Computing Curriculum Progression

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

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Curriculum Overview Summary | Subject: COMPUTING 2022/23 | Sunning Hill Primary School

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 on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs	

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Information Technology Section: Managing online information, Privacy and security, Copyright and ownership

	• use technology purposefully to create, organise, store, manipulate and retrieve digital content • recognise common uses of information technology beyond school • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.			
	Year 1		Year 2	
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	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 K2h - **DC2.8 I can give examples of bullying behaviour and how it could**	

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			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. K1l - **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 S1l - **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 K2u – **CS2.6** I can plan use logical	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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			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 S2l – **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 S2s – I can arrange clips to make a short film

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				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 • Document • Format • Word processing • Typing **Computer Science** • Algorithm • Beebot • Command • Debug **Information Technology** • Password • Computer networks • Communicate • Ownership • Jack Kilby		**Digital Citizenship/Online Safety** • World wide web • Privacy settings • Social media • Technology • Strangers online **Digital Literacy** • Spell check • Word processing document • Row/column • Cursor • Format **Computer Science** • Algorithm • Program • Decompose • Deglitch • Event **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:** **Digital Citizenship/Online Safety** • 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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	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 **Computer Science** Using Beebots: • Identity what an algorithm is and plan a simple algorithm with commands • Debug an algorithm **Information Technology** • 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. **Digital Creativity** • Use the digital camera on an iPad independently • Explore sounds in a music programme or sound app **Data Handling** • Create a pictogram by entering data into a simple graphing package and answer simple questions (2Graph)	**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 **Computer Science** Using Scratch: • 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 **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 **Data Handling** • 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

	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

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<table>
<tr><td></td><td colspan="4">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.</td></tr>
<tr><td></td><td colspan="2">Year 3</td><td colspan="2">Year 4</td></tr>
<tr><td>Units</td><td colspan="2">Digital Citizenship
Digital Literacy
Computer Science
Information Technology
Digital Creativity and Data Handling</td><td colspan="2">Digital Citizenship
Digital Literacy
Computer Science
Information Technology
Digital Creativity and Data Handling</td></tr>
<tr><td></td><td>Knowledge</td><td>Skills</td><td>Knowledge</td><td>Skills</td></tr>
<tr><td>Digital Citizenship/ Online Safety</td><td>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
K3f – DC3.7 I can explain the need to be careful before sharing anything personal</td><td>S3a - DC3.1 I can use technology safely, respectfully, responsibly and be able to talk about my digital footprint</td><td>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)
K4g – DC4.7 I can explain why people need to think carefully about how content they post</td><td></td></tr>
</table>

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	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 - **DC3.10**I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships		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. S3l – **DL3.11** how to create a folder to save my work in. S3m – **DL3.12** how to give a file a name to identify it S3n – **DL3.13** how to transfer these skills into PowerPoint	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 K4l – **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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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 K3l – **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	S3o – **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 K4y – **IT4.8** I understand that work created by others does not belong to me even if I	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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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

			save a copy K4z – **IT4.9** I can explain a range of internet standards (eg; HTTP, URL)	
Data Handling		S3t - I can search and use a branching database to identify objects and use data to populate graphs	K4a2 – I can question data to answer "what if…?" questions K4b2 – I can explain why I have chosen my layout and formatting	S4l – 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 Safety** • Online identity • Privacy settings • Social media • Self-image • Digital citizen **Digital Literacy** • Formatting • Layout • Audience • Abstraction • Cursor **Computer Science** • Algorithm • Program • Sequence		**Digital Citizenship/Online Safety** • Viral • Content • Catfish • Scam • Online identity **Digital Literacy** • Spreadsheet • Data • Formula • AutoSum • Mathematical formulas **Computer Science** • Algorithm • Program • Sequence	

Computing Curriculum Progression

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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Information Technology Section: Managing online information, Privacy and security, Copyright and ownership

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

Computing Curriculum Progression

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

	• 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. • Research and talk about the life and achievements of Ada Lovelace or Charles Babbage. **Digital Creativity** • 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 **Data Handling** • Search and use a branching database to identify objects and use data to populate graphs	a copy. • Explain that internet use is never fully private and is monitored. • Research and talk about the life and achievements of Hedy Lamarr or Radia Perlman. **Digital Creativity** • Storyboard a short animation • Save my animation at different stages and talk about the changes and improvements I have made • Add titles, credits, transitions and special effects and edit video, animation or music footage by cropping clips

	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 • 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

Computing Curriculum Progression

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid)
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Objectives in Colours come from Education for a Connected World:
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Information Technology Section: Managing online information, Privacy and security, Copyright and ownership

	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 5		Year 6	
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 how to access them (e.g. Childline / CEOP / The Mix) K5g - **DC5.7** I can describe ways technology can affect health and well-being both positively (e.g.		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 K6f - **DC6.6** I can explain strategies anyone can use to protect their **'digital personality'** and online reputation, including degrees of **anonymity** K6g - **DC6.7** I can describe how to capture	

Computing Curriculum Progression

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid)
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	mindfulness apps) and negatively K5h - **DC5.8** I can describe some strategies, tips or advice to promote health and well-being with regards to technology K5i - **DC5.9** I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals		bullying content as evidence **(e.g. screen-grab, URL, profile)** to share with others who can help me K6h - **DC6.8** I can describe common systems that regulate age-related content **(e.g. PEGI, BBFC,** parental warnings) and describe their purpose K6i - **DC6.9** I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise)	
Digital Literacy	K5j - **DL5.1** how to select appropriate tools to add emphasis and effect to my work K5k – **DL5.2** why I have chosen my layout and formatting K5l – **DL5.3** how to review and edit my work and talk about the changes I made K5m – **DL5.4** whether my work is suitable for the audience K5n – **DL5.6** how to prepare a data collection form and collect quality information	S5a - **DL5.1** how to select appropriate tools to add emphasis and effect to my work S5b - **DL5.5** how to create a database structure of my own and enter the data S5c - **DL5.6** how to prepare a data collection form and collect quality information S5d - **DL5.7** I can use databases to create a graph S5e - **DL5.8** the most appropriate form of graph for a data set giving reasons for my choice S5f - **DL5.9** how to interpret graphs of data collected from a variety of sources	K6j - **DL6.3** why I have chosen my layout and formatting K6k - **DL6.5** how to consider whether my work is suitable for the audience K6l - **DL6.6** how to draft and redraft my work by deleting, inserting and replacing text	S6a - **DL6.1** how to choose, select and use a combination of software to present my work S6b - **DL6.2** how to select appropriate tools to add emphasis and effect to my work S6c - **DL6.4** how to review and edit my work and talk about the changes I made S6d - **DL6.6** how to draft and redraft my work by deleting, inserting and replacing text S6e - **DL6.7** how to interpret graphs of data collected from a variety of sources
Computer Science	K5o – **CS5. 1** I can tell you what a conditional / selection is K5p – **CS5. 5** I can use my skills and understanding of conditional / selection in more than 2 programs	S5g – **CS5. 2** I can plan algorithm and the write a program using the following: commands, sequence, repetition and selection / condition ('if…then') S5h - **CS5. 3** I can detect and debug errors in more complex algorithms and programs S5i - **CS5. 4** I can use selection to create games in which the user must make a choice	K6m - **CS6.1** I can explain what a variable is K6n - **CS6.2** I can confidently use events, repeats, selection and variables	S6f - **CS6.3** I can use a variable in a variety of programming software S6g - **CS6.4** I can confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go S6h - **CS6.5** I can evaluate the effectiveness of my programming and suggest improvements

Computing Curriculum Progression

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid)
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		S5j - **CS5. 5** I can use my skills and understanding of conditional / selection in more than 2 programs		S6i - **CS6.6** I confidently use the Blockly programming language
Information Technology	K5q – **IT5.1** I know what an operating system is and why it important K5r – **IT5.3** I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be **'sceptical'** K5s – **IT5.4** I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results K5t – **IT5.5** I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence K5u – **IT5.6** I can explain what a strong password is and demonstrate how to create one K5v – **IT5.7** I can explain what app permissions are and can give some examples K5w – **IT5.8** I can assess and justify when it is acceptable to use the work of others K5x – **IT5.9** I can give examples of content that is permitted to be reused and know how this content can be found online	S5k – **IT5.2** I can identify the key internal parts of a computer – RAM, memory, processor and motherboard and describe what each part does S5l – **IT5.8** I can assess and justify when it is acceptable to use the work of others	K6o - **IT6.1** I can explain how search engines work and how results are selected and ranked K6p - **IT6.2** I can explain how to use search technologies effectively K6q - **IT6.3** I can explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal K6r - **IT6.4 I can describe how some online information can be opinion and can offer examples** K6s - **IT6.5** I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and **'ad targeting'** and targeting for **fake news**) K6t - **IT6.6** I can describe how and why people should keep their software and apps up to date, e.g. auto updates K6u - **IT6.7** I can describe simple ways to increase privacy on apps and services that provide privacy settings K6v - **IT6.8** I can describe strategies to help me identify such content (e.g. **scams, phishing**) K6w - **IT6.10** I can suggest what technology might look like in twenty years' time	S6j - **IT6.9** I can demonstrate how to make references to and acknowledge sources I have used from the internet

Computing Curriculum Progression

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid)
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<table>
<tr><td>Digital Creativity</td><td>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</td><td>S5m - I can design a 3D model using ICT to meet a specific goal, e.g. 2Design & Make</td><td>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.</td><td>S6k - I can use a mobile device to film a short clip
S6l - 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</td></tr>
<tr><td>Vocabulary</td><td colspan="2"><u>Digital Citizenship/Online Safety</u>
• Online bullying
• Summary report
• Technology-specific forms of communication
• Online reputation
• Self-image and identity

<u>Digital Literacy</u>
• Spreadsheet
• Data
• Formatting
• Field
• Database

<u>Computer Science</u>
• Algorithm
• Program
• Sequence
• Repeat
• Selection

<u>Information Technology</u>
• Motherboard
• Sceptical
• Bill Gates
• Grace Hopper
• Steve Wozniak</td><td colspan="2"><u>Digital Citizenship/Online Safety</u>
• Screen grab
• CEOP
• URL
• PEGI
• BBFC

<u>Digital Literacy</u>
• Formatting
• Layout
• Audience
• Abstraction
• Sources

<u>Computer Science</u>
• Algorithm
• Program
• Sequence
• Repeat
• Selection
• Variable

<u>Information Technology</u>
• Influence
• Manipulation
• Phishing
• Alan Turing
• Elon Musk</td></tr>
</table>

Computing Curriculum Progression

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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End Points	**By the end of Y5 through the coverage of Computing children will be able to:**	**By the end of Y6 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 **Computer Science** Using Scratch: • Identify what condition/selection is • Plan and write a program using the following: commands, sequence, repetition and selection/condition ('if…then') • 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. • Give examples of content that is permitted to be reused and know how this content can be found online. • Research and talk about the life and achievements of Bill Gates, Grace Hopper, & Steve Wozniak. **Digital Creativity**	**Digital Citizenship/Online Safety** • 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 **Digital Literacy** • 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 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 **Information Technology** • 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 describe strategies to help me identify scams and phishing. • Suggest what technology might look like in twenty years' time. • Research and talk about the life and achievements of Alan Turing or Elon Musk. **Digital Creativity** • Using an iPad film a short clip, considering the effect of camera angles, light and

Computing Curriculum Progression

Knowledge and Skills – K1a/S1a (Sunning Hill Primary School Progression Grid)
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Information Technology Section: Managing online information, Privacy and security, Copyright and ownership

	• Design and evaluate a 3D model using 2Design & Make to meet a specific goal	shadow • Add titles, credits, transitions and special effects • Review and explain my choice of clips, effects and structure in resources I have created