

# Computing Progression Map



	Early Years Foundation Stage	
	Nursery	Reception
	<p><i>Whilst computing/technology is no longer a discrete area of learning in the EYFS, the foundations of computing are formed in nursery and reception. Children have the opportunity to use and interact with technological toys, both real and pretend for instance as part of their role play. There are also more discrete computing learning opportunities linked with other areas of learning, for instance what the internet can be used for and the importance of using it safely.</i></p>	
<b>Knowledge</b>	<p>Develop awareness that the internet can be used to find things out.</p> <p>Complete a simple programme on an electronic device.</p>	<p>Knows that information can be retrieved from books and digital devices.</p> <p>Understand programmable toys follow a series of instructions to move.</p> <p>Uses interactive technology to interact with apps and games e.g. iPads and whiteboards.</p>
<b>Skills</b>	<p>Show an interest in technological toys with knobs and pulleys, real objects such as cameras and touchscreen devices.</p> <p>Acquire basic skills in turning on and operating basic digital equipment.</p> <p>Operate mechanical toys.</p> <p>Show skill in making toys work by pressing parts or lifting flaps.</p> <p>Play with a range of materials to learn cause and effect.</p>	<p>Use information books and other sources (with adult support and guidance) to find out facts and relay these facts to others.</p> <p>Uses simple tools to affect changes to materials (PD)</p> <p>Program a toy with simple instructions to move in a desired way.</p> <p>Develops their own ideas through experimentation with diverse materials, e.g. light, projected image and loose parts to express and represent.</p> <p>Explore how different toys work and move</p>
<b>Vocabulary</b>	<p>On – off – battery – switch – button – phone – camera - iPad</p>	<p>Backwards – forwards – instruction – internet – search – website – choose - electricity</p>

<b>National Curriculum</b>	Pupils should be taught to: <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>• Create and debug simple programs</li> <li>• Use logical reasoning to predict the behaviour of simple programs</li> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• Recognise common uses of information technology beyond school</li> <li>• Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul>
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<b>Computing Systems and Networks – IT</b>		
<b>Around Us</b>		
	YEAR 1	YEAR 2
<b>Key knowledge</b>	<ul style="list-style-type: none"> <li>• To identify technology</li> <li>• To identify a computer and its main parts</li> <li>• To create rules for using technology responsibly.</li> </ul>	<ul style="list-style-type: none"> <li>• To recognise the uses and features of information technology</li> <li>• To explain how information technology helps us</li> <li>• To explain how to use information technology safely</li> <li>•</li> </ul>
<b>Key Skills</b>	<ul style="list-style-type: none"> <li>• To use a mouse in different ways</li> <li>• To use a keyboard to type on a computer</li> <li>• To use the keyboard to edit text</li> </ul>	<ul style="list-style-type: none"> <li>• To identify the uses of information technology in the school</li> <li>• To identify information technology beyond school</li> <li>• To recognise that choices are made when using information technology</li> </ul>
<b>Key Vocabulary</b>	technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.	Information technology (IT), computer, barcode, scanner/scan
<b>Creating Media</b>		
	Year 1 – Digital Painting and writing	Year 2 – Digital Photography and music
<b>Key knowledge</b>	<ul style="list-style-type: none"> <li>• To describe what different freehand tools do</li> <li>• To explain why I chose the tools I used</li> <li>• To compare painting a picture on a computer and on paper</li> <li>• To identify that the look of text can be changed on a computer</li> <li>• To explain why I used the tools that I chose</li> <li>• To compare typing on a computer to writing on paper</li> </ul>	<ul style="list-style-type: none"> <li>• To make choices when taking a photograph</li> <li>• To describe what makes a good photograph</li> <li>• To experiment with sound using a computer</li> <li>• To use a computer to create a musical pattern</li> </ul>

<b>Key Skills</b>	<ul style="list-style-type: none"> <li>• To use the shape tool and the line tools</li> <li>• To make careful choices when painting a digital picture</li> <li>• To use a computer on my own to paint a picture</li> <li>• To use a computer to write</li> <li>• To add and remove text on a computer</li> <li>• To make careful choices when changing text</li> </ul>	<ul style="list-style-type: none"> <li>• To use a digital device to take a photograph</li> <li>• To decide how photographs can be improved</li> <li>• To use tools to change an image</li> <li>• To recognise that photos can be changed</li> <li>• To say how music can make us feel</li> <li>• To identify that there are patterns in music</li> <li>• To create music for a purpose</li> <li>• To review and refine our computer work</li> </ul>
<b>Key Vocabulary</b>	Select, paint program, tool, erase, fill, undo, shape tools, word processor, keyboard, keys, type, space, backspace, cursor, toolbar, bold, italic, underline, mouse, font, redo, format, compare, typing	device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, music, quiet, loud, feelings, notes, create, open, edit.
<b>Programming</b>		
Year 1		Year 2
<b>Key knowledge</b>	<ul style="list-style-type: none"> <li>• To explain what a given command will do</li> <li>• To plan a simple program</li> <li>• To find more than one solution to a problem</li> <li>• To show that a series of commands can be joined together</li> <li>• To identify the effect of changing a value</li> <li>• To explain that each sprite has its own instructions</li> </ul>	<ul style="list-style-type: none"> <li>• To describe a series of instructions as a sequence</li> <li>• To explain what happens when we change the order of instructions</li> <li>• To use logical reasoning to predict the outcome of a program</li> <li>• To explain that programming projects can have code and artwork</li> <li>• To explain that a sequence of commands has a start</li> <li>• To explain that a sequence of commands has an outcome</li> </ul>
<b>Key Skills</b>	<ul style="list-style-type: none"> <li>• To act out a given word</li> <li>• To combine forwards and backwards commands to make a sequence</li> <li>• To combine four direction commands to make sequences</li> <li>• To choose a command for a given purpose</li> <li>• To design the parts of a project</li> <li>• To use my algorithm to create a program</li> </ul>	<ul style="list-style-type: none"> <li>• To design an algorithm</li> <li>• To create and debug a program that I have written</li> <li>• To create a program using a given design</li> <li>• To change a given design</li> <li>• To create a program using my own design</li> <li>• To decide how my project can be improved</li> </ul>
<b>Key Vocabulary</b>	Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program, command, sprite, compare, programming, area,	Sequence, clear, unambiguous, order, prediction, artwork, design, route, mat, debugging, decomposition, sequence, program, outcome, predict, design, actions, project, modify, algorithm, build, match,

	block, joining, start, run, program, background, delete, reset, predict, effect, value, instructions.	compare, features, evaluate, code.
	<b>Data and Information</b>	
	Year 1	Year 2
<b>Key knowledge</b>	<ul style="list-style-type: none"> <li>• To describe objects in different ways</li> <li>• To compare groups of objects</li> <li>• To answer questions about groups of objects</li> </ul>	<ul style="list-style-type: none"> <li>• To recognise that we can count and compare objects using tally charts</li> <li>• To recognise that objects can be represented as pictures</li> <li>• To recognise that people can be described by attributes</li> <li>• To explain that we can present information using a computer</li> </ul>
<b>Key Skills</b>	<ul style="list-style-type: none"> <li>• To label objects</li> <li>• To identify that objects can be counted</li> <li>• To count objects with the same properties</li> </ul>	<ul style="list-style-type: none"> <li>• To create a pictogram</li> <li>• To select objects by attribute and make comparisons</li> </ul>
<b>Key Vocabulary</b>	object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same	common, popular, organise, data, tally chart, votes, total, pictogram, enter, compare, count, explain, attribute, same, different, conclusion, block diagram, sharing