

# Computing Progression Plan

## EYFS curriculum links

Understanding of the World: Listening to a broad selection of stories, non-fiction, rhymes and poems will foster their understanding of our culturally, socially, technologically and ecologically diverse world.

## KS1 ICT curriculum

Pupils should be taught to:

- ✓ understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- ✓ create and debug simple programs
- ✓ use logical reasoning to predict the behaviour of simple programs
- ✓ use technology purposefully to create, organise, store, manipulate and retrieve digital content
- ✓ recognise common uses of information technology beyond school
- ✓ 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.



## Disciplinary Knowledge

Key Concepts	EYFS	Year One	Year Two
<b>Problem Solving</b>	<p>In Nursery children will be expected to:</p> <ul style="list-style-type: none"> <li>• Know how to operate simple equipment and operate toys by pressing buttons or lifting flaps in order to make a sound or movement.</li> </ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"> <li>• Complete a simple program on the computer such as a game.</li> <li>• The children can give instructions how to build, operate or make something.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Understand algorithms as sequences of instructions in everyday contexts.</li> <li>• Program Bee Bots using sequences of instructions to implement an algorithm.</li> <li>• Take real world problems and then plan a sequence of steps to solve these.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Recognise that common sequences of instructions or sets of rules can be thought of as algorithms.</li> <li>• Program on screen using sequences of instruction to implement an algorithm.</li> <li>• Create programs as sequences of instructions when programming on screen.</li> </ul>

<p><b>Programming</b></p>	<p>In Nursery children will be expected to:</p> <ul style="list-style-type: none"> <li>• Explore, through play cause and effect toys such as remote-controlled cars and sound books and will understand that their action will have an outcome.</li> </ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"> <li>• Explore, through play a range of technologies that require simple instructions and operate these to reach their desired outcome . For example, children will explore using technologies such as cameras, sound buttons, Storyphones, iPads and Beebots.</li> <li>• Children can describe their actions using appropriate language. For example, directional language to describe how something is moving.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Create and debug simple programs.</li> <li>• Create a Bee Bot program using a sequence of instructions before running it.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Create a simple program on screen, correcting any errors.</li> <li>• Create a simple program on screen with a particular goal or purpose in mind.</li> </ul>
<p><b>Logical Thinking</b></p>	<p>In Nursery children will be expected to:</p> <ul style="list-style-type: none"> <li>• Explore, through play cause and effect toys such as remote-controlled cars and sound books and will understand that their action will have an outcome.</li> </ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"> <li>• Understand that an action has a specific effect and children are able to predict what is likely to happen as a consequence of their action. For example, they understand that dragging their finger along a touch screen whilst using a paint programme will create a line on the screen.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Give explanations for what they think a program will do (written by themselves or piece of software, including computer games).</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Give logical explanations for what they think a program will do under given circumstances, including some attempt at explaining why it does what it does.</li> </ul>

<p><b>Online Safety</b> <b>(The school's RHE curriculum has specific units of work that also teach online safety.)</b></p>	<p>In Nursery children will be expected to:</p> <ul style="list-style-type: none"> <li>• Have a developing understanding what is safe and unsafe and how this makes them feel.</li> <li>• Have a developing understanding that adults and rules and boundaries are there to keep them safe.</li> </ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"> <li>• Understand that adults are there to keep them safe and they should seek permission before accessing an online game or programme.</li> <li>• Be familiar with the school's internet safety tool and know that they need to tell an adult if the hedgehog appears or something appears on their screen that makes them feel unsafe or they are unsure of.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Understand that they need to keep safe when using digital technology.</li> <li>• Understand that information on the internet can be seen by others.</li> <li>• Understand what to do if they see disturbing content online at home or at school. They should know to tell their teacher or parents or someone they can trust (helping hand).</li> <li>• Understand the school's internet safety tool and know that they need to tell an adult if the hedgehog appears or something appears on their screen that makes them feel unsafe or they are unsure of.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Know how to keep safe and show respect to others while using digital technologies.</li> <li>• Understand that they should not share personal information online.</li> <li>• Understand what to do if they have concerns about content or contact online.</li> <li>• Understand that they must always ask an adult before going online and go straight to them if you see something you are worried about.</li> <li>• Confidently know about the school's internet safety tool and know that they need to tell an adult if the hedgehog appears or something appears on their screen that makes them feel unsafe or they are unsure of.</li> </ul>
<p><b>Using IT beyond School</b></p>	<p>In Nursery children will be expected to:</p> <ul style="list-style-type: none"> <li>• Know examples of familiar technology in their environment. For example, a remote control, mobile telephone and traffic lights.</li> </ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"> <li>• Know a wide range of familiar technology within their wider environment and begin to understand how it works. For example, a camera on an iPad will take a photograph or film, scanners on a supermarket till and selecting an app to play a game.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Show an awareness of how ICT is used for communication beyond school and discuss when you may use it and what it might be useful for.</li> </ul>	<p>Children would be expected to:</p> <ul style="list-style-type: none"> <li>• Name a number of purposes for which IT is used beyond school.</li> <li>• Knows that work can be shared online, photos can be taken, edited and shared easily using digital technologies.</li> </ul>
<p><b>Creating content</b></p>	<p>In Nursery children will be expected to:</p>	<p>Children would be expected to:</p>	<p>Children would be expected to:</p>

	<ul style="list-style-type: none"><li>• Mark make on touch screen technology and be developing their skills to move objects on a screen.</li></ul> <p>In Reception children will be expected to:</p> <ul style="list-style-type: none"><li>• Understand that they can select specific tools on programmes for a desired purpose. For example, in a paint programme changing the colour.</li><li>• Beginning to move objects in a simple programme on touch screen technology with greater control and accuracy. For example, being able to match objects to a numeral in a maths game.</li></ul>	<ul style="list-style-type: none"><li>• Use a range of digital technologies to store and access digital content.</li><li>• Create their own content using range of technologies.</li></ul>	<ul style="list-style-type: none"><li>• With a given purpose, use a range of digital technologies to retrieve, organise and store digital content.</li><li>• Create and edit original content for a given purpose using digital technology.</li></ul>
--	--	--	---