



GCSE Computer Science Curriculum Map

<u>Year 10 – 1.2 Memory and Storage, Data</u>	<u>Year 10 – 1.1 Systems Architecture</u>	<u>Year 10 – 1.3 Computer Networks</u>	<u>Year 10 – 1.4 Systems and Network Threats</u>	<u>Year 10 – 1.5 Systems Software</u>
<p>Intent: Pupils study about the difference between memory and storage and how they're needed by the computer. They learn about data sizes, calculating file sizes and converting to binary, denary and hexadecimal.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: Pupils will learn about how computer systems work, including types of computers, Von Neumann architecture and the way in which CPUs work (FDE cycle)</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: Pupils study about types of networks (topology), as well as wireless and wired networks, Bluetooth etc. This then extends to protocols, layers and how the Internet works.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: Pupils study the threats posed to networks and systems by exterior and interior factors, such as malware, viruses and people as the weak point within a system.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: This unit focuses on how software is used by computers and the different types that might be used – such as operating systems, utility software and applications software.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>



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<u>Year 10 – 1.6 Computers in Society</u>	<u>Year 10 – 2.1 Algorithms</u>	<u>Year 11 – 2.2 Programming Fundamentals (including NEA)</u>	<u>Year 11 – 2.3 Robust Programs</u>	<u>Year 11 – 2.4/5 Boolean Logic and Languages</u>
<p>Intent: Computers in Society is the study of how digital technology impacts the world around us, looking at ethical, social and moral concerns. For example, the digital divide between those who have access to computers and the Internet and those who don't.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: Pupils will study about the core computing principles of algorithmic thinking, decomposition and how to write algorithms in both pseudocode and flowchart format. Pupils also study the key searching and sorting algorithms, such as linear searches and insertion sorts.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork.</p>	<p>Intent: Pupils will be given the opportunity to learn and to study how to program. This will be in the Python programming language, building up their programming skills. To support this, they will also undertake their programming project after school during this.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork. In addition,</p>	<p>Intent: Pupils will study how programs must be designed to stop their intentional or accidental misuse. For example, making sure a form can only be filled in the correct way, or making it secure from being hacked.</p> <p>Assessment Focus: Pupils are set an end of unit test using OCR Exambuilder, in addition to samples of their classwork. In addition, the 20 hour NEA project takes place as part of this</p>	<p>Intent: Unit 2.5 is a brief unit on Programming Languages, which is partially covered in previous units – but covers the idea of low level and high level languages and how these are translated or compiled for computer or human use. Equally, Unit 2.4 covers Boolean Logic, which is also taught as part of programming – this covers AND OR NOT as a Boolean concept, allowing comparisons in programs to happen.</p>



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