Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid) DC1.1/DL1.1/CS1.1/IT1.1 - (Bolton Sict Objectives from Subject Toolkits)

Objectives in Colours come from Education for a Connected World:

Self-image and Identity, Online relationships, Online reputation, Online bullying, Health, wellbeing and lifestyle Information Technology Section: Managing online information, Privacy and security, Copyright and ownership

Curriculum Ove	rview Summary	Subject:	COMPUTING 2022/23	Sunning Hill Primary School
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Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Reception	Digital Citizenship	Digital Literacy	Computer Science	Computer Science	Information Technology	Information Technology
Year 1	Digital Citizenship	Digital Literacy	Computer Science Focus: Algorithm	Computer Science Focus: Algorithm	Information Technology	Consolidation for Digital Literacy (Digital Creativity and Data Handling)
Year 2	Digital Citizenship	Digital Literacy	Computer Science	Computer Science Focus: Program/Events	Information Technology	Consolidation for Digital Literacy (Digital Creativity and Data Handling)
Year 3	Digital Citizenship	Digital Literacy	Computer Science	Computer Science Focus: Sequence	Information Technology	Consolidation for Digital Literacy (Digital Creativity and Data Handling)
Year 4	Digital Citizenship	Digital Literacy	Computer Science	Computer Science Focus: Repetition	Information Technology	Consolidation for Digital Literacy (Digital Creativity and Data Handling)
Year 5	Digital Citizenship	Digital Literacy	Computer Science	Computer Science Focus: Selection/Condition	Information Technology	Consolidation for Digital Literacy (Digital Creativity)
Year 6	Digital Citizenship	Digital Literacy	Computer Science	Computer Science Focus: Variable	Information Technology	Consolidation for Digital Literacy (Digital Creativity)

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	Early Years				
Curriculum	Sunning Hill Primary School follow the Bolton SICT scheme of work as there isn't any statutory guidance specifically linked to Computing. Knowledge and Skills begin from Reception for EYFS, however some aspects of Computing can be seen in Nursery 2s and 3s through technology allowing them to be exposed.				
	Knowledge	Skills			
Digital Citizenship/ Online Safety Digital Literacy	 DL.EYFS.1 I can talk about my digital footprint DL.EYFS.2 I can recognise, online or offline, that anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset DL.EYFS.3 I can recognise some ways in which the internet can be used to communicate DL.EYFS.4 I can give examples of how I (might) use technology to communicate with people I know DL.EYFS.6 I can describe ways that some people can be unkind online DL.EYFS.7 I can offer examples of how this can make others feel DL.EYFS.8 I can identify rules that help keep us safe and healthy in and beyond the home when using technology DL.EYFS.9 I can give some simple examples of these rules 	DL.EYFS.5 I can identify ways that I can put information on the internet			
Computer Science	CS.EYFS.1 I can name items we control in the everyday environment CS.EYFS.4 I know that an algorithm is a set of instruction that can solve a problem	CS.EYFS.2 I can use every day technology CS.EYFS.3 I can explore on screen activities – by clicking (cause and effect) CS.EYFS.5 create a simple algorithm for a BeeBot/Blue-Bots or remote control toy			
Information Technology	IT.EYFS.1 I can talk about how to use the internet as a way of finding information online IT.EYFS.5 I know that work I create belongs to me	IT.EYFS.2 I can identify devices I could use to access information on the internet IT.EYFS.3 I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location) IT.EYFS.4 I can describe who would be trustworthy to share this information with; I can explain why they are trusted IT.EYFS.6 I can name my work so that others know it belongs to me			
	KS1				
Curriculum	 Pupils should be taught to: understand what algorithms are; how they are implemented as programs instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs 	on digital devices; and that programs execute by following precise and unambiguous			

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	 use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school 					
	use technology safely and rescontact on the internet or other		ion private; identify where to go for help and support whe	-		
	Y	ear 1	Year	2		
Units	Digita Compu Informatic Digital Creativity	Citizenship I Literacy ter Science n Technology v and Data Handling	Digital Citiz Digital Lite Computer S Information Te Digital Creativity and	eracy Science echnology d Data Handling		
	Knowledge	Skills	Knowledge	Skills		
Digital Citizenship/ Online Safety	K1a - DC1.1 I can talk about my digital footprint K1b - DC1.2 I can recognise that there may be people online who could make me feel sad, embarrassed or upset K1c - DC1.3 If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust. (Butterfly feeling) K1d - DC1.4 I can give examples of when I should ask permission to do something online and explain why this is important. K1e - DC1.5 recognise that information can stay online and could be copied K1f - DC1.6 describe how to behave online in ways that do not upset others and can give examples K1g - DC1.7 explain rules to keep us safe when we are using technology both in and beyond the home		K2a - DC2.1 I can talk about my digital footprint and explain how other people may look and act differently online and offline K2b - DC2.2 I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help. (Butterfly feeling) K2c - DC2.3 I can give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country) K2d - DC2.4 I can explain why I have a right to say 'no' or 'I will have to ask someone'. K2e - DC2.5 I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online K2f - DC2.6 I can explain how information put online about me can last for a long time K2g - DC2.7 I can explain what bullying is, how people may bully others and how bullying can make someone feel			

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			K2h - DC2.8 I can give examples of bullying behaviour and how it could look online K2i - DC2.9 I can explain simple guidance for using technology in different environments and settings, e.g. accessing online technologies in public places and the home environment.	
Digital Literacy	K1h - DL1.3 how to format my typing in a number of ways (size, colour, font) K1i - DL1.4 the main keys for typing e.g. shift, space bar, full stop K1j - DL1.5 how to type simple sentences using the correct format (Capital letters, space and full stop) K1k - DL1.6 how to make text bold/ italics / text alignment etc. K1I - DL1.7 simple keyboard shortcuts Ctrl + B, I, U to edit my text style K1m - DL1.8 how to move to different places in the text using the arrow keys or mouse K1n - DL1.9 how to use the 'undo' icon to fix a mistake	S1a - DL1.1 how to input text and images using a simple publishing programs S1b - DL1.2 how to type a simple sentences on the screen, making use of a word bank S1c - DL1.3 how to format my typing in a number of ways (size, colour, font) S1d - DL1.4 the main keys for typing e.g. shift, space bar, full stop S1e - DL1.5 how to type simple sentences using the correct format (Capital letters, space and full stop) S1f - DL1.6 how to make text bold/ italics / text alignment etc. S1g - DL1.7 simple keyboard shortcuts Ctrl + B, I, U to edit my text style S1h - DL1.8 how to move to different places in the text using the arrow keys or mouse S1i - DL1.9 how to use the 'undo' icon to fix a mistake	K2j - DL2.1 how to use spell checker to check my work. K2k - DL2.2 how to use the return/enter key to insert relevant line breaks K2l - DL2.3 how to save an image from the internet rather than using copy & paste K2m - DL2.4 how to add a page border K2n - DL2.5 to insert a basic table K2o - DL2.6 which page orientation would best suit my work. e.g. portrait to landscape K2p - DL2.7 how to transfer these skills into PowerPoint	S2a - DL2.1 how to use spell checker to check my work. S2b – DL2.2 how to use the return/enter key to insert relevant line breaks S2c - DL2.3 how to save an image from the internet rather than using copy & paste S2d - DL2.4 how to add a page border S2e - DL2.5 to insert a basic table S2f - DL2.7 how to transfer these skills into PowerPoint
Computer Science	K1o - CS1.1 tell you what an algorithm is K1p - CS1.5 break an algorithm down into smaller parts (decomposing / chunking) K1q - CS1.6 predict if a simple algorithm will work	S1j - CS1.2 plan a simple algorithm S1k - CS1.3 give and follow commands, which include straight / turning commands – one at a time S1I - CS1.4 debug a simple algorithm that is causing an unexpected outcome. S1m - CS1.5 break an algorithm down into smaller parts (decomposing / chunking)	K2q – CS2.1 I can tell you what a program is K2r – CS2.2 I can tell you what an event is K2s – CS2.3 I know programs need an event to begin K2t – CS2.5 I know that computers need precise instructions	S2g - CS2.4 I can give and follow instructions, which include direction and turning command – several in order S2h - CS2.7 I can create a program that contains several commands for a device or software programme S2i - CS2.8 I can debug a program independently that has caused an unexpected outcome

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			K2u – CS2.6 I can plan use logical reasoning to predict outcomes	S2j - CS2.9 I can use different events to start my programs – timing / on click / on button press
Information Technology	K1r - IT1.1 I can give simple examples of how to find information (e.g. search engine, browsers, voice activated searching) K1s - IT1.2 I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened. (Butterfly feeling) K1t - IT1.3 explain how passwords can be used to protect information and devices K1u - IT1.4 recognise more detailed examples of information that is personal to someone (e.g. where I live, my family's names, where I go to school) K1v - IT1.5 explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others	S1n - IT1.4 recognise more detailed examples of information that is personal to someone (e.g. where I live, my family's names, where I go to school) S1o - IT1.6 explain why work I create using technology belongs to me S1p - IT1.7 save my work (Purplemash) so that others know it belongs to me (e.g. filename, name on content)	K2v - IT2.3 I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real' K2w - IT2.4 I can explain how passwords can be used to protect information, accounts and devices K2x - IT2.5 I can explain and give examples of what is meant by 'private' and 'keeping things private' K2y - IT2.6 I can explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions) K2z - IT2.7 I can recognise that content on the internet may belong to other people	S2k - IT2.1 I can use simple keywords in search engines S2I – IT2.2 I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections)
Data Handling		S1q - I can use a pictogram to answer simple questions (2Graph) S1r - I can create a pictogram by entering data into a simple graphing package (2Graph)	K2a2 – I can plan a simple Y/N tree diagram to sort information e.g. Branching database -2Question	S2m – I can create and search a branching database S2n – I can use a database to answer simple questions S2o – I can search a database to find information S2p - I can use ICT to support handling data – creating simple graphs, bar charts and pie charts
Digital Creativity		S1s - I can use the digital camera independently S1t - I can explore sounds in a music programme or sound app	K2b2 – I can explain what digital communication is	S2q – I can use a range of ICT devices to create a sequence of sounds S2r – I can use a digital video camera to capture film and images

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		S2s – I can arrange clips to make a short film that conveys meaning S2t – I can add simple titles and credits
Vocabulary	Digital Citizenship/Online Safety Bullying Digital citizen Personal information Privacy Online Digital Literacy Keyboard keys	Digital Citizenship/Online Safety • World wide web • Privacy settings • Social media • Technology • Strangers online Digital Literacy • Spell check
	 Document Format Word processing Typing Computer Science 	 Word processing document Row/column Cursor Branching Computer Science
	 Algorithm Beebot Command Debug 	 Algorithm Program Decompose Deglitch Event
	Information Technology Password Computer networks Communicate Ownership Jack Kilby	Information Technology Search engine Navigate Private information Content Tim Berners Lee
End Points	 By the end of Y1 through the coverage of Computing children will be able to: <u>Digital Citizenship/Online Safety</u> Begin to talk about their digital footprint Give examples of when and how to speak to an adult they can trust after seeing things online that upset them Know they should ask permission to use the internet Behave appropriately online and not upset others Identify which personal information can and cannot be shared online 	By the end of Y2 through the coverage of Computing children will be able to: Digital Citizenship/Online Safety • Confidently talk about their digital footprint • Identify trusted adults and scenarios where permission is needed online • Talk about how someone might use technology to communicate with strangers online and identify that this might be risky • Know that information put online about me can last for a long time • Give examples of bullying behaviour and how it could look online • Explain why some personal information can and cannot be shared online and talk confidently about how to keep safe

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internation reenterogy section. Managing on the montation, rivacy and security,	, copyright and ownership
 Digital Literacy Use PurpleMash and Microsoft Word to type simple sentences using the correct punctuation (Capital letters, space and full stop) Identify and use the main keys for typing (shift, space bar, full stop) Format typing in a number of ways (size, colour, font) Move to different places in the text using the mouse 	 Digital Literacy Use spell checker to check my work Use the return/enter key to insert relevant line breaks Copy & paste/save an image from the internet Format by adding a page border
 <u>Computer Science</u> <u>Using Beebots:</u> Identity what an algorithm is and plan a simple algorithm with commands Debug an algorithm <u>Information Technology</u> 	 <u>Computer Science</u> <u>Using Scratch:</u> Identity what a program and event is Predict if a simple program will work using logical reasoning Create and debug programs using different events that contain several commands
 Give simple examples of how to find information. Talk about what a password is and why it is used. Save their work on Purplemash and recognise that is belongs to them. Identify what a browser is and how to open one. Research and talk about the life and achievements of Jack Kilby. <u>Digital Creativity</u> Use the digital camera on an iPad independently Explore sounds in a music programme or sound app <u>Data Handling</u> Create a pictogram by entering data into a simple graphing package and answer simple questions (2Graph) 	 Information Technology Identify 'google' as a search engine, use simple key words when searching and recognise that content on the internet may belong to other people Navigate a simple web page using the forward and back arrows and be able to scroll to find information. Name different devices and/or accounts that have a password and be able to talk about why. Explain and give examples of what is meant by 'private' and 'keeping things private' Explain why some information I find online may not be real or true. Research and talk about the life and achievements of Tim Berners Lee. Digital Creativity Use a digital video camera to capture film and images Arrange clips to make a short film that conveys meaning
	 Add simple titles and credits <u>Data Handling</u> Plan a simple Y/N tree diagram to sort information using 2Question Search a database to find information and answer simple questions Use ICT to support handling data by creating simple graphs
	N32

Curriculum	Pupils should be taught to:

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	 design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 				
	Year 3 Year 4				
Units	Digital Citizenship Digital Literacy Computer Science Information Technology Digital Creativity and Data Handling		Digital Citizenship Digital Literacy Computer Science Information Technology Digital Creativity and Data Handling		
	Knowledge	Skills	Knowledge	Skills	
Digital Citizenship/ Online Safety	K3a - DC3.2 I can explain what is meant by the term 'identity' K3b - DC3.3 I can explain how people can represent themselves in different ways online K3c - DC3.4 I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with K3d - DC3.5 I can explain how someone's feelings can be hurt by what is said or written online K3e - DC3.6 I can give examples of what anyone may or may not be willing to share about themselves online	S3a - DC3.1 I can use technology safely, respectfully, responsibly and be able to talk about my digital footprint	K4a - DC4.1 I can explain how my online identity can be different to my offline identity and be able to talk about my digital footprint K4b - DC4.2 I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this K4c - DC4.3 I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours K4d – DC4.4 I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs K4e – DC4.5 I can describe how to find out information about others by searching online K4f – DC4.6 I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat)		

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	 K3f – DC3.7 I can explain the need to be careful before sharing anything personal K3g – DC3.8 I can describe ways that some people can be unkind online K3h – DC3.9 I can offer examples of how this can make others feel K3i - DC3.10I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships 		 K4g – DC4.7 I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation) K4h – DC4.8 I can explain how using technology can be a distraction from other things, in both a positive and negative way 	
Digital Literacy		S3b – DL3.1 how to type a number of sentences using the keyboard S3c – DL3.2 how to use tab to indent paragraphs S3d – DL3.3 how to use cut, copy and paste to re-order text S3e – DL3.4 how to use keyboard shortcuts e.g. Ctrl + V, X, C to re-order text. S3f – DL3.5 how to use bullet points, speech bubbles, auto shapes and text boxes S3 – DL3.6 how to format wrapping/layout of text boxes and images in word S3h – DL3.7 how to format images - move, rotate and re-size shapes S3i – DL3.8 how to use the format tab to alter word art to enhance my work. S3j – DL3.9 how to use a variety of table tools (merge cells, fill, columns etc.) S3k – DL3.10 how to explain the difference between save and save as. S3I – DL3.11 how to create a folder to save my work in.	 K4i – DL4.3 how to enter a basic mathematical formula into Excel K4j – DL4.5 how to use SUM to calculate the total of a set of numbers in a range of cells K4k – DL4.6 how to change the look of a spreadsheet by using different formats e.g. text styles, colour, number format inc, currency and date, row and column heights K4I – DL4.7 how to insert and delete columns and rows in a spreadsheet K4m – DL4.8 to use spreadsheets to create a graph K4n – DL4.9 how to decide on the most appropriate form of graph for a data set and give reasons for my choice K4o – DL4.10 how to interpret graphs of data collected from sensors 	S4a - DL4.1 how to transfer my word processing skills into other multimedia packages e.g. PowerPoint S4b - DL4.2 how to include importing images, hyperlinks and the use of sounds recorded S4c - DL4.4 how to add basic mathematical formulas S4d - DL4.5 how to use SUM to calculate the total of a set of numbers in a range of cells S4e - DL4.6 how to change the look of a spreadsheet by using different formats e.g. text styles, colour, number format inc, currency and date, row and column heights

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		S3m – DL3.12 how to give a file a name to identify it S3n – DL3.13 how to transfer these skills into PowerPoint		
Computer Science	K3j – CS3.1 I know that a sequence is a list of instructions in a particular order K3k – CS3.2 I know that if I change the sequence I may change the outcome of the program K3I – CS3.7 I can use logical reasoning to explain what will happen next K3m – CS3.8 I can predict how a change in a sequence may impact on the outcome of a program	S30 – CS3.3 I can sequence a simple program on Logo to produce a line drawing of a 2D shape S3p – CS3.4 I can solve problems by decomposing them into smaller parts S3q - CS3.5 I can detect and debug errors in my sequence S3r - CS3.6 I can use and edit a pre- written program to achieve a specific outcome	K4p – CS4.1 I know what a repeat is K4q – CS4.2 I know that a repeat is used to repeat a set of instructions K4r – CS4.7 I can explain why it is important to use the repeat function in a particular place in my sequence	 S4f – CS4.3 I can use repeats in programs confidently S4g - CS4.4 I can independently select repeat and sequence code to make my own program S4h - CS4.5 I can detect and debug errors in algorithms and programs. S4i - CS4.6 I can transfer my coding skills between software
Information Technology	K3n - IT3.2 explain the difference between a 'belief', an 'opinion' and a 'fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc K3o - IT3.3 describe simple strategies for creating and keeping passwords private K3p - IT3.4 give reasons why someone should only share information with people they choose to and can trust K3q - IT3.5 explain that if they are not sure or feel pressured then they should tell a trusted adult. K3r - IT3.6 explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause	S3s - IT3.1 demonstrate how to use key phrases in search engines to gather accurate information online	K4s - IT4.1 I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others K4t - IT4.2 I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites) K4u - IT4.3 I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't K4v - IT4.4 I can describe strategies for keeping personal information private, depending on context K4w - IT4.5 I know what the digital age of consent is and the impact this has on online services asking for consent K4x - IT4.6 I can explain why work I create using technology belongs to me	S4j IT4.1 I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others S4k – IT4.7 I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content)

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Data Handling		S3t - I can search and use a branching database to identify objects and use data to populate graphs	K4y – IT4.8 I understand that work created by others does not belong to me even if I save a copy K4z – IT4.9 I can explain a range of internet standards (eg; HTTP, URL) K4a2 – I can question data to answer "what if?" questions K4b2 – I can explain why I have chosen my layout and formatting	S4I – I can select appropriate tools to add emphasis and effect to my work S4m – I can review and edit my work and talk about the changes I made
Digital Creativity		S3u - I can edit pictures using various tools in paint or photo-manipulation software S3v - I can create a simple musical composition combining electronic and live sounds S3w - I can capture still/moving images S3x - I can create a multimedia presentation/eBook, with a title page, incorporating images, sounds and text		S4n – I can storyboard a short animation - what would happen and when S4o – I can take a series of pictures to form an animation S4p – I can save my animation at different stages and talk about the changes and improvements I have made S4q – I can add titles, credits, transitions and special effects S4r – I can edit video, animation or music footage by cropping clips S4s - I can choose appropriate scene transitions
Vocabulary	Digital Citizenship/Online Sa Online identity Privacy settings Social media Self-image Digital citizen Digital Literacy Formatting Layout Audience Abstraction Cursor Computer Science	<u>afety</u>	 Digital Citizenship/Online Safety Viral Content Catfish Scam Online identity Digital Literacy Spreadsheet Data Formula AutoSum Mathematical formulas Computer Science 	
	Computer Science Algorithm		Computer Science Algorithm	

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mormation	rechnology Section: Managing online mormation, Privacy and securit	ty, copyright and ownership
	Program	Program
	Sequence	Sequence
	Debug	Repeat
	Event blocks	Debug
	Information Technology	Information Technology
	World Wide Web	Collaboration
	Collaboration	Probable accuracy
	Pioneer	Copyright
	Charles Babbage	Hedy Lamarr
	Ada Lovelace	Radia Perlman
End Points	By the end of Y3 through the coverage of Computing children will be able	By the end of Y4 through the coverage of Computing children will be able to:
	to:	Digital Citizenship/Online Safety
	Digital Citizenship/Online Safety	 Explain how their online identity can be different to their offline identity
	 Understand the term 'identity' and how people can represent 	 Describe how to recognise healthy and unhealthy online behaviours
	themselves in different ways online	Describe how to find out information about others by searching online
	 Explain who a trusted adult is and who to trust online including what 	Describe ways people can be bullied through a range of media
	information and content they can be trusted with.	Understand how using technology can be a distraction from other things, in both a
	 Explain that if they are not sure or feel pressured then they should tell 	positive and negative way
	a trusted adult.	
	 Give examples of what someone may or may not be willing to share 	Digital Literacy
	about themselves online	Create a PowerPoint presentation with varied text sizes, colours, fonts,
	 Describe ways that some people can be unkind online 	backgrounds and appropriate layouts with pictures
	 Understand why spending too much time using technology can 	 Add a basic mathematical formula into Excel and use the SUM function
	sometimes have a negative impact on anyone	 Change the look of a spreadsheet by using different formats (text styles, colour,
		number format) including how to insert and delete columns and rows
	Digital Literacy	Use spreadsheets to create a graph
	Using Microsoft Word:	(Data to be given by the teacher for children to use)
	Use cut, copy and paste to re-order text	
	 Use bullet points, speech bubbles, auto shapes and text boxes 	Computer Science
	 Format images (move, rotate and re-size shapes) 	Using Scratch:
	Insert a table and use a variety of table tools (merge cells, fill, columns	 Identify what a repeat is and use repeats appropriately in my program.
	etc.)	 Create more complex sequences using a variety of blocks and sprites.
	 Create a folder to save my work in and give a file a name to identify it 	 Detect and debug errors in algorithms and programs.
	 Create a simple PowerPoint presentation with varied text sizes, 	
	colours, fonts, a background and at least one picture.	Information Technology
		 Understand why it is important to make my own decisions and judgements
	Computer Science	regarding content online.
	Using Scratch:	Explain what is meant by fake news.
		 Know what the digital age of consent is and why this is put in place.

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid) DC1.1/DL1.1/CS1.1/IT1.1 - (Bolton Sict Objectives from Subject Toolkits)

Objectives in Colours come from Education for a Connected World:

Self-image and Identity, Online relationships, Online reputation, Online bullying, Health, wellbeing and lifestyle

 Identify what a sequence is and understand how it affects the outcome of the program Sequence a simple program to produce a line drawing of a 2D shape Sequence a program on Scratch using multiple blocks and predict its outcome Detect and debug errors in my sequence. Information Technology Demonstrate how to use key phrases in search engines to gather accurate information online. Explain the difference between a 'belief', an 'opinion' and a 'fact' and can give examples. Describe simple strategies for creating and keeping passwords private. Explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause. Describe how connected devices can collect and share anyone's information with others. 	
 Charles Babbage. <u>Digital Creativity</u> Edit pictures using various tools in paint or photo-manipulation software Create a simple musical composition combining electronic and live sounds Create a multimedia presentation/eBook, with a title page, incorporating images, sounds and text <u>Data Handling</u> Search and use a branching database to identify objects and use data to populate graphs 	

	KS2		
Curriculum	Pupils should be taught to:		
	design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into		
	smaller parts		

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid) DC1.1/DL1.1/CS1.1/IT1.1 - (Bolton Sict Objectives from Subject Toolkits)

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	 use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 			
14-14-		ar 5	Yea	
Units	Digital Citizenship Digital Literacy Computer Science Information Technology Digital Creativity		Digital Citizenship Digital Literacy Computer Science Information Technology Digital Creativity	
	Knowledge	Skills	Knowledge	Skills
Digital Citizenship/ Online Safety	K5a - DC5.1 I can talk about my digital footprint and demonstrate responsible choices about my online identity, depending on context K5b - DC5.2 I can explain how identity online can be copied, modified or altered K5c - DC5.3 I can explain how someone can get help if they are having problems and identify when to tell a trusted adult K5d - DC5.4 I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect K5e - DC5.5 I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences K5f - DC5.6 I can describe the helpline services which can help people experiencing bullying, and		K6a - DC6.1 I can talk about my digital footprint and the importance of asking until I get the help needed K6b - DC6.2 I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online K6c - DC6.3 I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline K6d - DC6.4 I can explain how sharing something online may have an impact either positively or negatively K6e - DC6.5 I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not	

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid) DC1.1/DL1.1/CS1.1/IT1.1 - (Bolton Sict Objectives from Subject Toolkits)

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Self-image and Identity, Online relationships, Online reputation, Online bullying, Health, wellbeing and lifestyle

		ine information, i macy and security		
	how to access them (e.g. Childline /		K6f - DC6.6 I can explain strategies	
	CEOP / The Mix)		anyone can use to protect their 'digital	
	K5g - DC5.7 I can describe ways		personality' and online reputation,	
	technology can affect health and well-		including degrees of anonymity	
	being both positively (e.g.		K6g - DC6.7 I can describe how to capture	
	mindfulness apps) and negatively		bullying content as evidence (e.g. screen-	
	K5h - DC5.8 I can describe some		grab, URL, profile) to share with others	
	strategies, tips or advice to promote		who can help me	
	health and well-being with regards to		K6h - DC6.8 I can describe common	
	technology		systems that regulate age-related content	
	K5i - DC5.9 I recognise the benefits		(e.g. PEGI, BBFC, parental warnings) and	
	and risks of accessing information		describe their purpose	
	about health and well-being online		K6i - DC6.9 I can assess and action	
	and how we should balance this with		different strategies to limit the impact of	
	talking to trusted adults and		technology on health (e.g. night-shift mode,	
	professionals		regular breaks, correct posture, sleep, diet	
			and exercise)	
Digital	K5j - DL5.1 how to select appropriate	S5a - DL5.1 how to select appropriate	K6j - DL6.3 why I have chosen my layout	S6a - DL6.1 how to choose, select and use
Literacy	tools to add emphasis and effect to	tools to add emphasis and effect to my	and formatting	a combination of software to present my
Enclacy	my work	work	K6k - DL6.5 how to consider whether my	work
	K5k – DL5.2 why I have chosen my	S5b - DL5.5 how to create a database	work is suitable for the audience	S6b - DL6.2 how to select appropriate
	layout and formatting	structure of my own and enter the data	K6I - DL6.6 how to draft and redraft my	tools to add emphasis and effect to my
	K5I – DL5.3 how to review and edit			work
		S5c - DL5.6 how to prepare a data	work by deleting, inserting and replacing	
	my work and talk about the changes I	collection form and collect quality	text	S6c - DL6.4 how to review and edit my
	made	information		work and talk about the changes I made
	K5m – DL5.4 whether my work is	S5d - DL5.7 I can use databases to		S6d - DL6.6 how to draft and redraft my
	suitable for the audience	create a graph		work by deleting, inserting and replacing
	K5n – DL5.6 how to prepare a data	S5e - DL5.8 the most appropriate form		text
	collection form and collect quality	of graph for a data set giving reasons		S6e - DL6.7 how to interpret graphs of
	information	for my choice		data collected from a variety of sources
		S5f - DL5.9 how to interpret graphs of		
		data collected from a variety of sources		
1				

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid) DC1.1/DL1.1/CS1.1/IT1.1 - (Bolton Sict Objectives from Subject Toolkits)

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Self-image and Identity, Online relationships, Online reputation, Online bullying, Health, wellbeing and lifestyle

Computer	K5o – CS5. 1 I can tell you what a	S5g – CS5. 2 I can plan algorithm and	K6m - CS6.1 I can explain what a variable	S6f - CS6.3 I can use a variable in a
Science	conditional / selection is	the write a program using the following:	is	variety of programming
	K5p – CS5. 5 I can use my skills and	commands, sequence, repetition and	K6n - CS6.2 I can confidently use events,	software
	understanding of conditional /	selection / condition ('ifthen')	repeats, selection and variables	S6g - CS6.4 I can confidently decompose
	selection in more than 2 programs	S5h - CS5. 3 I can detect and debug		a problem and methodically create a
		errors in more complex algorithms and		program to solve it, testing and adapting as
		programs		lgo
		S5i - CS5. 4 I can use selection to		S6h - CS6.5 I can evaluate the
		create games in which the user must		effectiveness of my programming and
		make a choice		suggest improvements
		S5j - CS5. 5 I can use my skills and		S6i - CS6.6 I confidently use the Blockly
		understanding of conditional / selection		
				programming language
Information	VEG ITE A L know what an anary firm	in more than 2 programs		Sci ITE O Loop demonstrate how to really
Information	K5q – IT5.1 I know what an operating	S5k – IT5.2 I can identify the key	K6o - IT6.1 I can explain how search	S6j - IT6.9 can demonstrate how to make
Technology	system is and why it important	internal parts of a computer – RAM,	engines work and how results are selected	references to and acknowledge sources I
	K5r – IT5.3 I can explain what is	memory, processor and motherboard	and ranked	have used from the internet
	meant by 'being sceptical'; I can give	and describe what each part does	K6p - IT6.2 I can explain how to use search	
	examples of when and why it is	S5I – IT5.8 I can assess and justify	technologies effectively	
	important to be 'sceptical'	when it is acceptable to use the work of	K6q - IT6.3 I can explain how and why	
	K5s – IT5.4 I can evaluate digital	others	some people may present 'opinions' as	
	content and can explain how to make		'facts'; why the popularity of an opinion or	
	choices about what is trustworthy e.g.		the personalities of those promoting it does	
	differentiating between adverts and		not necessarily make it true, fair or perhaps	
	search results		even legal	
	K5t – IT5.5 I can explain key concepts		K6r - IT6.4 I can describe how some	
	including: information, reviews, fact,		online information can be opinion and	
	opinion, belief, validity, reliability and		can offer examples	
	evidence		K6s - IT6.5 I can define the terms	
	K5u – IT5.6 I can explain what a		'influence', 'manipulation' and 'persuasion'	
	strong password is and demonstrate		and explain how someone might encounter	
	how to create one		these online (e.g. advertising and 'ad	
	K5v – IT5.7 I can explain what app		targeting' and targeting for fake news)	
	permissions are and can give some		K6t - IT6.6 I can describe how and why	
	examples		people should keep their software and	
	K5w – IT5.8 I can assess and justify		apps up to date, e.g. auto updates	
	when it is acceptable to use the work		K6u - IT6.7 I can describe simple ways to	
	of others		increase privacy on apps and services that	
	K5x – IT5.9 I can give examples of		provide privacy settings	
	content that is permitted to be reused		K6v - IT6.8 I can describe strategies to	
	and know how this content can be		help me identify such content (e.g. scams ,	
	found online		phishing)	
L	Touria oralino		pinoning/	

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			K6w - IT6.10 I can suggest what technology might look like in twenty years' time	
Digital Creativity	K5y - I can evaluate and improve my finished designs K5z - I can evaluate website and web content, recognising the features of good page design and how it is suited to an audience	S5m - I can design a 3D model using ICT to meet a specific goal, e.g. 2Design & Make	K6x - I can explain my choice of clips, effects and structure in resources I have created K6y - I can discuss and compare film for effect on audience.	 S6k - I can use a mobile device to film a short clip S6I - I can consider the effect of camera angles, light and shadow when filming S6m - I can add titles, credits, transitions and special effects S6n - I can review and add to, replace and edit clips to make messages clearer S6o - I can export / embed a video in different formats for different purposes
Vocabulary	Digital Citizenship/Online Sa Online bullying Summary report Technology-specific forms of c Online reputation Self-image and identity Digital Literacy Spreadsheet Quality information Formatting Field Database Computer Science Algorithm Program Selection Information Technology Motherboard Sceptical Bill Gates		Digital Citizenship/Online Safety Screen grab CEOP URL PEGI BBFC Digital Literacy Effect Layout Audience Sources Transition Computer Science Algorithm Program Sequence Repeat Selection Variable Influence Manipulation	
	Grace HopperSteve Wozniak		Phishing Alan Turing	

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	Technology Section: Managing online information, Privacy and security	Elon Musk
End Points	 By the end of Y5 through the coverage of Computing children will be able to: Digital Citizenship/Online Safety Explain how online identity can be copied, modified or altered Explain how someone can get help if they are having problems and identify when to tell a trusted adult Recognise and describe online bullying and helpline services Describe ways technology can affect health and well-being and strategies to support this Digital Literacy Create a PowerPoint presentation with varied text sizes, colours, fonts, backgrounds, appropriate layouts with pictures and animations of texts and pictures (to add emphasis and effect to work) Review and edit work knowing if it is suitable for the audience Prepare a data collection form Create a database structure of my own and enter the data Use databases to create a graph Interpret graphs of data collected by a variety of sources 	 By the end of Y6 through the coverage of Computing children will be able to: <u>Digital Citizenship/Online Safety</u> Identify and critically evaluate representations online and strategies used to protect digital personality Identify strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity Describe how to capture bullying content Describe common systems that regulate age-related content and describe their purpose Assess and action different strategies to limit the impact of technology on health <u>Digital Literacy</u> Edit a PowerPoint presentation to vary text sizes, colours, fonts, backgrounds, appropriate layouts with pictures, animations and transitions (to add emphasis and effect to work) Use iMovie, to create a project using the skills I have learnt throughout school Review and edit work and talk about the changes made knowing if it is suitable for the audience Draft and redraft work by deleting, inserting and replacing text
	 Computer Science Using Scratch: Identify what condition/selection is Plan and write a program using the following: commands, sequence, repetition and selection/condition ('ifthen') Detect and debug errors in more complex algorithms and programs Information Technology Identify the key internal parts of a computer – RAM, memory, processor and motherboard. Explain what is meant by 'being sceptical' and give examples. Evaluate digital content (adverts and search results) and explain how to make choices about what is trustworthy and reliable. Explain what a strong password is and demonstrate how to create one. 	 <u>Computer Science</u> <u>Using Scratch:</u> Identify what a variable is Create a game using: events, repeats, selection and variables in which the user must make a choice Confidently use the Blocky programming language <u>Information Technology</u> Explain how search engines work and how results are selected and ranked. Explain how and why some people may present 'opinions' as 'facts' and understand that the popularity of an opinion does not necessarily make it true or right. Define the terms 'influence', 'manipulation' and 'persuasion' and give examples. Describe simple ways to increase privacy settings on apps and services and

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Cive examples of content that is permitted to be reused and know how	- Suggest what technology might look like in twenty years' time
Give examples of content that is permitted to be reused and know how	 Suggest what technology might look like in twenty years' time.
this content can be found online.	 Research and talk about the life and achievements of Alan Turing or Elon Musk.
Research and talk about the life and achievements of Bill Gates, Grace	-
Hopper, & Steve Wozniak.	Digital Creativity
	 Using an iPad film a short clip, considering the effect of camera angles, light and
Digital Creativity	shadow
 Design and evaluate a 3D model using 2Design & Make to meet a 	 Add titles, credits, transitions and special effects
specific goal	Review and explain my choice of clips, effects and structure in resources I have
	created