



Area	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Coding		<p>Coding 1.1</p> <ul style="list-style-type: none"> • To understand what coding means in computing. • To create unambiguous instructions like those required by a computer. • To build one- and two-step instructions using the printable code cards. • To introduce 2Code. • To use the 2Code program to create a simple program. • To use Design Mode to add and change backgrounds and characters. They will use the Properties table to change the look of the objects. • To use the Properties table to change the look of the objects. 	<p>Coding 2.1</p> <ul style="list-style-type: none"> • To understand what an algorithm is. • To create a computer program using simple algorithms • To compare the Turtle and Character objects. • To use the button object. • To understand how use the Repeat command. • To understand how to use the Timer command. • To know what debugging means. • To understand the need to test and debug a program repeatedly. • To debug simple programs. • To create programs using different kinds of objects whose behaviours are 	<p>Coding 3.1</p> <p>To review coding vocabulary that relates to Object, Action, Output, Control and Event.</p> <ul style="list-style-type: none"> • To use 2Chart to represent a sequential program design. • To use the design to write the code for the program • To design and write a program that simulates a physical system. • To look at the grid that underlies the design and relate this to X and Y properties. • To introduce selection in their programming by using the if command. • To combine a timer in a program with selection. • To understand what a variable is in programming. 	<p>Area: Coding 4.1</p> <ul style="list-style-type: none"> • To review coding vocabulary. • To use a sketch or storyboard to represent a program design and algorithm. • To use the design to create a program. • To introduce the If/else statement and use it in a program. • To create a variable. • To explore a flowchart design for a program with an if/else statement • To create a program which responds to the If/else command, using the value of the variable. • To create a program with a character that repeats actions. • To use the Repeat Until command to 	<p>Coding 5.1</p> <ul style="list-style-type: none"> • To review coding vocabulary. • To use a sketch or storyboard to represent a program design and algorithm. • To use the design to create a program. • To design and write a program that simulates a physical system. • To review the use of number variables in 2Code. • To explore text variables. • To create a playable, competitive game. • To combine the use of variables, If/else statements and Repeats to achieve the desired effect in code. • To read code so that it can be adapted, 	<p>Coding 6.1</p> <ul style="list-style-type: none"> • To review good planning skills. • To design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. • To use variables within a game to keep track of the properties of objects. • To use functions and understand why they are useful in 2Code. • To debug a program and organise the code into tabs. • To organise code into functions and Call functions to eliminate surplus code in the program. • To explore the options for getting

		<ul style="list-style-type: none"> • To design a scene for a program. • To use code blocks to make the characters move automatically when the green Play button is clicked. • To add an additional character who moves when clicked. • To explore the When Key and When Swiped commands (on tablets if available). • To use the Stop button to make characters stop when the background is clicked. • To explore a method to code interactivity between objects. <ul style="list-style-type: none"> • To use Collision Detection to make objects perform actions. • To use the sound property. 	<p>limited to specific actions.</p> <ul style="list-style-type: none"> • To predict what the objects will do in other programs, based on their knowledge of what the object is capable of. • To discuss how logic helped them understand that they could only predict specific actions, as that is what the objects were limited to. • To use all the coding knowledge, they have learned throughout their programming lessons to create a more complex program that tells a story. 	<ul style="list-style-type: none"> • To use a variable to create a timer • To create a program with an object that repeats actions indefinitely. • To use a timer to make characters repeat actions. • To explore the use of the repeat command and how this differs from the timer • To know what debugging means. <ul style="list-style-type: none"> • To understand the need to test and debug a program repeatedly. • To debug simple programs. • To understand the importance of saving periodically as part of the code development process. 	<p>make characters repeat actions.</p> <ul style="list-style-type: none"> • To program a character to respond to user keyboard input. • To make timers and counting machines using variables to print a new number to the screen every second • To explore how 2Code can be used to investigate control by creating a simulation. • To know what decomposition and abstraction are in computer science. • To take a real-life situation, decompose it and think about the level of abstraction. • To design a decomposed feature of a real-life situation. 	<p>personalised and improved.</p> <ul style="list-style-type: none"> • To explore the launch command and use buttons within a program that launch other programs or open websites. • To create a program to inform others. 	<p>text input from the user in 2Code.</p> <ul style="list-style-type: none"> • How to include interactivity in programming. • To use flowcharts to test and debug a program. • To create a simulation of a room in which devices can be controlled. • To explore how 2Code can be used to make a text-based adventure game.
Online Safety		<p>Online Safety 1.1</p> <p>To log in safely.</p> <p>To start to understand the idea of 'ownership'</p>	<p>Online Safety 2.2</p> <p>To know how to refine searches using the Search tool.</p>	<p>Online Safety 3.2</p> <ul style="list-style-type: none"> • To know what makes a safe password, how to keep passwords 	<p>Online safety 4.2</p> <ul style="list-style-type: none"> • To understand how children can protect themselves 	<p>Online Safety 5.2</p> <ul style="list-style-type: none"> • To gain a greater understanding of the impact that sharing digital 	<p>Online Safety 6.2</p> <ul style="list-style-type: none"> • Identify benefits and risks of mobile devices broadcasting the

		<p>of their creative work.</p> <p>To learn how to find saved work in the Online Work area and find teacher comments.</p> <p>To learn how to search Purple Mash to find resources.</p> <p>To become familiar with the types of resources available in the Topics section.</p> <p>To become more familiar with the icons used in the resources in the Topics section.</p> <p>To start to add pictures and text to work.</p> <p>To explore the Tools section of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New.</p> <p>To explore the Games section on Purple Mash. To understand the importance of logging out when they have finished.</p>	<p>To know how to share work electronically using the display boards.</p> <p>To use digital technology to share work on Purple Mash to communicate and connect with others locally.</p> <p>To have some knowledge and understanding about sharing more globally on the Internet.</p> <p>To introduce Email as a communication tool using 2Respond simulations.</p> <p>To understand how we talk to others when they aren't there in front of us.</p> <p>To open and send simple online communications in the form of email.</p> <p>To understand that information put online leaves a digital footprint or trail.</p> <p>To begin to think critically about the information they leave online.</p>	<p>safe and the consequences of giving your passwords away.</p> <ul style="list-style-type: none"> To understand how the Internet can be used to help us to communicate effectively. To understand how a blog can be used to help us communicate with a wider audience. For children to consider if that they read on websites is true? To look at some 'spoof' websites. To create a 'spoof' webpage. To think about why these sites might exist and how to check that the information is accurate. To learn about the meaning of age restrictions symbols on digital media and devices. To discuss why PEGI restrictions exist. 	<p>from online identity theft.</p> <ul style="list-style-type: none"> Understand that information put online leaves a digital footprint or trail and that this can aid identity theft. To Identify the risks and benefits of installing software including apps. To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment. To understand the importance of balancing game and screen time 	<p>content can have.</p> <ul style="list-style-type: none"> To review sources of support when using technology. To review children's responsibility to one another in their online behaviour. To know how to maintain secure passwords. To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. To learn about how to reference sources in their work 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. Ensuring reliability through using 	<p>location of the user/device, e.g. apps accessing location.</p> <ul style="list-style-type: none"> Identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. Identify the benefits and risks of giving personal information and device access to different software To review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist and
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Spreadsheets		<p>Spreadsheets 1.3</p> <ul style="list-style-type: none"> To understand what a spreadsheet looks like. To be able to navigate around a spread sheet and enter data. To learn new vocabulary related to spreadsheets. <p>To add clipart images to a spreadsheet.</p>	<p>Spreadsheets 2.3</p> <p>Reviewing prior use of spreadsheets</p> <p>Copying and Pasting Totalling tools</p> <p>Using a spreadsheet to add amounts</p> <p>Creating a table and block graph</p>	<p>Spreadsheets 3.3</p> <p>To create pie charts and bar graphs.</p> <ul style="list-style-type: none"> To introduce the 'more than', 'less than' and 'equals' tools. To introduce the 'spin' tool and show how it can be used to count through times tables. 	<p>Spreadsheets 4.3</p> <p>To explore how the numbers entered into cells can be set to either currency, decimal or fraction.</p> <ul style="list-style-type: none"> To explore the use of the display of decimal places. To find out how to add formulae to a cell. To explore how tools can be combined to use 	<p>Spreadsheets 5.3</p> <ul style="list-style-type: none"> To use formulae within a spreadsheet to convert measurements of length and distance. To use the count tool to answer hypotheses about common letters in use. To use a spreadsheet to 	<p>Spreadsheets 6.3</p> <p>To use a spreadsheet to investigate the probability of the results of throwing many dice.</p> <ul style="list-style-type: none"> Use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale

		<p>To use the 'move cell' and 'lock' tools.</p> <ul style="list-style-type: none"> • To use the 'speak' and 'count' tools in 2Calculate to count items. 		<ul style="list-style-type: none"> • To add and edit data in a table layout. • To find out how spreadsheet programs can automatically create graphs from data. • To introduce the Advanced mode of 2Calculate. • To learn about describing cells using their coordinates. 	<p>2Calculate to make number games.</p> <ul style="list-style-type: none"> • To explore the use of the timer, random number and spin button tools. • To use the line graphing tool in 2Calculate with appropriate data. • To interpret a line graph to estimate values between data readings. • To use the currency formatting tool in 2Calculate • To use 2Calculate to create a model of a real-life situation. • To use the functions of allocating value to images in 2Calculate to make a resource to teach place value. 	<p>model a real-life problem</p> <ul style="list-style-type: none"> • To use formulae to calculate area and perimeter of shapes. • To Learn to create formulae that use text variables. Calculate how many days in x amount of years. • To use a spreadsheet to help plan a school cake sale. 	<ul style="list-style-type: none"> • To use a spreadsheet to plan how to spend pocket money and the effect of saving money. • To use a spreadsheet to plan a school charity day to maximise the money donated to charity.
Writing for different audiences					<p>Writing for different audiences 4.4</p> <p>To explore how font size and style can affect the impact of a text.</p> <ul style="list-style-type: none"> • To use a simulated scenario to 		

					<p>produce a news report.</p> <ul style="list-style-type: none"> •To use a simulated scenario to write for a community campaign. 		
Logo					<p>Area: Logo 4.5</p> <ul style="list-style-type: none"> •To learn the structure of the language of Logo. To input simple instructions in Logo •Using 2Logo to create letter shapes. •To use the Repeat function in Logo to create shapes. •To use and build procedures in Logo 		
Animation					<p>Animation 4.6</p> <ul style="list-style-type: none"> •To discuss what makes a good animated film or cartoon and what their favourites are. •To learn how animations are created by hand. •To find out how 2Animate can be created in a similar way using the computer. •To learn about onion skinning in animation. •To add backgrounds and 		

					<p>sounds to animations.</p> <ul style="list-style-type: none"> •To be introduced to 'stop motion' animation. •To share animation on the class display board and by blogging. 		
Effective Searching			<p>Effective Searching 2.5</p> <ul style="list-style-type: none"> • To understand the terminology associated with searching. <p>To gain a better understanding of searching on the Internet.</p> <p>To create a leaflet to help someone search for information on the Internet.</p>		<p>Effective Searching 4.7</p> <ul style="list-style-type: none"> •To locate information on the search results page. •To use search effectively to find out information. •To assess whether an information source is true and reliable. 		
Hardware Investigators					<p>Hardware Investigations 4.8</p> <ul style="list-style-type: none"> •To understand the different parts that make up a computer. •To recall the different parts that make up a computer. 		
Typing				<p>Touch Typing 3.4</p> <ul style="list-style-type: none"> • To introduce typing terminology. • Understand the correct way to sit at the keyboard. 			

				<ul style="list-style-type: none"> • To learn how to use the home, top and bottom row keys. • To practice and improve typing for home, bottom and top rows. • To practice the keys typed with the left hand. • To practice the keys typed with the right hand. 			
Email				Email 3.5 To think about different methods of communication. To open and respond to an email. To write an email to someone using an address book To learn how to use email safely. To add an attachment to an email. To explore a simulated email scenario.			
Branching Databases				Branching Data 3.6 To sort objects using just 'yes' no' questions. To complete a branching database using 2Question.		To learn how to search for information in a database. To contribute to a class database.	

				To create a branching database of the children's choice.		To create a database around a chosen topic.	
Simulations				<p>Simulation 3.7</p> <p>To find out what a simulation is and understand the purpose of simulations</p> <ul style="list-style-type: none"> • To explore a simulation; making choices and discussing their effects. • To work through and evaluate a more complex simulation. 			
Graphing				<p>Graphing 3.8</p> <ul style="list-style-type: none"> • To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form. 			
Grouping and Sorting		<p>Grouping and Sorting 1.2</p> <p>To sort items using a range of criteria.</p> <p>To sort items on the computer using the 'Grouping'</p>					

		activities in Purple Mash					
Pictograms		<p>Pictograms 1.3</p> <p>To understand that data can be represented in picture format.</p> <p>To contribute to a class pictogram</p> <p>To use a pictogram to record the results of an experiment.</p>					
Lego Builders		<p>Lego Builders 1.4</p> <p>To emphasise the importance of following instructions.</p> <p>To follow and create simple instructions on the computer.</p> <p>To consider how the order of instructions affects the result.</p>					

Maze Explorers

Maze Explores 1.5
To understand the functionality of the basic direction keys in Challenges 1 and 2.
To be able to use the direction keys to complete the challenges successfully.
To understand the functionality of the basic direction keys in Challenges 3 and 4.
To understand how to create and debug a set of instructions (algorithm).
To use the additional direction keys as part of their algorithm.
To understand how to change and extend the algorithm list.
To create a longer algorithm for an activity.
To provide an opportunity for the children to set challenges for each other.
To provide an opportunity for the teacher to set

		these new challenges as 2Dos for all the class to try.					
Animated Stories		<p>To introduce e-books and 2Create a Story.</p> <p>To continue a previously saved story. To add animation to a story.</p> <p>To add sound to a story, including voice recording and music the children have created.</p> <p>To work on a more complex story, including adding backgrounds and copying and pasting pages.</p> <p>To use additional features to enhance their stories.</p> <p>To share their e-books on a class display board.</p>					

Technology Outside		Technology Outside 1.9 To walk around the local community and find examples of where technology is used. To record examples of technology outside school.					
Questioning			Questioning 2.4 To show that the information provided on pictograms is of limited use beyond answering simple questions. To use yes/no questions to separate information. To construct a binary tree to separate different items. To use 2Question (a binary tree) to answer questions. To use a database to answer more complex search questions. To use the Search tool to find information.				
Creating Pictures			Creating Pictures 2.6 To be introduced to 2Paint a Picture.				

			<p>To look at the impressionist style of art (Monet, Degas, Renoir).</p> <p>To recreate pointillist art and look at the work of pointillist artists such as Seurat</p> <p>To look at the work of Piet Mondrian and recreate it using the Lines template.</p> <p>To look at the work of William Morris and recreate it using the Patterns template.</p> <p>To explore surrealism and eCollage</p>				
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Making Music			<p>Making Music 2.7</p> <p>To be introduced to making music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence</p> <p>To add sounds to a tune they've already created to change it.</p> <p>To think about how music can be used to express feelings and create tunes which depict feelings.</p> <p>To upload a sound from a bank of sounds into the Sounds section.</p> <p>To record their own sound and upload it into the Sounds section.</p> <p>To create their own tune using the sounds which they have added to the Sounds section.</p>				
Presenting ideas			<p>Presenting ideas 2.8</p> <p>To explore how a story can be presented in different ways.</p> <p>To make a quiz about a story or class topic.</p>				

			<p>To make a fact file on a non-fiction topic</p> <p>To make a presentation to the class.</p>				
Game Creator						<p>Game Creator 5.5</p> <p>To set the scene.</p> <p>To create the game environment.</p> <p>To create the game quest.</p> <p>To finish and share the game</p> <p>To evaluate their and peers' games.</p>	
Modeling						<p>Modelling 5.6</p> <p>To be introduced to 2Design and Make.</p> <p>To explore the effect of moving points when designing</p> <p>To understand designing for a purpose.</p> <p>To understand printing and making.</p>	
Concept Maps						<p>Concept Maps 5.7</p> <ul style="list-style-type: none"> • To understand the need for visual representation when generating and discussing complex ideas. • To introduce the idea of concept mapping and the need for it to be 	

						<p>represented visually. • To understand the connections and links between ideas.</p> <p>To understand and use the correct vocabulary when creating a concept map.</p> <p>To create a concept map.</p> <p>To understand how a concept map can be used to retell stories and information.</p> <p>To create a collaborative concept map and present this to an audience.</p>	
Bloggng							<p>Bloggng 6.4</p> <p>To identify the purpose of writing a blog.</p> <p>To identify the features of successful blog writing.</p> <p>To plan the theme and content for a blog.</p> <p>To understand how to write a blog.</p> <p>To consider the effect upon the audience of changing the visual</p>

							<p>properties of the blog.</p> <p>To understand the importance of regularly updating the content of a blog.</p> <p>To understand how to contribute to an existing blog.</p> <p>To understand how and why blog posts are approved by the teacher.</p> <p>To understand the importance of commenting on blogs.</p> <p>To peer-assess blogs against the agreed success criteria.</p>
Text Adventures							<p>Text Adventures 6.5</p> <p>To find out what a text adventure is.</p> <p>To plan a story adventure.</p> <p>To make a story-based adventure.</p> <p>To introduce map-based text adventures.</p> <p>To code a map-based text adventure.</p>
Networks							<p>Networks 6.6</p> <p>To discover what the children know about the internet.</p>

							<p>To find out what a LAN and a WAN are.</p> <p>To find out how we access the internet in school.</p> <p>To research and find out about the age of the internet.</p> <p>To think about what the future might hold.</p>
Quizzing							<p>Quizzing 6.7</p> <p>To create a picture-based quiz for young children.</p> <p>To learn how to use the question types within 2Quiz.</p> <p>To explore the grammar quizzes.</p> <p>To make a quiz that requires the player to search a database.</p> <p>Are you smarter than a 10- (or 11-) year-old? To make a quiz to test your teachers or parents.</p>
Binary							<p>Binary 6.8</p> <ul style="list-style-type: none"> • Recognising that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary

							<p>digits, which is why they are called digital systems). • Understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.</p> <ul style="list-style-type: none">• Recognising that the numbers 0, 1, 2 and 3 could be represented by the patterns of two binary digits of 00, 01, 10 and 11 • <p>Representing whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary.</p> <ul style="list-style-type: none">• Representing whole numbers in binary, for example counting in binary from zero to 15, or writing a friend's age in binary. • <p>Exploring how division by two can be used as a technique to determine the binary representation of</p>
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							<div>any whole number by collecting remainder terms</div> <div>• Representing the state of an object in a game as active or inactive using the respective binary values of 1 or</div>
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