

## Computing Curriculum Overview

Year Group	Autumn		Spring		Summer	
	Autumn 1 Computing systems and networks	Autumn 2 Creating media	Spring 1 Programming A	Spring 2 Data and information	Summer 1 Creating media	Summer 2 Programming B
<b>ONLINE SAFETY TOPICS</b>	<i>Self-Image and Identity Individual Liberty The Rule of Law</i>	<i>Online Relationships Online Reputation Individual Liberty The Rule of Law Democracy</i>	<i>Managing Information Online Individual Liberty The Rule of Law</i>	<i>Health, Well-being and Lifestyle Individual Liberty The Rule of Law</i>	<i>Privacy and Security Individual Liberty The Rule of Law</i>	<i>Copyright and Ownership Individual Liberty The Rule of Law</i>
R	<u>Devices in our world</u> <i>Children aware of technology/devices in their world and beginning to explore using them.</i> Tolerance	<u>Festival Art</u> <i>Using MiniMash to create a festival painting.</i> Tolerance Mutual Respect	<u>Bee-bots</u> <i>Children to explore moving toys.</i>	<u>Farm Animals Data</u> <i>Introduction to the use of a pictogram using Purple Mash.</i>	<u>Super Space</u> <i>Introduction to computational thinking and algorithms using Barefoot.</i>	<u>Story Time</u> <i>Using PurpleMash 2&gt;Create to create a simple story page.</i>
1	<u>Technology around us</u> <i>Recognising technology in school and using it responsibly.</i> The Rule of Law	<u>Digital painting</u> <i>Choosing appropriate tools in a program to create art and making comparisons with working non-digitally.</i>	<u>Moving a robot</u> <i>Writing short algorithms and programs for floor robots and predicting program outcomes.</i>	<u>Grouping data</u> <i>Exploring object labels, then using them to sort and group objects by properties.</i>	<u>Digital writing</u> <i>Using a computer to create and format text, before comparing to writing non-digitally.</i> Individual Liberty	<u>Programming animations</u> <i>Designing and programming the movement of a character on screen to tell stories.</i>
2	<u>Information technology around us</u> <i>Identifying IT and how its responsible use improves our world in school and beyond.</i> The Rule of Law	<u>Digital photography</u> <i>Capturing and changing digital photographs for different purposes</i> The Rule of Law Mutual Respect	<u>Robot algorithms</u> <i>Creating and debugging programs and using logical reasoning to make predictions.</i>	<u>Pictograms</u> <i>Collecting data in tally charts and using attributes to organise and present data on a computer.</i>	<u>Making music</u> <i>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</i>	<u>Programming quizzes</u> <i>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz</i>
3	<u>Connecting computers</u> <i>Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks</i>	<u>Stop-frame animation</u> <i>Capturing and editing digital still images to produce a stop-frame animation that tells a story</i>	<u>Sequencing sounds</u> <i>Creating sequences in a block-based programming language to make music</i>	<u>Branching databases</u> <i>Building and using branching databases to group objects using yes/no questions.</i>	<u>Desktop publishing</u> <i>Creating documents by modifying text, images, and page layouts for a specified purpose</i> Individual Liberty	<u>Events and actions in programs</u> <i>Writing algorithms and programs that use a range of events to trigger sequences of actions.</i>

4	<u>The internet</u> <i>Recognising the internet as a network of networks including the WWW, and why we should evaluate online content</i> Democracy	<u>Audio production</u> <i>Capturing and editing audio to produce a podcast, ensuring that copyright is considered.</i>	<u>Repetition in shapes</u> <i>Using a text-based programming language to explore count-controlled loops when drawing shapes</i>	<u>Data logging</u> <i>Recognising how and why data is collected over time, before using data loggers to carry out an investigation.</i>	<u>Photo editing</u> <i>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled</i> Individual Liberty	<u>Repetition in games</u> <i>Using a block-based programming language to explore count-controlled and infinite loops when creating a game.</i>
5	<u>Systems and searching</u> <i>Recognising IT systems around us and how they allow us to search the internet.</i> Democracy The Rule of Law	<u>Video production</u> <i>Planning, capturing, and editing video to produce a short film</i> Individual Liberty	<u>Selection in physical computing</u> <i>Exploring conditions and selection using a programmable microcontroller</i>	<u>Flat-file databases</u> <i>Using a database to order data and create charts to answer questions.</i>	<u>Vector drawing</u> <i>Creating images in a drawing program by using layers and groups of objects.</i>	<u>Selection in quizzes</u> <i>Exploring selection in programming to design and code an interactive quiz.</i>
6	<u>Communication and collaboration</u> <i>Identifying and exploring how data is transferred and information is shared online.</i> Democracy	<u>Webpage creation</u> <i>Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation</i> Individual Liberty	<u>Variables in games</u> <i>Exploring variables when designing and coding a game.</i>	<u>Introduction to spreadsheets</u> <i>Answering questions by using spreadsheets to organise and calculate data</i>	<u>3D modelling</u> <i>Planning, developing, and evaluating 3D computer models of physical objects.</i>	<u>Sensing</u> <i>Designing and coding a project that captures inputs from a physical device.</i>