



# Curriculum Map

Subject: Computer Science

Year group: 7

	Autumn 1/Autumn 2	Autumn 2/Spring 1	Spring 2	Summer 1	Summer 2
<p><b>Content</b></p> <p><i>Declarative Knowledge – ‘Know What’</i></p>	<p><b>Introduction to Computer Science – Basic Computer Skills Development</b></p> <p>The objective of this short topic is to introduce the new students to the technical ways of working at Sandringham School. Students will create their own “skills guide” to perform common tasks that they will use throughout the year.</p> <p><i>Digital Literacy Skills</i></p> <p><b>Virtual Tour - Mobile Application</b>            Students will create their very own “mobile app” using Google Slides.  <i>Data and Data Representation</i>  <i>Information Technology</i></p>	<p><b>An Introduction To Programming Using the BBC Micro: Bit</b></p> <p>This topic aims to introduce students to the world of programming through using the BBC Micro:Bit. Students will learn through familiar block editing and also take a glimpse into text based coding with Micro Python.</p> <p><i>Programming &amp; Algorithms</i></p> <p><i>Hardware &amp; Processing</i></p>	<p><b>PC Basics</b></p> <p>The PC Basics scheme of work aims to give students a detailed look at what is “under the hood” of computers and machines.</p> <p><i>Hardware &amp; Processing</i></p> <p><i>Data and Data Representation</i></p>	<p><b>Developing Programming Skills Using Scratch With CS First</b></p> <p>Students will be introduced to block editing programming with Scratch 3.0</p> <p><i>Programming &amp; Algorithms</i></p> <p><i>Information Technology</i></p>	<p><b>Programming Skills Using Scratch...continued (advanced)</b></p> <p><i>Programming &amp; Algorithms</i></p> <p><i>Information Technology</i></p> <p><i>Hardware &amp; Processing</i></p>
<p><b>Skills</b></p> <p><i>Procedural Knowledge – ‘Know How’</i></p>	<p>I can collect, organise and present data and information in digital content.</p> <p>I can create digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience.</p>	<p>I know that computers collect data from various input devices, including sensors and application software.</p> <p>I can create programs that implement algorithms to achieve given goals.</p> <p>I can declare and assign variables.</p>	<p>I know that computers collect data from various input devices, including sensors and application software.</p> <p>I know the difference between hardware and application software, and their roles within a computer system.</p> <p>I know that digital computers use binary to represent all data.</p>	<p>I know the difference between, and appropriately I can use if and if, then and else statements.</p> <p>I can use a variable and relational operators within a loop to govern termination.</p> <p>I can use loops and a sequence of selection statements in programs, including an IF, THEN and ELSE statement.</p>	<p>I can design, write and debug modular programs using procedures.</p> <p>I can combine programming theory with the use of hardware</p>
<p><b>Key Questions</b></p>	<p>How can I create and reuse digital artefacts and multiple applications across a range of devices to present information suitable for my audience?</p>	<p>How instructions are stored and executed within a computer system?            How is binary used to store various data types?</p>	<p>How can I use computational thinking to solve problems?            How can I program the various components of a Micro:BIT?</p>	<p>How can I use sequence, selection and iteration to develop a program to solve a problem?</p>	<p>How can I develop modular programs that use procedures or functions?</p>



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					How can I combine Micro:BITS with SCRATCH?
<b>Assessment</b>	Online Baseline assessment  Teacher assessment of project	Micro:Bit programming test	PC Basics End of unit knowledge test	Midway peer assessment of student Scratch game End of unit assessment of Scratch game	
<b>Literacy/Numeracy/ SMSC/Character</b>	Writing and presenting information suitable for audience and purpose. Resilience, Initiative.	Combining hardware and software terminologies. Problem solving and algorithmic thinking. Confidence. Resilience. Initiative.	Binary numbers. Pair working. Resilience. Aspiration. Initiative.	Problem solving and algorithmic thinking. Peer support and experimentation. Confidence. Resilience. Initiative. Video Game responsibility	Combining hardware and software terminologies. Problem solving and algorithmic thinking Initiative, Aspiration, Confidence