



St Michael's CE Aided School

Computing Curriculum Map

Progression of Knowledge and Skills

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Personal, Social and Emotional Development</p> <p>Know and talk about the different factors that support their overall health and wellbeing:- sensible amounts of 'screen time'. Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly.</p> <p>Physical Development</p> <p>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>Expressive Arts and Design</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills Unlock an iPad using a passcode.</p> <p>Locate and open different apps.</p> <p>Use the camera to take videos and photographs.</p> <p>Use knowledge of phonics and spelling rules to search for information on the internet (at a Phonics Phase appropriate level).</p> <p>Computational Thinking, Coding & Programming Know that the order of instructions in an algorithm is important.</p> <p>Create a simple program</p> <p>Debug simple programs</p> <p>Know what an algorithm is Know that programs follow a set of clear, precise instructions.</p> <p>Know that when a computer does something it is following a code.</p> <p>Creative Computing & Data Sequence a series of pictures to explain my understanding of a topic.</p> <p>Add labels to an image</p> <p>Create an animation to tell a story with more than one scene.</p> <p>Record a film using the camera app.</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills As Year 1, then:</p> <p>Know how to find and print photos.</p> <p>Use a variety of different apps such as the Bee-Bots app, ScratchJr, PoppletLite, Clicker.</p> <p>With supervision, use Safari to access the internet purposefully and safely. Link several words together to refine search queries.</p> <p>Computational Thinking, Coding & Programming Write algorithms for everyday tasks.</p> <p>Understand that programs execute by following a series of precise instructions.</p> <p>Create programs on digital devices.</p> <p>Use logical reasoning to predict the outcome of a program.</p> <p>Debug my own programs.</p> <p>Know that decomposition is breaking a problem or process down.</p> <p>Know that programs execute by following precise and unambiguous instructions.</p> <p>Know that different sequences of commands can achieve the same outcome.</p> <p>Creative Computing & Data Copy and paste images and text</p> <p>Combine images, media and text to create an eBook</p> <p>Add speech bubbles to an image</p> <p>Import images to a project from the web and camera roll</p> <p>Begin to use green screen techniques with support</p> <p>Create a simple stop motion animation.</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills Log on to a computer from memory.</p> <p>Create, save and at a later date, open a file.</p> <p>To begin to type fluently.</p> <p>Access and use the internet for the purposes of learning across the curriculum, doing so safely and responsibly.</p> <p>Computational Thinking, Coding & Programming Create simple programs</p> <p>Decompose a task into separate steps.</p> <p>Write a program to accomplish a specific task</p> <p>Use various forms of input.</p> <p>Know that a range of events can be used to launch sequences of code.</p> <p>Know that programs execute by following sequences of precise and unambiguous instructions.</p> <p>Know that a program may consist of multiple sequences of instructions.</p> <p>Creative Computing & Data Create an interactive eBook with sounds, formatted text and video.</p> <p>Use animation tools in presenting software to create simple animations.</p> <p>Create animations of faces to speak in role with more life-like realistic outcomes.</p> <p>Independently create a green screen clip.</p> <p>Trim and cut film clips and add titles and transitions</p> <p>Create and edit purposeful compositions using music software to create mood or a certain style</p> <p>Understanding Networks Recognise a range of technology Know that computers in a school are connected together in a network</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills As Year 3, then: Use technology as an alternative means to record writing (e.g. Publisher, Word, Powerpoint).</p> <p>Write in accordance with the English curriculum, including the use of the full range of punctuation required in LKS2 (Full stops, capital letters, commas, question marks, exclamation marks, speech marks).</p> <p>Access other programs (e.g. MS Paint, iMovie, Corkulous) to present learning across the curriculum in a variety of ways where appropriate.</p> <p>Computational Thinking, Coding & Programming Write increasingly more precise algorithms when programming.</p> <p>Use logical reasoning to systematically detect and correct errors in programs.</p> <p>Use loops and repetition.</p> <p>Use simple selection in algorithms</p> <p>Work with various forms of input and output.</p> <p>Know that programs can repeat sequences of instructions a specific number of times or until a criteria is met.</p> <p>Know that I can choose whether to use a count controlled or infinite loop.</p> <p>Creative Computing & Data Combine digital images from different sources, objects, and text to make a final piece for a variety of tasks: posters, documents, eBooks, scripts, leaflets.</p> <p>Collaborate with peers using online tools, e.g., Office 365</p> <p>Know a data attribute is a feature or property of something. Know a data value is the value collected for a data attribute</p> <p>Select and use data attributes and values to work out the answer to questions.</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills Log on to a computer from memory.</p> <p>Create, save and at a later date, open a file.</p> <p>To type with speed and accuracy.</p> <p>Use technology as an alternative means to record writing (e.g. Publisher, Word, Powerpoint, Excel).</p> <p>Use the internet as is required for the purposes of learning across the curriculum.</p> <p>Computational Thinking, Coding & Programming Solve problems by decomposing them into smaller parts.</p> <p>Use selection in algorithms</p> <p>Use conditions in repeat commands and loops.</p> <p>Work with variables.</p> <p>Create programs that interact or control physical systems.</p> <p>Use logical reasoning to detect and correct errors in algorithms.</p> <p>Decompose code into sections for effective debugging.</p> <p>Evaluate my work and identify errors.</p> <p>Know the difference between 'IF' and 'IF ELSE THEN' statements and how I can use them in my own code.</p> <p>Know that a variable is a value stored by a computer which can be used to make decisions in code.</p> <p>Know that I can use mathematical operations in code to make decisions.</p> <p>Creative Computing & Data Create and export an interactive presentation including a variety of media, animations, transitions, and other effects. Apply other elements to digital publications such as hyperlinks.</p>	<p>Use Project Evolve to learn about online safety and digital citizenship. See Online Safety Overview.</p> <p>Basic Skills As Year 5, then: Write in accordance with the English curriculum, including the use of the full range of punctuation required in UKS2 (Full stops, capital letters, commas, question marks, exclamation marks, speech marks, semicolon, colon, hyphen, brackets).</p> <p>Organise writing as appropriate to the style of writing (e.g. the correct format for a play script).</p> <p>Competently Access other programs (e.g. MS Paint, iMovie, Corkulous) to present learning across the curriculum in a variety of ways where appropriate.</p> <p>Computational Thinking, Coding & Programming Use a range of sequence, selection and repetition commands combined with variables in my design.</p> <p>Identify the variables I need and how they will be used in selection and repetition.</p> <p>Create procedures to make complex programs more efficient.</p> <p>Write precise algorithms to achieve a task.</p> <p>Identify and make use of generic code across multiple projects.</p> <p>Decompose code into sections for effective debugging.</p> <p>Critically evaluate my work and identify errors.</p> <p>Know that a variable has a name and a value and that the name should reflect its role. Know that that the way a variable changes can be defined by code.</p> <p>Know that efficient coders reuse sections of code. I know that choices made as code runs can determine which segments of code are used.</p> <p>Creative Computing & Data Confidently choose the best application to demonstrate my learning.</p>



St Michael's CE Aided School Computing Curriculum Map Progression of Knowledge and Skills

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			<p>Know why computers are networked</p>	<p>Identify which data attributes are required to answer a question.</p> <p>Understanding Networks Begin to use appropriate tools to collaborate across the internet.</p> <p>Know that servers on the Internet are located across the planet</p> <p>Know how web content is sent across the internet.</p> <p>Know the difference between the Internet and the World Wide Web (WWW)</p>	<p>Organise and reorganise text, graphics, and other elements on screen to suit a purpose.</p> <p>Create a webpage and embed video.</p> <p>Record animations of different characters and edit them together to create an interview.</p> <p>Further improve green screen clips using crop and resize and explore more creative ways to use the tool - wearing green clothes and the masking tool.</p> <p>Add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast.</p> <p>Input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts.</p> <p>Create and publish my own online questionnaire and analyse the results.</p> <p>Understanding Networks Use search technologies effectively</p> <p>Know how we view web pages on the Internet</p> <p>Know that web spiders index the web for search engines</p> <p>Know how pages are ranked in a search engine</p>	<p>Choose applications to communicate to a specific audience.</p> <p>Format my documents and publications to suit a purpose.</p> <p>Evaluate my own content and consider ways to improve it.</p> <p>Create a web site which includes a variety of media.</p> <p>Write spreadsheet formula to solve more challenging maths problems.</p> <p>Collect and enter data values into a spreadsheet, and predict what a change to a spreadsheet will do</p> <p>Understanding Networks Create a web page.</p> <p>Know the function of the main internal parts of basic computer architecture</p> <p>Know there are a range of operating systems.</p> <p>Know the difference between hardware and software.</p>