**Ways to connect to the internet**

**Wi-Fi**

a

**Ethernet**

Ethernet cables are used to create a LAN (local area network) of devices, this can also include a router which allows devices on the LAN to access a different network, the internet. As there are a lot of devices connected together, they can connect to the data on other connected devices [e6]. This allows data to easily transferred between two connected computers, or many computers sending data to and from a router, connected to the internet.

Advantages

Since you are physically connected to the internet through a wire, the signal speed and strength should not fluctuate as much as other radio-based ways of connecting to the internet.

Ethernet is a lot more secure than other ways of connecting such as Wi-Fi. This is because the data is sent across a wire so anyone wanting to intercept the signal needs physical access to that wire, other ways of connecting such as Wi-Fi has data sent through the air so other people can intercept it and read it.

Disadvantages

You are attached to a physical location via a cable, this means you have a lower flexibility in where you can connect to the internet.

Ethernet cables are recommended to be shorter than 100m [e1], this means that if you want to sit far away from where it is plugged into, usually the router or a switch.

The port that is required to plug a ethernet cable into your device varies in availability but even though it is common on desktops, it is less so on newer laptops [e3] and to connect it you need a special adaptor [e4] and they have never been on phones, even if it is simple to do [e5]. As you need to buy an adaptor to use ethernet on a lot of devices, harder to connect to than other ways of connecting to the internet such as Wi-Fi.

Speeds

The common speeds of ethernet are 100 Mbps, 1,000 Mbps (1 Gbps), and 10,000 Mbps (10 Gbps). [e2]

**Mobile Data**

Mobile data is a way of connecting to the internet by using a SIM (subscriber identification module) card [md2]. This will allow you to connect to send data to and from the mobile tower if you are in range, the same towers that allow you to make phone calls and send and receive text messages.

You can also use a buy a device that uses a SIM card as a portable router [md3] to connect any Wi-Fi compatible device to the internet using mobile data where a signal is avalable.

**3G**

**4G**

**5G**

**Modem**

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**Bibliography**

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