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

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| **Topic title:**  What different types of networks are there and how do I use them? | **Year:** 9 **Term:** Autumn 1 | **Why we teach this:** To investigate the different types of networks by first re-introducing the school network and how to access the different accounts available to students.  The unit develops further into the hardware of networks and the comparison to cloud computing finally understanding privacy by understanding why username and passwords should be kept safe. | **Why we teach this here:** it is important students understand what it means by a network and how it works. Students are taught the different types of network and how the hardware and functionality differs. | |
| **Big questions:**   1. How do I access my network accounts? 2. Why do we use networks? 3. What is a LAN? 4. What is a WAN? 5. What hardware do I need to access a network? 6. What laws must I follow when using a network? 7. What is cloud computing? 8. Why should I keep my username and password a secret? | | **Builds on previous topics:** - Cloud technologies  Hardware and software in year 7 | **Links to future topics:** - Computer network architecture in GCSE Computer Science and cloud computing in modern technologies studied in Learning Aim A of BTEC DIT. | |
| **Key knowledge:**   * Recap on basic computer rooms rules * Looks at health and safety when using computer systems * Introduces the concept of the ‘Cloud’. * How and why organisation/individuals are using the cloud to carry out work. * How can Office 365 and OneDrive be used effectively. * Understand the difference between LAN and WAN network. * Explore the hardware needed to create a network. * Understand the different laws that impact technology * Investigate what it means by the internet and how data packets travel through the internet. | **Key knowledge continued:** | |
| **Skills developed:**   * Creating folders and saving files. * Login to the O365 account. * Creating folders and saving files on O365**.** | |
| **Mini/Interim assessments:**   * Exam questions * Cloud assessment   **Termly summative assessment:**   * End of unit assessment out of 30 marks | | **Independent study tasks/resources:**  Week 1 – Creating an IDEA account  Week 3 – Completing IDEA skills appropriate to the topic. | **Key vocabulary 1:** Cloud Computing  Data Packet  Data Transfer  Hub  Internet  LAN  Laws  Network  Network resources  Office 365 and Teams  Password  Router  Server  Switch  Username  WAN | **Key vocabulary 2:**  Cloud Computing  Cloud Storage  Law  Morals  Ethics |
| **Cultural capital opportunities:**  - investigate the school network. Take a tour of the school to investigate network hardware.  Visit local organisations such as the council to investigate different local area networks and the hardware required to create the different hardware. | | **Whole school Curricular Concept links:** Civic Responsibility – understanding the importance of laws that govern IT.  Technological development – understand the different hardware needed to create a network. Explore cloud technologies. |

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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:**  … |
|  |  | |
| 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:**  … |
|  | | |
| 6 | **Small Questions:** … | |
| **Key Activities/Resources:**  … | **Retrieval focus:**  …  **Independent study:**  … |