Curriculum Progression Model - Computing

	End of EYFS	End of Year 1	End of Year 2	End of Year 3	End of Year 4	End of Year 5	End of Year 6
Digital Citizenship	Discuss my digital footprint. Recognise, online or offline, that anyone can say no to somebody who makes them feel sad or uncomfortable. Recognise some ways in which the internet can be used to communicate. Give examples of how I can use technology to communicate with people I know. Identify ways that I can put information on the internet. Describe ways that some people can be unkind online. Identify rules that help keep us safe and healthy in and beyond the home when using technology.	Discuss my digital footprint. Recognise, online or offline, that anyone can say no to somebody who makes them feel sad or uncomfortable. 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) Give examples of when I should ask permission to do something online and explain why this is important. Recognise that information can stay online and could be copied. Describe how to behave online in ways that do not upset others and can give Examples. Explain rules to keep us safe when we are using technology both in and beyond the home.	Discuss my digital footprint and explain how other people may look and act differently online and offline. 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) 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) Explain why I have a right to say 'no' or 'I will have to ask someone'. Explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online. Explain how information put online about me can last for a long time. Explain what bullying is, how people may bully others and how bullying can make someone feel. Give examples of bullying behaviour and how it could look online. Explain simple guidance for using technology in different environments and settings, e.g. accessing online. Technologies in public places and the home environment.	I can use technology safely, respectfully, responsibly and be able to talk about my digital footprint. Explain what is meant by the term 'identity'. Explain how people can represent themselves in different ways online. 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. Explain how someone's feelings can be hurt by what is said or written online. Give examples of what anyone may or may not be willing to share about themselves online. Explain the need to be careful before sharing anything personal. Describe ways that some people can be unkind online. Offer examples of how this can make others feel. Explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships.	I can explain how my online identity can be different to my offline identity and be able to talk about my digital footprint. Explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this. Give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. Explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs. Describe how to find out information about others by searching online. Describe ways people can be bullied through a range of media (e.g. image, video, text, chat). 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). Explain how using technology can be a distraction from other things, in both a positive and negative way.	Talk about my digital footprint and demonstrate responsible choices about my online identity, depending on context. Explain how identity online 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. Describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. Recognise online bullying can be different to bullying in the physical world and can describe some of those differences. Describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline / CEOP / The Mix). Describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively. Describe some strategies, tips or advice to promote health and well-being with regards to technology. 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.	Talk about my digital footprint and the importance of asking until I get the help needed. 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. 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. Explain how sharing something online may have an impact either positively or negatively. 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. Explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. Describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help me. Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. 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).

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Digital Literacy	Begin to use a mouse and practise keyboard skills. Begin to follow instructions to complete activities. Use different software and online apps. Name the main parts of a computer and know what they are used for e.g Mouse, Monitor, Printer, Keyboard, and USB. To shut down a computer appropriately.	How to input text and images using a simple publishing programs. How to type a simple sentences on the screen, making use of a word bank. How to format my typing in a number of ways (size, colour, and font). Identify the main keys for typing e.g. shift, space bar, and full stop. How to type simple sentences using the correct format (Capital letters, space and full stop). How to make text bold/ italics / text alignment etc. Use simple keyboard shortcuts Ctrl + B, I, U to edit my text style. Move to different places in the text using the arrow keys or mouse. Use the 'undo' icon to fix a mistake.	Know how to use spell checker to check my work. Use the return/enter key to insert relevant line breaks. Know how to save an image from the internet rather than using copy & paste. Know how to add a page border. Know how to insert a basic table. Identify which page orientation would best suit my work. e.g. portrait to landscape. Transfer these skills into PowerPoint.	To type a number of sentences using the keyboard. Use tab to indent paragraphs. Use cut, copy and paste to re-order text. Use keyboard shortcuts e.g. Ctrl + V, X, C to re-order text. Use bullet points, speech bubbles, auto shapes and text boxes. Format wrapping/layout of text boxes and images in word. Format images - move, rotate and re-size shapes. Format tab to alter word art to enhance my work. Use a variety of table tools (merge cells, fill, and columns). Explain the difference between save and save as. Create a folder to save my work in and give a file a name to identify it. Transfer these skills into PowerPoint.	How to transfer my word processing skills into other multimedia packages e.g. PowerPoint. How to include importing images, hyperlinks and the use of sounds recorded. Know how to enter a basic mathematical formula into Excel. Know how to add basic mathematical formulas. How to use SUM to calculate the total of a set of numbers in a range of cells. Change the look of a spreadsheet by using different formats e.g. text styles, colour, and number format inc, currency and date, row and column heights. Insert and delete columns and rows in a spreadsheet. Use spreadsheets to create a graph. Decide on the most appropriate form of graph for a data set and give reasons for my choice. Interpret graphs of data collected from sensors.	How to select appropriate tools to add emphasis and effect to my work. Explain why I have chosen my layout and formatting. Review and edit my work and talk about the changes I made. Know whether my work is suitable for the audience. Create a database structure of my own and enter the data. Prepare a data collection form and collect quality information. Use databases to create a graph. Know the most appropriate form of graph for a data set giving reasons for my choice. Interpret graphs of data collected from a variety of sources.	How to choose, select and use a combination of software to present my work. How to select appropriate tools to add emphasis and effect to my work. Explain why I have chosen my layout and formatting. Know how to review and edit my work and talk about the changes I made. Know how to consider whether my work is suitable for the audience. Know how to draft and redraft my work by deleting, inserting and replacing text. Know how to interpret graphs of data collected from a variety of sources.

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Computer Science	Name items we control in the everyday environment. Use every day technology. Explore on screen activities – by clicking (cause and effect). Know that an algorithm is a set of instruction that can solve a problem. Create a simple algorithm for a BeeBot/Blue-Bots or remote control toy.	Tell you what an algorithm is. Plan a simple algorithm. Give and follow commands, which include straight / turning commands – one at a time. Debug a simple algorithm that is causing an unexpected outcome. Break an algorithm down into smaller par.	Tell you what a program is. Tell you what an event is. To know programs need an event to begin. Give and follow instructions, which include direction and turning command – several in order. Know that computers need precise instructions. Plan and use logical reasoning to predict outcomes. Create a program that contains several commands for a device or software programme. Debug a program independently that has caused an unexpected outcome. Use different events to start my programs – timing / on click / on button press.	Know that a sequence is a list of instructions in a particular order. To know that if I change the sequence I may change the outcome of the program. Sequence a simple program on Logo to produce a line drawing of a 2D shape. Solve problems by decomposing them into smaller parts. Detect and debug errors in my sequence. Use and edit a pre-written program to achieve a specific outcome. Use logical reasoning to explain what will happen next. Predict how a change in a sequence may impact on the outcome of a program.	Know what a repeat is. To know that a repeat is used to repeat a set of instructions. Use repeats in programs confidently. Independently select repeat and sequence code to make my own program. Detect and debug errors in algorithms and programs. Transfer my coding skills between software. Explain why it is important to use the repeat function in a particular place in my sequence.	Explain you what a conditional / selection is. Plan an algorithm and the write a program using the following: commands, sequence, repetition and selection / condition ('if…then'). Detect and debug errors in more complex algorithms and programs. Use selection to create games in which the user must make a choice. Use my skills and understanding of conditional / selection in more than 2 programs.	Explain what a variable is. Confidently use events, repeats, selection and variables. Use a variable in a variety of programming software. Confidently decompose a problem and methodically create a program to solve it, testing and adapting as I go. Evaluate the effectiveness of my programming and suggest improvements. Confidently use the Blockly programming language.

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Information Technology	Talk about how to use the internet as a way of finding information Online. Identify devices I could use to access information on the internet. Identify some simple examples of my personal information (e.g. name, address, birthday, age, location) Describe who would be trustworthy to share this information with; I can explain why they are trusted. Know that work I create belongs to me. Name my work so that others know it belongs to me.	Give simple examples of how to find information (e.g. search engine, browsers, voice activated searching) Know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable worried or frightened. (Butterfly feeling) Explain how passwords can be used to protect information and devices 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) Explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others. Explain why work I create using technology belongs to me Save my work (Purplemash) so that others know it belongs to me.	Use simple keywords in search engines. Demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections). Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Explain how passwords can be used to protect information, accounts and devices. Explain and give examples of what is meant by 'private' and 'keeping things private'. Explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions). Recognise that content on the internet may belong to other people.	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 of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc. Describe simple strategies for creating and keeping passwords private. Give reasons why someone should only share information with people they choose to and can trust. Explain that if they are not sure or feel pressured then they should tell a trusted adult. Explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.	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. 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). 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. Describe strategies for keeping personal information private, depending on context. Know what the digital age of consent is and the impact this has on online services asking for consent. Explain why work I create using technology belongs to me. Save my work under a suitable title / name so that others know it belongs to me. Understand that work created by others does not belong to me even if I save a copy. Explain a range of internet standards (eg; HTTP, URL).	Know what an operating system is and why it important. Identify the key internal parts of a computer – RAM, memory, processor and motherboard and describe what each part does. Explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'. Evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results. Explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. Explain what a strong password is and demonstrate how to create one. Explain what app permissions are and can give some examples. Assess and justify when it is acceptable to use the work of others. Give examples of content that is permitted to be reused and know how this content can be found online.	Explain how search engines work and how results are selected and ranked. Explain how to use search technologies effectively. 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. Describe how some online information can be opinion and can offer examples. 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). Describe how and why people should keep their software and apps up to date, e.g. auto updates. Describe simple ways to increase privacy on apps and services that provide privacy settings. Describe strategies to help me identify such content (e.g. scams, phishing). Demonstrate how to make references to and acknowledge sources I have used from the internet. Suggest what technology might look like in twenty years' time.