

## Runwell Community School

### Computing Long Term Plan 2024-2025

Predominant Area of Computing*		
Computer Science	Information Technology	Digital Literacy

\*Most units will include aspects of all strands.



	Autumn		Spring		Summer	
EYFS	Online Safety – Self Image and Identity.	Online Safety – Online Relationships and Online Reputation.	Online Safety – Online Bullying.	Online safety – Managing online information.	Online Safety - Health, well-being and lifestyle.	Online safety – Privacy and security, and copyright and ownership.
	In EYFS, all children will be introduced to, and continually access, a range of computing equipment that will allow the children to build confidence and skills to access the computing curriculum in year 1.					
Year 1	<b>Online Safety – Self Image and Identity.</b>  <b>Basic computer skills</b> including logging in, mouse skills and familiarising with online platforms.  <b>1.2 (Grouping and sorting).</b> <ul style="list-style-type: none"> <li>Sorting items on the computer using Grouping activities in Purple Mash.</li> <li>Learning to sort using a range of criteria.</li> </ul>	<b>Online Safety – Online Relationships and Online Reputation.</b>  <b>1.3 (Pictograms)</b> <ul style="list-style-type: none"> <li>Representing data in picture forms / pictograms.</li> <li>Making a class pictogram.</li> </ul> <b>1.4 (Lego Builder)</b> <ul style="list-style-type: none"> <li>Following instructions and understanding how the order of instructions affects the results.</li> <li>Creating simple instructions on a computer.</li> </ul>	<b>Online Safety – Online Bullying.</b>  <b>1.6 (Animated Story Books).</b> <ul style="list-style-type: none"> <li>Add animation to a story.</li> <li>Adding music and voice recording to a story.</li> <li>Adding backgrounds and copying a pasting pages.</li> </ul>	<b>Online safety – Managing online information.</b>  <b>1.5 (Maze Explorers)</b> <ul style="list-style-type: none"> <li>Understand how to create and debug a set of instructions (algorithm).</li> <li>Understand the functionality of the direction keys and use them as part of an algorithm.</li> </ul>	<b>Online Safety - Health, well-being and lifestyle.</b>  <b>1.9 (Technology outside the classroom)</b> <ul style="list-style-type: none"> <li>Walk around the local community; locate and record examples of where technology is used.</li> </ul>	<b>Online safety – Privacy and security, and copyright and ownership.</b>  <b>1.7 (Coding)</b> <ul style="list-style-type: none"> <li>Understand what object and actions are.</li> <li>Use event to control an object.</li> <li>Begin to understand how codes execute.</li> <li>Plan and make a computer programme.</li> </ul>
Year 2	<b>Online Safety – Self Image and Identity.</b>  <b>2.8 (Presenting ideas)</b> <ul style="list-style-type: none"> <li>Explore how a story can be presenting in different ways.</li> <li>Make a quiz about a topic.</li> <li>Make a fact file.</li> <li>Present work to the class.</li> </ul>	<b>Online Safety – Online Relationships and Online Reputation.</b>  <b>2.4 (Questioning)</b> <ul style="list-style-type: none"> <li>Learn about data handling tools that give more information than pictograms.</li> <li>Use a binary tree database to answer questions.</li> <li>Use databases to answer complex questions.</li> <li>Use the search tool to find information.</li> </ul>	<b>Online Safety – Online Bullying.</b>  <b>2.6 (Creating Pictures)</b> <ul style="list-style-type: none"> <li>Learn the features to paint tools.</li> <li>Learn about and recreate the impressionist style of art, pointillist artist, surrealism and eCollage.</li> <li>Learn about the work of Piet Mondrian and recreate the style using the lines template.</li> <li>Learn about the work of William Morris and recreate the style using the lines template.</li> </ul>	<b>Online safety – Managing online information.</b>  <b>2.5 (Effective Searching)</b> <ul style="list-style-type: none"> <li>Understand the terminology associated with searching.</li> <li>Create a leaflet to explain effective searching.</li> </ul> <b>2.7 (Making Music)</b> <ul style="list-style-type: none"> <li>Make music digitally.</li> <li>Explore, edit and combine sounds.</li> <li>Record and upload environmental sounds into Purple Mash.</li> </ul>	<b>Online Safety - Health, well-being and lifestyle.</b>  <b>2.1 (Coding).</b> <ul style="list-style-type: none"> <li>Creating a computer programme using a simple algorithm and understand that they follow a sequence.</li> <li>Understand what different events do in code.</li> <li>Understand the collision detection event.</li> <li>Understand and debug simple programs.</li> </ul>	<b>Online safety – Privacy and security, and copyright and ownership.</b>  <b>2.3 (Spreadsheets)</b> <ul style="list-style-type: none"> <li>Make a counting machine.</li> <li>Learn to use a spreadsheet for money calculations.</li> <li>Use 2Calculate to collect data and produce a graph.</li> </ul>
Year 3	<b>Online Safety – Self Image and Identity.</b>  <b>3.4 (Touch Typing)</b> <ul style="list-style-type: none"> <li>Introduce typing terminology.</li> <li>Understand the correct way to sit at the keyboard.</li> <li>Learn how to use the home, top and bottom row keys.</li> <li>Practise typing with the left and right hand.</li> </ul>	<b>Online Safety – Online Relationships and Online Reputation.</b>  <b>3.5 (Email)</b> <ul style="list-style-type: none"> <li>Explore different methods of communication.</li> <li>Open and respond to an email using an address book.</li> <li>Learn how to use email safely.</li> <li>Add an attachment to an email.</li> </ul>	<b>Online Safety – Online Bullying.</b>  <b>3.7 (Simulations)</b> <ul style="list-style-type: none"> <li>Consider what simulations are.</li> <li>Explore, analyse and evaluate a simulation.</li> </ul>	<b>Online safety – Managing online information.</b>  <b>3.8 (Graphing)</b> <ul style="list-style-type: none"> <li>Enter data into a graph and answer questions.</li> <li>Solve an investigation and present the results in graphic form.</li> </ul> <b>3.3 (Spreadsheets)</b> <ul style="list-style-type: none"> <li>Use the symbols more than, less than and equal to, to compare values.</li> <li>Use 2Calculate to collect data and produce a variety of graphs.</li> </ul>	<b>Online Safety - Health, well-being and lifestyle.</b>  <b>3.1 (Coding)</b> <ul style="list-style-type: none"> <li>Understand what a flowchart is and how flowcharts are used in computer programming.</li> <li>Understand that there are different types of timers and how to use the repeat command.</li> <li>Design and create an interactive scene.</li> </ul> <b>3.10 (Microbits)</b> <ul style="list-style-type: none"> <li>Plan instructions to code an output on a physical device.</li> <li>Use inputs including buttons, accelerometer and gestures.</li> <li>Create an animation.</li> </ul>	<b>Online safety – Privacy and security, and copyright and ownership.</b>  <b>3.6 (Branching Databases)</b> <ul style="list-style-type: none"> <li>Sort objects using just 'yes' or 'no' questions.</li> <li>Complete a branching database using 2Question.</li> <li>Create a branching database of the children's choice.</li> </ul> <b>3.9 (Presenting)</b> <ul style="list-style-type: none"> <li>Understand the uses of PowerPoint.</li> <li>Create a page in a presentation and add media.</li> <li>Add animations to a presentation. U</li> <li>se the skills learnt to design and create an engaging presentation.</li> </ul>

Year 4	Online Safety – Self Image and Identity.	Online Safety – Online Relationships and Online Reputation.	Online Safety – Online Bullying.	Online safety – Managing online information.	Online Safety - Health, well-being and lifestyle.	Online safety – Privacy and security, and copyright and ownership.
	<b>4.1 (Coding)</b> <ul style="list-style-type: none"> <li>Understand the 'repeat. until' command.</li> <li>Understand how an IF/ELSE statement works.</li> <li>Understand what a variable is in programming and how to use co-ordinates.</li> <li>Create a playable game.</li> </ul>	<b>4.7 (Effective search)</b> <ul style="list-style-type: none"> <li>Locate information on the search results page.</li> <li>Use search effectively to find out information.</li> <li>Assess whether an information source is true and reliable.</li> </ul> <b>4.8 (Hardware Investigators)</b> <ul style="list-style-type: none"> <li>Understand the different parts that make up a computer.</li> <li>Recall the different parts that make up a computer.</li> </ul>	<b>4.4 (Writing for different audiences)</b> <ul style="list-style-type: none"> <li>Explore how font size and style can affect the impact of a text.</li> <li>Produce a news report.</li> <li>Use a simulated scenario to write for a community campaign.</li> </ul>	<b>4.5 (Logo)</b> <ul style="list-style-type: none"> <li>Learn the structure of the coding language of Logo and input simple instructions.</li> <li>Using 2Logo to create letter shapes.</li> </ul> <b>4.6 (Animation)</b> <ul style="list-style-type: none"> <li>Discuss what makes a good animated film or cartoon.</li> <li>Learn how animations are created by hand and how animation can be created using the computer.</li> <li>Add backgrounds and sounds to animations.</li> <li>Use 'stop motion' animation</li> </ul>	<b>4.9 (Making music)</b> <ul style="list-style-type: none"> <li>Identify and discuss the main elements of music.</li> <li>Understand and experiment with rhythm and tempo.</li> <li>Create a melodic phrase.</li> <li>Electronically compose a piece of music</li> </ul> <b>4.10 (Introduction to AI)</b> <ul style="list-style-type: none"> <li>Understand the concept, use and impact of AI.</li> <li>Explore critical thinking and creativity when using AI.</li> <li>Create music and art using AI.</li> </ul>	<b>4.11 (Microbits)</b> <b>Understand how sensor inputs and variables are used in real-world projects.</b> <b>Use logical conditional instructions, loops and gestures to create different outputs.</b> <b>Apply skills to make computer simulations of real-world tools.</b>
Year 5	Online Safety – Self Image and Identity.	Online Safety – Online Relationships and Online Reputation.	Online Safety – Online Bullying.	Online safety – Managing online information.	Online Safety - Health, well-being and lifestyle.	Online safety – Privacy and security, and copyright and ownership.
	<b>5.8 (Word Processing)</b> <ul style="list-style-type: none"> <li>Know what a word processing tool is for.</li> <li>Add and edit images to a word document.</li> <li>Change the look of text within a document.</li> <li>Use tables within MS Word to present information</li> <li>Consider page layout including heading and columns.</li> </ul>	<b>5.1 (Coding)</b> <ul style="list-style-type: none"> <li>Create a playable game.</li> <li>Program a simulation using 2Code.</li> <li>Use decomposition to make a plan of a real-life situation.</li> <li>Understand what a function is and how functions work in code.</li> <li>Understand how to create a string.</li> </ul> <b>5.10 (Microbits)</b> <ul style="list-style-type: none"> <li>Use accelerometer, gestures, and conditional instructions.</li> <li>Use input from physical device.</li> <li>Understand how variables are used within coding.</li> </ul>	<b>5.3 (Spreadsheets)</b> <ul style="list-style-type: none"> <li>Use formulae within a spreadsheet to convert measurements of length and distance.</li> <li>Use the count tool to answer hypotheses about common letters in use.</li> <li>Use a spreadsheet to model a real-life problem.</li> <li>Use formulae to calculate area and perimeter of shapes.</li> <li>Use a spreadsheet to help plan a school cake sale.</li> </ul>	<b>5.5 (Game Creator)</b> <ul style="list-style-type: none"> <li>Plan a game.</li> <li>Design and create the game environment.</li> <li>Design and create the game quest.</li> <li>Share and evaluate the game.</li> </ul>	<b>5.7 (Concept Maps)</b> <ul style="list-style-type: none"> <li>Understand the uses of a 'concept map.</li> <li>Understand and use the correct vocabulary when creating a concept map.</li> <li>Understand how a concept map can be used to retell stories and information.</li> <li>Create a collaborative concept map and present this to an audience.</li> </ul> <b>5.6 (3d Modelling)</b> <ul style="list-style-type: none"> <li>Use 2Design and Make to design a 3D Model to fit certain criteria.</li> </ul>	<b>5.6 (3D Modelling continued)</b> <ul style="list-style-type: none"> <li>Explore the effect of moving points when designing.</li> <li>Refine and print a model.</li> </ul> <b>5.4 (Databases)</b> <ul style="list-style-type: none"> <li>Learn how to search for information in a database.</li> <li>Contribute to a class database.</li> <li>Create a database around a chosen topic.</li> </ul>
Year 6	Online Safety – Self Image and Identity.	Online Safety – Online Relationships and Online Reputation.	Online Safety – Online Bullying.	Online safety – Managing online information.	Online Safety - Health, well-being and lifestyle.	Online safety – Privacy and security, and copyright and ownership.
	<b>6.9 (Spreadsheets)</b> <ul style="list-style-type: none"> <li>Create a variety of spreadsheets related to probability and using the formula wizard.</li> <li>Use a spreadsheet to model a real-life situation and come up with solutions.</li> <li>Navigate and enter data into cells.</li> <li>Introduce some basic data formulae in Excel for percentages, averages and max and min numbers.</li> <li>Use a spreadsheet to model a real-life situation.</li> <li>Create a variety of graphs in Excel.</li> <li>Apply spreadsheet skills to solving problems.</li> </ul>	<b>6.8 (Understanding Binary)</b> <ul style="list-style-type: none"> <li>Examine how whole numbers are used to represent data in digital systems.</li> <li>Understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.</li> </ul> <b>6.7 (Quizzing)</b> <ul style="list-style-type: none"> <li>Create a picture-based quiz for young children.</li> </ul>	<b>6.7 (Quizzing)</b> <ul style="list-style-type: none"> <li>Make a quiz that requires the player to search a database.</li> <li>Make a quiz to test your teachers or parents.</li> </ul>	<b>6.4 (Blogging)</b> <ul style="list-style-type: none"> <li>Identify the purpose and features of a blog.</li> <li>Understand how to write a blog and a blog post.</li> <li>Consider the effect upon the audience of changing the visual properties of the blog.</li> <li>Understand how to contribute to an existing blog.</li> </ul> <b>6.6 (Networks)</b> <ul style="list-style-type: none"> <li>Learn about what the Internet consists of.</li> <li>Find out what a LAN and a WAN are.</li> <li>Find out how the Internet is accessed in school.</li> </ul>	<b>6.1 (Coding)</b> <ul style="list-style-type: none"> <li>Design a playable game with a timer and a score.</li> <li>Understand how the launch command works.</li> <li>Use flowcharts to create and debug code.</li> <li>Use 2 Code to make a text-adventure game.</li> </ul>	<b>6.5 (Text Adventures)</b> <ul style="list-style-type: none"> <li>Find out what a text adventure is.</li> <li>Use 2 Connect to plan a story adventure.</li> <li>Make a story-based adventure using 2Create a Story.</li> <li>Use written plans to code a map based adventure in 2 Code.</li> </ul>