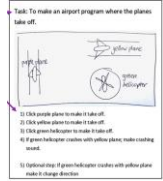
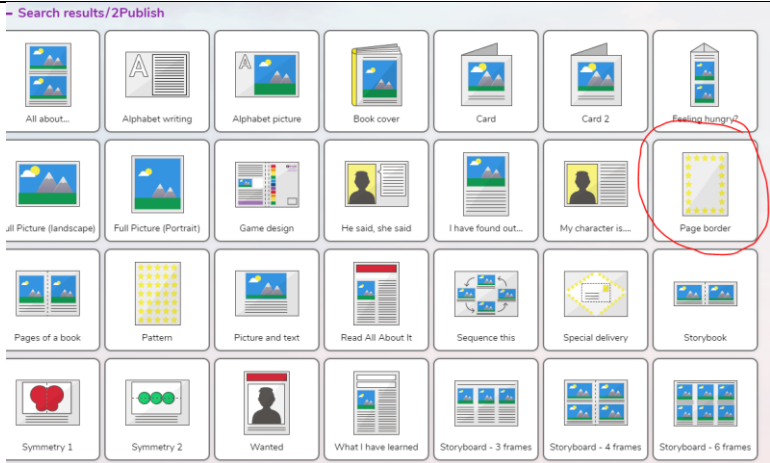


## Year 2 Year Overview Computing Curriculum (updated 2023)

<b>National Curriculum Objectives</b>	<p><b>Computer Science (CS):</b></p> <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> </ul> <p><b>Information Technology (IT):</b></p> <ul style="list-style-type: none"> <li>● Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>Digital Literacy (DL):</b></p> <ul style="list-style-type: none"> <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>		
	<b>Unit (Purple mash)</b>	<b>Learning Objectives (colour coded to NC objectives)</b>	<b>Activities outline</b>
<b>Term 1</b>	<b>Unit 2.7 Making Music &amp; Recap Online Safety Rules</b>	<ul style="list-style-type: none"> <li>● To make music digitally using 2Sequence.</li> <li>● To explore, edit and combine sounds from preset sounds</li> <li>● To create their own tune using a variety of sounds</li> <li>● Extension: To record their own sounds and upload them</li> </ul>	<p>Recap whole school online safety rules  <i>1 or 2 sessions</i>  <i>This unit that would hit IT objective of using Computers to create - please see Purple Mash unit plan pop s and condense as needed (hitting objectives on left)</i>  <i>Chromebooks and iPads</i>  <i>c/c Music!</i>  <b>Vocab</b>  <i>Soundtrack, instrument, composition, digital, tempo, volume, sound effects, bpm (beats per minute)</i></p>
<b>Term 2</b>	<b>Unit 2.1: Coding (non-negotiable)</b>	<ul style="list-style-type: none"> <li>● To understand and explain what is meant by the vocabulary algorithm, event and object.</li> <li>● To create a simple algorithm</li> <li>● To understand the collision detection event</li> <li>● To understand timer command</li> <li>● To understand that algorithms follow a sequence</li> <li>● To know what debugging means.</li> <li>● To understand the need to test and debug a program repeatedly.</li> </ul>	<p>Ipads - all activities and programs need to be set as 2dos for the children to access            May need more time for Lesson 5. Lesson 1-3 may be able to put 2 together to do this over 2 lessons.  <b>Lesson 1</b>            Recap what an <b>algorithm</b> is - precise set of instructions            Introduce vocab of <b>event</b> and <b>object</b>- (event something causes a command to happen object - something you can programme to do actions). There is an optional vocab quiz to review - quite challenging            Use Air Traffic control final stage (linked to on full Purple mash plans or powerpoint) to learn how to program 'when clicked' events. Share</p> 

		<ul style="list-style-type: none"> <li>● To debug simple programs</li> <li>● To create programs using different kinds of objects whose behaviours are limited to specific actions.</li> <li>● To predict what the objects will do in other programs, based on their knowledge of what the object is capable of</li> <li>● To discuss how logic helped them understand that they could only predict specific actions, as that is what the objects are limited to</li> <li>● To use all the coding knowledge that they have learned to create a more complex program that tells as story.</li> </ul>	<p>a copy of the task for them to refer to (may be helpful to have some printed copies for chn to see as you will be demoing on the screen)</p> <p>Extra challenge: when lots of chn are ready show them how to do a collision detection event.</p> <p><b>Lesson 2:</b>  <del>Princess and the Frog challenges guided lesson</del> CHANGE TO GUARD THE CASTLE  Focus is on <b>collision detection</b> - model on board first (there is also a video guide)  Extra challenge: make own princess and frog story</p> <p><b>Lesson 3</b>  Magician challenges guided lesson  Focus is on using the timer command - explain carefully the need to inset each timer so that they run one after the other (if you put in as separate blocks they all try and run at the same time)  Extra challenge: make own magician story</p> <p><b>Lesson 4:</b>  No ipads needed - Model how to create a scene and code using the criteria below to give them ideas and so they know what options are available - whole class on the screen. Show them what background and character options they can choose from. For the background design element use Free code chimp - choose a <b>free code scene</b> ( <u>not</u> just free code chimp as they have less options so less overwhelming than the standard Free code chimp). Space themed?  {Progressing from Year 1 criteria (algorithm should have 3 objects each with a command, including a 'when clicked' event and extra challenge to experiment with sound effects or buttons)}  Year 2 criteria (share this with the chn):  5 or 6 characters (and so 5 or 6 commands)  Including a when clicked, collisions detection and timer  Activity - Design background on paper and write what commands they would like to use</p> <p><b>Lesson 5 (may need longer for this? Or wish to revisit to get them to add in more features):</b>  Create their designs and code as per plan, adapting if needed - save work  Recap how to include different events/commands and how to switch between design mode and coding screen. Highlight importance of  Extra challenge - demo how to include a 'button' - use with the 'when clicked' event</p>
--	--	--	--

			<p><b>Lesson 6:</b> Debugging as on powerpoint - chn do the simpler debugging on ipads themselves. Look through the more complicated ones (Smelly code 1 and 2) as a whole class carpet time.</p> <p><b>Vocab</b>  <i>Algorithm, instructions, code, block of code, program, run, event, action, command, object debug, when clicked, collision detection, timer command, background, scene nesting, properties</i></p>
Term 3	<p><b>Unit 2.5: Effective searching &amp; Online Safety Day &amp; use of technology outside school</b> (non-negotiable)</p>	<ul style="list-style-type: none"> <li>● To know how to use the internet to search for information</li> <li>● To know the internet is a good source of information (recapping).</li> <li>● To know our school Online Safety Rules and be able to explain what they mean.</li> <li>● To know some people can be unkind online and to ask for help, just like if someone is unkind in the real world.</li> <li>● To know not to trust strangers online, just like in the real world</li> <li>● To know not to share private information online and know that once information is put online it is difficult to remove (digital footprint).</li> <li>● To know not to trust everything they read or see online and to check how reliable a source is.</li> </ul>	<p><b>Online Safety Day – Activities planned separately and KS1 assembly.</b></p> <p><b>Short session carpet time sessions on Effective internet searching</b> – following Purple mash unit 2.5 but condensed into 1 or 2 carpet times. (1<sup>st</sup> 2 sessions, not 3<sup>rd</sup> session creating a leaflet, unless time!)</p> <p><b>Home learning project</b> – quick recap of uses of technology in school and ask chn to find out about uses outside of school - encouraging them to think beyond their own homes; looking into how different jobs use it, shops etc</p> <p><b>Vocab</b>  <i>internet, source, trust, reliable, digital footprint, information, fact</i></p>
Term 4	<p><b>Word Processing</b></p>	<ul style="list-style-type: none"> <li>● To use the keyboard to type simple sentences.</li> <li>● To use the space bar, full stop and caps lock or shift keys</li> <li>● To use the backspace and delete keys to edit mistakes.</li> </ul> <p>WOULD YOU LIKE TO SWAP WITH CODING IN THE FUTURE- TERM 2???</p> <p>POTENTIALLY LESS OF A CLASH WITH DEVICES</p>	<p><b>Chromebooks</b>  1 or 2 session</p> <p>There are options on Purple Mash that could be used for typing captions or stories, choose to suit topic/other learning.</p> <p>2Publish (has options to add borders etc to publish a piece of writing - see below)</p> <p>2Write - simplified version of word</p>

			 <p>- Search results/2Publish</p> <p>All about... Alphabet writing Alphabet picture Book cover Card Card 2 Feeling hungry</p> <p>All Picture (landscape) Full Picture (Portrait) Game design He said, she said I have found out... My character is... Page border</p> <p>Pages of a book Pattern Picture and text Read All About It Sequence this Special delivery Storybook</p> <p>Symmetry 1 Symmetry 2 Wanted What I have learned Storyboard - 3 frames Storyboard - 4 frames Storyboard - 6 frames</p> <p><b>Please set the chosen application as a 2do so that they can access and save in the usual way.</b></p> <p><i>c/c English writing</i></p> <p><b>Vocab</b>  <i>chromebook, space bar, backspace, text cursor, shift, delete, full stop, tool, undo, hide keyboard button, save, exit</i></p>
Term 5	Photo editing	<ul style="list-style-type: none"> <li>To recap taking a photograph.</li> <li>To understand how to tap the screen to help it focus.</li> <li>To use photo editing software to edit a photograph.</li> <li>To use drawing tools and clip arts to edit photographs</li> <li>To use the rotate icon to switch the orientation of photographs.</li> </ul>	<p><b>Ipads</b>  <i>Photo editing (IPads)</i>  1 or 2 sessions  <i>c/c Would link nicely with most topics – make self look like a knight/dragon/astronaut etc</i></p> <p><b>Vocab</b>  <i>clip art, image, camera, lens, copy, paste, camera, lens, focus</i></p>
Term 6	Unit 2.3 Spreadsheets	<ul style="list-style-type: none"> <li>To review prior learning of spreadsheets (rows/columns, add clip art, count tool, open and save)</li> <li>To use the copy and paste tools</li> </ul>	<p><b>Chromebooks</b>  <i>Series of lessons</i>  <i>c/cPotential to link some with multiplication (rows/columns) or addition</i></p>

		<ul style="list-style-type: none"><li>•To use the totalling tool</li><li>•To use a spreadsheet to add amounts.</li><li>•To create a table and block graph</li></ul>	<b>Vocab</b> <i>chromebook, arrow keys, spreadsheet, cell, rows, columns, table, count tool, block graph</i>
--	--	---	---