|  |  |
| --- | --- |
| **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 |  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| **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.