



**Progression in Computing**

Early Learning Goals EYFS		National Curriculum KS1	
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for a particular purpose.		<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>	
Area of Learning	Key Learning in Reception	Year 1	Year 2
<b>Computer Science</b> <b>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.</b>	Children understand that they can give instructions to a device or person and they will carry out those instructions.  <u><b>Key Vocabulary</b></u> Instructions Beebot Robot	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program.  <u><b>Key Vocabulary</b></u> Algorithms Program (recap from Reception) Device Command Direction	Children can explain that an algorithm is a set of instructions to complete a task. 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.  <u><b>Key Vocabulary:</b></u> Algorithms Program Device

<p><b><u>Computer Science</u></b>  <b>Create and debug simple programs.</b></p>	<p>Children can adapt their instructions to make their device do what they want it to.</p> <p><b><u>Key Vocabulary</u></b>  Went wrong  Fix it</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. 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><b><u>Key Vocabulary</u></b>  Code  Debug  Event  Action</p>	<p>Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.</p> <p><b><u>Key Vocabulary</u></b>  Action  Button  Click Events  Code  Collision Detection  Debug  Event  Object  Properties  Run</p>
<p><b><u>Computer Science</u></b>  <b>Use logical reasoning to predict the behaviour of simple programs.</b></p>	<p>Predict what will happen as a result of the input (output)</p> <p><b><u>Key Vocabulary</u></b>  Beebot  What will happen?</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 Computer Science of the program.</p> <p><b><u>Key Vocabulary:</u></b>  Program  Code</p>	<p>Children can identify the parts of a program that respond to specific events and initiate specific actions.</p> <p><b><u>Key Vocabulary</u></b>  Program  Predict</p>

**'God is my strength, in whom I trust.' Psalm 18**

**Information Technology**

**Use technology purposefully to create, organise, store, manipulate and retrieve digital content.**

Use technology and IT equipment (e.g. camera, iPad, video/video clips, apps, or the internet) to make observations about their immediate environment.  
Children will use a keyboard to write simple sentences including a capital letter.

**Key Vocabulary**

Camera  
Photo  
Zoom in/out  
Picture  
Text  
Capital letter

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, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count. Children will explore ideas using digital sources, i.e. the internet.

**Key Vocabulary**

Edit  
Save  
Open  
Store  
Collect data  
Compare  
Pictogram  
Data  
Animation  
Background  
Clip Art  
Sound effect  
Font  
Text  
Button  
Cell  
Column  
Data  
Row  
Spreadsheet

Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound. Children will use a simple graphics package to create images and effects with lines, shape and fill tools, colours and textures and use basic selection and cropping tools.

**Key Vocabulary**

Binary Tree  
Data  
Database  
Text  
Sound  
Image  
Block graph  
Copy  
Count tool  
Drag  
Equals tool  
Search  
Sort  
Sound Effect  
Soundtrack  
Impressionism  
Palette  
Pointillism  
Surrealism  
e-book  
Mind map

			Presentation Quiz
<p><b><u>Digital Literacy</u></b>  <b>Recognise common uses of information technology beyond school.</b></p>	<p>Recognise that a range of technology is used in places such as homes and schools.</p> <p><b><u>Key Vocabulary</u></b>          Technology          Home          School</p>	<p>Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. Digital Literacy a microwave vs. a chair.</p> <p><b><u>Key Vocabulary</u></b>          Device          Digital          Electronic</p>	<p>Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. 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><b><u>Key Vocabulary</u></b>          Search engine          Domain          Web Address          Web Page          Website          Animations</p>

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<p><b><u>Digital Literacy</u></b>  <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>	<p>Children <u>begin</u> to use usernames and passwords to save their work.</p> <p><b><u>Key Vocabulary</u></b>  Save  Username  Password  Personal information</p>	<p>Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. 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><b><u>Key Vocabulary</u></b>  Password  Safety  Private  Avatar  Log in  Log out</p>	<p>Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.</p> <p><b><u>Key Vocabulary</u></b>  Display board  Sharing  Email  Attachment  Digital Footprint  Search</p>
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**CS - Computer Science**

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.

**IT – Information Technology**

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

**DL – Digital Literacy**

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.

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