Information

Digital systems refer to digital hardware and software working together to transform data into digital solutions. The hardware interacts with the software to perform the task. This task could be using a computer (hardware) that has access to a word processing program (software) to create a typed document. Once the hardware and software are connected, the digital system forms a network. All parts of a digital system are vital for a device to perform the required tasks.

Hardware is the physical systems and components of a digital device. Components can include the main unit (this contains the Central Processing Unit (CPU), Graphics Card (GPU), hard drive, memory, power supply and motherboard), a keyboard, mouse, CD drive and monitor.

Software is categorised as either application software or operating system software. Application software, (shortened to apps) are used by the computer to help perform a task. This could be using a word processing program to create a written document. Ever attempted to open a file that the device you are using won't recognise it or have difficulty opening it? It won't open because the format of the file is not recognized. You need application software to run programs and recognise files. Operating systems is the system software that connects the hardware and software together and allows it to interact.

Curriculum Expectations

Students will investigate how software and hardware are used for a certain purpose and identify the different needs that software use to help perform a task.

Video Resource

Click the image to open the video
This video explains how hardware and software work together.

Video Source: Hour of Code

DIGITAL SYSTEMS

Understanding the role of hardware & software

HARDWARE

SOFTWARE

HARDWARE	SOFTWARE
The physical components that make up the device	The core operating system that help a user to complete a task
Hardware includes components like the Central Processing Unit (CPU), memory, power supply and motherboard	Application Software allows the digital device to recognise the format of the file and help complete a task
	Operating System software enables the software and hardware to work together

From this...

...to this!

Hardware and software work together to transform data into a digital solution