

Computing Progression of skills (All Years)

	Year 3	Year 4	Year 5	Year 6
Computer Science (programming)	<ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 			
	<p>Break an open-ended problem up into smaller parts</p> <p>Input programming commands into a sequence to achieve a specific outcome</p> <p>Tests program and recognise when it needs debugging</p> <p>Detect a problem in an algorithm</p> <p>Describe an algorithm needed for a simple task</p>	<p>Use logical thinking to solve an open-ended problem by breaking it up into smaller pieces</p> <p>Use an efficient procedure to simplify a program</p> <p>Use a sensor to detect a change which can select an action within a programming</p> <p>Know that you need to keep testing a program</p> <p>Recognise an error and debug it.</p> <p>Recognise that an algorithm will help sequence more complex programmes.</p> <p>Recognise that using algorithms will also help solve problems in other learning such as maths, science and design technology.</p>	<p>Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.</p> <p>Refine a procedure using repeat commands to improve a program.</p> <p>Use a variable to increase programming possibilities.</p> <p>Change an input to a program to achieve a different output.</p> <p>Use 'if' and 'then' commands to select an action.</p> <p>Talk about how a computer model can provide information about a physical system.</p> <p>Use logical reasoning to detect and debug mistakes in a program.</p> <p>Use logical thinking, imagination and creativity to extend a program.</p>	<p>Deconstruct a problem into smaller steps, recognising similarities to solutions used before.</p> <p>Explain and program each of the steps in an algorithm.</p> <p>Evaluate the effectiveness and efficiency of an algorithm while I continually testing the programming of that algorithm.</p> <p>Recognise when you need to use a variable to achieve a required output.</p> <p>Use variables and operators to stop a program.</p> <p>Use different inputs (including sensors) to control a device or onscreen action and predict what will happen.</p> <p>Use logical reasoning to detect and correct errors in algorithms and programs.</p>

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Use of technology	<ul style="list-style-type: none"> • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • 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 			
	<p>Save and retrieve work on the internet, the school network or own devices.</p> <p>Talk about the parts of a computer.</p> <p>Tell you ways to communicate with others online.</p> <p>Describe the World Wide Web as the part of the internet that contains websites.</p> <p>Use search tools to find and use appropriate website.</p> <p>Think about whether images found online can be used in their own work</p>	<p>Tell you whether a resource being used is on the internet, the school network or my own device.</p> <p>Identify key words to use when searching safely on the World Wide Web.</p> <p>Think about the reliability of information read on the World Wide Web.</p> <p>Tell how to check who owns photos, text and clipart.</p> <p>Create a hyperlink to a source on the World Wide Web.</p>	<p>Describe different parts of the internet.</p> <p>Use different online communication tools for different purposes.</p> <p>Use a search engine to find appropriate information and check its reliability.</p> <p>Recognise and evaluate different types of information found on the World Wide Web.</p> <p>Describe the different parts of a webpage.</p> <p>Find out who the information on a webpage belongs to.</p>	<p>Tell you the internet services needed for use of different purposes.</p> <p>Describe how information is transported on the internet.</p> <p>Select an appropriate tool to communicate and collaborate online.</p> <p>Talk about the way search results are selected and ranked.</p> <p>Check the reliability of a website.</p> <p>Tell you about copyright and acknowledge the sources of information that are found online.</p>

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Digital Literacy	Handling Data	<ul style="list-style-type: none"> 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 			
	Handling Data	<p>Talk about the different ways data can be organised.</p> <p>Search a ready-made database to answer questions.</p> <p>Collect data to help me answer a question.</p> <p>Add to a database.</p> <p>Make a branching database.</p> <p>Use a data logger to monitor changes and can talk about the information collected</p>	<p>Organise data in different ways.</p> <p>Collect data and identify where it could be inaccurate.</p> <p>Plan, create and search a database to answer questions.</p> <p>Choose the best way to present data to a given audience</p> <p>Use a data logger to record and share my readings with my friends.</p>	<p>Use a spreadsheet and database to collect and record data.</p> <p>Choose an appropriate tool to help me collect data.</p> <p>Present data in an appropriate way.</p> <p>Search a database using different operators to refine my search.</p> <p>Talk about mistakes in data and suggest how it could be checked.</p>	<p>Plan the process needed to investigate the world around me.</p> <p>Select the most effective tool to collect data for an investigation.</p> <p>Check the data collected for accuracy and plausibility.</p> <p>Interpret data collected.</p> <p>Present data collected in an appropriate way.</p> <p>Use the skills developed over key stage to interrogate a database.</p>
Digital Literacy	Multimedia	<p>Create different effects with different technology tools.</p> <p>Combine a mixture of text, graphics and sound to share ideas and learning.</p> <p>Use appropriate keyboard commands to amend text on a device, including making use of a spellchecker.</p> <p>Evaluate their work and improve its effectiveness.</p> <p>Use an appropriate tool to share work online</p>	<p>Use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p>Change the appearance of text to increase its effectiveness.</p> <p>Create, modify and present documents for a particular purpose.</p> <p>Use a keyboard confidently and make use of a spellchecker to write and review work.</p> <p>Use an appropriate tool to share my work and collaborate online.</p> <p>Give constructive feedback to others to help them improve their work and refine own work.</p>	<p>Use text, photo, sound and video editing tools to refine their work.</p> <p>Use the skills already developed to create content using unfamiliar technology.</p> <p>Select, use and combine the appropriate technology tools to create effects that will have an impact on others.</p> <p>Select an appropriate online or offline tool to create and share ideas.</p> <p>Review and improve their work and support others to improve their work.</p>	<p>Talk about audience, atmosphere and structure when planning a particular outcome.</p> <p>Confidently identify the potential of unfamiliar technology to increase my creativity.</p> <p>Combine a range of media, recognising the contribution of each to achieve a particular outcome.</p> <p>Say why they have selected a particular online tool for a specific purpose.</p> <p>Be digitally discerning when evaluating the effectiveness of theirs and others work</p>

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E-Safety	<ul style="list-style-type: none"> use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact 			
	<p>Talk about what makes a secure password and why they are important.</p> <p>Know how to protect personal information when I doing different things online.</p> <p>Use the safety features of websites as well as reporting concerns to an adult.</p> <p>Recognise websites and games appropriate for their age.</p> <p>Ask an adult before downloading files and games from the internet.</p> <p>Understand that they need to be respectful when posting comments online.</p>	<p>Choose a secure password when using a website.</p> <p>Talk about the ways they can protect themselves and others from harm online.</p> <p>Use the safety features of websites as well as reporting concerns to an adult.</p> <p>Know that anything posted online can be seen by others.</p> <p>Choose websites and games that are appropriate for their age.</p> <p>Talk about why they need to ask a trusted adult before downloading files and games from the internet.</p> <p>Can discuss how they are respectful when posting comments online.</p>	<p>Protect their passwords and other personal information.</p> <p>Explain why they need to protect themselves and others and the best ways to do this, including reporting concerns to an adult.</p> <p>Know that anything posted online can be seen, used and may affect others.</p> <p>Talk about the dangers of spending too long online or playing a game.</p> <p>Explain the importance of communicating kindly and respectfully.</p> <p>Discuss the importance of choosing an age-appropriate website or game.</p> <p>Explain why they need to protect a computer or device from harm.</p> <p>Know which resources on the internet they can download and use</p>	<p>Protect their passwords and other personal information.</p> <p>Explain the consequences of sharing too much information about themselves online.</p> <p>Support others to protect themselves and make good choices online, including reporting concerns to an adult.</p> <p>Explain the consequences of spending too much time online or playing a game.</p> <p>Explain the consequences to and others of not communicating kindly and respectfully.</p> <p>Protect a computer or device from harm on the internet</p>