|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Unit 1.1** | **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 the CPU?  What is the function of the CPU? | **LG1:** Understand the purpose of the CPU.  **LG2:** Be able to state the function of the CPU (fetch and execute instructions stored in memory). | | |  |  |  |
| What are the CPU components?  What is the function of each CPU component? | LG1: Know the common CPU components and their function.   * + ALU (Arithmetic Logic Unit)   + CU (Control Unit)   + Cache   + Registers. | | |  |  |  |
| What does a computer system comprise of?  What is the role of memory?  What is a peripheral?  What is the role of different buses in a computer system? | LG1: Understand computer systems, the role of memory and what a peripheral is.  LG2: Be able to explain the role of different buses in a computer system. | | |  |  |  |
| What is Von Neuman Architecture?  What is MAR and MDR?  What does the program counter do? | **LG1:** Understand the Von Neumann architecture.  **LG2:** Be able to describe the MAR and MDR and the importance of the Program Counter. | | |  |  |  |
| What are the common characteristics of CPUs?  How do the characteristics of a CPU affect a computers performance? | **LG1:** Understand how common characteristics of CPUs affect their performance:   * + Clock speed   + Cache size   + Number of cores.   **LG2:** Be able to estimate the best performing CPUs | | |  |  |  |
| What is an embedded system?  What is their purpose and characteristics? | **LG1:** To understand ‘embedded systems’ regarding:   * + their characteristics   + their purpose.   **LG2:** Apply knowledge of embedded systems and be able to give examples of CPUs. | | |  |  |  |
| **Assessment** |  | | |  |  |  |

**Links:**

**LG1:** Understanding the purpose and characteristics of the CPU is important because the processor is classed as the ‘brains’ of the computer, therefore it is important to understand how it works and its role in a computer system.

**LG2:** Application is important so that you can understand how the CPU interacts with other components and understand what affects its performance.

**LG3:** Being able to identify computer components in a computer system enables you to understand how each component interacts with other components in a computer system, to enable the computer to function.