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| **10** | **Half term points** | | | | | |
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| **AUTUMN 1** | **AUTUMN 2** | **SPRING 1** | **SPRING 2** | **SUMMER 1** | **SUMMER 2** |
| **1.1 Systems architecture**  **Mini Assessment 1: Understanding the components of the CPU.**  **Mini assessment 2: Fetch-decode-execute and embedded systems** | **1.2 Memory and storage**  **Mini Assessment 1: primary (RAM,ROM), secondary storage (types, advantages/disadvantages).**  **Mini assessment 2: Units of storage, compression, number systems** | **1.3 Computer networks, connections and protocols**  **Mini Assessment 1: Types of networks (LAN, WAN, Wired & Wireless)**  **Mini assessment 2: Topologies and Protocols** | **1.4 Network security**  **Mini Assessment 1: Threats to computer systems**  **Mini Assessment 2: preventing threats and attacks** | **1.5 Systems software**  **Mini Assessment 1: Operating systems and utility software**  **Mini Assessment 2: memory management and user management functions.** | **1.6 Ethical, legal, cultural and environmental impacts of digital technology**  **Mini Assessment 1: impacts of digital technology**  **Mini assessment 2: Legal requirements when using computer systems.** |
| **Key skills and knowledge assessed:**   * Architecture of the CPU: purpose, components, Von Neuman architecture. * Fetch-decode-execute cycles. * Embedded Systems | **Key skills and knowledge assessed:**   * Why computers have primary and secondary storage. Including characteristics of RAM and ROM. * Storage units, numbers and characters (Binary, Denary, Hex) * Compression and file sizes | **Key skills and knowledge assessed:**   * Types of Networks (Lan and WAN) * Wired vs wireless * Factors affecting performance, topologies (STAR, MESH, BUS) * Protocols and encryption | **Key skills and knowledge assessed:**   * Threats to computer systems. * Preventing vulnerabilities, * Understand how to limit threats and attacks. | **Key skills and knowledge assessed:**   * Operating systems * utility software. * Memory management. * User management functions | **Key skills and knowledge assessed:**   * Impacts of digital technology on wider societies. * Legislations relevant to computers science. * Software licences |
| **Meaningful homeworks:**   * Students will be given a LMC (little Man Computing) task to complete at home. This software replicates the CPU function and will allow students to apply knowledge learnt in lesson. Students will need to add screenshots explaining what they have done for each task. | **Meaningful homeworks:**   * Student will rearch storage types including primary and scondary storgae. They will create a leaflet promoting each type explain the benefits of the storgae device and recommendations for the data that should be stored on them. | **Meaningful homeworks:**   * Students will need to make an A3 poster explaining network topologies. This will need to demonstrate STAR, MESH and BUS diargrams. Each diagram will need to be clearly labelled and demonstrated visually. This should be displayed in the classroom when completed. | **Meaningful homeworks:**   * Students wil be given series of scenarios that they will need to decide what threat is affecting to the computer system and they will need to recommend prevantion methods. | **Meaningful homeworks:**   * Students will be directed to the codeclub website where they will be expected to create a program that stores data for later use. They will be expected to record their progress in a presentation explaining the steps they have taken to create the program. | **Meaningful homeworks:**   * Students will answer a long answer exam style question on ethical, legal and rpivacy issues of comupting. |