

	Foundation Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Generic Skills (Technology in our Lives)</p>	<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>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>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 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 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>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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<p>Computer Science (Digital Programmer)</p>	<p>Help adults operate equipment around the school, independently operating simple equipment Use simple software to make things happen Press buttons on a floor robot and talk about the movements Explore options and make choices with toys, software and websites</p>	<p><u>Off-screen / Programmable Toys</u> Physically follow & give each other instructions to move around Explore outcomes when buttons are pressed in sequences on a robot Begin to use software to create movement & patterns on a screen Begin to identify an algorithm to achieve a specific purpose Execute a program on a floor robot to achieve an algorithm Use the word debug to correct any mistakes when programming a floor robot Begin to predict what will happen for a short sequence of instructions in a program</p>	<p><u>Off-screen / Scratch Jnr</u> Physically follow and give each other forward, backward & turn (right-angle) instructions Articulate an algorithm to achieve a purpose Plan and enter a sequence of instructions to achieve an algorithm, with a robot specifying distance & turn and drawing a trail Explore outcomes when giving instructions in a simple program Watch a program execute & debug any problems Predict what will happen & test results Talk about similarities & differences between floor robots and instructions on screen</p>	<p><u>PurpleMash / Scratch Jnr</u> Plan & enter a sequence of instructions on a robot specifying distance & turn to achieve specific outcomes, debug the sequence where necessary. Test & improve / debug programmed sequences. Begin to type commands to achieve outcomes. Explore outcomes when giving sequences of instructions in software. Use repeat to achieve solutions to tasks. Solve open-ended problems with a floor robot & Logo including creating simple regular polygons, making sounds & planning movements such as a dance. Create an algorithm to tell a joke or a simple story. Sequence pre-written lines of programming into order Talk about algorithms planned by others & identify any problems & the expected outcome.</p>	<p><u>Just2Easy (J2E)</u> Create & edit procedures typing commands. Use sensors to 'trigger' an action. Solve open-ended problems with a floor robot, Logo & other software using efficient procedures to create shapes & letters. Experience a variety of resources to extend knowledge & understanding of programming. Create an algorithm & a program that will use a simple selection command for a game. Begin to correct errors (debug) as they program devices & actions on screen, & identify bugs in programs written by others. Use an algorithm to sequence more complex programming into order Link the use of algorithms to solve problems to work in Maths, Science & DT.</p>	<p><u>Scratch 3.0</u> Explore procedures using repeat to achieve solutions to problems. Talk about procedures as parts of a program Refine procedures to improve efficiency Use a variable Explore instructions to control software or hardware with an input & using if... then... commands Explore a computer model to control a physical system Change inputs on a model to achieve different outputs Refine & extend a program Identify difficulties & articulate a solution for errors in a program Group commands as a procedure to achieve a specific outcome within a program 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> Record in some detail the steps (the algorithm) that are required to achieve an outcome & refer to this when programming Predict the outputs for the steps in an algorithm Increase confidence in the process to plan, program, test & review a program Write a program which follows an algorithm to solve a problem for a floor robot or other model Write a program which follows an algorithm to achieve a planned outcome for appropriate programming software Control on screen mimics & physical devices using one or more input & predict the outputs Understand how sensors can be used to measure input in order to activate a procedure or sequence & talk about applications in society Create variables to provide a score/trigger an action in a game Link errors in a program to problems in the original algorithm.</p>

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<p>Multimedia</p> <p>(Digital Animator) (Digital Artist) (Digital Broadcaster) (Digital Designer) (Digital FilmMaker)</p>	<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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<p>Data Handling (Digital Data Handler)</p>	<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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<p>Research & Presenting</p> <p>(Digital Researcher & Presenter) (Digital Publisher)</p>	<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 sue the delete/backspace key if they have mistyped or repeated a letter · Can word process short texts using word lists · Can move the curser 	<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 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.</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 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>		