

# 3.1 Computing systems and networks – Connecting computers – Knowledge Organiser

Year 7 Topic number Hyperlink to planning

Key prior learning is highlighted in green, but must be revisited and reinforced during this teaching sequence.

## Overview

### Digital Devices



- **Technology** is something that has been made by people to help us.
- **Information technology (I.T.)** includes **computers and things that work with computers.**
- Digital devices are things made for a particular purpose, that use **processing.**
- Digital devices have an input, process, and output.
- Information and data can be shared across **networks.** Many devices are used to create networks.

## Digital Devices – Input, Process Output (IPO)

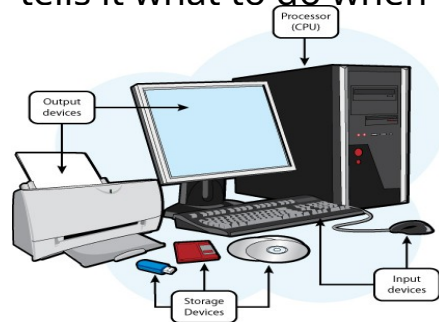
- **A device is something that has been made for a particular purpose (it has a special use).**
- Devices include, interactive whiteboards, iPads, cameras, phones, microwaves...
- Digital devices use **processing** (have a process). There is more than just an on-off function. Digital devices have an **input, process, output (IPO)**

Input: Something that sends a message to the device. E.g. You press a button on the keyboard



Input Devices: Keyboard, joystick, mouse, web cam, microphone, touch screen, track ball, digital camera.

Process: The device acts on the message. E.g. The computer follows a program that tells it what to do when



Output: Something that is sent out by the device. E.g. The letter that you have typed on



Output Devices: Screen/monitor, printer, headphones, projector, speaker, smartboard.

## Networks and Network Devices

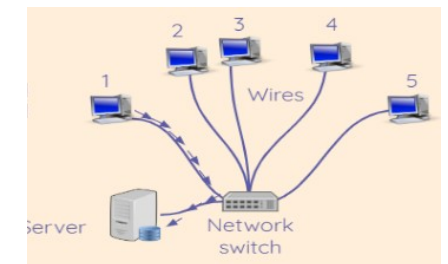
### Connections and Networks

- In Computing, a connection describes a link between the computer and something else.
- For example, a computer may be connected to the internet through wires, a mobile data system, or WiFi.
- A computer network is a set of connections that joins computers together.
- The computers in the network can send and receive information to one another.



### Network Devices

- **Network switch:** a device that helps different devices on a network to be connected with each other.
- **Server:** a computer that manages the network and stores files
- Wireless access point (WAP):** a device, connected to a wired network, that sends and receives wireless signals to and from devices.



## Why Networks Are Useful

- Computer networks allow us to send and receive information between computers that are in different places.
- Networks can help us to communicate quickly and easily.
- Networks can also join computers to shared devices, like scanners and printers.
- The internet is a global network of computers.

