

	Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generic Skills (Technology in our Lives)	<p>Most children:</p> <ul style="list-style-type: none"> · Are aware that pressing buttons will make a device respond e.g. a remote control toy · Can use the mouse and the keyboard to explore programs · Are aware that moving the mouse moves the pointer on the screen · Can talk about how they are using ICT · Can start to use appropriate ICT vocabulary <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>Most children:</p> <ul style="list-style-type: none"> · Can print work using the Print icon · Can use both hands on the keyboard · Can load programs with support · Can save work with support · Can retrieve work with support · Can talk about how they are using ICT · Can start to use appropriate ICT vocabulary <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>Understand the different types of content on websites and that some things may not be true or accurate.</p>	<p>Most children:</p> <ul style="list-style-type: none"> · Can load programs independently · Can save work independently · Can retrieve work independently · Can plan what they are going to do · Can edit their work · Can practise keyboard skills using both hands, try to use more than two fingers, and try to use the thumb on the spacebar · Can explain their work and how they have used ICT · Can annotate their work samples using prompts · Can use appropriate ICT vocabulary <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>Most children:</p> <ul style="list-style-type: none"> · Can use a range of ICT equipment and software with support · Can create and name new folders, with support · Can print work using the drop down menu · Can make changes to their work · Can consolidate keyboard skills · Can highlight/select items · Can use cut, copy and paste · Can explain their work and how they have used ICT <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 collaborate on-line.</p> <p>Use simple search tools and find appropriate websites.</p> <p>Talk about the owner of information online.</p>	<p>Most children:</p> <ul style="list-style-type: none"> · Can choose an appropriate program, with support. · Can create and name new folders, independently · Can use Print Preview · Can understand that work can be saved in different places e.g. network, writeable CD ROM, Pen Drive, Cloud storage · Can plan what they are going to do and evaluate the results · Can describe their work and explain how and why <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>Most children:</p> <ul style="list-style-type: none"> · Can choose an appropriate program to perform a task · Can understand and use the hierarchical file system · Can combine information from various sources · Can describe and discuss their work and explain how and why they have used ICT <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>Most children:</p> <ul style="list-style-type: none"> · Can choose and combine the use of appropriate ICT tools to complete a task · Can critically evaluate the fitness for purpose of work as it progresses. · Can annotate their work samples using prompt questions <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.</p> <p>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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Computer Science (Digital Programmer)	<p>Help adults operate equipment around the school, independently operating simple equipment</p> <p>Use simple software to make things happen</p> <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><u>Off-screen / Programmable Toys</u></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>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><u>Off-screen / Scratch Jnr</u></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>Watch a program execute & debug any problems</p> <p>Predict what will happen & test results</p> <p>Talk about similarities & differences between floor robots and instructions on screen</p>	<p><u>PurpleMash / Scratch Jnr</u></p> <p>Plan & enter a sequence of instructions on a robot specifying distance & turn to achieve specific outcomes, debug the sequence where necessary.</p> <p>Test & improve / debug programmed sequences.</p> <p>Begin to type commands to achieve outcomes.</p> <p>Explore outcomes when giving sequences of instructions in software.</p> <p>Use repeat to achieve solutions to tasks.</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 an algorithm to tell a joke or a simple story.</p> <p>Sequence pre-written lines of programming into order</p> <p>Talk about algorithms planned by others & identify any problems & the expected outcome.</p>	<p><u>Just2Easy (J2E)</u></p> <p>Create & edit procedures typing commands.</p> <p>Use sensors to 'trigger' an action.</p> <p>Solve open-ended problems with a floor robot, Logo & other software using efficient procedures to create shapes & letters.</p> <p>Experience a variety of resources to extend knowledge & understanding of programming.</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>Use an algorithm to sequence more complex programming into order</p> <p>Link the use of algorithms to solve problems to work in Maths, Science & DT.</p>	<p><u>Scratch 3.0</u></p> <p>Explore procedures using repeat to achieve solutions to problems.</p> <p>Talk about procedures as parts of a program</p> <p>Refine procedures to improve efficiency</p> <p>Use a variable</p> <p>Explore instructions to control software or hardware with an input & using if... then... commands</p> <p>Explore a computer model to control a physical system</p> <p>Change inputs on a model to achieve different outputs</p> <p>Refine & extend a program</p> <p>Identify difficulties & articulate a solution for errors in a program</p> <p>Group commands as a procedure to achieve a specific outcome within 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><u>Scratch 3.0 / Hopscotch / Kodu</u></p> <p>Record in some detail the steps (the algorithm) that are required to achieve an outcome & refer to this when programming</p> <p>Predict the outputs for the steps in an algorithm</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 for a floor robot or other model</p> <p>Write a program which follows an algorithm to achieve a planned outcome for appropriate programming software</p> <p>Control on screen mimics & physical devices using one or more input & predict the outputs</p> <p>Understand how sensors can be used to measure input in order to activate a procedure or sequence & talk about applications in society</p> <p>Create variables to provide a score/trigger an action in a game</p> <p>Link errors in a program to problems in the original algorithm.</p>

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Multimedia (Digital Animator) (Digital Artist) (Digital Broadcaster) (Digital Designer) (Digital FilmMaker)	<p>Use a mouse to rearrange objects and pictures on a screen.</p> <p>Recognise text, images and sound when using ICT.</p> <p>Use a camera or sound recorder to collect photos or sound</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>Use templates to make electronic books individually and in pairs.</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.</p> <p>Use DELETE & BACKSPACE buttons to correct text.</p> <p>Create sentences, SAVE & edit later.</p>	<p>Explore & begin to evaluate the use of multimedia to enhance communication.</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>Explore the use of video, animation & green screening.</p> <p>Use ICT tools to create musical phrases.</p> <p>Amend text & save changes. 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>Explore how multimedia can create atmosphere & appeal to different audiences</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>Look at their own, and a friend's work & provide feedback that is constructive & specific.</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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Data Handling (Digital Data Handler)	<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>Ask questions and consider how they will collect information.</p> <p>Collect data, generate graphs and charts to find answers.</p> <p>Save & retrieve the data to show to others.</p> <p>Create paper/ object decision trees & explore a branching database.</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>Use a data logger to monitor changes and talk about the outcomes seen.</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. Present data in appropriate format for an audience.</p> <p>Use a data logger to record and compare individual readings.</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>Select appropriate use of a data logger for an investigation and interpret the findings.</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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Research & Presenting (Digital Researcher & Presenter) (Digital Publisher)	<ul style="list-style-type: none"> Explore selected internet website resources (with adult support) Begin to be aware of internet safety rules - Use the keyboard to enter letter strings (play writing) Begin to use the space bar to break letter strings into groups of letters Use the Back Space key to delete, use a word bank or word list to enter text e.g. to match with pictures 	<ul style="list-style-type: none"> Can talk about websites they have been on Can explore a website by clicking on buttons, arrows, menus and hyperlinks Can navigate 'back' by clicking on the 'back' button Can complete a search using a child friendly search engine under the supervision of adults Can access and open a word processing document Can enter text Can use upper and lower case letters Can use the space bar Can use the Return key Can use the Shift key to create a capital letter Can understand how to use the delete/backspace key if they have mistyped or repeated a letter Can word process short texts using word lists Can move the cursor 	<ul style="list-style-type: none"> Can complete a search using a child friendly search engine independently Can use the Internet to find information for a topic, with support (Favourites file, hyperlinks set up by the teacher) - Can understand how text can be saved and retrieved Can change the font style Can change the font size Can change the font colour Can use the cursor (arrow) keys for simple on screen editing Can import graphics and add text, with support 	<ul style="list-style-type: none"> Can type in a URL to find a website Can add websites to favourites Can use a search engine to find a range of media, e.g. images, text Can understand Internet safety rules. - Can select text and change the font style, size and colour Can select text and use Bold and Underline icons Can confidently use the cursor (arrow) keys for simple on screen editing Can use the scroll bars to view different parts of the document justify/align text Can import graphics and add text 	<ul style="list-style-type: none"> Can think of search terms to use linked to questions they are finding the answers for Can talk about the reliability of information on the Internet, e.g. the difference between fact and opinion Can use Internet safety rules - Can import graphics and use the Picture Toolbar to choose the text wrapping Can use the spell checker Can use Page Setup to choose Portrait or Landscape page as appropriate Can learn how to insert and use a simple table Can use the Zoom menu to view the whole page Can use word art 	<ul style="list-style-type: none"> Can use advanced search functions in Google, e.g. quotations Can use AND and OR in their searches Can check the accuracy of information, with support Can begin to be aware of privacy and other issues related to using the Internet Can interpret and question the plausibility of information Children should be given the opportunity to use their word processing skills in a range of contexts Can change the layout of a document using centring and justification Can use the tab key to format a list Can import, position and manipulate graphics into word processing document Can moving, resizing and reshaping text and graphics on a page 	<ul style="list-style-type: none"> Understand websites such as Wikipedia are made by users (link to E-Safety) Can suggest ways to check the accuracy of information independently Can be aware of privacy and other issues related to using the Internet Children should be given the opportunity to use their word processing skills in a range of contexts Can split cells in a table Can merge cells in a table Can insert/delete cells in a table Can use Find, search and replace if appropriate

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E-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 appropriate games on the Internet.</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>Begin to understand that if you create something you own it.</p> <p>Learn that many websites ask for information that is private & discuss how to responsibly handle such requests.</p> <p>Explore how email can be used to communicate with real people within their schools, families & communities.</p> <p>Learn that directory sites with alphabetical listings offer one way to find things on the Internet.</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>Discuss criteria for rating informational websites a site.</p> <p>Realise that not all websites are equally good sources of information.</p>	<p>Agree sensible e-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 enjoy 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.</p> <p>Comment and provide positive feedback on the work of classmates in school or online, or the work of others online.</p>		<p>Agree sensible e-safety rules for the classroom.</p> <p>Discuss their own personal use of the Internet and choices they make.</p> <p>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>	