

Curriculum Map - Computer Science Year - 10

	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Link to Prior Learning	Year 8 - Computational Thinking Year 9 Year - Computational Thinking Year 9 - Flowcharts & Binary	Year 7 - Scratch & Micro:bits Year 8 - Python Year 9 Year - Computational Thinking	Year 7 - Scratch & Micro:Bits Year 8 - Python Year 9 - programming	Year 7 - Computer Systems Year 8 - Computer Systems Year 9 - Inside a Computer System	Year 7 - Computer Systems Year 8 - Computer Systems Year 9 - Inside a Computer System Year 9 - programming 1 & 2	Year 7 - Computer Systems Year 8 - Computer Systems Year 9 - Inside a Computer System
CONTENT	2.4: Boolean logic 1.2.3: Units 2.4: Data Storage 1.1: Computational Thinking	2.1.1: Computational Thinking 2.4: Data storage 1.2.5 Compression 1.2: Designing, creating and refining algorithms	1.1: Architecture of the CPU 1.2: CPU Performance 2.2: Data types 2.1: Programming fundamentals	1.1.3 Embedded systems 1.2.1 Primary storage (Memory) 1.2.2 Secondary storage 2.2.1 Programming fundamentals 2.2.3 Additional programming techniques 1.4.1 Threats to computer systems and networks	1.2.2 Secondary storage 1.3.1 Networks and topologies 2.2.3 Additional programming techniques 1.4.1 Threats to computer systems and networks	1.3.1 Networks and topologies 1.3.2 Wired and wireless networks, protocols and layers
SKILLS	Students will learn about the basics of a computer - Binary, Boolean Logic and the fundamentals of computational thinking, in preparation for solving problems and for later programming.	Students will continue to build on their knowledge of Data Storage, also covering compression and how to design and create algorithms.	Students will be introduced to the architecture of the CPU and look at its performance. Additionally, they will continue to build on their programming skills.	Students will cover the use and need for embedded systems, along with primary and secondary storage. They will also continue to build on their programming skills.	Students will continue to cover secondary storage and look at the advantages and disadvantages of networks and their topologies. They will also continue to build on their programming skills.	Students continue to cover Networks, looking at the difference between wired and wireless networks, network protocols and network layers.

THEMES	<ul style="list-style-type: none"> ● Boolean logic ● Storage ● Calculations ● Computational approach ● Clarify significant information ● Develop Computing Language skills ● Problem solving 	<ul style="list-style-type: none"> ● Storage ● Compression ● Design ● Creating Algorithms ● Computational approach ● Clarify significant information ● Develop Computing Language skills ● Problem solving 	<ul style="list-style-type: none"> ● CPU ● Performance of CPU ● Contextualise content ● Computational approach ● Clarify significant information ● Develop Computing Language skills ● Problem solving ● Programming 	<ul style="list-style-type: none"> ● Systems ● Storage ● Memory ● Contextualise content ● Computational approach ● Clarify significant information ● Develop Computing Language skills ● Problem solving ● Programming 	<ul style="list-style-type: none"> ● Storage ● Networking ● Contextualise content ● Computational approach ● Clarify significant information ● Develop Computing Language skills ● Problem solving ● Programming 	<ul style="list-style-type: none"> ● Networks ● Data ● Wired Connections ● Wireless Connections ● Contextualise content ● Computational approach ● Clarify significant information ● Develop Computing Language skills