

Unit 4.1 – Coding

Lesson	Title	Aims (Objectives)	Success Criteria
1	Design, Code, Test and Debug	<ul style="list-style-type: none"> <li>To review coding vocabulary and knowledge.</li> <li>To create a simple computer program.</li> </ul>	<ul style="list-style-type: none"> <li>Children can explore different object types in 2Code.</li> <li>Children can use a background and objects to create a scene.</li> <li>Children can plan an algorithm for their scene and use 2Code to program it.</li> </ul>
2	IF Statements	<ul style="list-style-type: none"> <li>To begin to understand selection in computer programming.</li> <li>To understand how an IF statement works.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a program that includes an IF statement.</li> <li>Children can interpret a flowchart that depicts an IF statement.</li> </ul>
3	Co-ordinates	<ul style="list-style-type: none"> <li>To understand how to use co-ordinates in computer programming.</li> <li>To understand how an IF statement works.</li> </ul>	<ul style="list-style-type: none"> <li>Children can make use of the X and Y properties of objects in their coding.</li> <li>Children can create a program that includes an IF statement.</li> </ul>
4	Repeat Until and IF/ELSE Statements	<ul style="list-style-type: none"> <li>To understand the Repeat until command.</li> <li>To begin to understand selection in computer programming.</li> <li>To understand how an IF/ELSE statement works.</li> </ul>	<ul style="list-style-type: none"> <li>Children can read code that includes repeat until and IF/ ELSE and explain how it works.</li> <li>Children can create a program that includes an IF/ ELSE statement.</li> <li>Children can interpret a flowchart that depicts an IF/ ELSE statement.</li> </ul>
5	Number Variables	<ul style="list-style-type: none"> <li>To understand what a variable is in programming.</li> <li>To use a number variable.</li> </ul>	<ul style="list-style-type: none"> <li>Children can explain what a variable is in programming.</li> <li>Children can create and use variables when programming.</li> </ul>
6	Making a Playable Game	<ul style="list-style-type: none"> <li>To review vocabulary and concepts learnt in Year 4 Coding.</li> <li>To create a playable game.</li> </ul>	<ul style="list-style-type: none"> <li>Children can read code that includes repeat until and IF/ ELSE and explain how it works.</li> <li>Children can create a program that includes and IF/ ELSE statement.</li> <li>Children can interpret a flowchart that depicts an IF/ ELSE statement.</li> </ul>

## Unit 4.2 – Online Safety

Lesson	Title	Aims (Objectives)	Success Criteria
1	Going Phishing	<ul style="list-style-type: none"> <li>To understand how children can protect themselves from online identity theft.</li> <li>To understand that information put online leaves a digital footprint or trail and that this can aid identity theft.</li> </ul>	<ul style="list-style-type: none"> <li>Children know that security symbols such as a padlock protect their identity online.</li> <li>Children know the meaning of the term 'phishing' and are aware of the existence of scam websites.</li> <li>Children can explain what a digital footprint is and how it relates to identity theft.</li> <li>Children can give examples of things that they would not want to be in their digital footprint.</li> </ul>
2	Beware Malware	<ul style="list-style-type: none"> <li>To identify the risks and benefits of installing software including apps.</li> </ul>	<ul style="list-style-type: none"> <li>Children can identify possible risks of installing free and paid for software.</li> <li>Children know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer.</li> <li>Children know what a computer virus is.</li> </ul>
3	Plagiarism	<ul style="list-style-type: none"> <li>To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.</li> <li>To identify appropriate behaviour when participating or contributing to collaborative online projects for learning.</li> </ul>	<ul style="list-style-type: none"> <li>Children can determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it</li> <li>Children know about citing sources that they have used.</li> </ul>
4	Healthy Screen-Time	<ul style="list-style-type: none"> <li>To identify the positive and negative influences of technology on health and the environment.</li> <li>To understand the importance of balancing game and screen time with other parts of their lives.</li> </ul>	<ul style="list-style-type: none"> <li>Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities.</li> <li>Children can give reasons for limiting screen time.</li> </ul>

## Unit 4.3 – Spreadsheets

Lesson	Title	Aims (Objectives)	Success Criteria
1	Formula Wizard and Formatting Cells	<ul style="list-style-type: none"> <li>To explore how the numbers entered into cells can be set to either currency or decimal.</li> <li>To explore the use of the display of decimal places.</li> <li>To find out how to add formulae to a cell.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use the number formatting tools within 2Calculate to appropriately format numbers.</li> <li>Children can add a formula to a cell to automatically make a calculation in that cell.</li> </ul>
2	Using the Timer and Spin Buttons	<ul style="list-style-type: none"> <li>To explore how tools can be combined to use 2Calculate to make number games.</li> <li>To explore the use of the timer, random number and spin button tools.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use the timer, random number and spin button tools.</li> <li>Children can combine tools to make fun ways to explore number.</li> </ul>
3	Line Graphs	<ul style="list-style-type: none"> <li>To use the line graphing tool in 2Calculate with appropriate data.</li> <li>To interpret a line graph to estimate values between data readings.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use a series of data in a spreadsheet to create a line graph.</li> <li>Children can use a line graph to find out when the temperature in the playground will reach 20°C.</li> </ul>
4	Using a Spreadsheet for Budgeting	<ul style="list-style-type: none"> <li>To use the currency formatting tool in 2Calculate.</li> <li>To use 2Calculate to create a model of a real-life situation.</li> </ul>	<ul style="list-style-type: none"> <li>Children can make practical use of a spreadsheet to help them plan actions.</li> <li>Children can use the currency formatting in 2Calculate.</li> </ul>
5	Exploring Place Value with a Spreadsheet	<ul style="list-style-type: none"> <li>To use the functions of allocating value to images in 2Calculate to make a resource to teach place value.</li> </ul>	<ul style="list-style-type: none"> <li>Children can allocate values to images and use these to explore place value.</li> <li>Children can use a spreadsheet made in 2Calculate to check their understanding of a mathematical concept.</li> </ul>

## Unit 4.5 – Logo

Lesson	Title	Aims (Objectives)	Success Criteria
1	Introduction to 2Logo	<ul style="list-style-type: none"> <li>To learn the structure of the language of 2Logo.</li> <li>To input simple instructions in 2Logo</li> </ul>	<ul style="list-style-type: none"> <li>Children know what the common instructions are in 2Logo and how to type them.</li> <li>Children can follow simple 2Logo instructions to create shapes on paper.</li> <li>Children can follow simple instructions to create shapes in 2Logo.</li> </ul>
2	Creating Letters using 2Logo	<ul style="list-style-type: none"> <li>To use 2Logo to create letter shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create 2Logo instructions to draw patterns of increasing complexity.</li> <li>Children understand the pu and pd commands.</li> <li>Children can write 2Logo instructions for a word of four letters.</li> </ul>
3	Using the 'Repeat' Command in 2Logo	<ul style="list-style-type: none"> <li>To use the Repeat command in 2Logo to create shapes.</li> </ul>	<ul style="list-style-type: none"> <li>Children can follow 2Logo code to predict the outcome.</li> <li>Children can create shapes using the Repeat command.</li> <li>Children can find the most efficient way to draw shapes.</li> </ul>
4	Using Procedures	<ul style="list-style-type: none"> <li>To use and build procedures in 2Logo.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use the Procedure feature.</li> <li>Children can create 'flowers' or 'crystals' using 2Logo.</li> </ul>

## Unit 4.6 – Animation

Lesson	Title	Aims (Objectives)	Success Criteria
1	Animating an Object	<ul style="list-style-type: none"> <li>To decide what makes a good, animated film or cartoon and discuss favourite animations.</li> <li>To learn how animations are created by hand.</li> <li>To find out how 2Animate animations can be created in a similar way using technology.</li> </ul>	<ul style="list-style-type: none"> <li>Children have put together a simple animation using paper to create a flick book.</li> <li>Children understand animation frames.</li> <li>Children have made a simple animation using 2Animate.</li> </ul>
2	2Animate Tools	<ul style="list-style-type: none"> <li>To learn about onion skinning in animation.</li> <li>To add backgrounds and sounds to animations.</li> </ul>	<ul style="list-style-type: none"> <li>Children know what the Onion Skin tool does in animation.</li> <li>Children can use the Onion Skin tool to create an animated image.</li> <li>Children can use backgrounds and sounds to make more complex and imaginative animations.</li> </ul>
3	Stop Motion Animation	<ul style="list-style-type: none"> <li>Introducing 'stop motion' animation.</li> <li>To share animation the class blog.</li> </ul>	<ul style="list-style-type: none"> <li>Children know what 'stop motion' animation is and how it is created.</li> <li>Children have used ideas from existing 'stop motion' films to recreate their own animation.</li> <li>Children have shared their animations and commented on each other's work using display boards and blogs in Purple Mash.</li> </ul>

## Unit 4.8 – Hardware Investigators

Lesson	Title	Aims (Objectives)	Success Criteria
1	Hardware	<ul style="list-style-type: none"> <li>To understand the different parts that make up a desktop computer.</li> </ul>	<ul style="list-style-type: none"> <li>Children can name the different parts of a desktop computer.</li> <li>Children know what the function of the different parts of a computer is.</li> </ul>
2	Parts of a computer	<ul style="list-style-type: none"> <li>To recall the different parts that make up a computer</li> </ul>	<ul style="list-style-type: none"> <li>Children have created a leaflet to show the function of computer parts.</li> </ul>