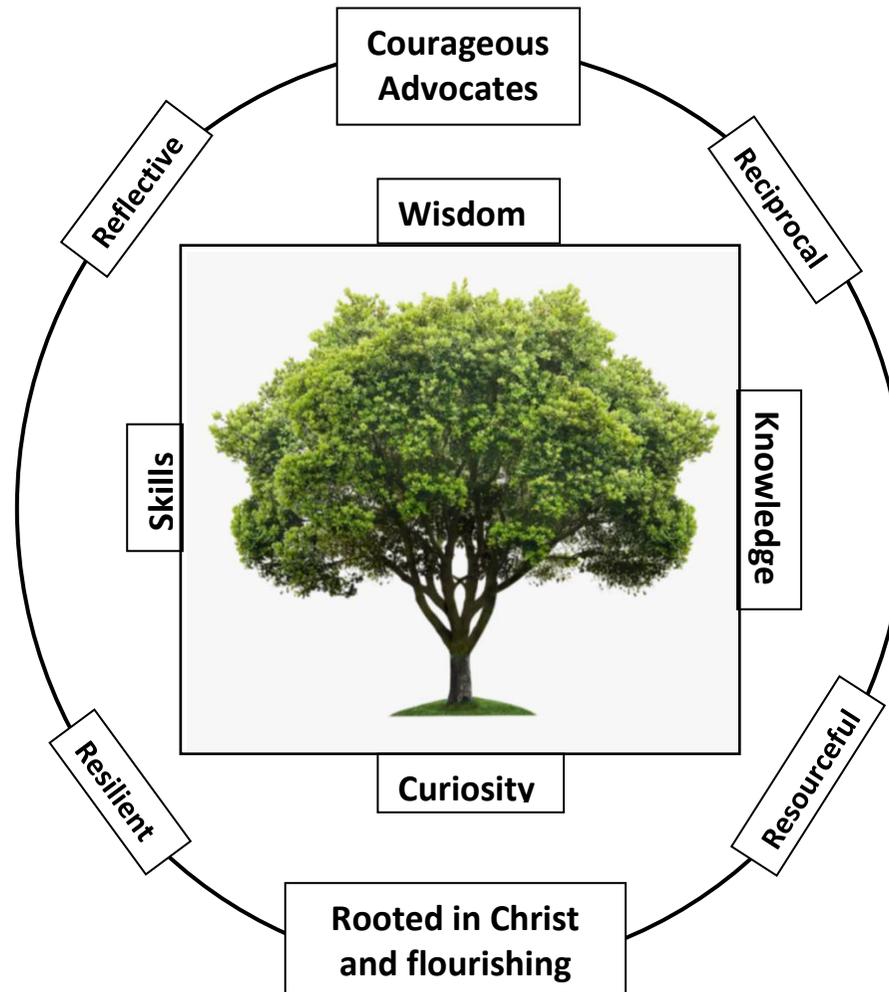


The Whittle-le-Woods Curriculum

I have come so they may have life and have it to the full. John 10:10

Computing



Our Computing curriculum at Whittle-le-Woods aims to:

Prepare our children with the computational thinking skills necessary to achieve their potential within an ever-changing technological world. These skills will be used throughout each child’s life allowing each child from Whittle-le-Woods Primary School the opportunity **flourish** confidently, effectively and creatively to British society.

We focus our children on being **Courageous Advocates** of change and our Computing curriculum enables children the ability to contribute **positively to society**.

We use this time to nurture **wisdom** to ensure children make the best online choices which will keep them safe whilst also instilling an understanding of **a person’s online dignity** is equal to their **real-life dignity**.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	2 Paint	Listen and record stories	2 Paint	Moving objects on a screen	Use pre-made templates 2 paint	Drag and drop
Reception	Information sharing Smart rules	2 paint to create different textures patterns	Simple City	E books Smart Rules	Mini Mash	Messages to parents
Year 1	Unit 1.1 Online Safety & Exploring Purple Mash	Unit 1.2 Grouping & Sorting Unit 1.3 Pictograms	Unit 1.4 Lego Builders Unit 1.5 Maze Explorers	Unit 1.6 Animated Story Books	Unit 1.7 Coding	Unit 1.8 Spreadsheets Unit 1.9 Technology outside school
Year 2	2.1 Coding	2.2 Online Safety 2.3 Spreadsheets	2.4 Questioning	2.5 Effective Searching	2.6 Creating Pictures 2.7 Making Music 2.8 Presenting Ideas	
Year 3	3.1 Coding	3.2 Online Safety	3.3 Spreadsheets	3.4 Typing 3.5 Email	3.6 Branching Databases 3.7 Simulations	3.8 Graphing

						3.9 Presenting with Google Slides
Year 4	4.1 Coding 4.2 Online Safety	4.3 Spreadsheets	4.4 Writing for different audiences	4.5 Logo	4.6 Animation 4.7 Effective searching	4.8 Hardware Investigators 4.9 Making Music
Year 5	5.1 Coding	5.2 Online Safety	5.3 Spreadsheets	5.4 Databases 5.5 Game Creator	5.6 3D Modelling	5.7 Concept Maps 5.8 Word processing (with Microsoft word or Google Docs)
Year 6	6.1 Coding	6.2 Online Safety	6.6 Networks	6.4 Blogging	6.5 Text Adventures	6.9 Spreadsheets (with Microsoft Excel or Google Sheets) 6.8 Binary

Nursery

Term	Unit Name	Curriculum Content Skills and knowledge	Key vocabulary to be taught	Visitor/trips and other opportunities	Evidenced
Autumn 1	Marvellous me/we are family All about me My Family	<u>Expressive arts and design</u> Create closed shapes with continuous lines and begin to use these shapes to represent objects.	Touch Drag Paint	2Paint	2Simple and Mini Mash

	My School	Draw with increasing complexity and detail, such as representing a face with a circle and including details.			
		Using 2 Paint children will know that they can touch an interactive screen to make marks,			
Autumn 2	Once upon a time Old Macdonald Round & round the garden	<u>Literacy</u> Listen to simple stories and understand what is happening, with the help of the pictures. Enjoy listening to longer stories and can remember much of what happens. Engage in extended conversations about stories, learning new vocabulary.	Button Press Microphone	Use audiobooks to listen to stories. Use a microphone to record a story	2Simple and Mini Mash
		Using Audiobooks and Microphones children will know they can use technology to listen and record stories			
Spring 1	Jungle/ pets	<u>Expressive arts and design</u> Create closed shapes with continuous lines and begin to use these shapes to represent objects. Draw with increasing complexity and detail, such as representing a face with a circle and including details.	Touch Drag Paint	Use 2paint to create pictures of minibeasts. Adding in detail.	2Simple and Mini Mash
		Using 2 Paint children will know that they can touch an interactive screen to make marks and using different 'pens' create different textures			
Spring 2	Transport/Journeys (The Train ride)	<u>Understanding the world</u> Complete inset puzzles. Develop their small motor skills so that they can use a range of tools competently, safely and confidently	Control Click Drag Lever Forward Backwards	Use Mini Mash to complete an online Jigsaws and drag and drop matching pairs.	2Simple and Mini Mash

		Children will know they can use their finger to drag objects across the screen. They will know they can control objects using technology		Use fine motor skills to control remote control cars.	
Summer 1	Dinosaurs' day out Hot & cold	<u>Expressive arts and design</u> Create closed shapes with continuous lines and begin to use these shapes to represent objects. Draw with increasing complexity and detail, such as representing a face with a circle and including details.	Drag Drop	2Paint	2Simple and Mini Mash
		Using 2 Paint children will know that they can touch an interactive screen to make marks and using different 'pens' create different textures. Children will know they can use pre-made templates to add detail.			
Summer 2	Pirates	<u>Mathematics</u> Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').	Drag Drop Count	Use 2paint to create a decorated a treasure map Drag and drop specific number treasure pieces into a chest	2Simple and Mini Mash
		Children will know they can drag and drop to arrange objects on a screen in an order.			

Key Vocabulary learnt end of YN	Drag, Drop, Touch, Click, Button, Press, Microphone
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Reception – EYFS

Term	Unit Name	Curriculum Content Skills and knowledge	Key vocabulary to be taught	Visitor/trips and other opportunities	Evidenced
Autumn 1	All about me!	<p><u>Fine Motor Skills</u> Begin to show accuracy and care when drawing.</p> <p><u>Creating with Materials</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used</p>	Mouse Computer Paint	Self-portrait using the iPad. Google maps/earth – where is our school?	2Simple and Mini Mash
		<p>By using 2Paint children will know how to use different tools to create different textures in 2Paint.</p> <p>Using Google maps/ Earth, led by a teacher, children will know technology is used to share information and using google maps will see where our school is?</p>			

		<p>Identify everyday technology and make links to technology at home. Children will know Computers (Laptops), tablet (iPad)</p> <p>Make marks on a digital device to communicate their ideas</p> <p>Children will understand that ‘output’ is the result of a trigger (pressing the play button) and will know about how everyday technology is controlled.</p> <p><u>SMART RULES:</u> Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>			
Autumn 2	Let’s Celebrate!	<p><u>Fine Motor Skills</u> Begin to show accuracy and care when drawing.</p> <p><u>Fine Motor Skills</u> Begin to show accuracy and care when drawing.</p> <p><u>Creating with Materials</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used;</p> <p>Children will use 2paint to create a firework display, Create a rangoli pattern using 2paint, Design your own Gingerbread man on Mini Mash - linked to English and use Mini Mash online</p>	Mouse Computer paint	<p>Use 2paint to create a firework display</p> <p>Create a rangoli pattern using 2paint</p> <p>Design your own Gingerbread man on Mini Mash - linked to English</p> <p>Mini Mash online</p>	2Simple and Mini Mash

		<p>simulations – Toy Shop To know how to use different tools to create different textures in 2Paint.</p> <p>By using these programs children will know that ICT may be used to communicate information electronically, know that digital devices can present information in a variety of ways, know how navigate their way around a device and operate a program.</p> <p>Children will know the basic functions of a device (home button, lock button and volume buttons)</p> <p><u>SMART RULES</u> Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>		simulations – Toy Shop	
Spring 1	People who Help Us – heroes!	<p><u>Understanding the World</u> -Show interest in different occupations.</p>	Keyboard Numbers Mouse	Design your own superhero – 2simple Visit from key workers (zoom if needed) SimpleCity	2Simple and Mini Mash
		Children will know how to visit the different areas within Simple City to find out more about			

		<p>people’s roles and responsibilities in different areas of the community.</p> <p>Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>			
Spring 2	Growing!	<p><u>Creating with Materials</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used</p> <p><u>Comprehension - Ebook</u> Demonstrate understanding of what has been read to them by retelling stories and narratives using their own words and recently introduced vocabulary Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role-play.</p> <p><u>Word Reading - Ebook</u> Read words consistent with their phonic knowledge by sound-blending Read aloud simple sentences and books that are consistent with their phonic knowledge, including some common exception words.</p>	Ebook on chicks	Photos/ E-book of chick hatching experience – children to evidence and record independently using technology	2Simple and Mini Mash
		<p>Using eBooks, Audio Books and Animation children will know that prose can be represented using technology. Children will know that information can be found using a computer</p>			

		<p>SMART RULES Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>			
Summer 1	Amazing Animals!	<p><u>Creating with Materials</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used</p>	Simulation Mouse Drag Click		2Simple and Mini Mash
		<p><u>Skills and Knowledge</u> By exploring Mini Mash children will know the difference between computer-based activities (painting changes can easily be made, text can be deleted etc)</p> <p>SMART RULES Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>			
Summer 2	Fantasy!	<p><u>Creating with Materials</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used</p>	Ebook, Audiobook, Animation Microphone	Continuous provision area with microphones and audiobooks	2Simple and Mini Mash

		<p><u>Skills and Knowledge</u></p> <p>Use a range of devices to record information in a range of formats (text, image, sound)</p> <p>Interact with multimedia software: children to send a video/photo of their work in class (with support) to parents on DoJo</p> <p>To know that information may be stored on a digital device</p> <p>SMART RULES Children will know to tell an adult if they see something on a digital device that upsets them, know not to give out any information about themselves, know that not everything they see on the internet is true</p>		<p>Design your own princess/pirate mini mash</p> <p>Share a photo/video on DoJo.</p>	
Key vocabulary to be learnt	<p>Mouse Computer Paint Keyboard Drag Click Audiobook, eBook</p>				

Year 1

Term	Unit Name	Skills	Knowledge (in bold)	Key Vocabulary to be taught	Visitor/trips links to other Year groups
Autumn 1	Unit 1.1 Online Safety	To log in safely.	Know how to keep ourselves safe online.	Log in. Year Username. Password.	Online Safety -Year 1,2,3,4,5,6

	& Exploring Purple Mash	Find saved work in the Online Work area and find teacher comments. Search Purple Mash to find resources. To become familiar with the icons and types of resources available in the Topics section. To start to add pictures and text to work. To explore the Tools and Games section of Purple Mash Open, save and print. To understand the importance of logging out.	Know how to use Purple mash effectively.	Avatar. My Work. Log out. Save. Notification. Topics. Tools.	Kidsafe PSHE
Autumn 2	Unit 1.2 Grouping & Sorting	To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash.	Know we can sort objects by different criteria. These include the size of the objects, the colour of the objects or the number of sides the object has. The criteria will depend on the type of objects being sorted.	Sort. Criteria.	Database units -Year 1,2,3,4,5,6
	Unit 1.3 Pictograms	To use a pictogram to record the results of an experiment.	By contributing to a class pictogram and creating their own children will know that data can be represented in picture format.	Pictogram. Data. Collate.	Database units -Year 1,2,3,4,5,6 2Count
Spring 1	Unit 1.4 Lego Builders	To compare the effects of adhering strictly to instructions to completing tasks without complete instructions. To follow and create simple instructions on the computer. To consider how the order of instructions affects the result.	Know an instruction takes you through something step by step so that you can successfully complete a task. Know that when you write code, it won't always work correctly first time. When you search for	Instruction. Algorithm. Computer. Program. Debug.	Coding units -Year 1,2,3,4,5,6

	Unit 1.5 Maze Explorers	<p>To understand the functionality of the direction keys.</p> <p>To understand how to create and debug a set of instructions (algorithm).</p> <p>To use the additional direction keys as part of an algorithm.</p> <p>To understand how to change and extend the algorithm list.</p> <p>To create a longer algorithm for an activity.</p> <p>To set challenges for peers.</p> <p>To access peer challenges set by the teacher as 2dos.</p>	<p>the errors and correct them, this is known as debugging.</p> <p>Know the functionality of the direction keys.</p> <p>Know what an algorithm is and why it is used.</p>	<p>Direction.</p> <p>Challenge.</p> <p>Arrow. Undo.</p> <p>Rewind.</p> <p>Forward.</p> <p>Backwards.</p> <p>Right turn. Left turn. Debug.</p> <p>Instruction.</p> <p>Algorithm.</p>	<p>Coding units -Year 1,2,3,4,5,6</p> <p>2Go</p>
Spring 2	Unit 1.6 Animated Story Books	<p>To introduce e-books and the 2Create a Story tool.</p> <p>To add animation to a story.</p> <p>To add sound to a story, including voice recording and music the children have composed.</p> <p>To work on a more complex story, including adding backgrounds and copying and pasting pages.</p> <p>To share e-books on a class display board.</p>	<p>Using2Create a Story, children can create e-books including animated pages, sounds, narration and music. Children will know an animated story is a story where the images in the foreground can move in a variety of ways.</p> <p>As well as adding animation to the story, it can be improved by adding sounds or sound effects to the different pages.</p>	<p>Animation. E-book. Font.</p> <p>Sound effect.</p> <p>File. Display board</p>	<p>Word Processing units -Year 1,2,3,4,5,6</p> <p>2Create a Story</p>
Summer 1	Unit 1.7 Coding Weeks	<p>To understand what coding means.</p> <p>To use design mode to set up a scene.</p> <p>To add characters.</p> <p>To use code blocks to make the character perform actions.</p> <p>To use collision detection.</p>	<p>Children will know coding is writing instructions in a way that a computer can interpret them to make a program.</p>	<p>Action.</p> <p>Background.</p> <p>Button.</p> <p>Character.</p> <p>Code block.</p> <p>Code design.</p> <p>Coder.</p>	<p>Coding units -Year 1,2,3,4,5,6</p> <p>2Code</p>

		<p>To save and share work. To know the save, print, open and new icon.</p>		<p>Collision detection. Coding. Command. Input. Design mode. Object. Program. Scale. Properties. Sound. Stop command. When clicked. When key.</p>	
Summer 2	Unit 1.8 Spreadsheets	<p>To know what a spreadsheet program looks like. How to open 2Calculate in Purple Mash. How to enter data into spreadsheet cells. To use 2Calculate image tools to add clipart to cells. To use 2Calculate control tools: lock, move cell, speak and count.</p>	<p>Using 2Calculate children will know what a spreadsheet looks like and the main function of a spreadsheet It has a grid of cells. These are in rows and columns. You can enter numbers and operators such as +, -, x in the cells. Entering an equals sign in the correct cell will perform calculations.</p>	<p>Arrow keys. Backspace key. Cursor. Columns. Cells. Clipart. Count Tool. Delete key. Image Toolbox. Lock tool. Move cell tool. Rows. Speak Tool. Spreadsheet.</p>	<p>Spreadsheets units - Year 1,2,3,4,5,6 2Calculate</p>
	Unit 1.9 Technology outside school	<p>To walk around the local community and find examples of where technology is used. To record examples of technology outside school.</p>	<p>Children will investigate the use of technology throughout history and will know that technology has made people's lives easier. It is now much easier to communicate around the world. Messages that used to take weeks to reach the sender can now be sent and received in seconds. We are</p>	<p>Technology</p>	<p>Technology units - Year 1,2,3,4,5,6</p>

			surrounded by technology from toys, to household machines to systems that control traffic and planes.		
Vocabulary to be learnt by end Y1	Log in, Username, Password, Log out, Save, Program Cell Code, Bug E-Book, Animation Instruction, Sort Backspace				

<u>Year 2</u>					
Term	Unit Name	Skills	Knowledge	Key Vocabulary	Visitor/trips and other opportunities
Autumn 1	2.1 Coding	To understand what an algorithm is. To design algorithms and then code them. To compare different object types. To use the repeat command. To use the timer command. To know what debugging is and debug programs.	Using 2Code children will know what an algorithm is, that algorithms follow a sequence and will need debugging if they are wrong. They will design an algorithm that follows a timed sequence and know that different objects have different properties. Children will know what different events do in code and understand the function of buttons in a program.	Action. Algorithm. Bug. Character. Code block. Code design. Command. Debug. Design mode. Input. Object. Properties. Repeat. Scale. Timer. When clicked. When Key.	Coding units - Year 1,2,3,4,5,6 2Code

<p>Autumn 2</p>	<p>2.2 Online Safety</p>	<p>To know how to refine searches using the Search tool. To use digital technology to share work on Purple Mash to communicate and connect with others locally. To have some knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. To understand how we should talk to others in an online situation. To open and send simple online communications in the form of email. To understand that information put online leaves a digital footprint or trail. To identify the steps that can be taken to keep personal data and hardware secure.</p>	<p>Throughout this unit children will understand that information put online leaves a digital footprint or trail. Children will know how to keep personal data and hardware secure. When using the internet children will know how to refine searches using the Search tool and have some knowledge and understanding about sharing more globally on the Internet. Children will be introduced to email as a communication tool using 2Respond simulations and know how we should talk to others in an online situation.</p>	<p>Search. Displayboard. Internet. Sharing. Email. Attachment. Digital Footprint.</p>	<p>Online Safety -Year 1,2,3,4,5,6 Kidsafe PSHE</p>
	<p>2.3 Spreads heets</p>	<p>To use 2Calculate image, lock. Move cell, speak and count tools to make a counting machine. Copy and paste in 2Calculate. To use the totalling tools. To use a spreadsheet for money calculations. To use the 2Calculate equals tool to check calculations. To use 2Calculate to collect data and produce a graph.</p>	<p>Using 2Calculate children will know how to copy and paste. Using a spreadsheet for money calculations children will know how to use the 2Calculate equals tool to check calculations and know how to use 2Calculate to collect data and produce a graph.</p>	<p>Backspace key. Copy and Paste. Columns. Cells. Count tool. Delete key. Equals tool. Image Toolbox. Lock tool. Move cell tool. Rows. Speak tool. Spreadsheet.</p>	<p>Spreadsheet units -Year 1,2,3,4,5,6 2Calculate</p>

<p>Spring 1</p>	<p>2.4 Questioning</p>	<p>Use data handling tools that can give more information than pictograms. To use yes/no questions to separate information. To construct a binary tree to identify items. To use 2Question (a binary tree database) to answer questions. To use database to answer more complex search questions. To use the Search tool to find information.</p> <p>To understand the terminology associated with searching.</p>	<p>Using 2Question children will know about data handling tools that can give more information than pictograms. Using yes/no questions children will know how to separate information and construct a binary tree to identify items.</p>	<p>Pictogram. Question. Data. Collate. Binary Tree. Avatar. Database.</p>	<p>Database units -Year 1,2,3,4,5,6</p> <p>2Question 2Investigate</p>
<p>Spring 2</p>	<p>2.5 Effective Searching</p>	<p>To gain a better understanding of searching on the Internet. To create a leaflet to help someone search for information on the Internet.</p>	<p>Children will know the terminology associated with searching and gain a better understanding of searching on the Internet.</p>	<p>Internet. Search. Search Engine.</p>	<p>Technology units -Year 1,2,3,4,5,6</p>
<p>Summer 1 And Summer 2</p>	<p>2.6 Creating Pictures</p>	<p>To use the functions of the 2Paint a Picture tool. Recreate the Impressionist style of art (Monet, Degas, Renoir). To recreate Pointillist art and look at the work of pointillist artists such as Seurat. To research the work of Piet Mondrian and recreate the style using the lines template. To research the work of William Morris and recreate the style using the patterns template.</p>	<p>By learning about and recreating Impressionist style art (Monet, Degas, Renoir) children will know the functions of the 2Paint a Picture tool.</p>	<p>Impressionism. Palette. Pointillism. Share. Surrealism. Template.</p>	<p>Art and Design units – 1,2,4,5</p> <p>2Paint</p>

	2.7 Making Music	To make music digitally using 2Sequence. To explore, edit and combine sounds using 2Sequence. To edit and refine composed music. To think about how music can be used to express feelings and create tunes which depict feelings. To upload a sound from a bank of sounds into the Sounds section. To record and upload environmental sounds into Purple Mash. To use these sounds to create tunes in 2Sequence.	Children will make music digitally using 2Sequence and will know how to explore, edit and combine sounds using 2Sequence. Children will know how to upload a sound from a bank of sounds into the Sounds section and record and upload environmental sounds into Purple Mash.	Bpm. Composition. Digitally. Instrument. Music. Sound Effects (Sfx). Soundtrack. Tempo. Volume.	Making Music units – 2,4 2Sequence
	2.8 Presenting Ideas	To explore how a story can be presented in different ways. To make a quiz about a story or class topic. To make a fact file on a non-fiction topic. To make a presentation to the class.	By using 2Story and 2Quiz children will know how a story can be presented in different ways how to use technology to make a presentation to the class.	Concept Map (Mind Map). Node. Animated. Quiz. Non-Fiction. Presentation. Narrative. Audience.	Word Processing units -Year 1,2,3,4,5,6
Vocabulary to be learnt by end Y2	Algorithm, Action, Command, Input, Debug Internet, Email, Digital footprint Spreadsheet, Copy and paste Data, Database Search Engine, Digital Presentation				

Year 3

Term	Unit Name	Skills	Knowledge	Key vocabulary to be taught	Visitor/trips other
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					opportunities
Autumn 1	3.1 Coding	<p>To design algorithms using flowcharts.</p> <p>To design an algorithm that represents a physical system and code this representation.</p> <p>To use selection in coding with the 'if' command.</p> <p>To understand and use variables in 2Code.</p> <p>To deepen understanding of the different between timers and repeat commands.</p>	<p>Through using 2Flow children will know what a flowchart is and how flowcharts are used in computer programming. Children will use 2Code and will know that there are different types of timers, know how to use the repeat command and know the importance of nesting.</p>	<p>Action Algorithm . Bug Code block Code Design, Command, Control, Debug/Debugging, Design Mode, Event, If Input Output Object Properties Repeat Computer simulation Selection Timer Variable</p>	<p>Coding units -Year 1,2,3,4,5,6 2Code</p>
Autumn 2	3.2 Online Safety	<p>To know what makes a safe password.</p> <p>Methods for keeping passwords safe.</p> <p>To understand how the Internet can be used in effective communication.</p> <p>To understand how a blog can be used to communicate with a wider audience.</p> <p>To consider the truth of the content of websites.</p>	<p>By learning about the importance of online safety children will know what makes a safe password and methods for keeping passwords safe. Children will know about the meaning of age restrictions symbols on digital media and devices.</p> <p>They will know how the Internet can be used in effective communication and how a blog can be used to communicate with a wider audience. •</p>	<p>Password Internet Blog Concept map Username Website Webpage Spoof website PEGI rating</p>	<p>Online Safety -Year 1,2,3,4,5,6 Kidsafe PSHE</p>

		Research the meaning of age restrictions symbols on digital media and devices.			
Spring 1	3.3 Spreadsheets	To use the symbols more than, less than and equal to, to compare values. To use 2Calculate to collect data and produce a variety of graphs. To use the advanced mode of 2Calculate to use cell references.	When using 2Calculate children will know the symbols more than, less than and equal to, to compare values. Using 2Calculate to collect data and produce a variety of graphs children will know how use the advanced mode of 2Calculate to learn about cell references.	< > = , Advance mode, Copy and Paste Columns, Cells Delete key, Equals tool Move cell tool, Rows Spreadsheet	Spreadsheet units - Year 1,2,3,4,5,6 2Calculate
Spring 2	3.4 Typing 3.5 Email	To introduce typing terminology. To understand the correct way to sit at the keyboard. Use the home, top and bottom row keys. To practice typing with the left and right hand. To think about different methods of communication. To open and respond to an email using an address book. Use email safely. To add an attachment to an email.	By learning correct typing technique children will know the correct way to sit at the keyboard and how to use the home, top and bottom row keys. Children will know how to open and respond to an email using an address book and how to add an attachment to an email.	Posture Top row keys Home row keys. Bottom row keys Space bar Communication, Email Compose, Send Report to the teacher Attachment Address book Save to draft	Word Processing units -Year 1,2,3,4,5,6 2Type Technology units - Year 1,2,3,4,5,6 2Email

		To explore a simulated email scenario.		Password, CC, Formatting	
Summer 1	3.6 Branching Databases	To sort objects using just 'yes' or 'no' questions. To complete a branching database using 2Question. To create a branching database of the children's choice.	Children will know how to sort objects using just 'yes' or 'no' questions and complete a branching database using 2Question.	Branching database Data Database	Database units - Year 1,2,3,4,5,6 2Question
	3.7 Simulations	To consider what simulations are. To explore a simulation. To analyse and evaluate a simulation.	Children will know what a computer simulation is and will know how to analyse and evaluate a simulation.	Simulation	Simulations units – Year 3,5,6 2Simulate
Summer 2	3.8 Graphing	To enter data into a graph and answer questions. To solve an investigation and present the results in graphic form.	Children will know how to enter data into a graph and present the results in graphic form.	Graph Field Data Bar chart Block graph Line graph	Spreadsheet units - Year 1,2,3,4,5,6 2Graph
	3.9 Presenting with Google Slides	To understand the purpose of the Slides tool. To add slides to presentations. To add media to presentations.	Children will begin to transfer their computing skills from the Purple Mash environment to other programs by doing this they will know how to add slides to presentations, how to add media to presentations and know how to format text appropriately.	Animation Presentation Text Box Design Themes Text Formatting Font Slide	Word Processing units -Year 1,2,3,4,5,6 Google Slides

		To format text appropriately. To add shapes and lines to enhance a presentation. To use the skills learnt to design and create an engaging presentation		Transition Media Slideshow WordArt	
Vocabulary to be learnt by end Y3	Code block, Control, Event, If, Input, Output, Timer , Columns, Rows Top row keys, Home row Keys, Bottom row Keys, Space Bar Send, Attachment, Simulation				

Year 4

Term	Unit Name	Skills	Knowledge	Key vocabulary to be taught	Visitor/trips and other opportunities
Autumn 1	4.1 Coding	To use selection in coding with the 'if/else' command. To understand and use variables in 2Code. To use flowcharts for design of algorithms including selection. To use the 'repeat until' with variables to determine the repeat. Use computational thinking terms decomposition and abstraction.	When using 2Code to create a playable game children will know how an IF statement works and how to use co-ordinates in computer programming. Children will know the 'repeat until' command, how an IF/ELSE statement works and will know what a variable is in programming and how to use a number variable.	Action. Alert Algorithm Flowchart Bug Code Design Command Control Debug/Debugging Design Mode If If/Else Input Output Object	Coding units - Year 1,2,3,4,5,6 2Code
	4.2 Online Safety	To understand how children can protect themselves from online identity theft.	When learning about online safety children will know how they can protect themselves from online identity	Computer virus Cookies Copyright	

		<p>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 with other parts of their lives</p>	<p>theft, they will know the risks and benefits of installing software including apps and understand that copying the work of others and presenting it as their own is called 'plagiarism' Children will know the positive and negative influences of technology on health and the environment and to understand the importance of balancing game and screen time with other parts of their lives.</p>	<p>Digital footprint Email Identity theft Malware Phishing Plagiarism Spam</p>	<p>Online Safety -Year 1,2,3,4,5,6 Kidsafe PSHE</p>
<p>Autumn 2</p>	<p>4.3 Spreadsheets</p>	<p>To format cells as currency, percentage, decimal to different decimal places or fraction. To use the formula wizard to calculate averages. To combine tools to make spreadsheet activities such as timed times tables tests. To use a spreadsheet to model a real life situation. To add a</p>	<p>By using 2Calculate children will create a times-tables test game. To do this they will know how to use the to add a formula to a cell to automatically make a calculation in that cell and format cells.</p>	<p>Average Columns Equals tools Advance Mode Cells Formula Copy and Paste Charts Formula Wizard Random tool Spreadsheet Move Cell tool Rows spin Tool Timer</p>	<p>Spreadsheet units -Year 1,2,3,4,5,6 2Calculate</p>

		formula to a cell to automatically make a calculation in that cell.			
Spring 1	4.4 Writing for different audiences	To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign.	Children will use a simulated scenario to write for a community campaign and news report. They will know how font size and style can affect the impact of a text and how to change these on a computer.	Font. Bold Italic Underline	Word Processing units -Year 1,2,3,4,5,6
Spring 2	4.5 Logo	Use the structure of the coding 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.	Children will use LOGO to learn the structure of the coding language. They will know how to input simple instructions in Logo. (PU, PD, RT, LT) and use the Repeat function in Logo to create shapes.	LOGO BK RT LT REPEAT. PU PD	Coding units - Year 1,2,3,4,5,6 2LOGO
Summer 1	4.6 Animation	To discuss what makes a good animated film or cartoon. To research how animations are created by hand. To find out how 2Animate can be created in a similar way using the computer. Research the use of onion skinning in animation. To add backgrounds and sounds to animations. To be introduced to 'stop motion' animation. To share animation on the class	Children will use 2Animate to learn how animations are created by hand and find out how 2Animate can be created in a similar way using the computer. Children will know how to use onion skinning in animation and will know how to add backgrounds and sounds to animations.	Animation Flipbook. Frame. Onion skinning Background. Sound Stop Key Resources Video clip	Art and Design units – 1,2,4,5 2Animate

	4.7 Effective searching	display board and by blogging 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	When learning about effective searching children will know how to use search effectively to find out information and will know whether an information source is true and reliable.	Easter egg. Internet browser Web Search engine SpooF website. Website	Technology units -Year 1,2,3,4,5,6
Summer 2	4.8 Hardware Investigators 4.9 Making Music	To understand the different parts that make up a computer. To recall the different parts that make up a computer. To identify and discuss the main elements of music. To understand and experiment with rhythm and tempo. To create a melodic phrase. To electronically compose a piece of music.	Children will know the parts that make up a computer. By electronically composing a piece of music children will know how to create a melodic phrase on a computer and adjust the rhythm and tempo of a piece of music.	Motherboard CPU RAM Graphics Card Network Card Monitor Speakers Keyboard and Mouse Rippler Pulse Texture House Music Tempo	Technology units -Year 1,2,3,4,5,6 Raspberry Pi Making Music units – Year 2,4 Busy Beats
Vocabulary to be learnt by end Y4	Font, Bold Italic Underline LOGO Frame, Onion skinning Alert, If/Else, Repeat Virus, Cookies Copyright, Malware Phishing Plagiarism, Spam, SpooF website				

Year 5

Term	Unit Name	Skills	Knowledge	Key vocabulary	Visitor/trips and other opportunities
Autumn 1	5.1 Coding	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, personalised and improved. 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.	By using 2Code children will know how to use friction in code and begin to understand what a function is and how functions work in code. Children will know what the different variable types are and how they are used differently. They will know how to create a string what concatenation is and how it works	Action Alert	2Code 2Chart Coding units -Year 1,2,3,4,5,6
Autumn 2	5.2 Online Safety	To gain a greater understanding of the impact that sharing digital content can have. To review sources of support when using technology. To review children's responsibility to one another in their online behaviour	Whilst learning about online safety children will know how to maintain secure passwords. They will know what is considered appropriate and inappropriate text, photographs and videos and the impact of sharing these online and know how 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.	Online safety Smart rules Identity theft	Online Safety -Year 1,2,3,4,5,6 Kidsafe PSHE

		<p>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.</p> <p>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 different methods of communication</p>			
Spring 1	5.3 Spreadsheets	<p>Conversions of measurements. Novel use of the count tool. Formulae including the advanced mode. Using text variables to perform calculations. Using a spreadsheet to plan an event</p>	<p>Children will know how to use formulae within a spreadsheet to convert measurements of length and distance and use the count tool to answer hypotheses.</p>	<p>Copy and Paste Columns Cells Formula Spreadsheet</p>	<p>2Calculate Spreadsheet units - Year 1,2,3,4,5,6</p>
Spring 2	5.4 Databases	<p>Search for information on a database. To contribute to a class database. To create a database around a chosen topic.</p>	<p>When using 2Investigate children will know how to search for information using a database and create a database.</p>	<p>Branching database) Charts Data Database Find Statistics and reports</p>	<p>2Investigate Database units - Year 1,2,3,4,5,6</p>

	5.5 Game Creator	To set the scene. Create the game and the game environment. Finish, share and evaluate	Children will create their own game and will know how to design and create the game environment, create the game quest and share the game with their peers	Table Animation Customise Evaluation Image Interactive Screenshot Playability	Simulations units – Year 3,5,6 2DIY3D
Summer 1	5.6 3D Modelling	To be introduced to 2Design and Make. To explore the effect of moving points when designing. To explore the effect of moving points when designing. To understand printing and making.	When using 2Design and Make children will know how to explore the effect of moving points when designing and know how to design a 3D Model to fit certain criteria.	CAD – Computer aided Design Modelling	Art and Design units – 1,2,4,5 2Design and Make
Summer 2	5.7 Concept Maps	To understand the need for visual representation when generating and discussing complex ideas. To understand and use the correct vocabulary when creating a concept map. To create a concept map To understand how a concept map can be used to retell stories and information To create a collaborative concept map and present this to an audience.	Children know the uses of a 'concept map' and will know and use the correct vocabulary when creating a concept map. Children will know how to create a concept map. concept map and present this to an audience	3D Concept Map	2Connect
	5.8 Word processing	To know what a word processing tool is for.	Children will begin to transfer their computing skills from the Purple Mash environment to other programs by doing this they will know what a	Word Processing	Word Processing units -Year 1,2,3,4,5,6

	(with Microsoft word or Google Docs)	<p>To add and edit images to a word document.</p> <p>To know how to use word wrap with images and text.</p> <p>To change the look of text within a document.</p> <p>To add features to a document to enhance its look and usability.</p> <p>To use the sharing capabilities in Google Docs</p> <p>To use tables within to present information.</p> <p>To introduce children to templates.</p>	word processing tool is for. When using this program, they will know how to add and edit images to a word document, know how to use word wrap with images and text and know how to add features to a document to enhance its look and usability.	Microsoft Word, Google Docs, Text boxes Document	2Connect Google Docs
Vocabulary to be learnt by end Y5	<p>Identity theft, Formula, Charts, Database, Find, Statistics and reports, Table Image, Interactive, Screenshot, CAD - Computer aided design 3D Concept map Word Processing Microsoft Word, Google Docs, Text boxes, Document</p>				

Year 6

Term	Unit Name	Skills	Knowledge	Key vocabulary	Visitor/trips and other opportunities
Autumn 1	6.1 Coding	<p>To review good planning skills.</p> <p>To design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. To use variables</p>	<p>Children will design and create a playable game. They will know how to use a timer and a score, use selection and variables, know how the launch command works and know how to use functions and understand why they are useful. Children will also know how to create a simulation of a room in</p>	<p>Action</p> <p>Alert</p> <p>Algorithm -</p> <p>Bug -</p> <p>Code Design –</p> <p>Command</p> <p>Control</p>	<p>2Chart</p> <p>Free code gorilla</p> <p>Coding units - Year 1,2,3,4,5,6</p>

		<p>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 text input from the user in 2Code. 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.</p>	<p>which devices can be controlled and how user input can be used in a program.</p>	<p>Debug/Debugging Event Function Get Input If If/Else. Input Output Object Repeat. Sequence Selection Simulation. Tabs Timer Variable</p>	
<p>Autumn 2</p>	<p>6.2 Online Safety</p>	<p>Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location 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.</p>	<p>Children will know how to identify benefits and risks of mobile devices broadcasting the location of the user/device. Know the benefits and risks of giving personal information and know the meaning of a digital footprint.</p>	<p>Digital footprint Password PEGI rating Phishing Screen time Spoof website</p>	<p>Online Safety - Year 1,2,3,4,5,6 Kidsafe PSHE</p>

		To identify the positive and negative influences of technology on health and the environment.			
Autumn 2	6.6 Networks	To research about what the Internet consists of. To find out what a LAN and a WAN are. To find out how the Internet is accessed in school. To research and find out about the age of the Internet. To think about what the future might hold.	Children will learn about what the Internet consists of. They will know what a LAN and a WAN are and know who Tim Berners Lee is.	Internet Network Router Local area network (LAN) Network Cables World Wide Web Wide Area Network (WAN) Wireless	Technology units -Year 1,2,3,4,5,6 Tim Berners Lee Profile Communication Questionnaire
Spring 1	6.4 Blogging	To identify the features of successful blog writing To plan the theme and content for a blog. To consider the effect upon the audience of changing the visual properties of the blog. To understand the importance of regularly updating the content of a blog To understand how and why blog posts are approved by the teacher To understand the importance of commenting on blogs	Children will investigate the popularity of blogs and identify the features of a successful blog. They will know how to write a blog and a blog post and know how to contribute to an existing blog.	Blog. Blog page. Blog post Collaborative - Icon	2Blog 2Connect Word Processing units -Year 1,2,3,4,5,6

Spring 2	6.5 Text Adventures	To find out what a text adventure is. To plan a story adventure. To make a story-based adventure. To introduce map-based text adventures. To code a map-based text adventure.	Children will find out what a text adventure is. They will know what makes a good text-based adventure and will know how to use 2Connect to plan a story adventure and know how to make a story-based adventure using 2Create a Story.	Text-based adventure Concept map Debug - Sprite Function	2Create a Story 2Connect Word Processing units -Year 1,2,3,4,5,6 Simulations units – Year 3,5,6
Summer 1	6.9 Spreadsheets (with Microsoft Excel or Google Sheets)	To Know what a spreadsheet looks like To navigate and enter data into cells. To introduce some basic data formulae for percentages, averages and max and min numbers. To demonstrate how the use of spreadsheets can save time and effort when performing calculations. To use a spreadsheet to model a situation. To demonstrate how a spreadsheet can make complex data clear by manipulating the way it is presented. To create a variety of graphs in sheets. To apply spreadsheet skills to solving problems.	Children will begin to transfer their computing skills from the Purple Mash environment to other programs by doing this they will know what a spreadsheet looks like. Using the Google Sheets children will know how to navigate and enter data into cells and use some basic data formulae for percentages, averages and max and min numbers. And know how to create a variety of graphs in sheets.	Alignment Formula Style Calculate Function Sum Cell Range Value Cell Reference Row Chart Spreadsheet Column Workbook	Google Sheets Spreadsheet units -Year 1,2,3,4,5,6

<p>Summer 2</p>	<p>6.8 Binary</p>	<p>To examine how whole numbers are used as the basis for representing all types of data in digital systems. To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems). To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.</p>	<p>Children will know that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits).</p>	<p>Bit Nibble Gigabyte Byte Megabyte Kilobyte Tetrabyte Binary Base 2 Switch</p>	<p>Technology units -Year 1,2,3,4,5,6 2Connect 2Question Free Code Gorilla</p>
<p>Vocabulary to be learnt by end Y6</p>	<p>Event Function, Get Input If, Tabs Timer Variable PEGI rating , Screen time Count formula, Equals Formula. Text-based adventure game, Sprite Blog, Blog page, Blog post Microsoft PowerPoint, Excel, Google Sheets Local Area Network Wide Area Network Binary, Byte</p>				

Outcomes evidenced via 2Simple, Mini Mash for nursery and reception. Y1-Y6 Individual Purple Mash and Class Google Drive Folders evidence a broad, exciting, and balanced computing curriculum, demonstrating the children's acquisition of the identified key knowledge, vocabulary, and skills.

Children review the agreed objectives at the end of every lesson and are actively encouraged to identify their own target areas, with support from their teachers. Children are also asked to show what they have learned comparative to their starting points at the end of every topic.

Emphasis is placed on analytical thinking and deeper questioning which helps pupils gain a coherent knowledge and understanding of computing in the wider world and are curious to know more about the subject. Through this, children learn to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement.