

# 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	<p>Introduce the idea of embedded microprocessors and the difference between an embedded system and a computer system.</p> <p>Give examples of devices that use embedded microprocessors from everyday life.</p>	<p><a href="http://www.klbschool.org.uk/ict/gcse/theory/hardware/embedded.htm">http://www.klbschool.org.uk/ict/gcse/theory/hardware/embedded.htm</a> examples of embedded systems</p> <p><a href="http://www.theteacher99.btinternet.co.uk/theteacher/gcse/newgcse/module1/task5.htm">http://www.theteacher99.btinternet.co.uk/theteacher/gcse/newgcse/module1/task5.htm</a> introduces the microcomputer</p> <p><a href="http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm">http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm</a> introduces different types of computer</p> <p>L+W 13.1 and 13.2</p>
	<p>Standard input and output devices.</p> <p>The characteristics and performance of a range of peripherals (including control and communication devices).</p>	<p>Discuss the need to communicate with a computer and the physical ways of doing this.</p> <p>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.</p>	<p><a href="http://www.teach-ict.com/gcse/hardware/input/input.htm">http://www.teach-ict.com/gcse/hardware/input/input.htm</a> input devices, details, handouts, quizzes etc</p> <p><a href="http://www.teach-ict.com/gcse/hardware/output/output.htm">http://www.teach-ict.com/gcse/hardware/output/output.htm</a> output devices, details, handouts, quizzes etc</p> <p><a href="http://www.theteacher99.btinternet.co.uk/theteacher">http://www.theteacher99.btinternet.co.uk/theteacher</a></p>

AO	Learning outcomes	Suggested Teaching activities	Learning resources
		<p>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.)</p>	<p><a href="http://www.theteacher99.btinternet.co.uk/theteacher99/gcse/newgcse/module3/task2.htm">r/gcse/newgcse/module3/task2.htm</a> introduces Laser printers</p>
	Broad classes of processor power	General introduction to classes of processor only – no detail required here, see note in textbook	<p><a href="http://www.theteacher99.btinternet.co.uk/theteacher99/gcse/newgcse/alltopics.htm">http://www.theteacher99.btinternet.co.uk/theteacher99/gcse/newgcse/alltopics.htm</a> list of topics include introductions to many common peripherals.</p> <p>L+W 13.3 &amp; 13.4</p> <p><a href="http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm">http://www.teach-ict.com/gcse/hardware/types/computer_types/index.htm</a> includes different types of computer</p> <p>L+W 13.5</p>
	The functions and characteristics of storage media.	<p>Discuss the difference between RAM, ROM, and removable storage media e.g. CD-R/W.</p> <p>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.</p>	<p><a href="http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorageev2.shtml">http://www.bbc.co.uk/schools/gcsebitesize/ict/hardware/1datastorageev2.shtml</a> introduction to RAM and ROM</p> <p><a href="http://computer.howstuffworks.com/ram1.htm">http://computer.howstuffworks.com/ram1.htm</a> more details on RAM, could be used for extension work</p> <p><a href="http://computer.howstuffworks.com/rom.htm">http://computer.howstuffworks.com/rom.htm</a> more details on ROM, could be used for extension work</p> <p><a href="http://www.teach-ict.com/gcse/hardware/storage/hw_storage.htm">http://www.teach-ict.com/gcse/hardware/storage/hw_storage.htm</a> storage devices and media, details, handouts, quizzes etc</p> <p>L+W 13.6</p>