

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
IT and Digital Literacy	Mousing Around Keyboarding Away	Keyboard Fun Animation	Multimedia - Resounding Poetry	My Class Reader - An Animation	Picture Perfect	Theme Park
(Including E-Safety) switched on - online safety Helena update	Build up mouse skills and keyboard skills through different activities - Launch programs using click and enter - Close programs - Click to select - Click and drag - Enter to confirm - Right click - Log in - Log off Learn how to position their home fingers on the home keys and begin to be aware of typing with 2 hands .	Log in, launch applications, open files, save work and basic digital literacy skills More practice on typing using 2 hands	To use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content. Insert into a PowerPoint Slide - A picture from the web - Record own text - Save and retrieve work Word & Publisher (using a wide range of tools and integrating other online resources: hyper linking to appropriate websites, embedding content, acknowledging sources.	My Class Reader – an animation Use a webcam to take stop-frame pictures Collate all pictures together using Movie Maker Insert a sound clip into Movie Maker to make presentation more interesting Open work from and save work to the right folder	Website Creation and Digital Citizenship Use Google Sites to create a class website on a theme Research on a theme with each group working on a page Creating an additional page per group Digital Citizenship aspects of website creation ● Should only use first names if under 18 ● Should not publish any personal information online ● For images, either take them	Theme park research

					<p>ourselves or use images from sites that allow them to be published online free of copyright issues</p> <ul style="list-style-type: none">● If information about ourselves is published, be aware that this information can be accessed later by somebody who can be your potential employers● Information from other sources must be rewritten in our own words <p>Picture Perfect Use Photoshop online to edit pictures</p> <p>Save pictures to a local drive</p> <p>Make a PowerPoint presentation to present pictures</p>	
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					Acknowledge picture sources in slides Save and improve work	
E-Safety	E-Stranger Danger					
	<ul style="list-style-type: none"> - Identify behaviour that can cause danger online - Identify what count as personal information and know that it should be kept private - Know how to navigate from inappropriate materials and tell an adult afterwards - Make a digital ebook for e-stranger Danger 	<p>Identify what personal information is</p> <p>Understand why it is important to protect personal information</p> <p>Understand that personal information should be shared people</p>	<p>Understand that the sharing of passwords can expose them to risks</p> <p>Identify scenarios that have to zip, block or flag</p> <p>Understand how online communication is similar to, but differs from, face-to-face communications</p> <p>Develop kind and respectful online communication skills</p> <p>Develop the knowledge and skills to conduct effective online searches</p>	<p>Understand that Internet posting is forever</p> <p>Understand how online communication is similar to, but differs from, face-to-face, communication</p> <p>Develop kind and respectful online communication skills</p>	Digital Footprint	<p>E-Safety (Jigsaw – Video by CEOP)</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact</p> <p>Identify main digital communication tools and their comparative uses</p> <p>Identify the difference between real (face-to-face) and online (virtual) conversation</p>

	Develop digital literacy skills cross-curricular whenever appropriate		Identify reliable and appropriate online contents			Understand that revealing too much personal information is unwise as a stranger can piece together information to target you Responding to online Hazards – What should we do?
Data	School Garden	Human Database Keep Well!	Are we having healthy breakfast?	How do we come to school?	Maths Fun	Theme Park Design
	<p>Know that images give information</p> <p>Say what a pictogram is showing</p> <p>Put data into a program (pictogram program developed Minibeast by Helena or LGFL)</p> <p>Sort objects and pictures in lists or simple tables</p> <p>Navigate to the right folder to save work</p>	<p>Sort children out into groups using Y/N questions and draw a branching database progressively</p> <p>Place objects and pictures in a list or a table</p> <p>Make a simple Y/N tree diagram to sort information</p> <p>Create and search a branching database</p> <p>Navigate to the right folder with own name</p>	<p>Choose information to put in a data table</p> <p>Recognise what information is suitable for the topic chosen</p> <p>Design a data collection sheet</p> <p>Collect and enter data into an Excel spreadsheet to make a class database</p> <p>Filter data to answer questions</p>	<p>Collect information in a suitable format</p> <p>Sort and organise information to use in other ways</p> <p>Create a spreadsheet using the information selected</p> <p>Plot a graph and answer questions accordingly</p>	<p>Input formula into a spreadsheet to make maths games</p>	<p>Design a data collection sheet using Google Forms to find out what their classmates want for theme park</p> <p>Create a data collection form and enter data accurately</p> <p>Check and spot inaccuracy</p> <p>Know what formula to use when changing a spreadsheet</p>

		<p>Build a class spreadsheet of what keep us away from school</p> <ul style="list-style-type: none"> - Data collection - Enter data - Answer questions according to the graph plot 				<p>Make graphs from the calculation on the spreadsheet Sort and filter information</p> <p>Understand that the changing of the numerical data effects a calculation</p>
Networks and Communication	A Computer	Input and Output Devices	A Data Machine - On and Off	A Binary Machine	Inside a Computer	Computer Networks
	<p>Find out different parts of a computer</p> <p>Computers Now and Then</p> <p>How do we use computers at school</p>	<p>Find out more about computer invention</p> <p>Look at computer around us and computers as an input and out device</p> <p>Input and output devices make a computer work.</p> <p>Find out the main components of a set of computer – a monitor, a CPU, a mouse, a keyboard and a printer</p>	<p>To understand computer data is in binary form.</p> <p>Children will start looking at binary bit patterns through bitmaps, knowing that a computer cannot speak our language. When it sends a picture to a printer, it is sent in binary. Input from us is also translated into binary.</p>	<p>A Binary Machine Take understanding of binary by looking at</p> <ul style="list-style-type: none"> - how the first binary computer was invented - the invention of Colossus, a Code Breaking Machine. <p>These two important inventions during WWII have changed computers into a binary machine which uses binary to represent data (e.g. Words, pictures and sounds)</p>	<p>Inside a Computer A computer is taken apart to help children X-ray a computer. They will get to know the function of the main internal parts of basic computer architecture. They will also look at the health and safety implication related.</p>	<p><u>Search Ranking</u> Use search technology effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content</p> <p>Understand how the spider search ranks results</p> <p><u>Computer Networks</u></p> <p>Understand computer networks; how they can provide multiple services; and the opportunities they</p>

						<p>offer for communication and collaboration</p> <p>Learn about how a computer works by looking at the inside function of the fetch and execute cycle upon which the concepts of having a range of application software in the memory will also be mentioned. Besides, children will also explore the relationship between binary and the file size.</p> <p>Find out how a mobile network works</p>
Algorithms and Programming	Programming					
	Clicking and Moving Obey my command	Different Sorts of Inputs - Buttons and Instructions	More Scratch Action Geometry and Logo (1) - Shapes			
	Programs are executed by following clear instructions	Learn that programs respond to different sorts of inputs, and that the keyboard	Sequence instructions to complete a journey	Kodu onscreen Robot	Kodu onscreen Robot	Scratch and Python A calculator Game

	<p>Programs respond to inputs to do different things.</p> <p>Combine start up and input events to create more advanced apps and programs.</p> <p>Learn to give precise instructions</p>	<p>can be used to control objects on screen, not just by clicking them directly</p> <p>Learn that one object can be used to control another object. e.g. Writing code so clicking a button gives an instruction to make a lorry move</p>	<p>Configure starting events</p> <ul style="list-style-type: none"> - Background - Sprites - Costumes - Sound files - Co-ordinates <p>Configure Click events</p> <ul style="list-style-type: none"> - Green flag - Move - Turn - On edge, bounce back - Create animation by changing costumes - wait - Broadcast messages 	<ul style="list-style-type: none"> - When something happens do something <p>Scratch Onscreen Programming</p> <p>Revisit and Reinforce</p> <p>Configure starting events</p> <ul style="list-style-type: none"> - Background - Sprites - Costumes - Sound files - Co-ordinates <p>Configure Click events</p> <ul style="list-style-type: none"> - Green Flag - Move - Turn - On edge, bounce back - Wait - forever 	<ul style="list-style-type: none"> - When something happens do something - Set timer and Scores <p>Scratch Game Making Pecman, Ping Ball and Own Game</p> <p>Action Geometry and Python (1) - Shapes and Spin</p> <p>Design, write and debug programs that accomplish specific goals</p> <p>Solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; works with variables and various forms of inputs and outputs</p> <p>Use logical reasoning to explain how some simple algorithms and programs works</p>	<ul style="list-style-type: none"> - Different types of inputs and outputs <p>Action Geometry and Python (2)</p> <p>Design, write and debug programs that accomplish specific goals</p> <p>Solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; works with variables and various forms of inputs and outputs</p> <p>Use logical reasoning to explain how some simple algorithms and programs works</p> <p>Use both Scratch and Python to build a calculator game</p>
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					<p>Import sprites from a file</p> <p>Understand how to initialize start events</p> <p>Program sprite to move forwards with changing costumes</p> <p>Set conditions to make sprites</p> <ul style="list-style-type: none">- Bounce back or to a different angle when hit something- Not to go through objects <p>Broadcast to trigger events</p> <p>Set variables - timers and scores</p> <p>Put in algorithm to get a sprite to draw shapes</p> <p>Apply skills to make own program</p>	<p>Invite user inputs</p> <p>Make it Digital</p> <p>Use HTML to design a webpage about themselves and their achievement in Computing</p>
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					<p>Draw different shapes using formula 360/sides</p> <p>Use repeat procedures nested repeat procedures to spin shapes</p>	
Physical Computing						
Algorithms and Programming	A Very Hungry Caterpillar/Another Class Reader	Rosie's Walk/Another Class Reader	Action Geometry (1) - Shapes	Action Geometry (2) - Spinning Shapes	Action Geometry (3) - Shapes and Spin	
	<p>Find out the importance of logical sequencing through unplugged and on-screen activities</p> <p>Use simple direction cards to lay out instructions – fd, bk, lt and rt in a vertical format</p>	<p>Find out the importance of logical sequencing through unplugged and on-screen activities</p> <p>Use simple directional text to write instructions – fd, bk, lt and rt in a vertical format</p>	<p>Walk and draw a square and other regular shapes with angles given (triangle, pentagon, hexagon, octagon)</p> <p>- Children themselves as a beebot</p> <p>- Scratch</p>	<p>Action Geometry and Logo (2)</p> <p>- Spinning Shapes</p> <p>Walk and draw a square and other regular shapes with angles given (triangle, pentagon, hexagon, octagon)</p>	<p>Probot car drawing first and then Scratch before drawing with Python</p> <p>Debug own program by going through the punctuation, spacing, brackets and other syntax elements carefully</p>	

		<p>Program a Lego Wedo model to move by Scratch</p>	<ul style="list-style-type: none"> - Probot - Logo <ul style="list-style-type: none"> a) Direct command b) Procedure window to make own procedures <p>e.g. Dusty Bin)</p> <p>(fd/bk multiples of 10, lt 90 and rt 90)</p>	<p>Use multiples of 10 for the distance to move forward</p> <p>Repeat procedures and nested repeat procedures</p> <ul style="list-style-type: none"> - Unplugged activities - Scratch - Probot - Logo <p>Logo Own Program – Dusty Bin</p>		