

# Computing Pathway



	Nursery	Reception	Year1	Year 2	Expectation
<b>Online Safety</b>	<p><i>Can say who they would talk to if something was worrying them.</i></p> <p><i>Can recognise when something is not safe.</i></p> <p><i>Can tell an appropriate adult when something has upset them or made them feel sad.</i></p> <p><i>Can show how to stay safe in the classroom.</i></p>	<p>Is careful with technology devices</p> <p>Knows that they should limit their time on the computer / tablet</p> <p>Able to tell an adult when something worrying or unexpected happens.</p> <p>Is kind to their friends</p> <p><i>Can recognise when something is not safe.</i></p> <p><i>Can stay within the given safe website e.g. Cbeebies</i></p>	<p>Able to agree and follow sensible online safety rules</p> <p>Knows that they need to keep passwords private</p> <p>Able to tell an adult when they see something unexpected or worrying online</p> <p>Know what personal information is</p>	<p>Able to agree and follow sensible online safety rules</p> <p>Know why they need to keep passwords and personal information private</p> <p>Know the things that happen online that they must tell an adult about</p> <p>Know about why it's important to be kind and polite online and in real life</p> <p>Know about why they should go online for short amount of time</p> <p>Know that not everyone is who they say they are on the internet.</p>	<p><b>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.</b></p>
<b>Programming</b>	<p>Anticipates repeated sounds, sights and actions, e.g. when an adult demonstrates an action toy several times.</p> <p>Shows interest in toys with buttons, flaps and</p>	<p>Knows how to operate simple equipment.</p> <p>Completes a simple program on a computer.</p> <p>Shows skill in making toys work by pressing parts or</p>	<p>Explain what a given command will do</p> <p>Act out a given word</p> <p>Combine forwards and backwards commands to make a sequence</p>	<p>Describe a series of instructions as a sequence</p> <p>Explain what happens when we change the order of instructions</p>	<p><b>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and</b></p>

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	<p>simple mechanisms and beginning to learn to operate them.</p> <p>Operates mechanical toys, e.g. turns the knob on a wind-up toy or pulls back on a friction car.</p> <p><i>I can make a floor robot move</i></p> <p><i>I can use simple software to make something happen</i></p> <p><i>I make choices about buttons and icons I press, touch or click</i></p>	<p>lifting flaps to achieve effects such as sound, movements or new images.</p> <p>Children recognise that their actions have an effect</p> <p><i>I can make a floor robot move</i></p> <p><i>I can use simple software to make something happen</i></p> <p><i>I make choices about buttons and icons I press, touch or click</i></p>	<p>Combine four direction commands to make sequences</p> <p>Plan a simple program</p> <p>Find more than one solution to a problem</p> <p>Choose a command for a given purpose</p> <p>Show that a series of commands can be joined together</p> <p>Identify the effect of changing a value</p> <p>Explain that each sprite has its own instructions</p> <p>Design the parts of a project</p> <p>Use my algorithm to create a program</p>	<p>Use logical reasoning to predict the outcome of a program (series of commands)</p> <p>Explain that programming projects can have code and artwork</p> <p>Design an algorithm</p> <p>Create and debug a program that I have written</p> <p>Explain that a sequence of commands has a start</p> <p>Explain that a sequence of commands has an outcome</p> <p>Create a program using a given design</p> <p>Change a given design</p> <p>Create a program using my own design</p> <p>Decide how my project can be improved</p>	<p><b>unambiguous instructions</b></p> <p><b>Create and debug simple programs</b></p> <p><b>Use logical reasoning to predict the behaviour of simple programs</b></p>
<p><b>Data Information</b></p>		<p>Knows that information can be retrieved from computers</p>	<p>Label objects</p>	<p>Recognise that we can count and compare objects using tally charts</p>	<p><b>Use technology purposefully to create, organise, store,</b></p>

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		<p>Uses ICT hardware to interact with age-appropriate computer software.</p> <p>Completes a simple program on a computer.</p> <p>They select and use technology for particular purposes</p>	<p>Identify that objects can be counted</p> <p>Describe objects in different ways</p> <p>Count objects with the same properties</p> <p>Compare groups of objects</p> <p>Answer questions about groups of objects</p>	<p>Recognise that objects can be represented as pictures</p> <p>Create a pictogram</p> <p>Select objects by attribute and make comparisons</p> <p>Recognise that people can be described by attributes</p> <p>Explain that we can present information using a computer</p>	<p><b>manipulate and retrieve digital content</b></p>
<p><b>Creating Media</b></p>	<p><i>Can use ICT hardware to interact with age appropriate computer software</i></p> <p><i>Can swipe left and right</i></p> <p><i>Can take a photo using the camera app</i></p> <p><i>Can move objects on a screen</i></p> <p><i>Can create shapes and text on a screen</i></p>	<p>Uses ICT hardware to interact with age-appropriate computer software.</p> <p>Knows that information can be retrieved from computers</p> <p>They select and use technology for particular purposes</p> <p>Can use a touch screen</p> <p>Can select a required app</p>	<p><u>Digital Painting</u></p> <p>Describe what different freehand tools do</p> <p>Use the shape tool and the line tools</p> <p>Make careful choices when painting a digital picture</p> <p>Explain why I chose the tools I used</p> <p>Use a computer on my own to paint a picture</p>	<p><u>Digital photography</u></p> <p>Use a digital device to take a photograph</p> <p>Make choices when taking a photograph</p> <p>Describe what makes a good photograph</p> <p>Decide how photographs can be improved</p> <p>Use tools to change an image</p>	<p><b>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</b></p> <p><b>Recognise common uses of information technology beyond school</b></p>

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	<p><i>Can use technology to show my learning</i></p>	<p><i>Can move objects on a screen</i></p> <p><i>Can create shapes and text on a screen</i></p> <p><i>Can use technology to show my learning.</i></p>	<p><u>Digital writing</u></p> <p>Use a computer to write</p> <p>Add and remove text on a computer</p> <p>Identify that the look of text can be changed on a computer</p> <p>Make careful choices when changing text</p> <p>Explain why I used the tools that I chose</p> <p>Compare typing on a computer to writing on paper</p>	<p>Recognise that photos can be changed</p> <p><u>Making music</u></p> <p>Say how music can make us feel</p> <p>Identify that there are patterns in music</p> <p>Show how music is made from a series of notes</p> <p>Show how music is made from a series of notes</p> <p>Create music for a purpose</p> <p>Review and refine our computer work</p>	
<p><b>Computing Systems &amp; networks – Technology Around Us</b></p>	<p>Seeks to acquire basic skills in turning on and operating some ICT equipment</p> <p><i>Can identify technology used at school.</i></p> <p><i>Can identify technology used at home.</i></p>	<p>Knows how to operate simple equipment, e.g. turns on CD player and uses remote control</p> <p>Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</p>	<p>Recognise ways that technology is used in the home, classroom and community.</p> <p>Begin to identify some of the benefits of using technology.</p> <p>Identify a computer and its main parts</p>	<p>Recognise the uses and features of information technology</p> <p>Identify the uses of information technology in the school</p> <p>Identify information technology beyond school</p>	

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		<p>They select and use technology for particular purposes</p> <p>Children recognise that a range of technology is used in places such as homes and schools</p>	<p>Use a mouse in different ways</p> <p>Use a keyboard to type on a computer</p> <p>Create rules for using technology responsibly</p>	<p>Explain how information technology helps us</p> <p>Explain how to use information technology safely</p> <p>Recognise that choices are made when using information technology</p>	
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## Key Vocabulary

EYFS	Year 1	Year 2
iPad, unlock, lock, camera screen, swipe, home button, app, device, tablet, password, username, online	Computer, direction, challenge, arrow, rewind, forward, backwards, right turn, left turn, button, sort, keys, delete, password, information, save, program, debug, character, predict, instruction, action, background, undo, pictogram, data, animation, e-Book, font, file, sound effect, backspace, clipart, lock, spreadsheet, technology, username, private, online, columns, rows, code, scale, criteria, collate, cursor, cells, search engine, avatar, notification, algorithm	Algorithm, program, debug, backspace, columns, rows, spreadsheet, pictogram, question, data, store, present, report, search, translated, input, scale, command, code, code block, cause and effect, copy and paste, cells, count tool, image toolbox, lock tool, move cell tool, speak tool, database, retrieve, value, email, inappropriate, content, attachment, binary tree, composition, manipulate, digital footprint