

Computing Knowledge and Skills Progression 2020-21 **In class** ICT room /Tablets

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Safety		<p>Identify devices that can be used to search the Internet</p> <p>Identify what things count as personal information</p> <p>Teach that if you see something strange or upsetting, make sure you tell an adult</p> <p>Only ever provide your first name online as the person you are talking to may not be a stranger</p> <p>Understand why we use passwords</p>	<p>Explain why we use passwords</p> <p>Explain what is personal information and the need to keep it private</p> <p>Remind them that if you see something strange or upsetting, make sure you tell an adult</p> <p>Understand what makes a good online friend and the need to be kind and thoughtful online as in the real world</p> <p>Understand that spending a long time in front of a computer screen can be unhealthy</p> <p>Know that not all information found online is true</p>	<p>Teacher models playing an online game with someone who has taken false identity (Mr B pretending he is Mrs P)</p> <p>Play a game with each other where they only give their first name or what is appropriate</p>	<p>Teacher 1 sends a photo over internet to teacher 2</p> <p>Teacher 2 sends it to T3 with a pretend bully comment and T3 shares with class</p>	<p>Teacher 1 sends a neutral comment to T2 and T3/4/5 all expand on it in a pretend nasty way (bit like Chinese whispers)</p> <p>Share with class</p> <p>Understand that information can be stored and shared on the internet - understand websites such as Wikipedia are made by users (link to E-Safety)</p> <p>Use strategies to check the reliability of information (cross check with another source such as books)</p>	<p>Ask Heather to help put false info on internet so we can read it and Q it</p>
Text, Images and Multi-Media	<p>Through play they represent their own ideas, thoughts and feelings through photography, record music they make, video one another and paint with fingers, trackpad or mouse on screen</p>	<p>Use backspace, spacebar, shift and enter on keyboard</p> <p>Use a paint package to create a detailed picture for a specific purpose</p> <p>Explore shape, line and colour to communicate a specific idea</p> <p>Use various tools such as brushes, pens, rubber, stamps, and shapes</p> <p>Contribute to a class email – discuss journey of an email</p>	<p>Explore a website by clicking on the arrows, menus and hyperlinks</p> <p>Use the keyboard with increasing familiarity including the use of shift for capital letters</p> <p>Know how to add different punctuation including full stops, commas and the use of the shift key for ! ?</p> <p>Word process short texts.</p> <p>Start to use two hands when typing</p> <p>Navigate around text in a variety of ways (mouse, arrow keys, highlighting text) as they edit their work</p> <p>Find a traditional story- cut and paste text, change the font size, style and colour and add images to documents</p>	<p>Use keyboard to revise Y2 skills and then align text: left, right and centre.</p> <p>Create a PowerPoint where they change the layout and style of slides and create a title as well as content</p> <p>Type in a URL to find an appropriate website</p> <p>Use a search engine to find text and images for</p> <p>Select the most appropriate program to complete a given task (Publisher, Word or PowerPoint)</p>	<p>Create a PowerPoint using all previous skills but now also including hyperlinks</p>	<p>Word/Publisher: Use advanced tools in word processing / publishing such as tabs, appropriate text formatting, line spacing appropriately to create quality presentations appropriate for a known audience</p> <p>PowerPoint: Make use of more advanced features in presentations (animations, sounds, video, and hyperlinks to different pages)</p> <p>Edit a range of existing and their own media to create content</p> <p>Are aware of a range of internet services such as email, VOIP (Voice Over Internet Protocol, e.g. Skype)</p> <p>World Wide Web and what they do</p> <p>Explore alternative to PowerPoint and assess effectiveness (e.g. Prezi)</p>	<p>Select most appropriate software and means of presentation for a specific task</p> <p>Multimedia work shows restrained use of effects that help to convey meaning rather than impress</p> <p>Think about target audience when creating and designing digital content</p> <p>Design and make a short film /a animation from images (still and / or moving) that they have sourced, captured or created</p>

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<p>Programming and Computational Thinking</p>	<p>Through play, support them to make sense of this world, as well as planting the seeds for their understanding of the implications of technology in their lives Create a simple program to make Beebots move Including straight forwards/ backwards / turn one at a time Support in solving problems</p>	<p>Explain parts of the computer Learn to log on Learn how to use a password Learn how to save Understand that we control computers Mouse skills – understand that the mouse has a left and right button and how you control it Identify and list the steps of a known task in order Create a simple program to make Beebots move along a designated route Evaluate the success of a programme Debug an error in a simple programme (Beebot) List examples of common programming around the house and street e.g. traffic lights, washing machine, automatic doors</p>	<p>Blue Bee bots – Debug an error in a simple Beebot program to move it along a designated route Write your own Beebot program Create simple Scratch program and change its background and character Discuss meaning of algorithm and link to algorithms they see in everyday life: traffic lights alarm clocks computer games Evaluate the success of an algorithm or program Use the language if ... then to describe the relationship between two actions</p>	<p>Use Scratch to Revise Y2 skills and move on to adding conditional statements (If ... then Go to...) Create sequences of instructions Understand that some programs work with numbers only, or words Create sequences of instructions to accomplish goals Navigate the Scratch programming environment Create a background and a sprite for a game Add inputs to control their sprite Remix and change an existing program Use repetition to make programs more efficient Predict the outcome of a program</p>	<p>Debug a Scratch program to ensure it works (Needs to be harder than Beebot debugging in Y2) Write algorithms using conditional statements (if... then ...) and selection (when the sprite touches this colour ...) In games, create alternative outcomes (e.g. Game over, or move on to the next level) and also begin to use variables Use procedures in programs to create a sub routine Write a program using variables (What does this mean?)</p>	<p>Appreciate that different programs work with different types of data, e.g. text, number, strings, Booleans Scratch: Create and edit variables Use conditional statements (if, then and else) Bug fixing: Recognise that different solutions exist for the same problem Use sequence and broadcasting to create a digital story in Scratch Combine a variable with relational operators (< = > to determine when a program changes, e.g. score > 5 say 'you win')</p>	<p>Scratch: Use external triggers and repeat until loops to control sprites Identify success criteria for creating digital content for a given purpose and an audience Design and create own game including sprites, backgrounds, scoring and/or timers Evaluate the effectiveness of the game and debug as required</p>
<p>Understanding and Sharing Data</p>		<p>Use a search engine to find information Talk about websites they have been on Create a pictogram of eye colour as a class, then share with another class</p>	<p>Interpret a variety of simple pictograms and charts from the computer Create and search a branching database using pre-prepared images and questions</p>	<p>Create a simple pictogram, and send it to a friend as an attachment to a Word document</p>	<p>Type in a term to a Search engine and get groups to investigate the info coming back from item 100, 200, 300 and compare for usefulness Design a questionnaire and collect a range of data on a theme Choose information to put into a data base package and test Draw information from a database/chart Use a database to answer a set of questions Use a database to answer a set of Qs, but some data will be missing. What? Use a database with too much information to answer a set of Qs. What didn't they need Create and search a branching database Create a database from information the child has selected</p>	<p>Explore a record database to find out information Use filters in a database to find out specific information</p>	<p>Design a questionnaire and collect a range of data on a theme Create data collection forms and enter data accurately from these. Know how to check for and spot inaccurate data Know which formulas to use when they want to change their spreadsheet model Make graphs from the calculations on my spreadsheet Understand that search engines store information in databases</p>