



Curriculum Sequencing - Year 10

Year 10 Term 1a:	
Topics covered:	Intro to programming Decomposition, algorithms Data types, variables Input and integer functions, debugging tools Flowcharts
How it links to what has been studied before:	Term 1 of Year 10 builds on the foundational skills learned in the KS3 curriculum, such as understanding basic programming concepts, digital literacy, and the principles of computers and networks.
How it links to what will be studied:	Students transition from basic problem-solving and programming to more advanced topics like algorithms, data representation, and complex problem-solving techniques. This progression ensures they have the necessary skills and knowledge to tackle GCSE-level computer science challenges
Key words:	Program Decomposition Algorithm Sequence Variable Runtime error
Assessment focus	Represent algorithms in flowcharts Create code from algorithms represented in flowcharts
Revision tips	https://www.bbc.co.uk/bitesize/guides/z7kkw6f/revision/3 https://www.bbc.co.uk/bitesize/guides/zpp49j6/revision/3
Key skills:	Students will learn advanced programming concepts, algorithm development, data representation, problem-solving techniques, and how to debug and refine code efficiently.
Why we study it:	To enhance computational thinking, problem-solving abilities, and technical proficiency. These skills are essential for understanding complex systems, developing software, and preparing for further education and careers in technology-related fields.
Mastery in this subject	By actively engaging in practical programming tasks, seeking feedback, and consistently applying theoretical concepts to real-world problems.
Year 10 Term 1b:	
Topics covered:	String manipulation, string methods if, if else, relational operators if elif else, readability Boolean operators Repetition (while) Two's complement 2 Logical binary shifts Arithmetic binary shifts

	Hexadecimal ASCII
How it links to what has been studied before:	In Term 1 of Year 10, students delved deeper into fundamental programming principles. They studied decomposition and abstraction, algorithms, and data types. This included a focus on flowcharts, pseudocode, and debugging tools, which helped them break down complex problems and develop structured solutions.
How it links to what will be studied:	This term strengthens and expands upon the foundational skills and knowledge acquired in KS3 and Term 1 of Year 10. By progressively introducing more complex concepts and techniques, students are better prepared for advanced programming tasks and deeper computational thinking, crucial for their continued development in computer science.
Key words:	String manipulation functions Relational operators Flowchart If statements (if, if else, if elif else) Repetition (condition-controlled loops) Boolean operators (AND, NOT, OR) Two's complement binary numbers Logical shifts (left and right) Hexadecimal ASCII
Key skills:	
Assessment focus	
Revision tips	https://www.bbc.co.uk/bitesize/guides/z6qqmsg/revision/1 https://www.bbc.co.uk/bitesize/guides/z433rwx/revision/1
Why we study it:	
Mastery in this subject	