**Networking components**

Servers:

* Servers are systems that respond to requests across a network to provide aid. The provide information for computers across the network.
* One advantage is that servers give you more processing power.
* Another advantage is that they free up memory.
* A disadvantage is that a server-based network costs more.
* Another disadvantage is that it leads to a single point of failure.

Workstations:

* Workstations are personalised computers that can share things to other computers in a LAN.
* An advantage is that it can be personalised because it is your computer.
* A disadvantage is that a workstation computer is more expensive than a low-quality computer.

Switches:

* Switches allow for connected devices to communicate with each other. Switches also connect devices in a network.
* An advantage is that switches reduce network congestion.
* Another advantage is that they prevent data collisions.
* A disadvantage is that if the switch fails the network is brought down.

Routers:

* Routers send and receive data as well as sending out packets. They connect the network to the internet.
* An advantage of routers is that they control flow of data and isolates traffic.
* A disadvantage is that they are slower than other components.

Hubs:

* Hubs are unintelligent device that sends one signal to all devices connected on the network. They connect multiple devices together.
* An advantage of hubs is that it is cheaper and easier to install.
* A disadvantage of hubs is that it cannot differentiate between devices on a network.

Modems:

* Modems allow communication between computers over telephone lines. They bring the internet to your home.
* An advantage of modems is that they are able to convert digital signals into analogue signals.
* Another advantage is that they are useful for connecting LANs to the internet.
* A disadvantage of modems is that they act as an interface between the internet and LAN.
* Another disadvantage is that they have no traffic management.

3G vs 4G:

3G (third generation) and 4G (fourth generation) are both mobile data connections. 4G is newer and can do everything 3G can do but faster and smoother. 4G can support more intense activity. This may include streaming. 4G technology can offer a download rate of 1 gigabyte per second which is faster than 3Gs 21 megabytes per second. 4G technology utilises packet switching technology.