

Computing – Long Term Plan

Our whole-school Curriculum Development Leaders for computing are Mrs C Ogunji and Mrs S Khan

Year 1

Objectives/Key vocabulary/CCW	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Purple Mash Unit 1.1 Online Safety Digital literacy & IT	Purple Mash Unit 1.7 Coding Computer science & IT	Purple Mash Unit 1.4 Lego Builders Computer science & IT		Purple Mash Unit 1.6 Animated story books IT	Purple Mash 1.5 Maze Explorers BeeBots and Probots can be used to achieve the same objectives. Computer science and IT
ScholarPack objectives to be assessed in each unit	-Understands the importance of keeping personal information private. -Logs in safely with own login and logs out when finished. -Recognises common uses of information technology beyond school	-Creates unambiguous instructions -Understands what algorithms are and why they are important for digital devices -Creates simple programs and is starting to understand how the order of commands affects the outcome.	-Uses technology purposefully to create digital content -Creates simple programs and is starting to understand how the order of commands affects the outcome. -Creates unambiguous instructions		-Uses technology purposefully to create digital content -Saves work appropriately: starts to understand the idea of ownership of their creative work -Retrieves saved work.	-Creates simple programs and is starting to understand how the order of commands affects the outcome. -Saves work appropriately: starts to understand the idea of ownership of their creative work -Creates unambiguous instructions
Key vocabulary for each unit	Log in – to get into a computer or program safely Username – a name used to log in	Action - A type of command Background - Part of the program that displays behind the objects	Instruction - Information on how something should be done Algorithm - A precise set of step-by-step		Animation - giving the illusion of movement E-book - A book that can be read on a computer or digital device	Direction - A course along which someone or something moves. Challenge - A task or situation that tests

<p><i>You may want to enhance vocabulary with icons or pictures</i></p>	<p>Password – a secret code used to log in Avatar –a picture used instead of a person’s photo Log out – to leave a program or computer safely Save – to keep your work for later Tools – these help you to do different things in a program User – the person using a computer or program</p>	<p>Block - In programming, a group of commands Button - In 2 code, this object responds to being clicked Character - A type of object that is displayed on the screen Code Mode - In code 2, this is where you write your program Coder/Programmer - A person who writes a code Command - A single instruction in a computer program Input- Information going into a computer Scale - The size of an object Sound - A noise that is made Up – Moving from a lower to higher position Down- Moving from a higher to lower position Left- Moving in an opposite direction to the right (anti-clockwise) Right – Moving in an opposite direction to the left (clockwise) Directions - A course along which something/someone moves</p>	<p>instructions used to achieve something Program - To provide a computer with coded instructions Debug - To remove errors from computer Computer - An electronic device for storing and processing data Hide - Put out of sight Show - To be visible Up – Moving from a lower to higher position Down- Moving from a higher to lower position Left- Moving in an opposite direction to the right (anti-clockwise) Right – Moving in an opposite direction to the left (clockwise) Directions - A course along which something/someone moves</p>		<p>Font - A style of text on a computer File - A piece of work on a computer or a digital device Sound effect - A sound other than speech to bring a story to life Undo -A way to take-away what you did Redo - A way to replace what you did Background - A part of a picture Save - Keep and store a file on a computer or digital device</p>	<p>someone’s abilities. Arrow - A mark or sign resembling an arrow, used to show direction or position. Undo - Cancel or reverse the instruction. Rewind - Move back several steps or to the start. Right turn - To move the object in a clockwise direction. Forward - To move in the direction that one is facing or travelling. Backwards - To move in the opposite direction to which one is facing. Left turn - To move the object in an anti-clockwise direction. Debug - To find and remove errors from computer hardware or software. Instruction - Information about how something should be done. Algorithm - A precise, step-by-step set of instructions used to solve a problem or achieve an objective.</p>
<p>Cross-curricular opportunities for each unit</p>	<p>Writing - Poster</p>	<p>Writing – Instructions or evaluation</p>	<p>Writing – Instructions or evaluation</p>		<p>Writing - Evaluation</p>	<p>Writing - Instructions</p>

<p>Curriculum Themes</p> <p>Environment</p> <p>Engineering</p> <p>Celebrating diversity</p> <p>World of work and ambition</p> <p>Wellbeing and mental health</p> <p>Our school and our town</p>	<p>Being able to use technology safely and effectively is important for future education and work</p> <p>It is important to keep ourselves safe online.</p>	<p><i>Children develop their understanding of cause and effect.</i></p> <p>Children explore the effect of computers/ programs in day-to-day life.</p> <p>They understand that these skills could lead on to becoming website/ game designers.</p> <p>They explore the benefits or otherwise of computer games on wellbeing.</p> <p>They recognise diversity of characters within games.</p>	<p><i>Children develop their understanding of sequences of instructions in order to make things work</i></p> <p>Children explore the effect of computers/ programs in day-to-day life- how can these support living in an environmentally friendly way?</p> <p>They understand that these skills could lead on to becoming involved in jobs linked to debugging</p>		<p>Benefits of creating digital images vs drawn images</p> <p>Characters chosen represent different genders/ethnicity</p> <p>Authors, animators</p> <p>Creating animations is fun and relaxing</p>	<p><i>Children build on prior learning around digital content, coding and debugging.</i></p> <p>Children explore the effect of computers/ programs in day-to-day life.</p> <p>They understand that these skills could lead on to becoming involved with programming</p> <p>They explore the benefits or otherwise of how computers can make things easier!</p> <p>They recognise diversity of characters within games</p>
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Year 2

Objectives/Key vocabulary/CCW	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Purple Mash Unit 2.2 Online Safety Digital literacy & IT	Purple Mash 2.6 Creating Pictures cc art IT	Effective searching cc history: Explorers IT	Purple Mash Unit 2.1 Coding Computer science & IT		Purple Mash 2.8 Presenting ideas. cc link to a favourite topic IT
ScholarPack objectives to be assessed in each unit	<p>-Uses technology safely and respectfully</p> <p>-Thinks critically about the information they leave online: digital footprint</p> <p>-Identifies where to go for help and support when they have concerns</p>	<p>-Uses technology purposefully to manipulate digital content: including creating digital artwork</p> <p>-Uses technology purposefully to organise digital content: including presenting, saving and retrieving</p>	<p>-Understands the terminology and processes associated with searching on the internet</p> <p>-Uses technology purposefully to organise digital content: including presenting, saving and retrieving</p> <p>-Uses technology purposefully to manipulate digital content: including creating digital artwork</p>	<p>-Debugs simple programs</p> <p>-Uses logical reasoning to predict the behaviour of simple programs</p> <p>-Understands that algorithms are implemented as programs on digital devices</p>		<p>-Uses technology purposefully to organise digital content: including presenting, saving and retrieving</p> <p>-Uses technology purposefully to manipulate digital content: including creating digital artwork</p>
Key vocabulary for each unit <i>You may want to enhance vocabulary with icons or pictures</i>	<p>Search – Look for information in (in a database or the World Wide Web) using a search engine.</p> <p>Display board – In Purple Mash, this is a tool that enables you to share work with a wide audience.</p> <p>Internet – A way to send information from one computer to another</p>	<p>Log-in details - A code or words that are needed to open a computer programme</p> <p>Retrieve work -A way to open up again the work that you have done</p> <p>2 paint a picture -A computer painting programme</p> <p>Save work -The button to press to save the work you have just done</p>	<p>Easter egg – something you wouldn't expect to find</p> <p>Internet – network that is used across the world.</p> <p>Internet browser –used to locate and display Web pages.</p> <p>Search – To look for information. In this case on the Internet.</p>	<p>Algorithm – a precise set of step-by-step set instructions to achieve an objective</p> <p>Alert – Shows a pop up of text on the screen</p> <p>Bug – a problem in a computer program</p> <p>Code design – design what the program will look like and do</p> <p>Debug/debugging – Looking for any</p>		<p>Concept map (mind map) – A tool for organising and representing knowledge. They form a web of ideas which are all interconnected.</p> <p>Quiz - A test of knowledge, especially as a competition between individuals or teams as a form of entertainment.</p>

	<p>anywhere in the world using technology such as phones, satellites and radio links.</p> <p>Sharing – Post or repost (something) on a website.</p> <p>Email – Messages distributed by electronic means from one computer user to one or more people.</p> <p>Attachment – A computer file sent with an email.</p> <p>Digital Footprint – The information about a person that exists on the Internet as a result of their online activity.</p>	<p>Pen thickness -A tool to change the thickness of the paint brush</p> <p>Style to paint -Choices of painting programmes</p> <p>Colour palette -Colours or shapes within computer</p> <p>Fill tool -A way to instantly fill an area with colour</p> <p>Eraser - A tool to rub out mistakes</p> <p>Undo -A way to take-away what you did</p> <p>Redo - A way to replace what you did</p> <p>Zoom in - Making it larger</p> <p>Zoom out - Making it smaller</p>	<p>Search engine – A program that searches for information</p> <p>Spoof website – a website that gives pretend/fake information</p> <p>Website – A set of related information on one site</p>	<p>problems and fixing them</p> <p>Command – a single instruction</p> <p>Event – something that cause a block of the code.</p> <p>If – if this happens then another action will occur</p> <p>Timer – use this to set a timer</p> <p>Simulation – model that represent a real-life situation.</p>		<p>Narrative - A speech or talk in which a new product, idea, or piece of work is shown and explained to an audience.</p> <p>Node - A way to represent a concept or idea using text and/or images.</p> <p>Non-fiction - Informative or factual writing.</p> <p>Audience - The people giving attention to something.</p> <p>Animated - A process by which we see still pictures appear to move.</p> <p>Presentation - A speech or talk in which a new product, idea, or piece of work is shown and explained to an audience.</p>
Cross-curricular opportunities for each unit	Writing – Online Safety poster	<p>Links to art lessons</p> <p>Writing - evaluation</p>	<p>History topic</p> <p>Writing – Fact File</p>	Writing – Instructions		Writing or maths (link to suitable lesson that demonstrates ideas appropriately)
<p>Curriculum Themes</p> <p>Environment</p> <p>Engineering</p> <p>Celebrating diversity</p>	<p>Being able to use technology safely and effectively is important for future education and work</p> <p>It is important to keep ourselves safe online.</p>	<p>Is it more environmentally friendly to create digital artwork?</p> <p>CAD</p> <p>Graphic designers, games design</p>	<p>Extinction – dinosaurs – relate to present day</p> <p>Essential skills for world of work</p> <p>Keeping safe online</p>	<p>Problem solving skills learnt through coding are essential for engineers</p> <p>Games/app designers, programmers</p>		<p>Engineering – sharing ideas; putting forward proposals</p> <p>Learning skills which can be used in future study and throughout lifetime; advertising, graphic design; teaching</p>

World of work and ambition						
Wellbeing and mental health						
Our school and our town						

Year 3

Objectives/Key vocabulary/CCW	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Purple Mash unit 3.2 Online Safety Digital literacy & IT	Purple Mash unit 3.4 Typing IT	Purple Mash unit 3.3 Spreadsheets cc maths: statistics and place value	Purple Mash unit 3.5 Email IT	Purple Mash unit 3.1 Coding Computer science & IT	Purple Mash unit 3.7 Simulations (or revisit coding if further practice is required) IT
ScholarPack objectives to be assessed in each unit	<ul style="list-style-type: none"> -Knows what makes a password safe, how to keep a password safe and the consequences of not doing so. -Understands the importance of age restrictions on digital media. -Identifies a range of ways to report concerns about inappropriate 	<ul style="list-style-type: none"> -Uses a variety of software to accomplish given goals, including being able to touch type 	<ul style="list-style-type: none"> -Uses a variety of software to accomplish given goals, including being able to touch type -Uses technology effectively for communicating - Uses search technologies effectively; thinks critically about the accuracy of search results 	<ul style="list-style-type: none"> -Uses a variety of software to accomplish given goals, including being able to touch type -Uses technology effectively for communicating -Knows what makes a safe password, how to keep passwords safe and the consequences of not doing so 	<ul style="list-style-type: none"> -Writes programs that accomplish specific goals, including simulating a physical system -Uses sequences and 'if statements' in programs -Understands variables in programming and uses a variable to create a timer 	<ul style="list-style-type: none"> -Writes programs that accomplish specific goals, including simulating a physical system

	content and contact, including cyber-bullying			-Identifies a range of ways to report concerns about inappropriate content and contact, including cyber-bullying		
<p>Key vocabulary for each unit</p> <p><i>You may want to enhance vocabulary with icons or pictures</i></p>	<p>Password – a secret word, phrase or combination of letters/numbers to get into a website.</p> <p>Internet – a computer network with information.</p> <p>Blog – a website or webpage used by a group or individual to have a conversation.</p> <p>Concept map – a diagram to show how objects or ideas are connected.</p> <p>Username – an identification used by a person to get into an online service.</p> <p>Website – a set of related web pages, located under a name.</p> <p>Webpage – a page on line that makes up one screen of a website.</p> <p>Spoof website – a website that uses dishonest designs to trick people.</p> <p>PEGI rating – a rating that shows what age a game is suitable for.</p>	<p>Posture – The correct way to sit at the computer.</p> <p>Top row keys – The keys on the top row of the keyboard.</p> <p>Home row keys – The keys on the middle row of the keyboard.</p> <p>Bottom row keys – The keys on the bottom row of the keyboard.</p> <p>Space bar – The bar at the bottom of the keyboard.</p> <p>Keyboard – the part of the computer that you press to type onto.</p> <p>Computer – an electronic device for storing information.</p> <p>Laptop – a computer that can be carried around easily.</p> <p>Shift key – a key that allows other keys to show extra symbols.</p> <p>Caps Lock – a key that causes all letters to become capitals.</p> <p>Full Stop Key – A key that is used to add a full stop.</p>	<p>< > = – Symbols used to represent comparing two values. ($a < b$ means ‘a is less than b’. $a > b$ means ‘a is greater than b’. $a = b$ means ‘a is equal to b’). These can be combined, for example $a = < b$ means ‘a is equal to or less than b’.</p> <p>Advance mode – A mode of 2Calculate in which the cells have references and can include formulae.</p> <p>Copy and Paste – A way to copy information from the screen into the computer’s memory and paste it elsewhere without re-typing.</p> <p>Columns – Vertical reference points for the cells in a spreadsheet.</p> <p>Cells – An individual section of a spreadsheet grid. It contains data or calculations.</p> <p>Delete key - Use this key to remove the contents of a cell.</p> <p>Equals tool – tests whether the entered calculation in the cells to</p>	<p>Communication – The sharing or exchanging of information by speaking, writing, or using some other medium such as email.</p> <p>Email – Messages sent by electronic means from one device to one or more people.</p> <p>Compose – To write or create something.</p> <p>Send – To make an email be delivered to the email address it is addressed to.</p> <p>Report to the teacher – A way in 2Email to tell the teacher if you have received an email that makes you feel upset or scared.</p> <p>Attachment – A file, which could be a piece of work or a picture, that is sent with the email.</p> <p>Address book – A list of people who you regularly send an email to.</p> <p>Save to draft – Allows you to save an email that you are working on and send it later.</p>	<p>Action - Types of commands, which are run on an object. They could be used to move an object or change a property.</p> <p>Algorithm - A precise step by step set of instructions used to solve a problem or achieve an objective.</p> <p>Bug - A problem in a computer program that stops it working the way it was designed.</p> <p>Control - These commands determine whether parts of the program will run, how often and sometimes, when.</p> <p>Debug/Debugging - Looking for any problem in the code, fixing and testing them.</p> <p>Design Mode - Used to create the look of a 2Code computer program when it is run.</p> <p>Code Design - Design what your program will look like and what it will do.</p>	<p>Simulation - A computer simulation is a program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life.</p>

		<p>Delete Key - Use this key to remove the contents of a cell.</p>	<p>the left of the tool has the correct answer in the cell to the right of the tool.</p> <p>Move cell tool – This tool makes a cell’s contents moveable by drag-and-drop methods.</p> <p>Rows - Vertical reference points for the cells in a spreadsheet.</p> <p>Spin Tool – Clicking on this in a cell will increase or decrease the value in the cell to the right by 1.</p> <p>Spreadsheet - A computer program that represents information in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells</p>	<p>Password – A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as email.</p> <p>CC – A way of sending a copy of your email to other people so they can see the information in it.</p> <p>Formatting – Allows you to change the way the text of an email looks. For example, you can make the text bold or underline it.</p>	<p>Command - A single instruction in a computer program.</p> <p>Code block - A group of commands that are joined together and are run when a specific condition is met or when an event occurs.</p>	
<p>Cross-curricular opportunities for each unit</p>	<p>Writing - Poster</p>	<p>Could using skills taught to write sentences or words on the word document (i.e., for weekly spellings, published writing). Work could then be printed with and a note of the length of the session could be added to assess speed.</p>	<p>Maths – data collection/tables</p>	<p>Writing - Poster</p>	<p>Writing - Instructions</p>	<p>Writing - Evaluation</p>
<p>Curriculum Themes</p> <p>Environment</p>	<p>Impact of what we share may have on our futures; possibilities of online world for jobs</p>	<p>Computers/ electronic devices used in most jobs – typing skills improve efficiency</p>	<p>Essential for engineers – speeds up analysis and problem solving</p>	<p>Lower carbon footprint than past</p>	<p>A variety of different engineers use coding in their jobs e.g. software engineers</p>	<p>A variety of different engineers use coding in their jobs e.g. software engineers</p>

<p>Engineering</p> <p>Celebrating diversity</p> <p>World of work and ambition</p> <p>Wellbeing and mental health</p> <p>Our school and our town</p>	<p>Questioning online content: how it makes us feel; is it true; has the person been paid; how do our posts affect others?</p>		<p>Used in many jobs</p>	<p>Essential within work environment</p> <p>Using emails safely</p>	<p>Engineers</p> <p>Children code in their leisure time – something to do to relax</p>	<p>Engineers</p> <p>Children code in their leisure time – something to do to relax</p>
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Year 4

Objectives/Key vocabulary/CCW	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	<p>Purple Mash unit 4.2 Online Safety Digital literacy & IT</p>	<p>Purple Mash unit 4.7 Effective Searches IT</p>	<p>Purple Mash unit 4.4 Writing for different audiences IT</p>	<p>Purple Mash unit 4.3 Spreadsheets cc maths: statistics and place value IT</p>	<p>Purple Mash unit 4.1 Coding Computer science & IT</p>	<p>Purple Mash unit 4.6 Animation IT</p>
<p>ScholarPack objectives to be assessed in each unit</p>	<p>-Has a deeper understanding of digital footprints and understands how to protect themselves from online identity theft</p> <p>-Recognises acceptable / unacceptable behaviour when communicating electronically</p>	<p>-Selects a variety of software to accomplish given goals</p> <p>-Presents digital content in effective ways, appropriate to the given audience</p>	<p>-Presents digital content in effective ways, appropriate to the given audience</p> <p>-Selects a variety of software to accomplish given goals</p>	<p>-Uses spreadsheets effectively for planning actions and presenting data</p> <p>- Works with various forms of input and output</p>	<p>- Uses 'if/else' statements in programs</p> <p>- Designs and creates programs which include repetition</p> <p>- Works with various forms of input and output</p>	<p>-Presents digital content in effective ways, appropriate to the given audience</p> <p>-Selects a variety of software to accomplish given goals</p> <p>- Designs and creates programs which include repetition</p>

	-Understands the importance of balancing digital activities with other parts of their life					
<p>Key vocabulary for each unit</p> <p><i>You may want to enhance vocabulary with icons or pictures</i></p>	<p>Computer virus – put on the computer to cause damage or copy information</p> <p>Cookies – generates information about the user</p> <p>Copyright – when the rights to something belong to a specific person.</p> <p>Digital footprint – information left behind after being online</p> <p>Email – messages sent by a electronic device. Identity theft – when a person pretends to be someone else.</p> <p>Malware – software that is designed to damage or gain unauthorised access to a computer system.</p> <p>Phishing – sending email pretending to be from a company in order to persuade people to give personal information</p> <p>Plagiarism – when you use someone else’s ideas and pretend they are yours</p>	<p>Easter egg – An unexpected or undocumented feature in a piece of computer software or on a DVD, included as a joke or a bonus.</p> <p>Internet – A global computer network providing a variety of information and communication facilities.</p> <p>Internet browser – A software application used to locate and display Web pages.</p> <p>Search – To look for information. In this case on the Internet.</p> <p>Search engine – A program that searches for and identifies items in a database. Used especially for finding sites on the World Wide Web.</p> <p>Spoof website – Website spoofing is the act of creating a website, as a hoax, with the intention of misleading readers that the website has been created by a different person or organisation.</p>	<p>Font –the style of writing.</p> <p>Bold –Makes the font stand out.</p> <p>Italic– when the text is at an angle</p> <p>Underline –to draw a line under the font.</p> <p>Document – something written to provide information.</p>	<p>Average – comparing two values</p> <p>Columns – Vertical reference points for the cells.</p> <p>Equals tool – test whether the calculation are correct</p> <p>Cells – individual section of a spreadsheet grid.</p> <p>Copy and paste – copy information and put it somewhere else</p> <p>Charts – represents data into a graph.</p> <p>Rows – horizontal reference point for the cells</p>	<p>Algorithm – step by step set of instructions to achieve an objective</p> <p>Alert – Shows a pop up of text on the screen</p> <p>Bug – a problem in a computer program</p> <p>Code design – design what the program will look like and do</p> <p>Debug/debugging – Looking for any problems and fixing them</p> <p>Command – a single instruction</p> <p>Event – something that cause a block of the code.</p> <p>If – if this happens then another action will occur</p> <p>Timer – use this to set a timer</p> <p>Simulation – model that represent a real-life situation.</p>	<p>Animation –Still picture appear to move.</p> <p>Flipbook – A book with pictures drawn in a way that makes them appear to move when the pages are flicked.</p> <p>Frame– A single image in an animation.</p> <p>Onion skinning – A process where the shadow image of the previous frame is present to help you line up the objects of the animation correctly.</p> <p>Background – A non-moving image that appears behind the animated images.</p> <p>Stop motion - A technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement.</p> <p>Video clip - A short piece of film or animation.</p>

	Spam Messages - sent over the internet to lost of people	Website – A set of related web pages located under a single domain name.				
Cross-curricular opportunities for each unit	Writing - Poster	Writing - Poster	Writing – potential to link to English topic (published piece at the end of a unit)	Maths – link to maths unit/data collection	Writing - Instructions	Writing - Evaluation
Curriculum Themes Environment Engineering Celebrating diversity World of work and ambition Wellbeing and mental health Our school and our town	Emails and IT found in almost all types of jobs; emailing is a major way of communicating Positive and negative effects of being online; strategies to use if something upsets them/impacts negatively on their mental health	Evaluating reliability of information Useful skills for most jobs and for further study Understanding validity of information; evaluating impact on wellbeing	Zoos for conservation Graphic design; advertising	Accountancy, running a business, young enterprise	Important skill for citizens of future. Understanding how computers/ simple games work Computer systems engineer Programmers / games industry/ web developer/ app developer	Children learn how drawings can be turned into moving pictures Animation industry: films, TV, adverts, game design.

Year 5

Objectives/Key vocabulary/CCW	AUTUMN	AUTUMN		SPRING	SPRING	SUMMER	SUMMER
	1	2		1	2	1	2
		Purple Mash unit 5.2 Online safety Digital literacy & IT	Purple Mash unit Effective Searching cc research on rivers IT	Purple Mash unit 5.1 Coding Computer science & IT		Purple Mash unit 5.3 Spreadsheets cc maths: measurement and algebra IT	Purple Mash unit 5.6 3D Modelling cc maths: geometry IT
ScholarPack objectives to be assessed in each unit		-Understands impact that sharing digital content can have; thinks critically about what they share online. -Knows how to maintain secure passwords. -Understands plagiarism and knows how to reference sources in their work.	-Uses search technologies effectively, appreciating how results are selected and ranked and is discerning in evaluating digital content. -Understands impact that sharing digital content can have; things critically about what they share online.	-Combines the use of variables, if/else statements and repeats to achieve the desired effect in code. -Uses logical reasoning to detect and correct errors in programs. -Controls or simulates physical systems		-Uses more complex formulae, including text variables, in spreadsheets for planning actions and solving problems	-Uses 3D modelling effectively to design for a given purpose
Key vocabulary for each unit <i>You may want to enhance vocabulary with icons or pictures</i>		Online safety - Staying safe online Smart rules - A set of rules based around the word SMART designed to help you stay safe when online. Encryption - converting information or data into a code, to stop access by people who shouldn't see it. Shared image - A picture that is shared online for other people to see Reference - Saying where we found the information from	<i>The majority of vocab should be linked specifically to the topic that 'effective searching' is taking place in. No Purple Mash unit to follow.</i> Easter egg – An unexpected or undocumented feature in a piece of computer software or on a DVD, included as a joke or a bonus. Internet – A global computer network providing a variety of	Action - Types of commands, which are run on an object. They could be used to move an object or change a property. Abstraction - A way of de-cluttering and removing unnecessary details to get a program functioning. Algorithm - A precise step by step set of instructions used to solve a problem or achieve an objective. Button - An object that can trigger an event in response to being clicked.		Spreadsheet - A computer programme that represents information in a grid of rows and columns. Formula - A formula calculates the value for the cells based upon all the values of the other cells in the spreadsheet e.g., adding the numbers to find the total Rows - Horizontal reference points for the cells in a spreadsheet Average - Symbols use to represent comparing two values	Modelling - The activity of making models Viewpoint - A person's point of view or opinion 2D - Something that has only two dimensions- height and width CAD - Computer Aided Design allows you to design a 3D object or environment in 2D and then view it from many angles on a screen thus appearing 3D Net - A pattern that you can cut and fold to make a model of a solid shape

		<p>Reputable - Having a good reputation of being reliable and trustworthy</p> <p>Password - A code made up of letters, numbers and special characters</p> <p>Plagiarism - Copying someone else's work or ideas and pretending that it is your own</p> <p>Identity theft - Using another person's name and personal information in order to obtain credit, loans, etc.</p>	<p>information and communication facilities.</p> <p>Internet browser – A software application used to locate and display Web pages.</p> <p>Plagiarism – when you use someone else's ideas and pretend they are yours</p> <p>Reputable - Having a good reputation of being reliable and trustworthy</p> <p>Search – To look for information. In this case on the Internet.</p> <p>Search engine – A program that searches for and identifies items in a database. Used especially for finding sites on the World Wide Web.</p> <p>Spoof website – Website spoofing is the act of creating a website, as a hoax, with the intention of misleading readers that the website has been created by a different person or organisation.</p> <p>Website – A set of related web pages located under a single domain name.</p>	<p>Called - A line of code that triggers a function to be carried out.</p> <p>Co-ordinates - Numbers which determine the position of a point, shape or object in a particular space.</p> <p>Decomposition - A method of breaking down a task into manageable components. This makes coding easier as the components can then be coded separately and then brought back together in the program.</p> <p>Event - Something that causes a block of code to be run.</p> <p>Function - A block or sequence of code that you can access when you need it, so you don't have to rewrite the code repeatedly. Instead, you simply 'call' the function each time you want it.</p> <p>If - A conditional command. This tests a statement. If the condition is true, then the commands inside the block will be run.</p> <p>Nesting - When you write a command inside something else e.g. a block of commands could be nested inside a timer.</p>	<p>Charts - A variety of graph types for the data in the spreadsheet</p> <p>Cells - Individual sections of a spreadsheet grid. It contains data or calculations</p> <p>Columns - Vertical reference points for the cells in a spreadsheet</p> <p>Copy and paste - A way to copy information from the screen into the computer's memory and paste it elsewhere without re-typing.</p> <p>Random tool - This can be clicked to give a random value between 0 and 9 to a cell</p> <p>Advance mode - A mode of 2Calculate in which cells have references and can include formulae</p> <p>Timer - When placed in a spreadsheet, click the timer to add 1 to the value of every cell to its right every second until it is clicked again and stopped.</p> <p>Equals tool - Test whether the entered calculation in the cells to the left of the tool has the correct answer in the cell to the right of the tool.</p> <p>Spin tool - This adds or subtracts 1 from the value of the cell to its right</p> <p>Move cell tool - This tool makes a cell's contents</p>	<p>Polygon - An object with at least 3 straight sides and angles, and typically 5 or more.</p> <p>Points - An exact position or location on a 2D surface</p> <p>3D - Something that has 3 dimensions- height, width and depth</p> <p>3D Printing - The action or process of making a physical object from a 3-dimensional digital model- typically by laying down many layers of a thin material in succession.</p> <p>Template - Something that serves as a model for others to copy</p>
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				<p>Object - An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.</p> <p>Physical System - A system or process which happens in the real-world using robotics, sensors or motors e.g. traffic lights.</p> <p>Properties – All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.</p> <p>Repeat - This command can be used to make a block of commands run a set number of times or forever.</p> <p>Run - To cause the instruction in a program to be carried out.</p> <p>Score - A record of points won or lost in a game.</p> <p>Sequence - This is when a computer program runs commands in order. In 2Code this can also include “repeat” or a timer.</p> <p>Simplify/Simplified - To make something easier.</p> <p>Simulation - A model that represents a real or imaginary situation.</p> <p>Tab - In 2Code, this is a way to organise a program into</p>	moveable by drag and drop methods.	
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				<p>separate pages (tabs) of code.</p> <p>Timer - Use this command to run a block of commands after a timed delay or at regular intervals.</p> <p>Variable - A named area in computer memory. A variable has a name and a value. The program can change this variable value.</p>		
Cross-curricular opportunities for each unit		Writing - Poster	Topic focus – coordinate with appropriate topic (i.e., research in geography)	Writing - Instructions	Maths – link to maths lessons	<p>Maths – link to maths lessons</p> <p>Writing - Evaluation</p>
<p>Curriculum Themes</p> <p>Environment</p> <p>Engineering</p> <p>Celebrating diversity</p> <p>World of work and ambition</p> <p>Wellbeing and mental health</p> <p>Our school and our town</p>		Cyber-bullying	<p><i>By creating a database, understanding of searches is enhanced</i></p> <p>Use of/creating databases fundamental skill for many roles including in schools</p> <p>Being able to search efficiently can save time and stress</p>	What jobs link to coding?	Accountancy, running a business, young enterprise	Designing props and sets for films (like Harry Potter World)

Year 6

Objectives/Key vocabulary/CCW	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	Purple Mash unit 6.2 Online safety Digital literacy & IT	Purple Mash unit 6.3 Spreadsheets cc maths: percentage problems IT	Purple Mash unit 6.4 Blogging cc English: audience and purpose IT		Purple Mash unit 6.6/6.7 Networking Quizzing cc English /maths: revision of chosen curriculum area	Purple Mash unit 5.1 Coding Computer science & IT Purple Mash unit 6.8 Binary cc maths (can be taught through maths lessons) IT
ScholarPack objectives to be assessed in each unit	<ul style="list-style-type: none"> -Identifies the benefits and risks of giving personal information and device access to different software -Understands how appropriate online behaviour protects them from online dangers, bullying and inappropriate behaviour of others -Understands the positive and negative aspects of technology and can balance these opposing views 	<ul style="list-style-type: none"> -Understands the positive and negative aspects of technology and can balance these opposing views. -Evaluates effectiveness of digital content for given audiences and purposes -Uses spreadsheets for 'real-life' computational modelling and problem solving 	<ul style="list-style-type: none"> -Evaluates effectiveness of digital content for given audiences and purposes 		<ul style="list-style-type: none"> -Understands networks and how they can provide multiple services, such as the World Wide Web, and opportunities for communication and collaboration 	<ul style="list-style-type: none"> -Organises code into Functions and Call Functions to eliminate surplus code in a program -Solves problems by decomposing them into smaller parts -Designs programs using their choice of objects, using variables to keep track of the properties of objects
Key vocabulary for each unit <i>You may want to enhance vocabulary with icons or pictures</i>	Digital Footprint – The information about a person that exists on the Internet as a result of their online activity.	Cell - a single block in a spreadsheet. Cells - the 'building blocks' of a spreadsheet. Row - a horizontal collection of cells.	Collaborative - produced by or involving two or more parties working together. Icon - a widely known symbol Blog – a website or webpage used by a		Internet - A global computer network providing a variety of information and communication facilities consisting of interconnected networks using standardized communication protocols.	<i>BINARY WOULD INCLUDE MATHEMATICAL VOCAB.</i> <i>CODING VOCAB BELOW.</i> Event - Something that causes a block of code to be run.

Password - A code made up of letters, numbers and special characters
PEGI rating – a rating that shows what age a game is suitable for.
Phishing – sending email pretending to be from a company in order to persuade people to give personal information
Screen time – The duration of time that someone views device such as a computer, television, or games console.
Spoof website – Website spoofing is the act of creating a website, as a hoax, with the intention of misleading readers that the website has been created by a different person or organisation.
Personal information – data that can be used to identify, locate, or contact an individual
Appropriate – something that is suitable or proper in the circumstances.

Column - a vertical collection of cells.
Value - a number that has been entered into a cell.
Data - information that has meaning/purpose.
Spreadsheet - the entire collection of data.
Formula - an equation based on multiple cells.
Format - to organise and arrange things in a certain way.
Variable - something that can be changed.
Graph - a visual representation of data.

group or individual to have a conversation. Things are posted on a regular basis.
Blogging – The act of creating a blog
Blogger – A word for someone who creates and posts the blog
Blog post – The item people see in which they can respond to within the comments
Blog page – The location that the blog post can be found
audience - A group of people gathered to see or hear something
Advertisements - Whenever people give information to the public about an event, a product, or a service, they are using advertising.
Sponsored posts - Refers to any social media post that includes paid promotion. Sponsored posts are typically bought to increase reach, engagement, or brand awareness.
Affiliate - a person or group that is connected with another similar, larger group.
Effectiveness - Able to make happen or change something

World Wide Web - An information system on the Internet which allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another.
Network - Several interconnected computers, machines, or operations.
Local area network (LAN) - A computer network that links devices within a building or group of adjacent buildings, especially one with a radius of less than 1 km.
Wide area network (WAN) - A computer network in which the computers connected may be far apart, generally having a radius of more than 1 km.
Router - A device which forwards data packets to the appropriate parts of a computer network.
Network cables - Used to connect and transfer data and information between computers and routers.
Wireless - The ability to transmit data from one device to another without using wires.

Flowchart - A diagram which represents an algorithm.
Function - A block or sequence of code that you can access when you need it, so you don't have to rewrite the code repeatedly. Instead, you simply 'call' the function each time you want it.
Get Input - This puts the text that a user types into the computer's temporary memory to be used to control the program flow.
If/Else - A conditional command. This tests a statement. If the condition is true, then the commands inside the 'if block' will be run. If the condition is not met, then the commands inside the 'else block' are run.
Launch Command - A command that launches another program within the existing program.
Number Variable - A variable that is numerical
Nested - When you write a command inside something else e.g. a block of commands could be nested inside a timer.
Object - An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.
Predict - Say what you think will happen when a piece of code is run.

						<p>Procedure - A set of coded instructions that perform a certain task.</p> <p>Prompt - A question or request asked in coding to obtain information from the user in order to select which code to run.</p> <p>Properties - All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.</p> <p>Repeat - This command can be used to make a block of commands run a set number of times or forever.</p> <p>Run - To cause the instruction in a program to be carried out.</p> <p>Scene - A visual aspect of a program.</p> <p>Selection - This is a conditional/decision command. When selection is used, a program will choose a different outcome depending on a condition.</p> <p>Simulation - A model that represents a real or imaginary situation.</p> <p>String - A sequence of characters, which could form words, phrases or even whole sentences.</p> <p>Tab - In 2Code, this is a way to organise a program into separate pages (tabs) of code.</p> <p>Timer - Use this command to run a block of commands after a timed delay or at regular intervals.</p>
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						<p>User Input - When a program requires an input from a user such as a click or text from a keyboard.</p> <p>Variable - A named area in computer memory. A variable has a name and a value. The program can change this variable value.</p>
Cross-curricular opportunities for each unit	Writing - Poster	Maths – link to maths lessons	<p>Writing – link to English lessons</p> <p>Writing – could also write an evaluation</p>		<p>Writing – link to English or maths lessons, depending on chosen unit.</p>	<p>Maths – link to maths lessons (BINARY)</p> <p>Writing - Instructions</p>
<p>Curriculum Themes</p> <p>Environment</p> <p>Engineering</p> <p>Celebrating diversity</p> <p>World of work and ambition</p> <p>Wellbeing and mental health</p> <p>Our school and our town</p>	<p>Range of job applicants looked at</p> <p>Impact of what we share may have on our futures; possibilities of online world for jobs</p> <p>Questioning online content: how it makes us feel; is it true; has the person been paid; how do our posts affect others?</p>	<p><i>Building on existing knowledge</i></p> <p>Used to support analysis in science and engineering</p> <p>Universal tool – common in most businesses and establishments</p>	<p><i>Creating and evaluating reliability of online content</i></p> <p>Can make a career of blogging</p> <p>Writing for pleasure; questioning blog content and evaluating impact on wellbeing and whether author is being paid</p>		<p>Careers in networking – Mark Zuckerberg</p> <p>Need to be aware that networking can have a positive and negative affect on one’s self esteem/well being</p>	<p>A variety of different engineers use coding in their jobs e.g. software engineers</p> <p>Engineers</p> <p>Children code in their leisure time – something to do to relax</p>