

Skill Progression in Computing at Key Stage 1			
National Curriculum	<ul style="list-style-type: none"> <li>✓ Understand what algorithms are; how to and unambiguous instructions</li> <li>✓ Create and debug simple programs</li> <li>✓ Use logical reasoning to predict the behaviour of simple programs</li> <li>✓ Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>✓ Recognise common uses of information technology beyond school</li> <li>✓ Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>		
Year 1	Digital Literacy	Computer Science	Information technology
	<p>I can understand that I need to keep safe when using digital technology.</p> <p>I am aware that information on the internet is available to other people.</p> <p>I can mention some of the ways in which IT is used to communicate beyond school.</p> <p><b>E-Safety</b></p> <p>I know to close the laptop lid or turn the tablet over if I find content, such as inappropriate images, which might disturb me or other children.</p> <p>I know to tell their teacher or their parents if this happens.</p>	<p>I can make programmable toy move by inputting a sequence of instructions.</p> <p>I can develop and record sequences of instructions as an algorithm.</p> <p>I can program a sprite to follow an algorithm.</p> <p>I can debug my programs.</p> <p>I can predict how a program will work.</p> <p>I can break down a process into simple, clear steps, as in an algorithm.</p>	<p>I can log on to a computer</p> <p>I can use a mouse correctly.</p> <p>I can use a keyboard correctly.</p> <p>I can explain how objects have been grouped</p> <p>I can say that labels are used to identify a group with similar characteristics</p> <p>I can count how many objects are in group and identify which has more</p> <p>I can group objects to answer a question</p>

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	Year 2	<table><tr><th>Digital Literacy</th><th>Computer Science</th><th>Information technology</th></tr><tr><td>I can edit and format text in emails. I can create and deliver a short multimedia presentation. <b>E-Safety</b> I am aware of how to use games safely and in balance with other activities. I am aware of online safety issues when using email  I can use appropriate language in emails. I can search for information safely.</td><td>I can understand algorithms as sequences of instructions in everyday contexts.  I can program a Sprite using sequences of instructions to implement an algorithm. I can create a simple program on screen to control a Sprite using a sequence of instructions to move it from one place to another.  will do and explain why it does what it does. I can give logical explanations of what a program</td><td>I can store, organise and retrieve content on digital devices for a given purpose.  I can understand that a computer can generate different sounds I can understand that a computer can be used to make a sequence of notes I can use the computer to generate different sounds represented by images  I can collect data using tick charts or tally charts.  I can use simple charting software to produce pictograms and other basic charts.</td></tr></table>	Digital Literacy	Computer Science	Information technology	I can edit and format text in emails. I can create and deliver a short multimedia presentation. <b>E-Safety</b> I am aware of how to use games safely and in balance with other activities. I am aware of online safety issues when using email  I can use appropriate language in emails. I can search for information safely.	I can understand algorithms as sequences of instructions in everyday contexts.  I can program a Sprite using sequences of instructions to implement an algorithm. I can create a simple program on screen to control a Sprite using a sequence of instructions to move it from one place to another.  will do and explain why it does what it does. I can give logical explanations of what a program
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Skill Progression in Computing at Key Stage 2			
National Curriculum	<ul style="list-style-type: none"> <li>design, write and debug programs that decomposing them into smaller parts</li> <li>use sequence, selection, and repetition</li> <li>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</li> <li>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</li> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</li> </ul>		
Year 3	Digital Literacy	Computer Science	Information technology
	<p>I can use search engines to learn about a new topic.</p> <p>I can plan, design and deliver an interesting and engaging publishing.</p> <p>I can create my own original images.</p> <p><b>E-Safety</b></p> <p>I have a developing understanding of how the internet, web and search engines work.</p> <p>I have a developing understanding of how email works.</p> <p>I am gaining skills in using emails.</p>	<p>I can create an algorithm for an animated scene in the form of a storyboard.</p> <p>I can write a program in Scratch to create the animation.</p> <p>I can correct mistakes in animation programs.</p> <p>I can develop a number of strategies for finding errors in programs.</p> <p>I have an increasing knowledge of Scratch.</p> <p>I can recognise a number of common types of bugs in software.</p>	<p>I am gaining skills in shooting stop motion video, holding the camera steady and reviewing.</p> <p>I can edit videos, add narration and set in/out points.</p> <p>I can search for and evaluate online images</p> <p>I can investigate questions with yes/no answers</p> <p>I can make up a yes/no question about a collection of objects</p> <p>I can create two groups of objects separated by one attribute</p> <p>I can select an attribute to separate objects into groups</p> <p>I can create a group of objects within an existing group</p> <p>I can arrange objects into a tree structure</p>

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Year 4	Digital Literacy	Computer Science	Information technology
	<p>I can outline how the images will be used together</p> <p>I can suggest colours and effects that might suit their scene</p> <p>I can select images and combine them into one</p> <p>I can use a range of tools to create their image</p> <p><b>E-Safety</b></p> <p>I understand some of the risks in using the web.</p> <p>I am becoming familiar with information sites such as Wikipedia.</p> <p>I can explain why some information I find online may not be honest, accurate, or legal</p>	<p>I can develop an educational game using selection and repetition.</p> <p>I understand and can use variables.</p> <p>I am beginning to debug computer programs.</p> <p>I can design and make an on-screen prototype of a computer-controlled toy.</p> <p>I understand different forms of input and output.</p> <p>I can design, write and debug the control and monitoring program for my toy.</p> <p>I can use hyperlinks to connect ideas and sources.</p> <p>I can code up a simple web page with useful content, including using HTML tags.</p>	<p>I can use computer-based data logging to automate the recording of some weather data.</p> <p>I can analyse data, explore inconsistencies and make predictions.</p> <p>I can use one or more programs to edit music</p> <p>I can create and develop a musical composition, refining ideas through reflection and discussion.</p> <p>I can research for a purpose.</p>

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	<p>Digital Literacy</p> <p>I can create a database using cards I can navigate a flat-file database to compare different views of information I can group information using a database I can outline how 'AND' and 'OR' can be used to refine data selection</p> <p><b>E-Safety</b> I understand the need for private information to be encrypted. I can encrypt and decrypt messages in simple ciphers I appreciate the need to use complex passwords and to keep them secure. I decide what information is appropriate when researching I understand how search engines select and rank results.</p>	<p>Computer Science</p> <p>I can create original artwork and sound for a game. I can design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. I can detect and correct errors in my computer game. I can use iterative development techniques to improve my game. I am familiar with semaphore and morse code.</p>	<p>Information technology</p> <p>I am developing my research skills to decide which information is appropriate. I understand some elements of how search engines select and rank results. I am developing a familiarity of a simple CAD (computer aided design) tool. I understand the work of architects and engineers working in 3D. I can explore and experiment with 3D virtual environments, developing my spatial awareness.</p>
Year 5			

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Year 6	<p>I can manage or contribute to large collaborative projects, facilitate using online tools.</p> <p>I can design and produce a high-quality print document.</p> <p>I can think critically about how video is used to promote a cause</p> <p>I can storyboard an effective advert for a cause.</p> <p><b>E-Safety</b></p> <p>I can research a location online using a range of resources appropriately.</p> <p>I can to argue their point effectively, supporting my views with sources. I can source digital media while demonstrating safe, respectful and responsible use.</p> <p>I can counter someone else's argument while showing respect and tolerance</p> <p>I can consider some ethical principles in designing AI systems.</p>	<p>I can control or simulate physical systems. I can thoroughly debug the program.</p> <p>I am developing the ability to reason logically about algorithms.</p> <p>I understand how key algorithms can be expressed as programs.</p> <p>I understand that some algorithms are more efficient than others for the same problem.</p> <p>I understand common algorithms for sorting and searching.</p> <p>I can train a neural net to classify images.</p>	<p>I can suggest how to structure my data I can choose an appropriate format for a cell I can construct a formula in a spreadsheet I can apply a formula to multiple cells by duplicating it I can use a spreadsheet to answer questions I can use a chart to show the answer to a question I can work collaboratively to shoot original footage and source additional content I can think critically about how video is used to promote a cause I can use a variety of software to present finding.</p> <p>I can use criteria to provide others with feedback on their work.</p> <p>I can train a neural net to classify images I can train a machine learning system to identify sentiments</p>

