

Unit 5.1 – Coding

Lesson	Title	Aims (Objectives)	Success Criteria
1	Coding Efficiently	<ul style="list-style-type: none"> <li>To review existing coding knowledge.</li> <li>To begin to be able to <b>simplify</b> code.</li> <li>To create a playable game.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use simplified code to make their programming more efficient.</li> <li>Children can use variables in their code.</li> <li>Children can create a simple playable game.</li> </ul>
2	Simulating a Physical System	<ul style="list-style-type: none"> <li>To understand what a simulation is.</li> <li>To program a simulation using 2Code.</li> </ul>	<ul style="list-style-type: none"> <li>Children can plan an algorithm modelling the sequence of traffic lights.</li> <li>Children can select the right images to reflect the simulation they are making.</li> <li>Children can use their plan to program the simulation to work in 2Code.</li> </ul>
3	Decomposition and Abstraction	<ul style="list-style-type: none"> <li>To know what decomposition and abstraction are in Computer Science.</li> <li>To take a real-life situation, decompose it and think about the level of abstraction.</li> <li>To use decomposition to make a plan of a real-life situation.</li> </ul>	<ul style="list-style-type: none"> <li>Children can make good attempts to break down their task into smaller achievable steps.</li> <li>Children recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task.</li> </ul>
4	Friction and Functions	<ul style="list-style-type: none"> <li>To understand how to use friction in code.</li> <li>To begin to understand what a function is and how functions work in code.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a program which represents a physical system.</li> <li>Children can create and use functions in their code to make their programming more efficient.</li> </ul>
5	Introducing Strings	<ul style="list-style-type: none"> <li>To understand what the different variable types are and how they are used differently.</li> <li>To understand how to create a string.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create and use strings in programming.</li> <li>Children can set/change variable values appropriately.</li> <li>Children know some ways that text variables can be used in coding.</li> </ul>
6	Text Variables and Concatenation	<ul style="list-style-type: none"> <li>To begin to explore text variables when coding.</li> <li>To understand what concatenation is and how it works.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a string and use it in their program.</li> <li>Children can use strings to produce a range of outputs in their program.</li> </ul>

## Unit 5.2 – Online Safety

Lesson	Title	Aims (Objectives)	Success Criteria
1	Responsibilities and Support when Online	<ul style="list-style-type: none"> <li>To gain a greater understanding of the impact that sharing digital content can have.</li> <li>To review sources of support when using technology.</li> <li>To review children' responsibility to one another in their online behaviour.</li> </ul>	<ul style="list-style-type: none"> <li>Children critically about the information that they share online both about themselves and others.</li> <li>Children know who to tell if they are upset by something that happens online.</li> <li>Children can use the SMART rules as a source of guidance when online.</li> </ul>
2	Protecting Privacy	<ul style="list-style-type: none"> <li>To know how to maintain secure passwords.</li> <li>To understand the advantages, disadvantages, permissions, and purposes of altering an image digitally and the reasons for this.</li> <li>To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.</li> </ul>	<ul style="list-style-type: none"> <li>Children think critically about what they share online, even when asked by a usually reliable person to share something.</li> <li>Children have clear ideas about good passwords.</li> <li>Children can see how they can use images and digital technology to create effects not possible without technology.</li> <li>Children have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge.</li> </ul>
3	Citing Sources	<ul style="list-style-type: none"> <li>To learn about how to reference sources in their work.</li> <li>To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information.</li> </ul>	<ul style="list-style-type: none"> <li>Children can cite all sources when researching and explain the importance of this.</li> <li>Children select keywords and search techniques to find relevant information and increase reliability.</li> </ul>
4	Reliability	<ul style="list-style-type: none"> <li>Ensuring reliability through using different methods of communication.</li> </ul>	<ul style="list-style-type: none"> <li>Children show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.</li> </ul>

## Unit 5.3 – Spreadsheets

Lesson	Title	Aims (Objectives)	Success Criteria
1	Conversions of Measurements	<ul style="list-style-type: none"> <li>To use formulae within a spreadsheet to convert measurements of length and distance.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a formula in a spreadsheet to convert m to cm.</li> <li>Children can apply this to creating a spreadsheet that converts miles to km and vice versa.</li> </ul>
2	Using formulae	<ul style="list-style-type: none"> <li>To use a spreadsheet to model a real-life problem.</li> <li>To use formulae to calculate area and perimeter of shapes.</li> </ul>	<ul style="list-style-type: none"> <li>To use a spreadsheet to model a real-life problem.</li> <li>To use formulae to calculate area and perimeter of shapes.</li> </ul>
3	Exploring Probability	<ul style="list-style-type: none"> <li>To use a spreadsheet to investigate the probability of the results of throwing many dice.</li> </ul>	<ul style="list-style-type: none"> <li>Children can create a spreadsheet to answer a mathematical question relating to probability.</li> <li>Children can problem solve using the count tool</li> </ul>
4 & 5	Computational Modelling	<ul style="list-style-type: none"> <li>To use spreadsheets to model real-life situations.</li> <li>To use the created spreadsheet to make decisions about these situations.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use spreadsheets to model real-life situations and produce solutions that can be practically applied.</li> </ul>
6	Testing a hypothesis	<ul style="list-style-type: none"> <li>To use the count tool to answer hypotheses about common letters in use.</li> </ul>	<ul style="list-style-type: none"> <li>Children can use a spreadsheet to work out which letters appear most often.</li> <li>Children can use the count tool.</li> </ul>

## Unit 5.5 – Game Creator

Lesson	Title	Aims (Objectives)	Success Criteria
1	Setting the scene.	<ul style="list-style-type: none"> <li>To Introduce the 2DIY 3D tool.</li> <li>To begin planning a game.</li> </ul>	<ul style="list-style-type: none"> <li>Children can review and analyse a computer game.</li> <li>Children can describe some of the elements that make a successful game.</li> <li>Children can begin the process of designing their own game.</li> </ul>
2	Creating the Game Environment	<ul style="list-style-type: none"> <li>To design the game environment.</li> </ul>	<ul style="list-style-type: none"> <li>Children can design the setting for their game so that it fits with the selected theme.</li> <li>Children can upload images or use the drawing tools to create the walls, floor, and roof.</li> </ul>
3	The Game Quest	<ul style="list-style-type: none"> <li>To design the game quest to make it a playable game.</li> </ul>	<ul style="list-style-type: none"> <li>Children can design characters for their game.</li> <li>Children can decide upon, and change, the animations and sounds that the characters make.</li> </ul>
4	Finishing and Sharing	<ul style="list-style-type: none"> <li>To finish and share the game.</li> </ul>	<ul style="list-style-type: none"> <li>Children can make their game more unique by selecting the appropriate options to maximise the playability.</li> <li>Children can write informative instructions for their game so that other people can play it.</li> </ul>
5	Evaluation	<ul style="list-style-type: none"> <li>To self- and peer-evaluate.</li> </ul>	<ul style="list-style-type: none"> <li>Children can evaluate my their own and peers' games to help improve their design for the future.</li> </ul>

## Unit 5.8 – Word Processing (with Microsoft Word)

Lesson	Title	Aims (Objectives)	Success Criteria
1	Making a Document from a Blank Page	<ul style="list-style-type: none"> <li>To know what a word processing tool is for.</li> </ul>	<ul style="list-style-type: none"> <li>Children know what a word processing tool is for.</li> <li>Children will be able to create a word processing document altering the look of the text and navigating around the document.</li> </ul>
2	Inserting Images: Considering Copyright	<ul style="list-style-type: none"> <li>To add and edit images to a word document.</li> </ul>	<ul style="list-style-type: none"> <li>Children know how to add images to a word document.</li> <li>Children can edit images to reduce their file size.</li> <li>Children know the correct way to search for images that they are permitted to reuse.</li> <li>Children know how to attribute the original artist of an image.</li> </ul>
3	Editing Images in Word	<ul style="list-style-type: none"> <li>To know how to use word wrap with images and text.</li> </ul>	<ul style="list-style-type: none"> <li>Children can edit their images within Word to best present them alongside text.</li> <li>Children understand wrapping of images and text.</li> </ul>
4	Adding the Text	<ul style="list-style-type: none"> <li>To change the look of text within a document.</li> </ul>	<ul style="list-style-type: none"> <li>Children can add appropriate text to their document, formatting in a suitable way.</li> <li>Children can use a style set in Word.</li> <li>Children can use bullet points and numbering.</li> </ul>
5	Finishing Touches	<ul style="list-style-type: none"> <li>To add features to a document to enhance its look and usability.</li> </ul>	<ul style="list-style-type: none"> <li>Children can add text boxes and shapes.</li> <li>Children can consider paragraph formatting such as line spacing, drop capitals.</li> <li>Children can add hyperlinks to an external website.</li> <li>Children can add an automated contents page.</li> </ul>
6	Presenting Information Using Tables	<ul style="list-style-type: none"> <li>To use tables within MS Word to present information.</li> </ul>	<ul style="list-style-type: none"> <li>Children can add tables to present information.</li> <li>Children can edit properties of tables including borders, colours, merging cells, adding and removing rows and columns.</li> <li>Children can add word art for a heading.</li> </ul>
7	Writing a Letter Using a Template	<ul style="list-style-type: none"> <li>To introduce children to templates</li> </ul>	<ul style="list-style-type: none"> <li>Children use a word template and edit it appropriately</li> </ul>
8	Presenting information – newspaper	<ul style="list-style-type: none"> <li>To consider page layout including heading and columns</li> </ul>	<ul style="list-style-type: none"> <li>Children can format a page using a combination of images, headers and columns</li> </ul>