

Modems

Devices that convert digital data from a computer into analogue signals for transmission over communication lines and vice versa.

Protocols (for example, TCP/IP)

Sets of rules and conventions that govern how data is transmitted and received over a network. TCP/IP (Transmission Control Protocol/Internet Protocol) is a common protocol used on the internet.

Network Interface Cards (NICs)

Hardware components that allow computers to connect to a network providing the physical interface between the computer and the network medium (such as ethernet cables or wi-fi signals).

Internet Service Provider (ISP)

A company that provides individuals and organisations with access to the internet. ISPs connect users to the internet through various technologies, such as dial-up, DSL, cable or fibre optic connections.

Domain Name System (DNS)

A system that translates domain names (for example, www.example.com) into IP addresses that computers use to identify each other on a network. It helps users access websites using easy-to-remember domain names.

**Similarities to the ancient First Nations trading routes**

Example:

* **Switches** could be compared to crossroads where different trade routes intersected.

Write down at least three similarities you can think of.

1.

2.

3.