# O Level Computer Studies 7010
## 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. | http://www.klbschool.org.uk/ict/gcse/theory/hardware/embedded.htm  examples of embedded systems |
| | | Give examples of devices that use embedded microprocessors from everyday life. | 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.<br><br>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.<br><br>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<br>http://www.teach-ict.com/gcse/hardware/output/output.htm output devices, details, handouts, quizzes etc<br><br>http://www.theteacher99.btinternet.co.uk/theteache |

| 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<br><br>http://www.theteacher99.btinternet.co.uk/theteacher/gcse/newgcse/alltopics.htm list of topics include introductions to many common peripherals.<br><br>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<br><br>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.<br><br>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<br><br>http://computer.howstuffworks.com/ram1.htm more details on RAM, could be used for extension work<br><br>http://computer.howstuffworks.com/rom.htm more details on ROM, could be used for extension work<br><br>http://www.teach-ict.com/gcse/hardware/storage/hw_storage.htm storage devices and media, details, handouts, quizzes etc<br><br>L+W 13.6 |