Document 2 Computing Curriculum at Spring Lane Primary School

SLP History Journey (Progression)							
	Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Units covered	**Core skills:** typing, communication, technology, control and data **Online Safety:** self-image, cyber bullying, stranger, reporting **Digital Creativity:** image, video, audio **Coding:** computational thinking	E-Safety Programming Animation Data & Information Creating Media Programming	E-Safety Programming Digital Art Data & Information Photography Programming	E-Safety Programming Presentations (App) Computer Networks AR/VR (3D Design) Programming	E-Safety Programming Presentations (Data) Computer Networks AR/VR (3d Design) Programming	E-Safety Programming Presentations (website) Computer Networks Video Production Programming	E-Safety Programming Presentations (Keynote) Computer Networks Sound (Podcast) Programming
Key knowledge	**Declarative knowledge - What** **Computer Science** What is an algorithm? **Information Technology** What are applications? **Digital Literacy** Where can I get support if I need it?		**Procedural knowledge - How** **Computer Science** How to write an algorithm **Information Technology** Create my own app prototype. **Digital Literacy** How to safely use a new application.		**Conditional knowledge - when** **Computer Science** I can evaluate and change my algorithm **Information Technology** I can decide when I need to change the font on a presentation **Digital Literacy** I know when to speak to an adult		
Substantive Concepts	Computer Science - Coding/Programming - Computational thinking - Problem solving Information Technology - Using technology to demonstrate understanding - Use of multimedia to create digital artefacts Digital Literacy - Education for a Connected World (DfE 2020)						

SLP History Journey (Progression in Knowledge and Skills)							
	Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	I can explore technology.	**Programming**	**Programming**	**Programming** I can create a program using a design	**Programming** - I can use **repetition** in programs	**Programming**	**Programming** I can use a range of sequence, selection

	I can repeat an action with technology to trigger a specific outcome. I can recognise the success or failure of an action. I can follow simple instructions to control a digital device. – I recognise that we control computers. I can input a short sequence of instructions to control a device.	I can explain what a given command will do I can act out a given word I can plan a simple program **Data & Information** I can label objects I can count objects with the same properties I can answer questions about groups of objects **Programming – quizzes** I can choose a command for a given purpose I can show that a series of commands can be joined together I can explain that each sprite has its own instructions	I can describe a series of instructions as a sequence I can explain what happens when I change the order of instructions I can use logical reasoning to predict the outcome of a program **Data & Information** I can count and compare objects using tally charts I can use pictograms to answer simple questions To select objects by attribute and make comparisons **Programming** I can explain that a sequence of commands has an outcome I can create a program using a given design I can make improvements to my design	I can create a **sequence** of code I can work with a variety of inputs and outputs **Computer Networks** I can identify input and output devices I can explain how a computer network can be used to share information I can explore how digital devices can be connected **Programming – Events & Actions** I can explain how a sprite moves in an existing project I can adapt a program to a new context I can identify and fix bugs in a program	I can work with a variety of inputs and outputs I can use logical reasoning to systematically detect and correct errors in programs **Computer Networks** I can describe how networks physically connect to other networks I can recognise how networked devices make up the internet I can evaluate the consequences of unreliable content **Programming - Intelino Indi** I can use decomposition to help solve complex problems I can use abstraction to help solve complex problems I can identify suitable commands to use when solving a problem.	I can create programs by decomposing them into smaller parts I can use a variety of **selection** commands in programs I can use conditions in **repetition** commands **Computer Networks** I can explain that computers can be connected together to form systems I can describe how search engines select results I can recognise why the order of results is important, and to whom **Programming** I can explain how **selection** is used in computer programs I can explain that a conditional statement connects a condition to an outcome I can explain how **selection** directs the flow of a program	and repetition commands to implement my design I can identify the need for, and work with, **variables** I can create procedures to hide complexity in programs **Networks** I can explain the importance of internet addresses I can recognise how data is transferred across the internet I can explain how sharing information online can help people to work together **Programming** I can explain that **selection** can control the flow of a program I can use an conditional statement to compare a **variable** to a value I can develop a program to use inputs and outputs on a controllable device
Information Technology	I can use technology to explore and access digital content. I can operate a digital device with support to fulfil a task.	**Animation** I can explain what animation is I know that animations require	**Digital Art** I can describe the main features of different art types	**Presentations** I can explain why we use prototypes I can identify the features of effective apps	**Data Handling** I can explain that data is collected to answer questions I can interpret data that has been collected	**Presentation** I can identify the key features of a website. I can consider the ownership and use of images	**Presentation** I can decide what information needs to be shared with an audience on screen

	I can create simple digital content I can choose media to convey information	consistency and being careful I can plan and create my own animation. **Creating Media** I can identify and find keys on a keyboard I can type a sentence using a variety of keys. I can use the toolbar to make changes I can choose appropriate tools to make a picture	I can use an app to recreate pieces of artwork I can make choice about what tools I use to design my own artwork. **Photography** I can use a digital device to take photographs I can describe what makes a good photograph I know what photos can be changed	I can design an app that helps inform people **AR/VR** I can explain the difference between AR and VR I can explain that AR/VR can change how we see the world I can select, combine and place shapes in a workspace to create a simple design	I can answer questions using data. **AR/VR – 3D design** I can explain how AR/VR is used in the world I can explain what jobs may need or use these skills I can select appropriate tools needed to meet a target audience	I can create a webpage and embed media. **Video Creation** I can capture video using a range of techniques I can identify when I need to reshoot or edit my clips I can consider the impact of choices made when making and sharing videos	I can record audio and overlay this on a slide I can add in transitions and animations to make the presentation effective. **Sound** I can explain what a podcast is and why they are popular I can identify and explain the key features I can plan, produce and edit my own podcast
Digital Literacy	I can use different digital devices. I recognise that you can access content on a digital device. I can use a mouse, touchscreen or appropriate access device to target and select options on screen. I recognise a selection of digital devices. I recognise the basic parts of a computer, e.g. mouse, screen, keyboard. I can select a digital device to fulfil a specific task. I know to tell an appropriate adult if I see something on the	I can explain why things one person finds funny or sad online may not always be seen in the same way by others. I can recognise that there may be people online who could make someone feel sad, embarrassed or upset. 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 and how they can help. I can give examples of when I should ask	I can explain how information put online about someone can last for a long time. I can understand how other people may look and act differently online and offline. I can explain who I should ask before sharing things about myself or others online. I know who to talk to if something has been put online without consent or if it is incorrect I can explain what bullying is, how people may bully others and how bullying can make someone feel. I can explain why anyone who	I can explain how my online identity can be different to the identity I present in 'real life'. I can describe ways people who have similar likes and interests can get together online. I can explain how information put online can last forever. I can describe appropriate ways to behave towards other people online and why this is important. I can use key phrases in search engines and explain what autocomplete is. I can explain how using technology can distract me from other things I	I can explain how online identities can be based on opinions and ideas. I can describe how people may behave differently online. I can describe how others can find out information about me by looking online I can describe how to recognise online bullying and how to seek help. I can explain how to check who owns photos, text and other content online. I can explain how spending too much time using technology can impact my health and well-being	I can explain how identity online can be copied, modified or altered I can explain how to respond to hurtful messages online and offer examples of how to get help. I can explain ways that some of the information about anyone online could have been created, copied or shared by others I can describe how bullying online can be different to bullying in the physical world. I can describe how to evaluate the reliability of online sources of information	I can describe how others can influence people's decisions and how they can be encouraged to act in different ways online. can describe strategies for safe and fun experiences in a range of online social environments. I can explain the importance of managing online information and how to create a positive online reputation. can identify strategies to respond to and report online bullying. I can explain how search results are selected and ranked.

	computer that upsets me	permission to do something online and explain why this is important. I can use the internet with adult support to communicate with people I know I can describe what information I should not put online without asking a trusted adult first. I can describe how to behave online in ways that do not upset others a I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened and can give examples. I can explain rules to keep myself safe when using technology both in and beyond the home. I can explain how passwords are used to protect information, accounts and devices. I can recognise more detailed examples of information that is personal to someone	experiences bullying is not to blame I can talk about how anyone experiencing bullying can get help. I can explain simple guidance for using technology in different environments (Home and school) I can say how those rules can help anyone accessing online technologies I can use simple keywords in search engines I can demonstrate how to navigate a simple webpage to get information I need I can explain and give examples of what is meant by private and keeping things private I can describe and explain some rules for keeping personal information private	might do or should be doing. I can explain how passwords help protect information and accounts online. I can explain why work I create using technology belongs to me.	I can describe simple strategies for creating and keeping passwords private I can explain why it is important to only use work that I have permission to use.	I can identify different types of media and how they can influence people's feelings or behaviour. I can explain what to do if a password is shared or stolen I can explain how to credit the sources of materials I use online	I can describe some strategies to manage the impact of technology on health and well-being. I can describe ways to protect personal information and devices online. I can demonstrate how to make careful choices about what content I use and share online.

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		I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.					

	Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Vocabulary	**Digital Literacy** Safe Help Kind Adult Share (used carefully in context) **Information Technology** Computer Tablet Screen Button Camera Click Tap Type **Computer Science** Move Press Go Stop	**Digital Literacy** Internet Rules Personal information Stranger Trust Private **Information Technology** Mouse Keyboard Icon Save File Text Picture Type **Computer Science** Algorithm Instruction Forwards Backwards Turn Debug	**Digital Literacy** Online Password Trusted adult Report Permission **Information Technology** Edit Record Image Sound Group Sort Pictogram **Computer Science** Sequence Command Repeat Input Output Program	**Digital Literacy** Username Password Digital footprint Online identity **Information Technology** Slide Presentation Format Table Chart **Computer Science** Loop Predict Debug Variable (introduced simply) Event	**Digital Literacy** Privacy Cyberbullying Block Filter Profile **Information Technology** Spreadsheet Cell Formula Data Router Browser **Computer Science** Condition Sensor Control Algorithm Sequence	**Digital Literacy** Online reputation Scam Secure site Bias Credible source **Information Technology** Database Field Record Evaluate Multimedia Slide transition **Computer Science** Selection Function Input/output Efficiency Decompose	**Digital Literacy** Influence Digital wellbeing Manipulation Misinformation Copyright Fair use **Information Technology** License Citation Format Rank Search engine Media type **Computer Science** Abstraction Boolean IP address Algorithm Variable Decomposition