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| **Unit 1 LO1** | **Understand Computer Hardware Road Map** | | | | | |
| In this unit you will investigate water on the land. The aims are as follows:  **LG1**: Knowledge  **LG2**: Application  **LG3**: Skills | Assessment Grades |  |  | | | |
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| **Themes** | **Learning Goals/Outcomes/Content** | | |  |  |  |
| What is an input and output device?  What are the benefits and limitations to individual input/ output devices? | **LG1:** Understand the difference between input and output devices.  **LG2:** Develop an ability to discuss the uses, benefits and limitations of input and output devices. | | |  |  |  |
| What is communication hardware is?  What is communication hardware used for? | **LG1:** Identify different communication devices and its purpose. | | |  |  |  |
| What is the purpose of each computer component? | **LG1:** Identify different components in a computer and understand their purpose.  **LG2:**Understand how you can upgrade different computer components to improve the performance of a computer.  **LG3:** To answer exam style questions | | |  |  |  |
| What different types of computer are there? | **LG1:** Identify different types of computer system.  **LG2:** Be able to discuss the uses of each type of computer system including the benefits and limitations of each. | | |  |  |  |
| What connectivity measures are available?  What are the characteristics and purpose of connectivity methods?  How may users may experience poor connectivity? | **LG1:** Identify the characteristics and purpose of connectivity methods.  **LG1:** Understand how users may experience poor connectivity. | | |  |  |  |
| What is a hardware fault?  How do you solve a hardware fault? | **LG1:** Understand how hardware faults occur.  **LG2:** Identify troubleshooting tools that can be used to solve faults.  **LG1:** Know the benefits of documentation and fault management.  **LG3:** Be able to use troubleshooting skills to fix a hardware fault. | | |  |  |  |
| What units are used when considering computer storage?  What is binary and denary?  Why is binary used?  How do I convert binary to denary and vice versa? | **LG1:** Define the units bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte, petabyte.  **LG1:** how data needs to be converted into a binary format to be processed by a computer.  **LG1 and 3:** Learn how to convert positive denary whole numbers (0-255) into 8 bit binary numbers and vice versa.  **LG2:** To apply knowledge of how to convert binary numbers into denary numbers and vice versa. | | |  |  |  |
| What is hexadecimal?  Why is hexadecimal used?  How do I convert Hexadecimal into binary and denary and vice versa? | **LG1 and LG3:** Learn how to convert positive denary whole numbers (0–255) into 3 digit hexadecimal numbers and vice versa.  **LG1 and LG3:** Learn how to convert from binary to hexadecimal equivalents and vice versa.  **LG2:** To apply knowledge of how to convert hexadecimal into binary and denary numbers and vice versa. | | |  |  |  |
| **Assessment** |  | | |  |  |  |

**Links:**

**LG1:** Understanding computer hardware enables you to understand how a computer works including how to troubleshoot problems with hardware.

**LG2:** Application is important so that you can identify how to upgrade a computer as well as advise on what hardware is suitable for a given purpose.

**LG3:** Being able to troubleshoot what is wrong with a computer’s hardware is important as it enables you to have the skills to fix a computer.