



St Bartholomew's Primary School – Computing – Progression of skills

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn (1) Technology in Our Lives	<p>Recognise purposes for using technology in school and at home.</p> <p>Understand that things they create belong to them and can be shared with others using technology.</p> <p>Recognise that they can use the Internet to play and learn.</p>	<p>Recognise uses of technology in their homes and in their community.</p> <p>Understand that there are online tools that can help them create and communicate.</p>	<p>Begin to understand there are a variety of sources of information and begin to recognise the differences.</p> <p>Begin to understand what the Internet is and the purposes that it is used for.</p> <p>Understand the different types of content on websites and that some things may not be true or accurate.</p>	<p>Save work on the school network, on the Internet and on individual devices.</p> <p>Talk about the parts of a computer.</p> <p>Use appropriate tools to communicate on-line.</p> <p>Use simple search tools and find appropriate websites.</p> <p>Talk about the owner of information online.</p>	<p>Talk about the school network & the different resources they can access, including the Internet.</p> <p>Frame questions & identify key words to search for information on the Internet.</p> <p>Consider reliability of information & ways it may influence you.</p> <p>Check who the owner is before copying photos, clipart or text.</p>	<p>Identify different parts of computing devices.</p> <p>Identify different parts of the Internet.</p> <p>Choose appropriate tools for communication and collaboration and use them responsibly.</p> <p>Use effective strategies to search with appropriate search engines.</p> <p>Talk about the different elements on web pages.</p> <p>Find out who the information presented on a webpage belongs to.</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. 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>



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Autumn (2) Multimedia	<p>Use a mouse to rearrange objects and pictures on a screen.</p> <p>Use a camera or sound recorder to collect photos or sound.</p> <p>Recognise text, images and sound when using ICT.</p> <p>Use paint programs to create pictures.</p> <p>Begin to use a keyboard see programming.</p> <p>Develop an interest in ICT by using age appropriate websites or programs.</p>	<p>Record their own voices and play back to an audience.</p> <p>Use a video or stills camera to record an activity.</p> <p>Create sounds and simple music phrases using ICT tools.</p> <p>Add text and images to a template document using an image & word bank.</p> <p>Use index fingers (left and right hand) on a keyboard to build words & sentences.</p> <p>Know when & how to use the SPACE BAR (thumbs) to make spaces between words.</p>	<p>Use an increasing variety of tools and effects in paint programs and talk about their choices.</p> <p>Explore the effects of sound and music in animation and video.</p> <p>Create own documents, adding text and images.</p> <p>Use keyboard to enter text (index fingers left & right hand).</p> <p>Know when and how to use the RETURN/ ENTER key. Use SHIFT & CAPS LOCK to enter capital letters. Use DELETE & BACKSPACE buttons to correct text. Create sentences, SAVE & edit later.</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>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>Amend text by highlighting & using SELECT/ DELETE & COPY/ PASTE.</p> <p>Look at own work & consider how it can be improved for effectiveness.</p>	<p>Be confident in creating & modifying text & presentation documents to achieve a specific purpose.</p> <p>Use art programs & online tools to modify photos for a specific purpose using a range of effects.</p> <p>Explore the use of video, animation, & green screening for a specific audience.</p> <p>Use ICT tools to create music phrases for a specific purpose.</p> <p>Use a keyboard effectively, including the use of keyboard shortcuts.</p> <p>Use font sizes & effects such as bullet points appropriately.</p> <p>Know how to use a spell check.</p>	<p>Select an appropriate ICT or online tool to create and share ideas.</p> <p>Explore the effects of multimedia (photos, video, sound) in a presentation or video and show how they can be modified.</p> <p>Develop skills using transitions and hyperlinks to enhance the structure of presentations.</p> <p>Use a wide range of effects in art programs and online tools, discussing the choices made and their effectiveness.</p> <p>Know how to use text and video editing tools in programs to refine their work.</p> <p>Use online tools to create and share presentations and films.</p>	<p>Identify the purpose for selecting an appropriate online tool.</p> <p>Discuss audience, atmosphere and structure of a presentation or video.</p> <p>Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience.</p> <p>Use sound, images, text, transitions, hyperlinks and HTML code effectively in presentations.</p> <p>Store presentations and videos online where they can be accessed by themselves and shared with others.</p> <p>Evaluate the effectiveness of their own work and the work of others.</p>



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Spring (1) Online Safety	<p>Talk about good & bad choices in real life e.g. taking turns, saying kind things, helping others, telling an adult if something upsets you.</p> <p>Play age appropriate games (let children choose their games, within reason, to see if they can select appropriate material.</p> <p>Talk about good and bad choices when using websites – being kind, telling a grown up if something upsets us & keeping ourselves safe by keeping information private.</p>	<p>Understand they need to follow certain rules to remain safe when visiting places online.</p> <p>Learn that many websites ask for information that is private & discuss how to responsibly handle such requests.</p> <p>Begin to understand that if you create something you own it.</p> <p>Explore how email can be used to communicate with real people within their schools, families & communities.</p>	<p>Stay safe online by choosing websites that are good for them to visit & not inappropriate sites.</p> <p>Explore what cyber-bullying means & what to do when they encounter it.</p> <p>Know that if they put information online it leaves a digital footprint or “trail” & they need to manage it so it’s not hurtful.</p> <p>Understand that keyword searching is an effective way to locate online information & how to select keywords to produce the best search results.</p>	<p>Agree sensible online 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>Agree sensible online 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. Comment and provide positive feedback on the work of classmates in school or online, or the work of others online.</p>	<p>Agree sensible online safety rules for the classroom.</p> <p>Discuss their own personal use of the Internet and choices they make Discuss how to protect devices from virus threats.</p> <p>Discuss the importance of keeping an adult informed about what you’re doing online, and how to report concerns.</p> <p>Explore using the safe and responsible use of online communication tools e.g. blogs, messaging.</p>	<p>Agree sensible online safety rules for the classroom.</p> <p>Discuss their own personal use of the Internet and choices they make Discuss how to protect devices from virus threats.</p> <p>Discuss the importance of keeping an adult informed about what you’re doing online, and how to report concerns.</p> <p>Explore using the safe and responsible use of online communication tools e.g. blogs, messaging.</p> <p>Identify a range of ways to report concerns about content and contact. Can you identify the ways to report things on different social media platforms.</p>



St Bartholomew's Primary School – **Computing** – *Progression of skills*

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Spring (2) Data Handling	<p>Collect information as photos or sound files.</p> <p>Use a simple pictogram or set of photos to count and organise information.</p>	<p>Take photographs, video and record sound to record learning experiences.</p> <p>Look at how data is representing digitally.</p> <p>Contribute to and interpret a pictogram.</p>	<p>Take and save photographs, video & record sound to capture learning.</p> <p>Use microscopes or other devices to capture and save magnified images.</p> <p>Ask questions and consider how they will collect information.</p> <p>Collect data, generate graphs and charts to find answers.</p> <p>Investigate different types of digital data e.g. online encyclopaedias.</p>	<p>Find out information from a pre-prepared database, asking straightforward questions.</p> <p>Contribute towards a database.</p> <p>Construct and use a branching database.</p> <p>Record data in a variety of ways.</p> <p>Present data for others.</p>	<p>Plan and create a database to answer questions.</p> <p>Identify different types of data.</p> <p>Ask questions carrying out simple searches on a database.</p> <p>Identify inaccurate data.</p> <p>Present data in appropriate format for an audience.</p>	<p>Collect and record information using spreadsheets and databases.</p> <p>Carry out complex searches (e.g. using and/or; \leq / \geq).</p> <p>Solve problems and present answers using data tools.</p> <p>Analyse information and question data.</p> <p>Identify poor quality data.</p>	<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>



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Summer (1) Programming	<p>Help adults operate equipment around the school, independently operating simple equipment e.g everyday items, to understand how things work.</p> <p>Use simple software to make things happen.</p>	<p>Physically follow & give each other instructions to move around.</p> <p>Explore outcomes when buttons are pressed in sequences on a robot.</p> <p>Begin to use software to create movement & patterns on a screen.</p> <p>Begin to identify an algorithm to achieve a specific purpose.</p>	<p>Physically follow and give each other forward, backward & turn (right-angle) instructions.</p> <p>Articulate an algorithm to achieve a purpose.</p> <p>Plan and enter a sequence of instructions to achieve an algorithm, with a robot specifying distance & turn and drawing a trail.</p> <p>Explore outcomes when giving instructions in a simple program.</p>	<p>Plan & enter a sequence of instructions on a robot (or into a sprite) specifying distance & turn to achieve specific outcomes, debug the sequence where necessary (Busy things could be used for this).</p> <p>Begin to type logo commands to achieve outcomes. (j2e logo could be used here).</p> <p>Explore outcomes when giving sequences of instructions in Logo software.</p> <p>Solve open-ended problems with a floor robot & Logo including creating simple regular polygons, making sounds & planning movements such as a dance.</p>	<p>Create & edit procedures typing logo commands including pen up, pen down (j2e logo could be used).</p> <p>Solve open-ended problems with a software using efficient procedures to create shapes & letters.</p> <p>Experience a variety of resources to extend knowledge & understanding of programming.</p>	<p>Talk about procedures (instructions) as parts of a program.</p> <p>Write a set of procedures for a computer game. Refine procedures to improve efficiency.</p> <p>Explore instructions to control software or hardware with an input & using if... then... commands (Scratch/ code.org could be used here).</p>	<p>Record in some detail the steps (the algorithm) that are required to achieve an outcome & refer to this when programming.</p> <p>Increase confidence in the process to plan, program, test & review a program.</p> <p>Write a program which follows an algorithm to solve a problem.</p>



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Summer (2) Programming	<p>Press buttons on a floor robot and talk about the movements.</p> <p>Explore options and make choices with toys, software and websites.</p>	<p>Execute a program on a floor robot to achieve an algorithm.</p> <p>Use the word debug to correct any mistakes when programming a floor robot.</p> <p>Begin to predict what will happen for a short sequence of instructions in a program.</p>	<p>Predict what will happen & test results (coding).</p>	<p>Create an algorithm to tell a joke or a simple story (project).</p> <p>Talk about algorithms planned by others & identify any problems & the expected outcome.</p>	<p>Create an algorithm & a program that will use a simple selection command for a game.</p> <p>Begin to correct errors (debug) as they program devices & actions on screen, & identify bugs in programs written by others.</p> <p>Link the use of algorithms to solve problems to work in Maths, Science & DT.</p>	<p>Create, refine & extend a program.</p> <p>Identify difficulties & articulate a solution for errors in a program.</p> <p>Write down the steps required (an algorithm) to achieve the outcome that is wanted and refer to this when programming.</p>	<p>Write a program which follows an algorithm to achieve a planned outcome for appropriate programming software.</p> <p>Create variables to provide a score/trigger an action in a game.</p> <p>Identify difficulties & articulate a solution for errors in a program.</p>