



Computing Long Term Plan 2017-18

Year	Strand	Theme/ Resources	Objectives
1	Computer Science	Beebot Virtual – 2Go or Daisy Dino on iPad 	Give and follow instructions, which include straight and turning commands, one at a time. Explore outcomes when instructions are given in a sequence Give a simple sequence of instructions Discuss/ explore what will happen when instructions are given in a sequence. Give a sequence of instructions to complete a simple task Instructions use both movement commands and additional commands
	Computer Science		
	Information Technology	Graphics (Paint program e.g. 2paint on Infant video toolkit)	Use ICT to generate ideas for their work Use various tools including brushes, pens, lines, fill, spray and stamp Use save, retrieve, amend and print


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1	Information Technology	Word Processing - Word	Use the spacebar, back space, enter, shift and arrow keys Start to use two hands when typing Word process short texts, rather than copying up written work
	Information Technology	Data - Pictograms	Know that images give information Say what a pictogram is showing them Put data into a program (Pictogram) Sort objects and pictures in lists or simple tables
	Information Technology	Internet Research	Talk about websites they have been on Explore a website by clicking on buttons, arrows, menus and hyperlinks Navigate 'back' by clicking on the 'back' button Complete a search under the supervision of adults

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Year	Strand	Theme/ Resources	Objectives
1	Digital Literacy	E-safety	See SWGfL Digital Literacy Planning and thinkuknow.co.uk

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2	Computer Science	Roamer/ probot and Virtual Roamer (2go) 	A) Generate a sequence of instructions including right angled turns Create a sequence of instructions to generate simple geometric shapes (oblong/ square) Discuss how to improve/ change their sequence of command B) Plan a short 'story' for a character and write the commands for this Edit/refine a sequence of commands Use the 'repeat' (loop) command within a series of instructions
	Computer Science		
	Information Technology	E-mail	Recognise an email address Find the @ on a keyboard Contribute to a class email Open and select to reply to an email as a class

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2	Information Technology	Sound recording Easy-speak microphones and audacity OR Garageband (iPads)	<i>Final piece can be created as a class</i> Use sound recorders, at and away from a computer and playback sound Use software to record music and sounds Change sounds recorded Save, retrieve and edit work
	Information Technology	Movie making Cameras and Windows Movie Maker OR iPads and iMovie	<i>Final piece can be created as a class</i> Capture video Discuss which videos to keep and why Arrange clips to make a short film that conveys meaning Add simple titles and credits Select text and make simple changes including bold, italic and underlined
	Information	Branching databases	Place objects and pictures in a list or a simple table Make a simple Y/N tree diagram to sort information Create and search a branching database

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2	Information Technology	Internet Research WORD or 2Publish	Talk about websites they have been on Explore a website by clicking on buttons, arrows, menus and hyperlinks Navigate 'back' by clicking on the 'back' button Complete a search under the supervision of adults Begin to word process work, develop basic editing skills (font, size, colour) Save and print work
	Digital Literacy	E-Safety	See SWGfL Digital Literacy Planning and thinkuknow.co.uk

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3	Computer Science	Scratch	<p>Explore the Scratch environment</p> <p>Use a variety of inputs</p> <p>Sequence instructions</p> <p><i>(This just needs to be an introduction to Scratch)</i></p>
	Computer Science	Logo	<p>Write simple program in Logo to produce a line drawing</p> <p>Use more advanced Logo programming including pen up, pen down etc.</p> <p>Write a program to reproduce a defined problem e.g. geometric shape/pattern</p>
	Information Technology	E-books Publisher or Book Creator (iPads)	<p>Create a new eBook with a front cover and add and remove pages</p> <p>Combine text and images within each page and embed sound clips</p> <p>Add information about the author and title for publishing</p> <p>Get quicker at typing with both hands</p> <p>Use different fonts, sizes, colours and effects to communicate meaning</p> <p>Align text left, right and centre</p>

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3	Information Technology	Spreadsheets - Excel	<p>Choose information to put into a data table</p> <p>Recognise which information is suitable for their topic</p> <p>Design a questionnaire to collect information</p> <p>Sort and organise information to use in other ways</p>
	Information Technology	Graphics (Software? Or Brushes on ipads)	<p>Acquire, store and combine images from cameras or the Internet for a purpose</p> <p>Use the print screen function to capture an image</p> <p>Select certain areas of an image and resize, rotate an image</p> <p>Edit pictures using various tools in paint for photo-manipulation software</p>
	Information Technology	PowerPoint	<p>Create a multi-media PowerPoint presentation which combine text and images</p> <p>Add new slides, adding features and changing design layout</p> <p>Make use of animation and transition effects</p> <p>Explore and use features of slideshows</p>

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4	Computer Science	Scratch 1	Navigate the scratch programming environment Create a background and sprite Plan and create a story scene Add inputs to control the sprite Use conditional statements(if, then) within their work
	Computer Science	Scratch 2	Create a stage for a game Add sprites to own game Program the sprites to move within the game Use the repeat command Use conditional statements (if..then) within own work
	Information Technology	Animation Cameras & Windows Movie Maker or iPads & iMovies	Plan what they would like to happen in the animation Take a series of picture to form an animation Move items within the animation to create movement on playback Edit and improve animation

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4	Information Technology	Databases Access	<p>Identify a problem which can be solved by collecting data</p> <p>Identify which data to collect and collect it in an efficient and accurate way</p> <p>Organise data by designing fields and records in a database</p> <p>Interpret data by using a range of searches and graphs</p> <p>Draw conclusions from the data and use these to solve the original problem</p> <p>Present findings to a specified audience</p>
	Information Technology	Email (School email accounts)	<p>Log-in to an email, open emails, create and send replies</p> <p>Attach files to an email</p> <p>Download and save files from an email</p> <p>Email more than one person and participate in group emails by 'replying to all'</p>
	Information Technology	Movie Making Cameras & Movie Maker or iPads & iMovie	<p>Capture video for a purpose</p> <p>Discuss the quality of videos and choose which to keep and which to re-shoot</p> <p>Trim and arrange clips to convey meaning</p> <p>Add titles, credits, slide transitions, special effects and talk about the effect these have on the audience</p>

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4	Information Technology	Internet Research WORD	Type in a URL to find a website Use a search engine to find a range of media e.g. images, text Think of search terms to use linked to questions they are finding the answers for Talk about the reliability of information on the Internet e.g. the difference between fact and opinion – link to E-safety Word process work making choices over text styles to suit the audience
	Digital Literacy	E-Safety	See SWGfL Digital Literacy planning and thinkuknow.co.uk

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Year	Strand	Theme/ Resources	Objectives
5	Computer science	Kodu	<p>Navigate the Kodu macro environment using keyboard and mouse</p> <p>Create a 3D digital world for a game with land, water and scenery</p> <p>Add a sprite to their world</p> <p>Program their sprite to navigate their 3D world with an input</p> <p>Create paths on which sprites will move</p> <p>Use conditional statements ('if...then') to give objects behaviours</p>
	Computer science	Scratch Shape based (link to Maths?)	<p>Write a sequence of instructions to draw a shape</p> <p>Adapt sequences of instructions to create other shapes</p> <p>Use sections of code and repetition (loops) to create patterns</p> <p>Use conditional statements, loops and variables</p> <p>Evaluate the effectiveness of their work and debug as necessary</p>
	Information Technology	Sound recording Microphones & Audacity Or Garageband on iPads	<p>Plan and record audio for a given purpose</p> <p>Collect audio from a variety of sources including own recordings and internet clips</p> <p>Create multi-track recording using effects</p> <p>Edit and refine own work to improve outcomes</p>

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Year	Strand	Theme/ Resources	Objectives
5	Information Technology	Graphics	<p>Import a photograph and explore the effects which can be created</p> <p>Use a range of visual effects such as filters, hues and painting over photographs.</p> <p>Create patterns and montages</p> <p>Select areas and manipulate to give different effects.</p>
	Information Technology	Data handling	<p>Use spreadsheets to collect (possible data logger use) and record information</p> <p>Present data in an appropriate way</p> <p>Explore how data can be presented on graphs</p> <p>Evaluate data, check accuracy against predictions and consider plausibility</p> <p>Identify mistakes in data and how these could be improved</p>
	Information Technology	Internet Research	<p>Search the Internet for relevant information linked to a topic</p> <p>Check the reliability of the information and cross reference with other sources or webpages</p> <p>Show an understanding of bias in search results</p> <p>Know how to acknowledge sources of information and avoid plagiarism</p> <p>Present findings for a given purpose and audience</p>

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6	Information Technology	Spreadsheets - Excel	<p>Create data collection forms and enter data from these accurately</p> <p>Know how to check for and spot inaccurate data</p> <p>Know which formulas to use to change spreadsheets</p> <p>Make graphs from the calculations on spreadsheets</p> <p>Sort and filter any information</p> <p>Understand that changing the numerical data effects a calculation</p>
	Information Technology	E-books Publisher Or Book Creator (iPads)	<p>Create an e-book with a front cover and add/ remove pages and sub-pages</p> <p>Produce multimedia e-book combining video, pictures, text and audio showing an understanding of copyright and plagiarism issues</p> <p>Attach author data for publishing and publish book</p>
	Information Technology	Movie Making Cameras & Windows Movie Maker or iPads & iMovies	<p>Storyboard and capture videos for a purpose</p> <p>Plan for the use of special effects/transitions to enhance their video</p> <p>Trim, arrange and edit audio levels of video to improve the quality of their outcome</p> <p>Add titles, credits, transitions, special effects</p> <p>Export their video in different formats for different purposes</p>

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	Digital Literacy	E-Safety	See SWGfL Digital Literacy planning and thinkuknow.co.uk