

Curriculum Overview

Years FS2-6

Subject: Computing

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>FS2: Coverage based on Child Initiated learning opportunities, mini Mash and technology opportunities in continuous provision</b>						
<b>Knowledge and Skills (to happen continuously through the year via Adult led and child initiated opportunities)</b>	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the	With support begin to save their work With support begin to be able to log in and out Use a mouse to move the cursor Explore a range of technology Know that a keyboard is made up of letters, numbers and symbols Understand and follow a set of simple instructions To use a range of simple programmable toys (e.g. beebots) Copy actions to make something happen (e.g. take a photo) Identify when something is not working correctly Name and identify different types of technology (e.g. computer camera, microwave) Name the parts of different types of technology e.g a mouse and keyboard ) Know that a specific program is needed for a specific job Recognise the ways technology is used in the

	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world	classroom, at home and in the community Begin to recognise the difference between the virtual and the real world
<b>Key Vocabulary</b>	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image	Log in, Username, Password, My Work, Log out, Save, Keyboard, Mouse, Screen, Direction, Monitor, Computer, Arrow, Spacebar, Enter Arrow keys, Backspace key, Cursor, Delete key, Undo, Rewind, Beebot, Program, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm, Action, Button, Character, Image
<b>Year 1</b>						
<b>Knowledge</b>	<b>Online Safety and Exploring Purple Mash - 4 weeks</b> To become familiar with the icons and types of resources available in the Topics section.  To build knowledge on how the Tools and Games section of Purple Mash works	<b>Pictograms - 3 weeks (2Count)</b> To understand that data can be represented in picture format.  To know what a pictogram is  <b>Lego Builders - 3 weeks (2DIY)</b>  To consider how the order of instructions affects the result.	<b>Maze Explorers- 3 weeks(2Go)</b> To understand the functionality of the direction keys.  CS1 Understand that the word algorithm means a set of instructions  To understand how to change and extend the algorithm list.	<b>Coding - 6 weeks (2Code)</b> To understand what coding means.  To know the save, print, open and new icon.  CS1 Understand that the word algorithm means a set of instructions	<b>Spreadsheets - 3 weeks (2Calculate)</b> To know what a spreadsheet program looks like.  To know which icon will open 2Calculate in Purple Mash.  <b>Technology Outside of School - 2 weeks</b>	<b>Assessment for Learning based intervention.</b>

	<p>OS1 Know that we use passwords to keep information safe</p> <p><b>Grouping and Sorting -2 weeks (2DIY) -</b></p> <p>To understand how to group and sort items and why this is useful</p>	<p>CS1 Understand that the word algorithm means a set of instructions</p>	<p><b>Animated Stories - 3 weeks plus 2 lesson linked to English (2Create A Story)</b></p> <p>To be introduced to an understand e-books and the 2Create a Story tool.</p>	<p>CS4 Understand that the word debug means a mistake on the computer</p>	<p><b>DL1 1.Understand that the internet can be used to talk to other people.</b></p> <p><b>2. Understand that they need permission from an adult to use the internet</b></p> <p>DL6 Understand that not everything they see online is true</p>	
Skills	<p><b>Online Safety and Exploring Purple Mash - 4 weeks</b></p> <p><b>OS6 1.Talk about why it's important to be kind and polite online</b></p> <p><b>2.Understand that we have online safety rules to keep us safe and talk about some of these rules</b></p> <p>IT1 Save work via an app or when the saving location has been set by an adult</p> <p>IT2 To be able to safely and correctly log out</p>	<p><b>Pictograms - 3 weeks (2Count)</b></p> <p><b>IT4 Confidently use a range different technology tools</b></p> <p><b>Lego Builders - 3 weeks (2DIY)</b></p> <p>To compare the effects of adhering strictly to instructions to completing tasks without complete instructions.</p> <p>CS1 Give instructions to a classmate (using</p>	<p><b>Maze Explorers- 3 weeks(2Go)</b></p> <p>IT5 Use the space bar, backspace, enter, lowercase letters and numbers on a keyboard on any device (including on a tablet) to enter text</p> <p>CS1 Give instructions to a classmate (using forward, backward and turn) and physically follow their instructions.</p> <p>CS3 Describe what actions they will need</p>	<p><b>Coding - 6 weeks (2Code)</b></p> <p>CS1 Give instructions to a classmate (using forward, backward and turn) and physically follow their instructions</p> <p><b>CS2 Program a robot or software to do a simple movement</b></p> <p>CS3 Describe what actions they will need to do to make something happen</p> <p>CS5 Begin to predict what will happen for a</p>	<p><b>Spreadsheets - 3 weeks (2Calculate)</b></p> <p>IT1 Save work via an app or when the saving location has been set by an adult</p> <p>IT9 Confidently use a range different technology tools</p> <p>IT10 Begin to use technology to create and present my ideas</p> <p><b>Technology Outside of School - 2 weeks</b></p>	

	<p>and shut down from any website or device Use a mouse to control a cursor and use the left click to select options</p> <p><b>IT4 Confidently use a range different technology tools</b></p> <p>DL5 Begin to use a search engine to find information</p> <p><b>Grouping and Sorting -2 weeks (2DIY) -</b></p> <p><b>IT4 Confidently use a range different technology tools</b></p>	<p>forward, backward and turn) and physically follow their instructions.</p> <p><b>CS2 Program a robot or software to do a simple movement.</b></p> <p>CS3 Describe what actions they will need to do to make something happen</p>	<p>to do to make something happen</p> <p>CS5 Begin to predict what will happen for a simple sequence of instructions</p> <p><b>Animated Stories - 3 weeks plus 2 lesson linked to English (2Create A Story)</b></p> <p><b>IT4 Confidently use a range different technology tools</b></p> <p>IT6 Say what is good about their work</p>	<p>simple sequence of instructions</p> <p>IT1 Save work via an app or when the saving location has been set by an adult</p>	<p>DL4 Talk about the similarities and differences between the Internet and things in the physical world</p> <p>DL3 Recognise the ways technology is used in the classroom, at home and in the community</p>	
<b>Key Vocabulary</b>	<p>Log in, Username, Password, Avatar, My Work, Log out, Save, Notification, Topics, Tools</p> <p>Sort, Criteria</p>	<p>Pictogram, Data, Collate</p> <p>Instruction, Algorithm, Computer, Program, Debug</p>	<p>Direction, Challenge, Arrow, Undo, Rewind, Forward, Backwards, Right turn, Left turn, Debug, Instruction, Algorithm</p> <p>Animation, E-Book, Font, File, Sound Effect, Display Board</p>	<p>Action, Background, Button, Character, Code block, Code Design, Coder, Coding, Collision Detection, Command, Design Mode, Input, Object, Program, Properties, Scale, Stop command, Sound, When clicked, When key</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>Technology</p>	

Year 2

<p>Knowledge</p>	<p><b>Coding - 6 weeks (2Code)</b>                  To understand what an algorithm is.</p> <p>To know there are different object types.</p> <p>To know what debugging means</p>	<p><b>Online Safety - 2 weeks</b>                  To know how to refine searches using the Search tool.</p> <p>To have some knowledge and understanding about sharing more globally on the Internet.</p> <p><b>DL1 Understand that the internet can be used to communicate with people anywhere in the world</b></p> <p>To know how Email is used as a communication tool.</p> <p>To understand how we should talk to others in an online situation.</p> <p>To understand that information put online leaves a digital footprint or trail.</p> <p><b>Spreadsheets - 4 weeks (2Calculate)</b></p>	<p><b>Questioning - 6 weeks (2 Question and 2 Investigate)</b>                  To learn about data handling tools that can give more information than pictograms.</p>	<p><b>Effective Searching - 3 Weeks (Browser)</b>                  To understand the terminology associated with searching.</p> <p>To gain a better understanding of searching on the Internet.</p> <p><b>Creating Pictures - 3 weeks (2Paint a Picture)</b>                  To know what functions can be used on the 2Paint a Picture tool.</p> <p>To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir).</p> <p>To learn about the work of Piet Mondrian and the styles he used and how we might use technology to recreate these</p> <p>To learn about the work of William Morris and the styles he used and how we might use</p>	<p><b>Creating Pictures (cont) - 2 weeks (2Paint a Picture)</b>  <i>(see previous column)</i></p> <p><b>Presenting Ideas - 4 weeks</b>                  To understand how a story can be presented in different ways using technology.</p>	<p><b>Making Music - 3 weeks (2Sequence)</b></p> <p>To know that 2Sequence can be used to create music digitally.</p> <p>To understand how music can be used to express feelings and create tunes which depict feelings.</p> <p><b>Assessment for Learning based intervention.</b></p>
------------------	--	---	--	--	--	--

		To know how to use a variety of tools in spreadsheets to perform calculations and understand what each tool is used for.		technology to recreate these		
--	--	--	--	------------------------------	--	--



<p>Skills</p>	<p><b>Coding – 6 weeks (2Code)</b></p> <p>CS1 Confidently predict what will happen for a sequence of instructions</p> <p><b>CS2 Say whether an algorithm works and achieves the goal</b></p> <p>CS3 Describe the algorithm they will need for a task</p> <p>CS4 Use the word debug confidently</p> <p>CS5 Watch a program work and spot where it goes wrong so that they can debug it. Say what could be changed about an algorithm to make it better Confidently predict what will happen for a sequence of instructions</p> <p>CS6 Use programming hardware/software or apps to programme</p>	<p><b>Online Safety – 2 weeks</b></p> <p>DL5 Confidently use a search engine to find information</p> <p><b>IT4 Independently use technology to create, manipulate and present their ideas</b></p> <p><b>OS6 1. Explain in their own words the schools online safety rules e.g. SMART rules</b></p> <p><b>2. Give examples of how they can be kind and polite online</b></p> <p>OS2 Discuss why they need to keep personal information private</p> <p><b>Spreadsheets – 4 weeks (2Calculate)</b></p> <p>IT3 Independently use technology to create, manipulate and present their ideas</p>	<p><b>Questioning – 6 weeks (2 Question and 2 Investigate)</b></p> <p>IT9 Create different effects with different technology tools</p> <p>DL5 Confidently use a search engine to find information</p>	<p><b>Effective Searching – 3 Weeks (Browser)</b></p> <p>DL4 Identify benefits of using technology including finding information, creating and communicating</p> <p>DL5 Confidently use a search engine to find information</p> <p>IT3 and IT4 <b>Independently use technology to create, manipulate and present their ideas</b></p> <p><b>DL1 Understand that the internet can be used to communicate with people anywhere in the world</b></p> <p><b>Creating Pictures – 3 weeks (2Paint a Picture)</b></p> <p>IT1 Save and retrieve work</p> <p>IT2 Use a mouse to control a cursor and</p>	<p><b>Creating Pictures (cont) – 2 weeks (2Paint a Picture)</b> <i>(see previous column)</i></p> <p><b>Presenting Ideas – 4 weeks</b></p> <p>IT3 and IT4 <b>Independently use technology to create, manipulate and present their ideas</b></p>	<p><b>Making Music – 3 weeks (2Sequence)</b></p> <p>CS1 Confidently predict what will happen for a sequence of instructions</p> <p>CS5 Watch a program work and spot where it goes wrong so that they can debug it. Say what could be changed about an algorithm to make it better Confidently predict what will happen for a sequence of instructions</p> <p>IT1 Save and retrieve work</p> <p><b>Assessment for Learning based intervention.</b></p>
---------------	---	---	---	--	--	--

	more complex movements	IT9 Create different effects with different technology tools		use the left and right click  <b>IT4 Independently use technology to create, manipulate and present their ideas</b>		
<b>Key Vocabulary</b>	Action, Algorithm, Bug, Character, Code block, Code design, Command, Debug/Debugging, Design mode, Input, Object, Properties, Repeat, Scale, Timer, When clicked, When key	Search, Display board, Internet, Sharing, E-mail, Attachment, Digital footprint  Backspace key, Copy and paste, Columns, Cells, Count Tool, Delete key, Equals tool, Image toolbox, Lock tool, Move cell tool, Rows, Speak tool, Spreadsheet	Pictogram, Question, Data, Collate, Binary tree, Avatar, Database	Internet, Search, Search Engine  Impressionism, Palette, Pointillism, Share, Surrealism, Template	Impressionism, Palette, Pointillism, Share, Surrealism, Template  Concept map (mind map), Node, Animated, Quiz, Non-Fiction, Presentation, Narrative, Audience	BPM, Composition, Digitally, Instrument, Music, Sound effects (sfx), Soundtrack, Tempo, Volume

**Year 3**

<b>Knowledge</b>	<p><b>Coding - 6 weeks (2Code)</b> To understand how to design algorithms using flowcharts.</p> <p>To know what codes are needed to design an algorithm that represents a physical system.</p> <p>To understand variables in 2Code.</p>	<p><b>Online Safety - 3 weeks</b> To know what makes a safe password.</p> <p>To understand what methods can be used 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</p>	<p><b>Touch Typing - 4 weeks (2Type)</b> To have some knowledge of typing terminology.</p> <p>To understand the correct way to sit at the keyboard.</p> <p>To know the use of the home, top and bottom row keys.</p>	<p><b>Emails (cont) - 4 weeks (2Email, 2 Connect and 2 DIY)</b> <i>(see previous column)</i></p> <p><b>Branching Databases - 2 weeks (2Question)</b>  To understand a branching database and how to sort objects using just 'yes' or 'no' questions.</p>	<p><b>Branching Databases (cont) - 2 weeks (2Question)</b> <i>(see previous column)</i></p> <p><b>Simulations - 3 weeks (2Simulate and 2Publish)</b> To consider what simulations are.</p> <p>To know what tools are needed to work a simulation.</p>	<p><b>Graph - 3 weeks (2Graph)</b> To know how to enter data into a graph and answer questions.</p> <p><b>Assessment for Learning based intervention.</b></p>
------------------	---	--	--	--	---	---



	<p>To deepen understanding of the different variables.</p>	<p>communicate with a wider audience.</p> <p>To consider the truth of the content of websites.</p> <p>To learn about the meaning of age restrictions symbols on digital media and devices.</p> <p><b>OS6 1. Understand the consequences of not communicating kindly and respectfully online</b></p> <p><b>Spreadsheets - 3 weeks (2Calculate)</b> To understand the symbols more than, less than and equal to, to compare values.</p>	<p><b>Emails - 2 weeks (2Email, 2 Connect and 2 DIY)</b> To understand different methods of communication.</p> <p>To know the rules of how to use email safely.</p>			
Skills	<p><b>Coding - 6 weeks (2Code)</b> CS1 Confidently predict what will happen for a more complex sequence of instructions</p> <p><b>CS2 Put programming commands into a</b></p>	<p><b>Online Safety - 3 weeks</b> OS1 Keep their school passwords safe and private and explain the importance of this</p> <p><b>DL1 Discuss different ways to communicate with others online e.g. email, instant messaging, Skype</b></p>	<p><b>Touch Typing - 4 weeks (2Type)</b> IT5</p> <p><b>Emails - 2 weeks (2Email, 2 Connect and 2 DIY)</b></p> <p><b>DL1 Discuss different ways to communicate</b></p>	<p><b>Emails (cont) - 4 weeks (2Email, 2 Connect and 2 DIY)</b> <i>(see previous column)</i></p> <p><b>Branching Databases - 2 weeks (2Question)</b></p> <p>IT9 Talk about the different ways they use</p>	<p><b>Branching Databases (cont) - 2 weeks (2Question)</b> <i>(see previous column)</i></p> <p><b>Simulations - 3 weeks (2Simulate and 2Publish)</b></p> <p>IT6 Evaluate their work and improve its</p>	<p><b>Graph - 3 weeks (2Graph)</b> IT10 Talk about the different ways in which information can be shown</p> <p><b>Assessment for Learning based intervention.</b></p>

	<p><b>sequence to achieve a specific outcome</b></p> <p>CS3 Use repeat commands to improve an algorithm</p>	<p>DL6 Begin to acknowledge that other people have created the information they use on the internet</p> <p>OS5 Talk about websites/ apps/films/ games that they use that are age appropriate</p> <p><b>2. Acknowledge that anything they share online can be seen by others</b></p> <p><b>3. Give real life examples for each of the schools online safety rules e.g. SMART rules</b></p> <p><b>Spreadsheets - 3 weeks (2Calculate)</b></p> <p>IT9 Talk about the different ways they use technology to collect information, including a camera, microscope or</p>	<p><b>with others online e.g. email, instant messaging, Skype</b></p> <p>OS2 Talk about different situations where they may be asked for personal information</p> <p>IT2 Explore new media to extend what they can achieve</p>	<p>technology to collect information, including a camera, microscope or sound recorder and do this independently</p> <p>IT10 Talk about the different ways in which information can be shown</p>	<p>effectiveness</p> <p>Say what kind of information they could use to help them investigate a question</p> <p><b>IT4 Acknowledge how to combine a mixture of text, graphics and sound to share their ideas and learning</b></p>	
--	---	--	--	--	--	--

		<p>sound recorder and do this independently</p> <p>IT10 Talk about the different ways in which information can be shown</p>				
<b>Key Vocabulary</b>	<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>Password, Internet, Blog, Concept map, Username, Website, Webpage, Spoof website, PEGI rating</p> <p>⇔, Advance mode, Copy and Paste, Columns, Cells, Delete key, Equals tool, Move cell tool, Rows, Spin tool, Spreadsheet</p>	<p>Posture, Top row keys, Home row keys, Bottom row keys, Space bar</p> <p>Communication, Email, Compose, Send, Report to the teacher, Attachment, Address book, Save to draft, Password, CC, Formatting</p>	<p>Communication, Email, Compose, Send, Report to the teacher, Attachment, Address book, Save to draft, Password, CC, Formatting</p> <p>Branching database, Data, Database, Question</p>	<p>Branching database, Data, Database, Question</p> <p>Simulation</p>	<p>Graph, Field, Data, Bar chart, Block graph, Line graph</p>

**Year 4**

<b>Knowledge</b>	<p><b>Coding - 6 weeks (2Code)</b></p> <p>Understand and use variables in 2Code.</p> <p>Effectively use computational thinking terms decomposition and abstraction.</p>	<p><b>Online Safety - 4 weeks</b></p> <p>Assess how children can protect themselves from online identity theft.</p> <p>Understand that information put online leaves a digital footprint or trail and that this can aid identity theft.</p> <p>Identify the risks and benefits of installing software including apps.</p>	<p><b>Spreadsheets (cont) - 4 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Writing for Different Audiences - 2 weeks (2Email, 2Connect, 2DIY)</b></p> <p>To explore how font size and style can affect the impact of a text.</p> <p><b>DL1 Discuss different ways to communicate</b></p>	<p><b>Writing for Different Audiences (cont) - 3 weeks (2Email, 2Connect, 2DIY)</b> <i>(see previous column)</i></p> <p><b>Logo - 3 weeks (reduced by 1) (2Logo)</b></p> <p>To learn the structure of the coding language of Logo.</p>	<p><b>Animation - 3weeks (2Animate)</b></p> <p>To discuss what makes a good animated film or cartoon.</p> <p>To learn how animations are created by hand.</p> <p>To find out how 2Animate can be created in a similar way using the computer.</p>	<p><b>Hardware Investigators - 2 weeks.</b></p> <p>To understand the different parts that make up a computer.</p> <p>CS6 Acknowledge whether the resource they are using is on the Internet, the school network or a different device</p>
------------------	---	---	---	--	---	---

		<p>Understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism.</p> <p><b>Spreadsheets - 2 weeks (2Calculate)</b></p> <p>IT9 Talk about the different ways they use technology to collect information, including a camera, microscope or sound recorder and do this independently  IT10 Talk about the different ways in which information can be shown</p>	<p>with others online e.g. email, instant messaging, Skype and select the appropriate tool for purpose</p>		<p>To learn about onion skinning in animation.</p> <p>IT2 Explore new media to extend what they can achieve</p> <p><b>Effective Search - 3 weeks (Browser)</b>  To assess whether an information source is true and reliable.</p> <p>IT6 Evaluate their work and improve its effectiveness  Say what kind of information they could use to help them investigate a question</p> <p>OS2 Talk about different situations where they may be asked for personal information</p> <p>DL6 Begin to acknowledge that other people have created the information they use on the internet</p>	<p><b>Assessment for Learning based intervention.</b></p>
--	--	---	--	--	---	---

<p>Skills</p>	<p><b>Coding - 6 weeks (2Code)</b></p> <p>CS1 Confidently predict what will happen for a more complex sequence of instructions</p> <p><b>CS2 Put programming commands into a sequence to achieve a specific outcome and evaluate its success</b></p> <p>CS3 Use repeat commands to improve an algorithm Change an input to a program to achieve a different output</p>	<p><b>Online Safety - 4 weeks</b></p> <p>OS2 Talk about different situations where they may be asked for personal information</p> <p>OS4 Make good decisions about the time they spend online and their choice of online activity</p> <p>OS5 Talk about websites/ apps/films/ games that they use that are age appropriate</p> <p><b>OS6 1. Explain the consequences of not communicating kindly and respectfully online</b></p> <p><b>2. Acknowledge that anything they share online can be seen by others</b></p> <p><b>3. Give real life examples for each of the schools online</b></p>	<p><b>Spreadsheets (cont) - 4 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Writing for Different Audiences - 2 weeks (2Email, 2Connect, 2DIY)</b></p> <p><b>IT3 and IT4 Combine a mixture of text, graphics and sound to share their ideas and learning</b></p>	<p><b>Writing for Different Audiences (cont) - 3 weeks (2Email, 2Connect, 2DIY)</b> <i>(see previous column)</i></p> <p><b>Logo - 3 weeks (reduced by 1) (2Logo)</b></p> <p><b>CS2 Put programming commands into a sequence to achieve a specific outcome and evaluate its success</b></p> <p>CS3 Use repeat commands to improve an algorithm</p>	<p><b>Animation - 3weeks (2Animate)</b></p> <p>IT3 and <b>IT4 Understand how to combine a mixture of text, graphics and sound to share their ideas and learning</b></p>	<p><b>Assessment for Learning based intervention.</b></p>
---------------	--	---	--	---	---	---

		<p><b>safety rules e.g. SMART rules</b></p> <p>DL2 Begin to acknowledge that other people have created the information they use on the internet</p> <p>DL4 Discuss benefits and disadvantages of technology</p> <p><b>Spreadsheets - 2 weeks (2Calculate)</b></p> <p>Use a spreadsheet to model a real-life situation.</p>				
<b>Key Vocabulary</b>	<p>Action, Alert, Algorithm, Bug, Code design, Command, Control, Debug/debugging, Design mode, Event, Get input, If, If/Else, Input, Output, Object, Repeat, Selection, Simulation, Timer, Variable</p>	<p>Computer virus, Cookies, Copyright, Digital footprint, Email, Identity theft, Malware, Phishing, Plagiarism, Spam</p> <p>Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equal tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer</p>	<p>Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equal tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer</p> <p>Font, Bold, Italic, Underline</p>	<p>Font, Bold, Italic, Underline</p> <p>Logo, BK, FD, RT, LT, Repeat, SETPC, SETPS, PU, PD</p>	<p>Animation, Flipbook, Frame, Onion skinning, Background, Play, Sound, Stop motion, Video clip</p> <p>Easter egg, Internet, Internet browser, Search, Search engine, Spoof website, Website</p>	<p>Motherboard, CPU, RAM, Graphics card, Network card, Monitor, Speakers, Keyboard and Mouse</p>

**Year 5**

<p>Knowledge</p>	<p><b>Coding - 6 weeks (2Code)</b> To represent a program design and algorithm.</p> <p>To explore string and text variable types so that the most appropriate can be used in programs.</p>	<p><b>Online Safety - 3 weeks</b> To gain a greater understanding of the impact that sharing digital content can have.</p> <p>To review sources of support when using technology and children's responsibility to one another in their online behaviour.</p> <p>To know how to maintain secure passwords.</p> <p>To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this.</p> <p>To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.</p> <p>To learn about how to reference sources in their work.</p>	<p><b>Spreadsheets (cont) - 3 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Databases - 3 weeks (reduced by 1 week).</b> <b>(2Question, 2 Investigate)</b> To learn how to search for information in a database.</p>	<p><b>Game Creator - 5 weeks (2DIY 3D)</b> To know how to create, share and evaluate a game.</p>	<p><b>3D modelling - 4 weeks (2Design and Make)</b> To be introduced to 2Design and Make and the skills of computer aided design.</p> <p>To understand designing for a purpose.</p> <p>To understand printing and making.</p> <p><b>2 Concept Maps - 2 weeks (2Connect)</b> To understand the need for visual representation when generating and discussing complex ideas.</p> <p>To understand and use the correct vocabulary when creating a concept map.</p> <p>To understand how a concept map can be used to retell stories and present information.</p>	<p><b>2 Concept Maps (cont) - 2 weeks (2Connect)</b> <i>(see previous column)</i></p> <p><b>Assessment for Learning based intervention.</b></p>
------------------	--	--	--	--	---	---

		<p><b>Spreadsheets - 3 weeks (2Calculate)</b></p> <p>IT6 Review and improve their own work and support others to improve their work</p> <p>IT8 Plan, create and search a database to answer questions</p>				
Skills	<p><b>Coding - 6 weeks (2Code)</b></p> <p>CS1 Deconstruct a problem into smaller steps, recognising similarities to solutions used before</p> <p><b>CS2 Use a variable and operators to stop a program</b></p> <p>CS3 Recognise when they need to use a variable to achieve a required output. use a sensor to detect a change which can select an action within their program</p>	<p><b>Online Safety - 3 weeks</b></p> <p>OS1 Talk about what makes a secure password and why it is important.</p> <p>OS2 Explore the dangers of sharing too much about themselves online</p> <p>OS3 Explain why they need to protect themselves and the best ways to do this, including reporting concerns to an adult</p>	<p><b>Spreadsheets (cont) - 3 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Databases - 3 weeks (reduced by 1 week).</b> <b>(2Question, 2 Investigate)</b></p> <p>IT8 Plan, create and search a database to answer questions</p> <p>To contribute to a class database.</p>	<p><b>Game Creator - 5 weeks (2DIY 3D)</b></p> <p>IT2 Use the skills they have already developed to create content using unfamiliar technology</p> <p><b>IT4 Select, use and combine the appropriate technology tools to create effects that will have an impact on others</b></p> <p>IT6 Review and improve their own work and support others to improve their work</p>	<p><b>3D modelling - 4 weeks (2Design and Make)</b></p> <p>IT2 Use the skills they have already developed to create content using unfamiliar technology</p> <p>IT3 Use photos, video and sound to create an atmosphere when presenting to different audiences</p> <p><b>IT4 Select, use and combine the appropriate technology tools to create effects that will have an impact on others</b></p>	<p><b>2 Concept Maps (cont) - 2 weeks (2Connect)</b> <i>(see previous column)</i></p> <p><b>Assessment for Learning based intervention.</b></p>



	<p>CS5 Continually test and refine a program</p>	<p><b>OS6 Acknowledge that anything they do online is then public and will remain on the internet for a long time</b></p> <p>DL2 Find out who the information on a webpage belongs to where available</p> <p>DL6 Find out who the information on a webpage belongs to where available</p> <p><b>DL1 Understand how to use different online communications, including e-mail</b></p> <p><b>Spreadsheets - 3 weeks (2Calculate)</b></p> <p>IT9 Use a spreadsheet to record collected data</p> <p>IT2 Use the skills they have already developed to create content using unfamiliar technology</p>			<p><b>2 Concept Maps - 2 weeks (2Connect)</b></p> <p>IT3 Use photos, video and sound to create an atmosphere when presenting to different audiences</p> <p><b>IT4 Select, use and combine the appropriate technology tools to create effects that will have an impact on others</b></p>	
--	--	---	--	--	---	--

		<p>Using the formula wizard to add a formula to a cell to automatically make a calculation in that cell.</p> <p>Using 2Calculate tools to test a hypothesis.</p> <p>Using a spreadsheet to model a real-life situation and answer questions.</p>				
Key Vocabulary	<p>Action, Alert, Algorithm, Bug, Code design, Command, Control, Debug/debugging, Design mode, Event, Get input, If, If/Else, Input, Output, Object, Repeat, Sequence, Selection, Simulation, Timer, Variable</p>	<p>Online safety, Smart rules, Password, Reputable, Encryption, Identity theft, Shared image, Plagiarism, Citations, Reference, Bibliography</p> <p>Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer</p>	<p>Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer</p> <p>Avatar, Binary tree, Charts, Collaborative, Data, Database, Find, Record, Sort, Group, Arrange, Statistics, Reports, Table</p>	<p>Animation, Computer game, Customise, Evaluation, Image, Instructions, Interactive, Screenshot, Texture, Perspective, Playability</p>	<p>CAD - Computer aided design, Modelling, 3D, Viewpoint, Polygon, 2D, Net, 3D printing, Points, Template</p> <p>Audience, Collaboratively, Concept, Concept Map, Connection, Idea, Node, Thought, Visual</p>	<p>Audience, Collaboratively, Concept, Concept Map, Connection, Idea, Node, Thought, Visual</p>

Year 6

<p>Knowledge</p>	<p><b>Coding - 6 weeks (2Code)</b></p>	<p><b>Online Safety - 3 weeks</b></p> <p>To have a clear idea of appropriate online behaviour.</p> <p>To begin to understand how information online can persist.</p> <p>To understand the importance of balancing game and screen time with other parts of their lives.</p>	<p><b>Spreadsheets (cont) - 2 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Networks - 3 weeks</b> To learn about what the Internet consists of.</p> <p>To find out what a LAN and a WAN are.</p> <p>To think about what the future might hold.</p> <p>CS8 Understand how computer networks can provide multiple services such as the World Wide Web</p> <p>DL3(Y5) Understand how technology has developed</p>	<p><b>Text Adventures - 5 weeks (2Code, 2 Connect)</b></p> <p>To find out what a text adventure is to be able to create one.</p>	<p><b>Blogging - 5 weeks (2Blog)</b></p> <p>To identify the purpose of writing a blog and its key features.</p> <p>To consider the effect upon the audience of changing the visual 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><b>Quizzing - 6 weeks (2Quiz, 2 DIY, Text toolkit, 2Investigate)</b></p> <p>To learn how to use the question types within 2Quiz.</p> <p>To explore the grammar quizzes.</p>
<p>Skills</p>	<p><b>Coding - 6 weeks (2Code)</b></p> <p>To use the program design process, including flowcharts, to develop algorithms for more complex programs using and understanding of abstraction and</p>	<p><b>Online Safety - 3 weeks</b></p> <p>OS2 Explain in detail the consequences of sharing personal information online</p> <p>OS3 Talk about how to preserve evidence if they see something</p>	<p><b>Spreadsheets (cont) - 2 weeks (2Calculate)</b> <i>(see previous column)</i></p> <p><b>Networks - 3 weeks</b></p>	<p><b>Text Adventures - 5 weeks (2Code, 2 Connect)</b></p> <p>IT1 Use an appropriate tool to share their work and collaborate online</p> <p>IT2 Use the skills they have already developed</p>	<p><b>Blogging - 5 weeks (2Blog)</b></p> <p>IT3 Use photos, video and sound to create an atmosphere when presenting to different audiences</p>	<p><b>Quizzing - 6 weeks (2Quiz, 2 DIY, Text toolkit, 2Investigate)</b></p> <p>IT1 Use an appropriate tool to share their work and collaborate online</p> <p>IT2 Use the skills they have already developed</p>

	<p>decomposition to define the important aspects of the program.</p> <p>CS1 Decompose a problem into smaller parts to design an algorithm for a specific outcome</p> <p>CS4 Use logical reasoning to detect and correct errors in a more complex algorithm and program.</p> <p>CS5 Evaluate the effectiveness and efficiency of an algorithm while continually testing the programming of that algorithm</p>	<p>inappropriate/upsetting online e.g. turn off screen but not computer, take screenshots, save messages</p> <p>OS4 Explain the long term consequences of spending too much time online or on a game</p> <p>OS5 Revise the importance of age appropriate websites/apps/films /games and the consequences of not choosing these</p> <p><b>OS6 Explain what a digital footprint is and how to have a positive digital footprint</b></p> <p><b>Spreadsheets - 3 weeks (2Calculate)</b></p> <p>IT9 Select and use confidently the most effective tool to collect data for an investigation</p>		<p>to create content using unfamiliar technology</p> <p>IT3 Use photos, video and sound to create an atmosphere when presenting to different audiences</p> <p><b>IT4 Select, use and combine the appropriate technology tools to create effects that will have an impact on others</b></p> <p>IT6 Review and improve their own work and support others to improve their work</p> <p>CS1 Deconstruct a problem into smaller steps, recognising similarities to solutions used before</p> <p><b>CS2 Use logical thinking, imagination and creativity to create and extend a program</b></p>	<p>IT5 Use basic Keyboard Skills (including touch typing) on a keyboard (Ctrl + B, U, I, S, P)</p> <p>IT6 Review and improve their own work and support others to improve their work</p> <p><b>DL1 1.Use different online communications</b></p> <p><b>2.Confidently use an email system to communicate safely online.</b></p>	<p>to create content using unfamiliar technology</p> <p>IT3 Use photos, video and sound to create an atmosphere when presenting to different audiences</p> <p><b>IT4 Select, use and combine the appropriate technology tools to create effects that will have an impact on others</b></p> <p>IT8 Plan, create and search a database to answer questions</p> <p>CS7 Recognise and evaluate different types of information they find on the World Wide Web.</p>
--	--	--	--	---	--	--

		<p>Select the most appropriate way to record their data</p> <p>IT10 Choose the best way to present data</p> <p>IT11 Use the skills they have developed to interrogate a database Check the data they collect for accuracy and plausibility</p> <p>To use a spreadsheet to investigate the probability of the results of throwing many dice.</p> <p>Using the formula wizard to add a formula to a cell to automatically make a calculation in that cell.</p> <p>Using a spreadsheet to create computational models and answer questions.</p>		<p>CS3 Recognise when they need to use a variable to achieve a required output. use a sensor to detect a change which can select an action within their program</p> <p>CS4 Use logical reasoning to detect and debug mistakes in a program</p> <p>CS5 Continually test and refine a program</p>		
<b>Key Vocabulary</b>	Action, Alert, Algorithm, Bug, Code design, Command, Control, Debug/debugging, Event, Function, Get input, If, If/Else, Input, Output,	Digital Footprint, Password, PEGI rating, Phishing, Screen time, Spoof website	Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Count (how many) tool, Dice, Equals tool, Formula, Formula wizard,	Text-based adventure, Concept map, Debug, Sprite, Function	Audience, Blog, Blog page, Blog post, Collaborative, Icon	Audience, Collaboration, Concept map, Database, Quiz

	Object, Repeat, Sequence, Selection, Simulation, Tabs, Timer, Variable	Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Count (how many) tool, Dice, Equals tool, Formula, Formula wizard, Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer	Move cell tool, Random tool, Rows, Spin tool, Spreadsheet, Timer  Internet, World Wide Web, Network, Local area network (LAN), Wide area network (WAN), Router, Network cables, Wireless			
--	--	--	--	--	--	--