



Computing - Progression of Skills and Knowledge in KS1

Curriculum Objectives	Year 1	Year 2
Understand what algorithms are.	<p>We are Treasure Hunters</p> <p>Give one another instructions to move around a large space.</p>	<p>We are Games testers</p> <p>Understand that computer programmers will have implemented many algorithms in making a computer game.</p> <p><i>Progression from concrete to abstract thinking; from considering what an algorithm is to how it applies in computing.</i></p>
Understand how algorithms are implemented as programs on digital devices.	<p>We are Collectors</p> <p>Use binary (yes/no) questions to identify an image from their collection.</p>	<p>We are Games Testers</p> <p>Understand that computer programmers will have implemented many algorithms in making a computer game. Notice common features in several game algorithms.</p> <p><i>Progression from simple if/then thinking in Year 1 (binary choice) to identifying more complex algorithms in computers, and shared features across games.</i></p>
Understand that programs execute by following precise and unambiguous instructions.	<p>We are Treasure Hunters</p> <p>Give one another instructions to move around a large space. Create a program to move a toy to a particular location.</p> <p>We are TV chefs</p> <p>Create a recipe with clear steps.</p>	<p>We are Games Testers</p> <p>Understand that computer games are made up of precise instructions for the computer to follow.</p> <p><i>Progression from understanding the need for unambiguous and logical instructions in concrete example to the need in computer algorithms.</i></p>
Creating and debugging simple programs.	<p>We are Treasure Hunters</p> <p>Debug a program.</p>	<p>We are Astronauts</p> <p>Debug simple programs. Solve a challenge ('Earth-Moon-Mars') on a variety of programmable devices.</p> <p><i>Progression from 'debugging' in concrete form – the beebot – to debugging computer program in the Earth-Moon-Mars challenge.</i></p>



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Use logical reasoning to predict the behaviour of simple programs.	We are TV chefs Predict what will happen when someone follows their recipes.	We are Games Testers Describe clearly what happens in a computer game. Conduct tests to check their predictions. <i>Progression from 'concrete', 'real life' example – what will happen when someone follows a recipe – to applying this logical reasoning to computer programs.</i>
Use technology purposefully to create, store, manipulate and retrieve digital content.	We are TV chefs Film video, keeping the camera still and steady; join video clips together.	We are Researchers Organise questions on a mind map. Find information using a general purpose search engine. Add appropriate images to a presentation. <i>Progression from using technology to create digital content towards retrieving digital content from search engine, and manipulating digital content through selection of images.</i>
Recognise common uses of information technology beyond school.	We are Collectors Identify the differences between clip art and digital photographs.	We are Researchers Present their findings to an audience. <i>Progression from identifying differences between two categories – digital and clip art – in information technology, and using digital technology to research and present their findings to an audience, a skill that is used beyond school.</i>
Use technology safely and respectfully keeping personal information private.	We are Collectors Know what they have to do if they discover bad images. Know that they should not post personal information or photos to the web.	We are Games Testers Be aware of and observe age restrictions on commercial games. Know that they should tell their parents or carers if they are concerned about something in a computer game. Understand that playing computer games should be balanced with other activities. <i>Progression from knowing the need to consult adults and keep information private, to more nuanced understanding of need to maintain technology balance with other areas of life, and why age restrictions are in place.</i>