# Knowledge Organiser – Inside a Computer

## What should I already know?

• Computers take data in, process it, and output information.
• Devices like keyboards and mice help us control computers.
• Hardware and software work together to perform tasks.

**Useful Websites:**

• www.bbc.co.uk/bitesize
• www.teachcomputing.org
• www.howstuffworks.com/computer

**Reflection Questions:**

1. What is the difference between input and output?
2. Why does a computer need a CPU?
3. What does the fan do inside a computer?
4. How do hardware and software work together?




| Word | Definition |
|---|---|
| Input | Data or signals sent *into* a computer from devices like keyboards or mice. |
| Output | Information or results sent *out* from the computer, like on a monitor. |
| Hardware | The physical parts of a computer you can touch. |
| Software | The programs and instructions that tell the computer what to do. |
| CPU | The 'brain' of the computer that processes data and instructions. |
| Motherboard | The main circuit board connecting all the computer's components. |
| Fan | Cools down the CPU and prevents overheating. |
| Peripheral | Any external device connected to the computer, e.g. printer or mouse. |

## Key Skills & Information

**Input Devices:**
Allow users to enter data into the computer.
Examples: keyboard, mouse, microphone, webcam.

**Output Devices:**
Display or present information from the computer.
Examples: monitor, printer, speakers, projector.

**Hardware:**
The physical parts of the computer such as the CPU, fan, and motherboard.

**Software:**
The programs and data that give instructions to hardware.
• System software – controls the computer (Windows, macOS)
• Application software – helps users perform tasks (Word, PowerPoint)

**CPU (Central Processing Unit):**
The 'brain' of the computer. It processes instructions and controls operations.
Contains:
• Control Unit (CU) – manages instructions
• Arithmetic Logic Unit (ALU) – handles calculations and logic.

**Motherboard & Fan:**
• The motherboard connects all internal components.
• The fan keeps the CPU cool and prevents overheating.