



# Curriculum Map

**Subject:** Computer Science

**Year group:** 9

	Autumn1	Autumn 2	Spring1	Spring2	Summer 1/ Summer 2
<p><b>Content</b></p> <p><i>Declarative Knowledge – ‘Know What’</i></p>	<p><b>Python Programming with PRIMM</b></p> <p><i>Algorithms Programming</i></p>	<p><b>Python Programming with PRIMM</b></p> <p><i>Algorithms Programming</i></p>	<p><b>Representations - from clay to silicon</b></p> <p><i>Data and Information Computer Systems</i></p>	<p><b>Networks</b></p> <p><i>Creating Media Computer Systems Design and development Data and Information Information Technology Effective use of technology</i></p>	<p><b>My Digital World</b></p> <p><i>Creating Media Design and Development Data and Information Information Technology Effective use of technology</i></p>
<p><b>Skills</b></p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<p>Write simple Python programs that display messages, assign values to variables, and receive keyboard input</p> <p>Locate and correct common syntax errors</p> <p>Describe the semantics of assignment statements</p> <p>Use simple arithmetic expressions in assignment statements to calculate values</p> <p>Receive input from the keyboard and convert it to a numerical value</p> <p>Use relational operators to form logical expressions</p>	<p>Write programs that display messages, receive keyboard input, and use simple arithmetic expressions in assignment statements</p> <p>Locate and correct common syntax errors</p> <p>Use selection (**if-elif-else* statements) to control the flow of program execution</p> <p>Perform common operations on lists or individual items</p> <p>Use iteration (while statements) to control the flow of program execution</p>	<p>List examples of representations</p> <p>Recall that representations are used to store, communicate, and process information</p> <p>Provide examples of how different representations are appropriate for different tasks</p> <p>Recall that characters can be represented as sequences of symbols and list examples of character coding schemes</p> <p>Measure the length of a representation as the number of symbols that it contains</p> <p>Provide examples of how symbols are carried on physical media</p>	<p>Define what a computer network is and explain how data is transmitted between computers across networks</p> <p>Define ‘protocol’ and provide examples of non-networking protocols</p> <p>List examples of the hardware necessary for connecting devices to networks</p> <p>Compare wired to wireless connections and list examples of specific technologies currently used to implement such connections</p> <p>Define ‘bandwidth’, using the appropriate units for measuring the rate at which data is transmitted, and discuss familiar examples where bandwidth is important</p> <p>Define what the internet is</p>	<p>I can justify the choice of and independently combine and I use multiple digital devices, internet services and application software to achieve given goals.</p> <p>I can identify and explain how the use of technology can impact on society.</p>





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	<p>I know that different algorithms exist for the same problem.</p> <p>I know that programming bridges the gap between algorithmic solutions and computers.</p>	<p>What is the purpose of testing code for robustness?</p> <p>Can I successfully create program code as a solution to a problem I have solved.</p>		<p>What services are available to us when using the WWW. How do these services all work together?</p>	
<b>Assessment</b>	<p>Online Baseline assessment at start of topic</p>	<p>Programming project assessment (Maze Game)</p> <p>Online Baseline assessment revisited</p>	<p>End of unit online test and practical assessment</p>	<p>Networks Infographic assessment Activity</p>	<p>Group Video Project on the effects of social media and mental health</p>
<b>Literacy/Numeracy/SMSC/Character</b>	<p>Creativity, Resilience, Initiative. Peer support. Algorithmic Thinking</p>		<p>Initiative, Aspiration. Resilience, Problem Solving</p>	<p>Understanding Networking and related terminologies.. Integrity. Initiative, Aspiration, Creativity. Integrity</p>	<p>Initiative. Moral and Ethical decision-making. Mental Health. Integrity. Understanding Legislation. Initiative, Aspiration, Creativity. Integrity.</p>