Topic: Unit 1.5 Systems Software

Key vocabulary:		**Core knowledge questions**	**Powerful knowledge crucial to commit to long term memory**	**Links to previous and future topics**
Systems Software Operating Software (OS) User Interface Graphical User Interface (GUI) Command Line Interface (CLI) Memory Management Data Multitasking Peripheral Device Driver User Management Access Rights File Management Utility Program	Operating System Encryption Key Interception Plaintext Ciphertext Defragmentation Fragmentation Hard Drive Files Data Compression Lossy Lossless	1. What is the purpose and functionality of operating systems? • User Interface • Memory Management and Multitasking • Peripheral Management and Drivers • User Management • File Management 2. What is the purpose and functionality of Utility Software? 3. Explain the following Utility System Software: • Encryption • Defragmentation • Data Compression	• What each function of an operating system does • Features of a user interface • Memory Management (transfer of data between memory, and how this allows for multi-tasking) • Understand that: ○ Data is transferred between devices and the processor ○ This process needs to be managed and what this entails • User Management functions: Allocation of an account; Access rights; Security • File Management, and the key features: Naming; Allocating to folders; Moving files; Saving • Understand that computers often come with utility software, and how this performs housekeeping tasks • The purpose of the identified utility software and why it is required.	• Systems Software is covered in Y7 and Y8 • Systems Software is fundamental to Computer Science and will be revisited throughout the course.

We will develop these skills:

Impressive reading	**Impressive speaking**	**Impressive writing**	**Resilience**	**Numeracy via:**	**Digital Literacy via:**	**Employability via:**
Research using the Internet to find relevant and appropriate information about Operating Systems and Utility Software. Interpreting scenarios to recommend appropriate Operating or Utility Software.	Discussion of research findings. Discussion in groups of Operating Systems and Utility Software characteristics	Recording research findings appropriately. Writing key terms for Operating Systems and Utility Software. Writing definitions. Answering exam questions	Developing ability to consistently amend and refine work. Listen to others' opinions	Capacity need and calculation for OS and Utility Software Data Compression calculations Encryption – deciphering encrypted text using specific keys	Use of the Internet Use of MS Office Suite	Teamwork – working in groups Flexibility – taking on opinions of others Problem Solving – using information to assess appropriate OS and Utility Software

SEND

- Peer Support - Some students may be more aware of Operating Systems and Utility Software – use these students as Lead Students
- Differentiated Activities and Tasks, choice of tasks for certain activities, support sheets
- Questioning
- Flipped Learning resources for students to study either prior to or after lesson
- Peer Assessment / Support on labelling tasks
- Scaffolded resources, gapped handouts