

Year: 11 Subject: GCSE Computing IMPLEMENTATION						
Key concepts and skills ('Big ideas')	Half Term 1 - Paper 2 Context: Unit 1 Computer Systems	Half Term 2 Context: Unit 1 Computer Systems	Half Term 3 Context: Unit 2 Computational Thinking	Half Term 4 Context: Unit 2 Computational Thinking	Half Term 5 - Unit 1 and 2 Context: Revision and retention	Half Term 6 N/A
		<p>Key Vocabulary: CPU, transistor, RAM, Virtual Memory, Operating systems, utility software</p> <p>Prior Learning/LTM: KS3 knowledge of the CPU and binary</p> <p>Cultural Capital: John Von Neumann</p> <p>Numeracy Links: Binary conversations, binary addition</p>	<p>Key Vocabulary: Hexadecimal, High and low level language, bitmap, pixel, colour depth, resolution, frequency, maintainability</p> <p>Prior Learning/LTM: Binary and number systems from KS3 and HT1, Programming projects from Y10</p> <p>Cultural Capital: Michael Noll</p> <p>Numeracy Links: Hexadecimal and binary</p>	<p>Key Vocabulary: Algorithm, syntax, bubble sort, binary sort, merge sort, conditional, iteration</p> <p>Prior Learning/LTM: KS3 programming experience. Y10 Python and logic</p> <p>Cultural Capital: Konrad Zuse</p> <p>Numeracy Links: Binary sort and merge sort</p>	<p>Key Vocabulary: Casting, variables, string, integer, float, syntax, logic, iterative testing</p> <p>Prior Learning/LTM: KS3 programming experience. Y10 Python and logic</p> <p>Cultural Capital: Konrad Zuse</p> <p>Numeracy Links: casting from string to integer</p>	<p>Key Vocabulary: Casting, variables, string, integer, float, syntax, logic, iterative testing Algorithm, syntax, bubble sort, binary sort, merge sort, conditional, iteration</p> <p>Prior Learning/LTM: KS3 Computing and Y10 programming experience</p> <p>Cultural Capital: Noam Chomsky Syntactic Structures</p> <p>Numeracy Links: casting from string to integer</p>
Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems	x	X			X	
Understand several key algorithms that reflect computational thinking			X	X	X	
Use two or more programming languages, at least one of which is textual		X	X	X	X	
Understand simple Boolean logic and some of its uses in circuits and programming	x	X	X	X	X	
Understand the hardware and software components that make up computer systems	x	X			X	
Understand how instructions are stored and executed within a computer system	x	x			X	
Understand how data of various types can be represented and manipulated digitally		X	X	X	X	
Undertake creative projects that involve selecting, using, and combining multiple applications.			X	X	X	
Create, re-use, revise and re-purpose digital artefacts for a given audience.						
Understand a range of ways to use technology safely, respectfully, responsibly and securely.	x		X	X	x	
IMPACT	<p>Assessment 1: Past Paper 1</p> <p>Assessment 2: Exam Style questions</p>	<p>Assessment 1: Exam Style Analysis Questions</p> <p>Assessment 2: Exam style</p>	<p>Assessment 1: End of Topic assessment - extended answers</p>	<p>Assessment 1: Exam style analysis questions</p> <p>Assessment 2: Exam Style</p>	<p>Assessment 1: End of topic assessment - extended answers</p>	<p>External Examination</p> <p>Assessment 1: Paper 1 90 min</p>

	<p>Progression to Post 16: A-level Computing BTEC Level 3 Computing</p>	<p>MCQ's Progression to Post 16: A-level Computing BTEC Level 3 Computing</p>	<p>Assessment 2: End of topic assessment MCQs Progression to Post 16: A-level Computing BTEC Level 3 Computing</p>	<p>MCQs Progression to Post 16: A-level Computing BTEC Level 3 Computing</p>	<p>Assessment 2: End topic assessment MCQ Progression to Post 16: A-level Computing BTEC Level 3 Computing</p>	<p>Assessment 2: Paper 2 90 min</p>
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