Computing Department Knowledge `Organiser: Year 8 Computing Systems

What is the Antikythera Mechanism?

https://youtu.be/EZy4a5uTYH0

Introduction to Computer Devices and Logic Gates

www.bbc.co.uk/bitesize/guides/zxb72hv/revision/1

Computing Systems

The invention of the computer has had a huge impact on our day-to-day lives, and they are now present everywhere – at home, at work and in education.

It is easy to recognise that personal computers, laptops and mobile devices are computers, but computers are also hidden in many more devices. Computers are found in many of the devices we use on a daily basis. Because they are relied on so heavily, knowing what they are and how to use them is valuable.

Input devices

An **input** device is any piece of computer hardware **used to provide data to a computer system**.

Output devices

An **output** device is any piece of computer hardware **used to communicate the results of data that has been processed**.
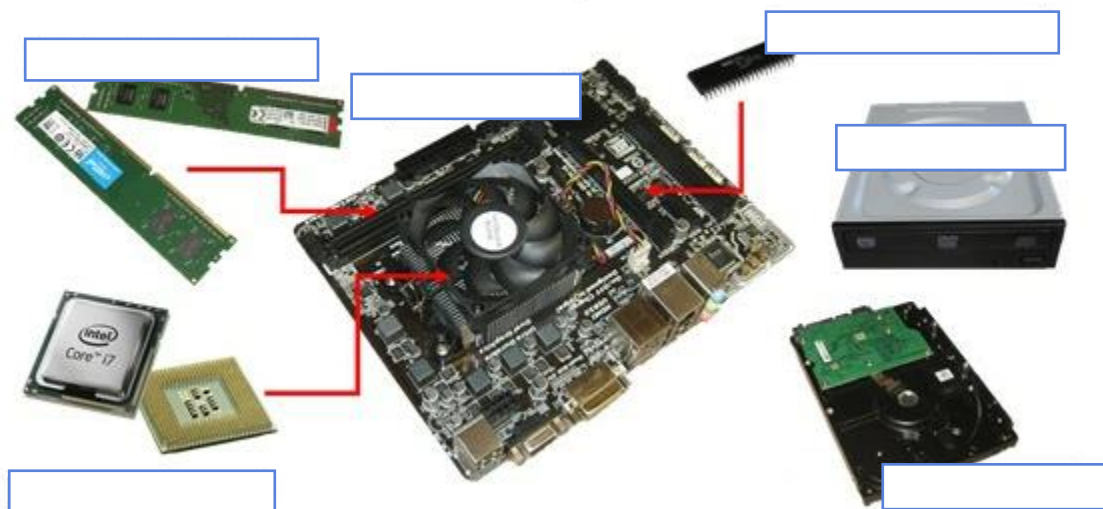
Identify whether each device is an input or output device: The first one has been done for you:

Device	Input Device	Output Device
Keyboard	✔	
Monitor		
Speakers		
Mouse		
Printer		
Headphones		
Webcam		

Internal Components

Label the Components

RAM (Random Access Memory)

ROM (Read Only Memory)

CD/DVD Drive

Hard Disk Drive

CPU (Central Processing Unit)

Motherboard

Operating Systems (OS)	Application Software
Software that supports a computer's basic functions, such as: managing memory, managing the CPU and controlling devices. • Windows • Mac OS X • Linux • iOS • Android	Programs that allow the user to complete a specific task • Word processing software e.g. Word • Graphic design software • Games
	System Utility Software Used to manage the computer and keep it running • Antivirus • Encryption • System security

Computing System Key Words:

Binary: A number system that contains two symbols, 0 and 1. Also known as base 2.

Boolean: A data type in computing which only has two possible values, true or false.

Component: Working parts of a computer system.

Hardware: The physical parts of a computer system, eg a graphics card, hard disk drive or CD drive.

Input: Data which is inserted into a system for processing and/or storage.

Logic Gate: Circuit components which take several inputs, compare the inputs with each other, and provide a single output based on logical functions such as AND, OR and NOT.

Output: Data which is sent out of a system.

Software: Programs that run on a computer and complete a specific task.

Truth Table: Used to assess possible results of a Boolean algebra statement.