



Tiverton High School Year 7 Computing Autumn Term Knowledge Organiser

Using Computer Systems (Unit 7-1)

A **program** is a set of **instructions** that tells the computer **what to do**.

Hardware means the **physical** components, parts and circuitry of the computer system.

Software means the **programs** that it uses.

Without software, the hardware would be useless, it would not have any instructions to follow.

Operating systems, device drivers and **utilities** are examples of **systems software**.

Without an operating system, a modern computer would be too difficult to use.

General purpose **software applications** include **Word Processing, Spreadsheets, Graphics Packages**.

Using Computer Systems (Unit 7-1)

Input Devices transfer data **into** the computer processor
Examples: **keyboard, mouse, image scanner, web-cam, microphone, fingerprint sensor**.

Output Devices transfer **out** of the computer for people to use.
Examples: **Screen/monitor, speakers, printer, 3D printer, LED**.

Storage Devices store files even while the computer is off.
Examples: **Magnetic hard-disk drive, solid-state drive, USB flash-drive, CD-ROM drive, DVD-ROM drive**.

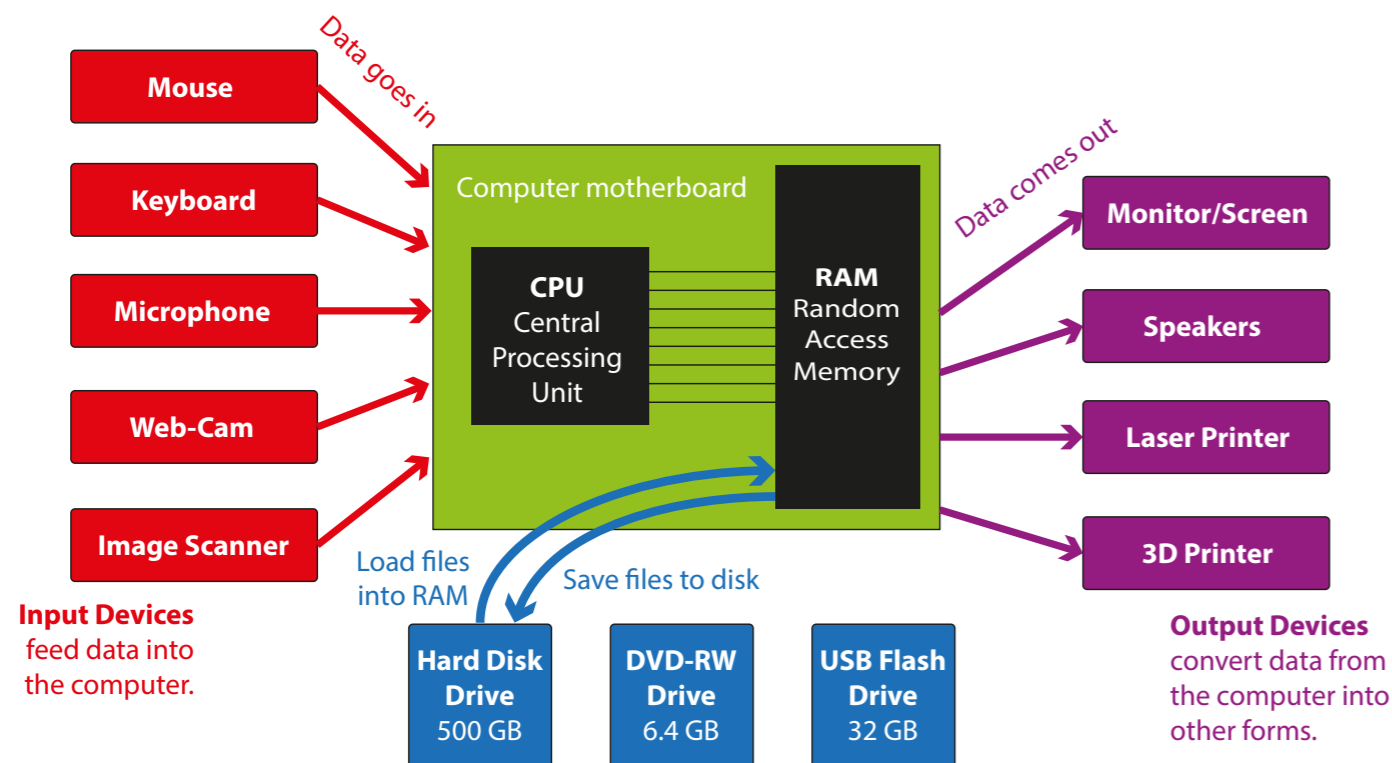
A computer has a **processor** inside it (called a **CPU**).
The processor **executes** each instruction to carry out a program.

RAM stands for **Random Access Memory**

The RAM inside a computer holds the program of instructions that the CPU needs to carry out.

RAM is **volatile... all data is lost when the power is turned off**.

Parts of a computer system



Input Devices feed data into the computer.

Storage Devices hold data and programs, even when computer is switched off.

Output Devices convert data from the computer into other forms.

Working with Text (Unit 7-2)

We use **Microsoft Word** to prepare most written documents. Microsoft Word is a **word-processor**.

It also lets you add **pictures, tables, page numbers** and other things to your document.

Always make it clear what your document is about. Use a large, bold **heading**.

Divide your writing into different **sections**. Label each new section with a smaller **sub-heading**.

Choose a **font-face** that is easy to read, such as **Calibri** or **Arial**.

Use a consistent **font size** for the main text in your document. Try **10 pt** or **11 pt**.

Use **bold** or *italics* to make important parts of your text stand out and gain attention from the reader.

You can organize more complicated information using a **table**.

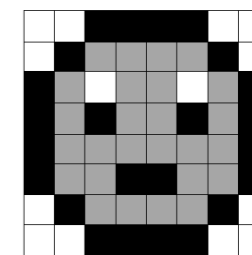
Working with Images (Unit 7-3)

Bitmap images are **pictures** that are made up of **pixels** (picture elements).

A **pixel** is a small coloured dot in a picture.

All of the pixels are arranged in a grid, a little bit like a mosaic.

The **colour** of each pixel is stored in the memory of the computer using binary digits... **1s** and **0s**.



Working with Numbers (Unit 7-4)

We use **Microsoft Excel** to perform **calculations**, produce **statistics** and plot **graphs** and **charts** from data values. Microsoft Excel is a **spreadsheet program**.

It can **multiply, divide, add, subtract** and work out **averages**. It can also make **decisions** about data.

A spreadsheet uses a grid of **cells**. A cell is like a "**box**".

Each cell can hold one **data value** - which is often either a **number** or a short piece of **text**.

A whole **vertical** line of cells is called a **column**.

A whole **horizontal** line of cells is called a **row**.

Column headers are labelled with **letters**.

Row headers are labelled with **numbers**.

Using the column letter and the row number you can find one cell. This is called a **cell reference**.

Cell **C5** is in **column C, row number 5**.

Cell **G23** is in **column G, row number 23**.

A spreadsheet can **calculate** things for you. Instead of typing in a data value into a cell, you can type in a **formula**.

A formula always begins with the **=** sign.

This sign tells the spreadsheet to **work something out for you**.

So the formula **=B5*2.2** would find what is in cell **B5** and then **multiply** it by **2.2** for you.

Remember: ***** means "multiply" / means "divide"

	A	B	C
1	Conversions		
2		Mass (kg)	Mass (lbs)
3		2.5	5.5
4		5	11
5		10	=B5*2.2
6			