

BCT KS4 Curriculum Intent, Implementation and Impact Overview

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 2 Computer Systems	Half Term 3 Context: Unit 2 Computational Thinking	Half Term 4 Context: 1 Computer Systems	Half Term 5 - Unit 1 and 2 Context: Revision and retention	Half Term 6 N/A	
	Key Vocabulary: CPU, transistor, RAM, Virtual Memory, binary and hexadecimal	Key Vocabulary: Algorithm, syntax, bubble sort, binary sort, merge sort, conditional, iteration	Key Vocabulary: IDEs, operating systems, defensive design, embedded systems	Key Vocabulary: Network threats, algorithms, compression.	Key Vocabulary: Casting, variables, string, integer, float, syntax, logic, iterative testing Algorithm & syntax		
	Prior Learning/LTM: KS3 and Y10 knowledge of the CPU and binary	Prior Learning/LTM: KS3 AND y10 programming experience. Y10 Python and logic	Prior Learning/LTM: KS3 and y10	Prior Learning/LTM: KS3 programming experience. Y10 Python and logic	Prior Learning/LTM: KS3 Computing and Y10 programming experience		
	Cultural Capital: John Von Neumann	Cultural Capital: Konrad Zuse	Cultural Capital: Coded Bias - Documentary	Cultural Capital: The Great Hack - Documentary	Cultural Capital: Noam Chomsky - Syntactic Structures		
	Numeracy Links: Binary conversations, binary addition	Numeracy Links: Binary sort and merge sort	Numeracy Links: Calculating capacity and storage space	Numeracy Links: Transmission speeds	Numeracy Links: casting from string to integer		
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	X	X	
Use two or more programming languages, at least one of which is textual	X		X	X	X	X	
Understand simple Boolean logic and some of its uses in circuits and programming	X	X	X	X	X	X	
Understand the hardware and software components that make up computer systems	X	X			X	X	
Understand how instructions are stored and executed within a computer system	X	X			X	X	
Understand how data of various types can be represented and manipulated digitally	X	X	X	X	X	X	
Undertake creative projects that involve selecting, using, and combining multiple applications.			X	X	X	X	
Understand a range of ways to use technology safely, respectfully, responsibly and securely.	X		X	X	X	x	
<b>IMPACT</b>	Assessment 1: Binary and Hex task  Assessment 2: 11.1 Exam paper  Progression to Post 16: A-level Computing BTEC Level 3 Computing	Assessment 1: Programming algorithms  Assessment 2: 11.2 Exam paper  Progression to Post 16: A-level Computing BTEC Level 3 Computing	Assessment 1: 11.3 Trial Exam  Assessment 2: Algorithm practical task  Progression to Post 16: A-level Computing BTEC Level 3 Computing	Assessment 1: 11.4 Trial exam  Assessment 2: Network Task  Progression to Post 16: A-level Computing BTEC Level 3 Computing	Assessment 1: Unit 1 & 2 Past Paper  Assessment 2: Algorithm practical task  Progression to Post 16: A-level Computing BTEC Level 3 Computing	External Examination  Assessment 1: Paper 1 90 min  Assessment 2: Paper 2 90 min	