

IGCSE Computer Studies 0420

Unit 8: Hardware

Recommended Prior Knowledge

Students can start this unit with little basic knowledge of computer systems.

Context

The basic parts of a computer system are introduced here, including the use of microprocessors in everyday objects this links to unit 1.

Outline

This unit looks at the physical parts of a computer system, the processor, storage and peripherals for input and output.

AO	Learning outcomes	Suggested Teaching activities	Learning resources
5.1	Computer, microcomputer, microprocessor	Introduce the idea of embedded microprocessors and the difference between an embedded system and a computer system. Give examples of devices that use embedded microprocessors from everyday life.	http://www.klbschool.org.uk/ict/gcse/theory/hardware/embedded.htm examples of embedded systems http://www.theteacher99.btinternet.co.uk/theteacher/gcse/newgcse/module1/task5.htm introduces the microcomputer http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm introduces different types of computer L+W 13.1 and 13.2
	Standard input and output devices. The characteristics and performance of a range of peripherals (including control and communication devices).	Discuss the need to communicate with a computer and the physical ways of doing this. This will link in to unit 1 (etc.) where specialist devices for disabled people, devices for interfacing with virtual reality systems, etc. need to be considered along with a whole range of peripherals.	http://www.teach-ict.com/gcse/hardware/input/input.htm input devices, details, handouts, quizzes etc http://www.teach-ict.com/gcse/hardware/output/output.htm output devices, details, handouts, quizzes etc http://www.theteacher99.btinternet.co.uk/theteacher

AO	Learning outcomes	Suggested Teaching activities	Learning resources
		The reasons for choosing certain devices in a number of applications needs to be carefully considered (e.g. bar code readers in supermarkets, graph plotters in design offices, etc.)	r/gcse/newgcse/module3/task2.htm introduction to Laser printers http://www.theteacher99.btinternet.co.uk/theteacher/gcse/newgcse/alltopics.htm list of topics include introductions to many common peripherals. L+W 13.3 & 13.4
	Broad classes of processor power	General introduction to classes of processor only – no detail required here, see note in textbook	http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm includes different types of computer L+W 13.5
	The functions and characteristics of storage media.	Discuss the difference between RAM, ROM, and removable storage media e.g. CD-R/W. There are many new devices coming on to the market (e.g. USB memory sticks, increased use of DVD-R/W, removable hard drives, etc.). Tape and floppy disk systems are being slowly phased out and aren't even offered on many new computers.	http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastoragerev2.shtml introduction to RAM and ROM http://computer.howstuffworks.com/ram1.htm more details on RAM, could be used for extension work http://computer.howstuffworks.com/rom.htm more details on ROM, could be used for extension work http://www.teach-ict.com/gcse/hardware/storage/hw_storage.htm storage devices and media, details, handouts, quizzes etc L+W 13.6