



Curriculum Content for Computing

Aims and Vision: The computing curriculum allows the children to use a simple program to write code for a variety of purposes. It also teaches the importance to connect with others safely and respectfully. The children use a number of applications to communicate their ideas as well as collect, organize and manipulate data effectively.

	Topics/ Context	Skills	Knowledge (Key facts for recall)	Vocabulary to be learnt
Prior Learning		<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions.</p> <p>Write and test simple programs.</p> <p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Organise, store, manipulate and retrieve data in a range of digital formats.</p> <p>Communicate safely and respectfully online, keeping personal information private and recognise common uses of information technology beyond school.</p>		

	Topics/ Context	Skills	Knowledge (Key facts for recall)	Vocabulary to be learnt
Year 3	E- safety	<p>Agree sensible e-safety rules for the classroom.</p> <p>Choose a secure password for age-appropriate websites.</p> <p>Discuss what actions could be taken if they are uncomfortable or upset online e.g. Report Abuse button.</p> <p>Talk about what games they enjoying playing and what good choices are when playing games e.g. content, screen time.</p> <p>Use a class blog to share information and talk about who can see it, and how to communicate safely and respectfully</p> <p>Comment and provide positive feedback on the work of classmates in school or online, or the work of others online.</p>		<p>Cyber-bullying</p> <p>E-safety</p> <p>Blog</p>
	Coding	<p>Write an algorithm.</p> <p>Use specified screen coordinates to control movement.</p> <p>Set the appearance of objects and create sequences of change.</p> <p>Create and edit sound. Control when sounds are heard; volume, duration and rests.</p> <p>Specify conditions to trigger events.</p> <p>Test and debug.</p>	<p>What a sprite and stage area are.</p> <p>How to create a script in Scratch.</p> <p>Understand what a repeat loop does.</p>	<p>Algorithm</p> <p>Sequence</p> <p>Sound output</p> <p>Repetition</p> <p>Repeat x times</p> <p>Test</p> <p>Debug</p>
	Multimedia	<p>Explore & begin to evaluate the use of multimedia to enhance communication.</p> <p>Create & begin to edit presentation documents & text, experimenting with fonts, size, colour, alignment for emphasis & effect.</p> <p>Use a range of effects in art programs including brush sizes, repeats, reflections</p> <p>Explore the use of video, animation & green screening.</p> <p>Use ICT tools to create musical phrases.</p> <p>Amend text & save changes.</p> <p>Use individual fingers to input text & use SHIFT key to type characters.</p> <p>Look at own work & consider how it can be improved for effectiveness.</p>	<p>Amend text by highlighting & using SELECT/ DELETE & COPY/ PASTE.</p>	

	Technology in our Lives	Save work on the school network, on the Internet and on individual devices Use appropriate tools to collaborate on-line. Use appropriate tools to communicate on-line. Use simple search tools and find appropriate websites. Talk about the owner of information online.	Talk about the parts of a computer.	
	Data Handling	Find out information from a pre-prepared database, asking straightforward questions. Contribute towards a database. Construct and use a branching database. Record data in a variety of ways. Present data for others. Use a data logger to monitor changes and talk about the outcomes seen.		

	Topics/ Context	Skills	Knowledge (Key facts for recall)	Vocabulary to be learnt
Year 4	E- safety	Agree sensible e-safety rules for the classroom. Choose a secure password for age-appropriate websites. Talk about what games they enjoying playing and what good choices are when playing games e.g. content, screen time. Use a class blog to share information and talk about who can see it, and how to communicate safely and respectfully Comment and provide positive feedback on the work of classmates in school or online, or the work of others online.	Know what actions could be taken if they are uncomfortable or upset online e.g. Report Abuse button.	
	Coding	Control the shade of pens. Use IF THEN conditions to control events or objects. Create conditions for actions by sensing proximity or by waiting for user input. Use variables to store a value. Use reporter operators to perform calculations.	Understand what a repeat loop does. Understand how to use an 'if then' block Know what a variable is within Scratch.	Forever loop Programming Input Output Solution Develop
	Multimedia	Explore how multimedia can create atmosphere & appeal to different audiences Be confident in creating & modifying text & presentation documents to achieve a specific purpose. Use art programs & online tools to modify photos for a specific purpose using a range of effects. Explore the use of video, animation, & green screening for a specific audience. Use ICT tools to create music phrases for a specific purpose Use a keyboard effectively, including the use of keyboard shortcuts. Use font sizes & effects such as bullet points appropriately. Look at their own, and a friend's work & provide feedback that is constructive & specific.	Know how to use a spell check.	
	Technology in our Lives	Frame questions & identify key words to search for information on the Internet. Consider reliability of information & ways it may influence you. Check who the owner is before copying photos, clipart or text.	Talk about the school network & the different resources they can access, including the Internet.	
	Data Handling	Plan and create a database to answer questions. Identify different types of data. Ask questions carrying out simple searches on a database. Identify inaccurate data. Present data in appropriate format for an audience. Use a data logger to record and compare individual readings.	Identify different types of data.	

	Topics/ Context	Skills	Knowledge (Key facts for recall)	Vocabulary to be learnt
Year 5	E- safety	Agree sensible e-safety rules for the classroom. Explore using the safe and responsible use of online communication tools e.g. blogs, messaging.	Discuss their own personal use of the Internet and choices they make Discuss how to protect devices from virus threats. Discuss the importance of keeping an adult informed about what you're doing online, and how to report concerns.	
	Coding	Set IF conditions for movement. Specify types of rotation giving the number of degrees. Upload sounds from a file and edit them. Set events to control other events by 'broadcasting' information as a trigger. Use IF THEN ELSE conditions to control events or objects.	Understand how to decompose a game/program/app. Understand how to use an 'if then else' block. Understand how to use a variable.	Forever loop Nested loop Decompose Selection Variable
	Multimedia	Select an appropriate ICT or online tool to create and share ideas. Explore the effects of multimedia (photos, video, sound) in a presentation or video and show how they can be modified. Develop skills using transitions and hyperlinks to enhance the structure of presentations. Use a wide range of effects in art programs and online tools, discussing the choices made and their effectiveness. Use online tools to create and share presentations and films.	Know how to use text and video editing tools in programs to refine their work.	
	Technology in our Lives	Choose appropriate tools for communication and collaboration and use them responsibly. Use effective strategies to search with appropriate search engines. Find out who the information presented on a webpage belongs to.	Identify different parts of computing devices. Identify different parts of the Internet. Talk about the different elements on web pages.	
	Data Handling	Collect and record information using spreadsheets and databases Carry out complex searches (e.g. using and/or; \leq / \geq) Solve problems and present answers using data tools. Analyse information and question data. Identify poor quality data. Select appropriate use of a data logger for an investigation and interpret the findings.		

	Topics/ Context	Skills	Knowledge (Key facts for recall)	Vocabulary to be learnt
Year 6	E- safety	Agree sensible e-safety rules for the classroom. Explore using the safe and responsible use of online communication tools e.g. blogs, messaging.	Discuss their own personal use of the Internet and choices they make Discuss how to protect devices from virus threats. Discuss the importance of keeping an adult informed about what you're doing online, and how to report concerns.	
	Coding	Change the position of objects between screen layers. Combine the use of pens with movement to create interesting effects. Use a range of sensing tools to control events and actions. Use lists to create a set of variables. Use Boolean operators to define conditions and Reporter operators to perform calculations.	Know what a list is within Scratch. Understand how a list can be used. Understand what broadcasting is and how to use it.	List Procedure Generalisation
	Multimedia	Identify the purpose for selecting an appropriate online tool. Discuss audience, atmosphere and structure of a presentation or video. Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience. Use sound, images, text, transitions, hyperlinks and HTML code effectively in presentations. Store presentations and videos online where they can be accessed by themselves and shared with others.		

		Evaluate the effectiveness of their own work and the work of others.		
	Technology in our Lives	<p>Connect a computing device to a keyboard, mouse or printer.</p> <p>Identify appropriate forms of online communication for different audiences.</p> <p>Use search engines as part of an effective research strategy.</p> <p>Describe how search results are selected & ranked.</p> <p>Acknowledge who resources belong to that they have found on the internet.</p>	<p>Describe different services provided by the Internet & how information moves around the Internet.</p> <p>Describe different parts of a computing device & how it connects to the Internet.</p>	
	Data Handling	<p>Use the whole data process – generate, process, interpret, store, and present information – realising the need for accuracy and checking plausibility.</p> <p>Select appropriate data tool.</p> <p>Identify and present results.</p> <p>Interrogate a database, refining searches to provide answers to questions.</p> <p>Plan investigations using the outcomes from a data logger to show findings</p>		