**Colton Hills Community School medium term planning – ICT/Computer Science**

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| **Topic title:**  **What is the purpose and functionality of Operating systems and Utility software** | **Year: GCSE CS  Term:** Autumn 1 | **Why we teach this:** This unit explores the roles of systems software and its importance to ensure a computer system runs effectively. Students recap the difference between software and hardware. The unit then builds knowledge on specific system software utility software, operating system and the difference between open source and proprietary software.  The operating system roles and responsibilities are understood and how the operating system is needed to ensure all hardware and software work effectively. | **Why we teach this here:** It is important to understand that without essential software such as the operating system a computer system would not function. The unit explores the types of system software and their purpose. | |
| **Big questions:**   1. What is an Operating System? 2. What are the major roles of an operating system? 3. How do operating systems for different types of devices differ? 4. Why do user interfaces differ depending on the type of device and its use? 5. Why do we need Utility software? 6. What is the purpose and functionality of some commonly used utility software? 7. How can system software help to use computers and devices more efficiently? | | **Builds on previous topics:** - Recap on computer authentications | **Links to future topics:** - Links to Level 2 BTEC content  - Links to computer science content | |
| **Key knowledge:**   * Recap on what is software and naming different forms of software. * Understanding the most important software on a computer is an operating system. * Understand the key roles and responsibilities of the operating system. * To explore the different types of interfaces. * Understand the purpose of the interfaces on different devices. * To be able to define the purpose of utility software. * To understand the need of utility software. * To explore the different forms of utility software and how they work with the operating system to improve a computer system performance. |  | |
| **Skills developed:**   * Using a variety of interfaces to complete basic commands. * Compare and contrast use of operating systems. | |
| **Mini/Interim assessments:**  **Kahoot quiz**  **Retrieval**  **Microsoft Forms tests Termly summative assessment:**   * End of unit assessment | | **Independent study tasks/resources:**  Revision of keywords and definition  Weekly revision in preparation for retrieval | **Key vocabulary 1:** software  Operating system  Utility software  Peripheral  Multi-tasking  User interface  Graphical User Interface  Command Line Interface  Menu driven interface | **Key vocabulary 2:** |
| **Cultural capital opportunities:**  - Use of cloud collaboration live | | **Whole school Curricular Concept links:** technological development – to understand the key roles of software in a computer system.  Ethical enterprise – understanding the ethical impact of open source and proprietary software. |

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| **Week/ Phase** | **Key Features** | |
| 1 | **Small Questions:** … | |
| **Key Activities/Resources:** … | **Retrieval focus:**  …  **Independent study:**  … |
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| 2 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |
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| 3 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |
| **Week/ Phase** | **Key Features** | |
| 4 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |
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| 5 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |
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| 6 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |