



**Progression Map**  
**Subject area: Computing and ICT Curriculum**

	<b>Year 1</b>	<b>Year 2</b>
<b>Programming</b>	<ul style="list-style-type: none"> <li>• Can explain what an algorithm is</li> <li>• Know that everyday devices respond to commands</li> <li>• Begin to use software/apps to create movement and give commands including straight forwards/backwards/turn one at a time</li> <li>• Explore what happens when a sequence of instructions is given</li> <li>• Use the word 'debug' when correcting mistakes in a program</li> <li>• Change/improve their sequence of command</li> </ul>	<ul style="list-style-type: none"> <li>• Can read and follow written algorithms</li> <li>• Know that there may be more than one algorithm to do the same task</li> <li>• Be able to express and follow a simple sequence of precise and unambiguous instructions (for example, using forwards, backwards and turn)</li> <li>• Plan, write, test and debug simple programs</li> <li>• Use logical reasoning to predict behaviour /outcomes of simple programs</li> <li>• Can describe ways computers and other devices are used outside school.</li> </ul>
<b>Data</b>	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> <li>• Talk about different ways in which information can be shown</li> <li>• Explain that images give information</li> <li>• Say what a pictogram is showing them</li> </ul> <p>Using and applying:</p> <ul style="list-style-type: none"> <li>• Put information (data) into a program (pictogram)</li> <li>• Sort objects and pictures in lists or simple tables</li> </ul> <p>With support, save and retrieve their work</p>	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> <li>• Talk about how different ways technology is used to collect to collect and show information</li> <li>• Explain how a tree-branching diagram works</li> </ul> <p>Using and applying:</p> <ul style="list-style-type: none"> <li>• Put objects and pictures in a list or a simple table.</li> <li>• Make a simple Yes / No tree diagram to sort data I have collected</li> <li>• Discuss graphs created and answer simple questions about them</li> </ul> <p>Save, retrieve and edit their work</p>
<b>Communication</b>	<ul style="list-style-type: none"> <li>• Use the keyboard or a word bank to put text in a screen</li> <li>• Use upper and lower case</li> <li>• Use basic punctuation (full stop, comma)</li> <li>• Use the space bar</li> <li>• Use the Return key</li> <li>• Use the Shift key to make a capital letter</li> <li>• Use word lists to enter text</li> <li>• Start to use two hands when typing</li> </ul>	<ul style="list-style-type: none"> <li>• Further develop their automaticity when using varying keys on the keyboard and continue to use two hands when typing</li> <li>• Word process short texts</li> <li>• Change the font style, size and colour</li> <li>• Use the cursor (arrow) keys for simple on screen editing</li> <li>• With support, import graphics and add text</li> <li>• With support, write and send a short email (for example, to Santa)</li> <li>• Save and be able to retrieve and print work later independently</li> </ul>
<b>Digital Literacy &amp; Research</b>	<ul style="list-style-type: none"> <li>• Recognise the ways we use technology in school</li> <li>• Recognise ways that technology is used outside the school</li> <li>• Talk about websites they have been on</li> <li>• Understand the importance of communicating safely and respectfully online and the need for keeping personal information private</li> </ul>	<ul style="list-style-type: none"> <li>• Be able to explain why we use technology in school and outside the school</li> <li>• Explore websites by clicking on back/forward arrows, menus and hyperlinks</li> <li>• Develop their awareness of internet safety rules</li> <li>• Use a search engine to find specific relevant information on a given topic</li> <li>• Understand why it is important to be kind, respectful and polite online and in real life</li> </ul>

	<ul style="list-style-type: none"> <li>• Begin to be aware of Internet safety rules</li> <li>• Look at websites to research areas of the curriculum together in the IWB</li> <li>• Identify different devices (game consoles) that can go online and separate those that do not</li> <li>• Know who to tell if something concerns them online</li> </ul>	<ul style="list-style-type: none"> <li>• Identify obvious false information in a variety of contexts</li> <li>• Identify devices that can be used to search the internet (phone, tablet, digital television etc)</li> <li>• Make decisions about whether or not statements found on the internet are true or not</li> <li>• Identify personal information that should be kept quiet (password) or shouldn't be online</li> <li>• Recognise that a variety of devices can be used to connect a number of people</li> <li>• Know a range of ways to report unacceptable content and contact when online</li> </ul>
<b>Multimedia</b>	<ul style="list-style-type: none"> <li>• Be creative with different technology tools (images, photographs, audio, etc)</li> <li>• Use technology to create and present my ideas</li> <li>• Use a range of simple tools in a paint package to create/modify a picture</li> <li>• Use a digital camera or device (tablet) to take pictures</li> <li>• With support, add captions, speech or sound to digital pictures or video</li> <li>• With support, save and retrieve their work</li> </ul>	<ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• With support, generate their own work combining text, graphics and sound.</li> <li>• With support, use a storyboard to do simple editing of a sequence of digital pictures or videos eg change sequence, add transitions</li> <li>• Start to be more discerning when taking video-framing image and zooming in (moving closer) before filming as appropriate</li> <li>• Save, retrieve and edit their work</li> </ul>



**Progression Map**  
**Subject area: Computing and ICT Curriculum**

	Year 3	Year 4
<b>Programming</b>	<ul style="list-style-type: none"> <li>Spot errors in algorithms</li> <li>Adapt a given program by changing instructions e.g adapting code to draw different shapes or to make characters move in a different way.</li> <li><b>Use logical reasoning to explain how a simple algorithm works</b></li> </ul>	<ul style="list-style-type: none"> <li>Investigate existing programs evaluating them and consider how they can be improved</li> <li><b>Design and write programs that accomplish specific goals</b>, working with variables for input and output</li> <li>Create an animation that repeats continuously</li> <li><b>Use logical reasoning to detect problems in algorithms, make changes</b> and find out what happens as a result</li> </ul>
<b>Data</b>	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> <li>Identify how to <b>select information</b> to put into a data table</li> <li>Recognise which information is suitable for their topic.</li> </ul> <p>Using and applying</p> <ul style="list-style-type: none"> <li>Design a questionnaire to <b>collect information</b> from peers.</li> <li>Pupils to copy and paste bar graphs into Word to then interpret what the graph shows e.g write questions about the graph for others to answer.</li> </ul>	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> <li>Describe how to <b>sort and organise information to use in a database</b></li> <li>Understand what information you can get from the graphs by answering and asking questions linked to the different graphs</li> </ul> <p>Using and applying</p> <ul style="list-style-type: none"> <li>Create a branching database from information which they have collected and sorted</li> <li>Explore existing spreadsheets to see how it is set up and how existing numbers have been changed.</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>Word processing - reorder (cut, copy, paste), spell check, add graphics</li> <li>Create presentations incorporating texts and images.</li> <li>Start to add effects and consider audience and appropriateness of different effects</li> <li><b>Discuss the etiquette</b> of E- mail e.g polite and respectful when writing to someone you can't see.</li> </ul>	<ul style="list-style-type: none"> <li>Using Word processor and applying different layouts, effects and justification (e.g. newspaper) to improve work</li> <li>Produce work for classroom blogs using a variety of programs e.g. contribute to class blog</li> <li>Create and add slide transitions into presentations. Add background colour and animation effects.</li> <li><b>Know how to stay safe while communicating with others online</b> (linked to e-safety) Discuss <b>rules for "netiquette"</b> - how to behave online and <b>what to do if someone is unkind to them.</b></li> </ul>

<b>Digital Literacy &amp; Research</b>	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> <li>• <b>Use search technologies effectively</b> - Identify ways to keep safe for example using Kidrex as a search engine instead of Google.</li> <li>• Think before sending and suggest consequences of sending / posting personal information.</li> <li>• Explain why passwords must be kept safe and secure</li> </ul> <p>Responsibilities</p> <ul style="list-style-type: none"> <li>• Show respect for individuals and intellectual property</li> </ul>	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> <li>• <b>Be discerning in evaluating digital content</b> (Identify factual information and know websites may not always be accurate. Children check information using different sites e.g Wikipedia can be edited and is not always accurate).</li> <li>• Recognise social networking sites and social networking features, built into other things, such as online games and handheld consoles.</li> <li>• Know what plagiarism is and when and <b>how you can use the work of others respectfully and responsibly.</b></li> <li>• <b>Make judgements</b> in order to stay safe whilst communicating with others <b>online.</b></li> <li>• Explain how to keep personal information private.</li> </ul> <p>Responsibilities (<b>use technology safely</b>)</p> <ul style="list-style-type: none"> <li>• Know who to tell if anything worries them online.</li> <li>• Identify potential risks when presented with scenarios, including social networking profiles.</li> <li>• <b>Use ICT responsibly, securely and safely.</b></li> </ul>
<b>Multimedia</b>	<ul style="list-style-type: none"> <li>• Know how to print screen, selecting area of image and paste images into other software.</li> <li>• Use a camera on any device to take a photo.</li> <li>• Download and edit photography - crop, snip, rotate and adjust colours.</li> <li>• Perform simple editing on an image</li> </ul>	<ul style="list-style-type: none"> <li>• Images- group and copy, order</li> <li>• Download and edit videos from a camera, tablet, phone</li> <li>• Edit an animation to improve and make more realistic e.g. add sounds and effects</li> <li>• Add titles, photos, audio into animation</li> <li>• Add audio into PowerPoint</li> </ul>



**Progression Map**

**Subject area: Computing**

	<b>Year 5</b>	<b>Year 6</b>
<b>Programming</b>	<ul style="list-style-type: none"> <li>With support, begin to produce algorithms by using logical and appropriate structures to organise data and create precise and accurate sequences of instructions.</li> <li>Use flowcharts, or other logical reasoning and other diagrams, to follow how a process or model works.</li> <li>Use logical reasoning to solve problems and model situations and processes.</li> <li>Predict what will happen when variables and rules within a model are changed.</li> </ul>	<ul style="list-style-type: none"> <li>Independently problem solve to produce algorithms by using logical and appropriate structures to organise and record data and create precise and accurate sequences of instructions.</li> <li>Create flowcharts, or other logical reasoning and other diagrams to follow how a process or model works.</li> <li>Independently problem solve and model situations and processes, by understanding and explaining the impact of changing variables and rules within a model.</li> <li>Solve problems by breaking down components into smaller parts and correcting error in algorithms and programs.</li> <li>Use repetition in programs involving looping with condition (repeat until) multiple selection (if, then, else) and variables.</li> </ul>
<b>Data</b>	<p>Knowledge-</p> <ul style="list-style-type: none"> <li>Describe how to check for and spot inaccurate data. Know which formulas to use to change a spreadsheet model.</li> </ul> <p>Using and applying-</p> <ul style="list-style-type: none"> <li>Create a branching database from information which they have collected and sorted.</li> <li>Review existing databases and how they are structured e.g. iTunes, imdb.com and estate agents.</li> <li>Create data collection forms and enter data from these accurately.</li> </ul>	<p>Knowledge-</p> <ul style="list-style-type: none"> <li>Explain that changing the numerical data effects calculation.</li> </ul> <p>Using and applying-</p> <ul style="list-style-type: none"> <li>Edit and change formula when changing a spreadsheet model.</li> <li>Be able to copy an entire sheet so it can be edited leaving the original document as it was.</li> <li>Use brackets to organise formula e.g. calculating the area and perimeter on Excel.</li> <li>Create graphs from calculations from spreadsheets.</li> <li>Sort and filter information.</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>Create a number of documents using a range of programs.</li> <li>Be able to become more discerning in the layout of fonts in their documents using different sizes and fonts in their work.</li> <li>Be able to show awareness of the audience when creating their documents.</li> </ul>	<ul style="list-style-type: none"> <li>Be able to create documents for a variety of purposes for example, reports, leaflets, fiction text and play scripts.</li> <li>Using their evaluations, be able to edit and amend own documents as needed.</li> <li>Ensure there is consistency across the document/ not using too many fonts and colours etc and consider the audiences.</li> </ul>
<b>Digital Literacy</b>	<ul style="list-style-type: none"> <li>Recognise the need for accuracy when searching for and selecting information.</li> <li>Use different sources to double check information found.</li> <li>Know how to reference text found on the internet e.g. with URL and direct them to copyright free image galleries.</li> </ul>	<ul style="list-style-type: none"> <li>Take account of accuracy and potential bias when searching for and selecting information</li> <li>Evaluate and improve presentations in the light of discussion, marking an audience response.</li> <li>Understand how search engines work and appreciate that the more accurate the search term, the more relevant the results.</li> </ul>

<b>Media</b>	<ul style="list-style-type: none"><li>• Improve photos with editing tools e.g. blur, filters and add border</li><li>• Edit a video and trimming reordering clips.</li><li>• Create audio recording and add to other software.</li></ul>	<ul style="list-style-type: none"><li>• Plan and create an animation for given purpose.</li><li>• Use a story board to plan animation and decide how it will be created.</li><li>• Edit an animation and improve it/ make it more realistic.</li><li>• Select and use appropriate multimedia tools and combine these for a given purpose with confidence.</li></ul>
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