

Lowe's Wong Infant School

Computing Progression Document



Key Area	Foundation 1	Foundation 2	Year 1	Year 2
Computing Science	<p>Know that pressing different buttons the output can change and a sequence can be created.</p> <p>Know that by combining or ordering button presses more complex sequences can be created.</p>	<p><u>Unit Robots</u></p> <p>Know how to talk about where a toy vehicle is moving whilst moving it.</p> <p>Know how to describe the route taken by a toy vehicle.</p> <p>Know how to follow directions to make a route for a toy vehicle.</p> <p>Know that a route can be planned for a toy vehicle.</p> <p>Know how to follow own plan for where the toy vehicle should move.</p> <p>Know how to control the forwards, backwards and rotation of a floor robot one step at a time.</p> <p>Know how to program a 3-step route for a floor turtle program and predict where a floor robot will end up when given the instructions for a 2 or 3 step route.</p> <p>Know how to plan a route for a floor robot and then carry out these instructions one step at a time.</p> <p>Know how to plan a route for a floor robot and then carry out these instructions more than one step at a time.</p>	<p><u>Unit 1.2 Grouping and Sorting</u></p> <p>Know how to think logically about the steps of a process.</p> <p>Know how to sort items using a range of criteria.</p> <p>Know how to sort items on the computer using the 'Grouping' activities in Purple Mash.</p> <p>Know that logical thinking and the use of technology can be bought together.</p> <p>Know that the term 'algorithm' can be used to describe logically following a process.</p> <p><u>Unit 1.4 Lego Builders</u></p> <p>Know that it is important to follow instructions.</p> <p>Know how to follow and create simple instructions on the computer.</p> <p>Know how to consider how the order of instructions affects the result.</p> <p><u>1.5 Maze Explorers</u></p> <p>Know how to understand the functionality of the basic direction keys in Challenges 1 and 2.</p> <p>Know how to use the direction keys to complete the challenges successfully.</p>	<p><u>Unit 2.1 Coding</u></p> <p>Know how to explain what an algorithm is.</p> <p>Know how to create a computer program using an algorithm.</p> <p>Know how to create a program using a given design.</p> <p>Know how to understand the collision detection event.</p> <p>Know that algorithms follow a sequence.</p> <p>Know how to design an algorithm that follows a timed sequence.</p> <p>Know that different objects have different properties.</p> <p>Know that different events do different things in code.</p> <p>Know how to create a program using a given design.</p> <p>Know how and understand the function of buttons in a program.</p> <p>Know that debugging has a meaning.</p> <p>Know that there is a need to test and debug a program repeatedly.</p> <p>Know how to debug simple programs.</p>

			<p>Know how to understand the functionality of the basic direction keys in Challenges 3 and 4.</p> <p>Know how to create and debug a set of instructions (algorithm). Know how to use the additional direction keys as part of their algorithm.</p> <p>Know how to change and extend the algorithm list.</p> <p>Know how to create a longer algorithm for an activity.</p> <p>Know how to provide an opportunity for the children to set challenges for each other.</p> <p>Know how to provide an opportunity for the teacher to add these challenges to a display board for the class to try.</p> <p><u>Unit 1.7 Coding</u></p> <p>Know that and understand what instructions are.</p> <p>Know how to predict what will happen when instructions are followed.</p> <p>Know that computer programs work by following instructions called code.</p> <p>Know how to use code to make a computer program.</p> <p>Know how to understand what objects and actions are.</p> <p>Know how to understand what an event is.</p> <p>Know how to use an event to control an object.</p> <p>Know how to understand what an event is.</p> <p>Know how to understand how code executes when a program</p>	
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			<p>is run.</p> <p>Know how to understand what backgrounds and objects are.</p> <p>Know how to understand how to use the scale property.</p> <p>Know how to plan a computer program.</p> <p>Know how to make a computer program.</p>	
<p>Information technology</p>	<p>Know how to take still images using an iPad.</p> <p>Know that different technology has specific uses.</p>	<p><u>Unit- Mouse and trackpad skills</u></p> <p>Know how to hold a computer mouse with my finger on the correct buttons.</p> <p>Know how to use a mouse to make the cursor move around the computer screen where I want it to go.</p> <p>Know how to use a mouse accurately to click and drag objects on the screen.</p> <p>Know how to use the mouse roller to scroll up and down a page.</p> <p><u>Unit- Keyboard skills</u></p> <p>Know how to find all the letters of the alphabet on a keyboard.</p> <p>Know how to correct typed work without re-doing the work entirely using the delete keys.</p> <p>Know how to type capital letters and lower case and know how to change between these.</p> <p>Know how to type numbers using a keyboard.</p> <p>Know how to move to the next line down when typing.</p> <p>Know how to use the arrow keys to move around the screen.</p> <p><u>Unit- Drawing skills</u></p> <p>Know how to select colours when painting on the computer.</p>	<p><u>Unit 1.3 Pictograms</u></p> <p>Know that data can be represented in picture format.</p> <p>Know how to contribute to a class pictogram.</p> <p>Know how to use a pictogram to record the results of an experiment.</p> <p><u>Unit 1.6 Animated Storybooks</u></p> <p>Know that there is a difference between traditional books and e-books.</p> <p>Know how to explore the tools of 2Create a Story's My Simple Story level.</p> <p>Know how to save the page they have created.</p> <p>Know how to add animation to a picture.</p> <p>Know how to play the pages created so far.</p> <p>Know how to save the additional changes and overwrite the file.</p> <p>Know how to add a sound effect to a picture.</p> <p>Know how to add a voice recording to the picture.</p> <p>Know how to add created music to the picture.</p> <p>Know how to add a background to the story.</p>	<p><u>Unit 2.3 Spreadsheets</u></p> <p>Know that the work done in 2Calculate in year 1 is reviewed.</p> <p>Know how to identify spreadsheet related vocabulary.</p> <p>Know how to use some 2Calculate tools that were introduced in year 1.</p> <p>Know how to use copying, cutting and pasting shortcuts in 2Calculate.</p> <p>Know how to use 2Calculate totalling tools.</p> <p>Know how to use 2Calculate to solve a simple puzzle.</p> <p>Know how to explore the capabilities of a spreadsheet in adding up coins to match the prices of objects.</p> <p>Know how to add and edit data in a table layout.</p> <p>Know how to use the data to manually create a block graph.</p> <p><u>Unit 2.4 Questioning</u></p> <p>Know that the information provided on pictograms is of limited use beyond answering simple questions.</p> <p>Know how to use yes/no questions to separate information.</p>

		<p>Know how to draw on a computer using a mouse. Know how to use a computer to draw with different widths of pens. Know how to use the undo and erase button correctly. <u>Unit- Sounds</u> Know how to make music using a computer. Know how to use a device to record speaking and play back the sounds. <u>Unit- Photographs</u> Know how to take photos using a digital device. Know how to use the webcam in Mini Mash. Know that photos can be opened in Purple Mash.</p>	<p>Know how to demonstrate a good understanding of all the tools they have used in 2Create a Story and use these successfully to create their own story. Know how to use the copy and paste feature to create additional pages. Know how to continue and complete an animated story. Know how to create a class display board of the story books created by the class. <u>Unit 1.8 Spreadsheets</u> Know how a spreadsheet looks. Know how to navigate around a spread sheet and enter data. Know that there is new vocabulary to learn related to spreadsheets. Know how to add clipart images to a spreadsheet. Know how use the 'move cell' and 'lock' tools. Know how to use the 'speak' and 'count' tools in 2Calculate to count items.</p>	<p>Know how to construct a binary tree to separate different items. Know how to use 2Question (a binary tree) to answer questions. Know how to use a database to answer more complex search questions. Know how to use the Search tool to find information. <u>Unit 2.6 Creating pictures</u> Know how to explore 2Paint A Picture. Know how to look at the work of Impressionist artists and recreate them using the Impressionism template. Know how to look at the work of pointillist artists such as Seurat. Know how to recreate pointillist art using the Pointillism template. To look at the work of Piet Mondrian and recreate it using the Lines template. To look at the work of William Morris and recreate it using the Patterns template. Know how to look at some surrealist art and create your own using the eCollage function in 2Paint A Picture. <u>Unit 2.7 Making Music</u> Know how to explore, edit and combine sounds using 2Sequence. Know how to add sounds to a tune to improve it. Know that and think about how music can be used to express feelings and create tunes which depict feelings. Know how to upload a sound</p>
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				<p>from a bank of sounds into the Sounds section.</p> <p>Know how to record their own sound and upload it into the Sounds section.</p> <p>Know how to create their own tune using the sounds which they have added to the Sounds section.</p> <p><u>Unit 2.8 Presenting ideas</u></p> <p>Know how a story can be presented in different ways.</p> <p>Know how to make a quiz about a story or class topic.</p> <p>Know how to make a fact file on a non-fiction topic.</p> <p>Know how to make a presentation to the class.</p>
<p>Digital literacy</p>	<p>Know that technology can be used in many ways at home.</p> <p>Know that technology can be used to achieve specific life tasks.</p>	<p><u>Unit- Technology around us</u></p> <p>Know that technology is used at home.</p> <p>Know that technology is used in the world around.</p> <p><u>Unit- Safety and privacy</u></p> <p>Know that work on the computer belongs to me and other people's work belongs to them</p> <p>Know that somethings are private.</p> <p>Know how to find who can help me when I am feeling worried</p> <p><u>Using Purple Mash with an individual log in</u></p> <p>Know that individual Purple Mash page can be accessed on a device at school and at home.</p>	<p><u>Unit 1.1 Online safety and exploring Purple Mash</u></p> <p>Know how to log in safely and understand why that is important.</p> <p>Know how to create an avatar and to understand what this is and how it is used.</p> <p>Know how to create a picture and add their own name to it.</p> <p>Know how to start to understand the idea of 'ownership' of creative work.</p> <p>Know how to save work to the My Work area and understand that this is private space.</p> <p>Know how to find saved work in the Online Work area.</p> <p>Know that the teacher has access to in Purple Mash.</p> <p>Know how to learn how to see messages left by the teacher on their work.</p>	<p><u>Unit 2.2 Online Safety</u></p> <p>Know how to refine searches using the Search tool.</p> <p>Know how to share work electronically using the display boards.</p> <p>Know how to use digital technology to share work on Purple Mash to communicate and connect with others locally.</p> <p>Know how to have some knowledge and understanding about sharing more globally on the Internet.</p> <p>Know how to introduce Email as a communication tool using 2Respond simulations.</p> <p>Know how we talk to others when they are not there in front of us.</p> <p>Know how to open and send simple online communications in the form of email.</p>

			<p>Know how to learn how to search Purple Mash to find resources. Know that there are types of resources available in the Topics section.</p> <p>Know how to use the icons used in the resources in the Topics section.</p> <p>Know how to start to add pictures and text to work.</p> <p><u>Unit 1.9 Technology outside school</u></p> <p>Know how to find and understand examples of where technology is used in the local community.</p> <p>Know that there are different types of technology outside school.</p>	<p>Know that information put online leaves a digital footprint or trail. Know how to think critically about the information they leave online. Know how to identify the steps that can be taken to keep personal data and hardware secure.</p> <p><u>Unit 2.5 Effective Searching</u></p> <p>Know how to use the terminology associated with the Internet and searching.</p> <p>Know how to gain a better understanding of searching the Internet.</p> <p>Know how to create a leaflet to help someone search for information on the Internet.</p>
Key Vocabulary	iPad, camera, buttons, photo, personal information.	Beebot, forwards, backwards, turn, left, right, log in, log out, password, sequence, instructions, keyboard	Spacebar, backspace, delete, shift, enter keys, font, animation, file, sound effect, instruction, algorithm, program, debug, direction, coder, coding, command, privacy, safe, trust. See separate unit plan for specific vocabulary for each unit.	Copy and paste, save, retrieve, click, drag, resize, animation, movement, clipart, image, app, Action, algorithm, bug, debug, debugging, command, input, repeat, scale, character, Search, internet, website, sharing, email, message, text, mobile phone, attachment. See separate unit plan for specific vocabulary for each unit.