



## Progression of Knowledge and Skills in Computing KS1

National Curriculum Objectives	Knowledge & Skills Progression		
Computer Science	Year 1	Year 2	Covered in
<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.</p>	<p>Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective.</p> <p>They know that an algorithm written for a computer is called a program.</p>	<p>Children can explain that an algorithm is a set of instructions to complete a task.</p> <p>When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.</p>	<p>1.4 Lego Builders 1.5 Maze Explorers 1.7 Coding</p> <p>2.1 Coding</p>
<p>Create and debug simple programs.</p>	<p>Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity.</p> <p>Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code.</p>	<p>Children can create a simple program that achieves a specific purpose.</p> <p>They can also identify and correct some errors, e.g. Debug Challenges: Chimp.</p> <p>Children's program designs display a growing awareness of the need for logical, programmable steps.</p>	<p>1.5 Maze Explorers 1.7 Coding</p> <p>2.1 Coding</p>
<p>Use logical reasoning to predict the behaviour of simple programs.</p>	<p>When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program</p>	<p>Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.</p>	<p>1.5 Maze Explorers 1.7 Coding</p> <p>2.1 Coding</p>

<b>Information Technology</b>			
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	<p>Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources and use 2Code design mode (manipulating backgrounds).</p> <p>Children can use different media in their digital content including clip art.</p>	<p>Children demonstrate an ability to organise data and can retrieve specific data by conducting simple searches.</p> <p>Children are confident when creating, naming, saving and retrieving content.</p> <p>Children use a range of media in their digital content including photos and text in tables.</p>	<p>1.1 Online Safety &amp; Exploring Purple Mash 1.7 Coding</p> <p>2.1 Coding 2.5 Effective Searching 2.6 Creating Pictures 2.8 Presenting Ideas</p>
<b>Digital Literacy</b>			
Recognise common uses of information technology beyond school.	<p>Children understand what is meant by technology and can identify a variety of examples both in and out of school.</p> <p>They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.</p>	<p>Children can effectively retrieve relevant, purposeful digital content using a search engine.</p> <p>They can apply their learning of effective searching beyond the classroom.</p> <p>Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.</p>	<p>1.9 Technology outside school</p> <p>2.5 Effective Searching</p>
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.	<p>Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons.</p> <p>Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.</p>	<p>Children know the implications of inappropriate online searches.</p> <p>Children begin to understand how things are shared electronically.</p> <p>They know ways of reporting inappropriate behaviours and content.</p>	<p>1.1 Online Safety &amp; Exploring Purple Mash</p> <p>2.5 Effective Searching 2.8 Presenting Ideas</p>

