

	Programming	Networking	Software skills	Hardware skills	Operating system skills	Online safety and Digital Citizen
						<b>Key Messages for all year groups:</b> 'Not everything online is real' 'Just because someone says everyone is doing it doesn't mean they are.'
EYFS	<p><b>ELG:</b> They recognise, create and describe patterns. Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p> <p>They can talk about the plans they have made to carry out activities and what they might change if they were to repeat them.</p> <p>Children listen to instructions and follow them accurately.</p> <p>They can carry out instructions which contain several parts in a sequence.</p> <p>They can order objects and talk about position.</p>	<p><b>ELG:</b> Children recognise that a range of technology is used in places such as homes and schools.</p> <p><b>Children find out about and use a range of everyday technology.</b></p>	<p><b>ELG:</b> Knows information can be relayed in the form of print. Knows that information can be retrieved from books and computers. They select and use technology for particular purposes.</p> <p>They select appropriate applications that support an identified need – for example in deciding how best to make a record of a special event in their lives, such as a journey on a steam train.</p>	<p><b>ELG:</b> Children show good control and co-ordination in large and small movements. They handle equipment and tools effectively. Links sounds to letters, naming and sounding the letters of the alphabet. Recognises numerals 1 to 5. They select and use technology for particular purposes.</p> <p>They hold paper in position and use their preferred hand for writing, using a correct pencil grip. They are beginning to be able to write on</p>	<p><b>ELG:</b> They select and use technology for particular purposes.</p>	<p><b>ELG:</b> To form positive relationships with adults and other children. Children talk about how they and others show feelings, talk about their own and others' behaviour, and its consequences, and know that some behaviour is unacceptable.</p> <p>Children know some ways to manage their feelings and are beginning to use these to maintain control. They can stop and think before acting and they can wait for things they want.</p> <p>They understand someone else's point of view can be different from theirs.</p>

	Children talk about the ideas and processes which have led them to make music, designs. Images or products. They can talk about features of their own and others work recognising the differences between them and the strengths of others.			lines and control letter size.		They understand what bullying is and that this is unacceptable behaviour.
Year 1	<b>Key skill:</b> Understand the term algorithm. Understand programs use algorithms. Create simple programs (one step at a time). Predict what a program will do.	<b>Key skill:</b> Using IT outside of school. Can talk about the way they use IT outside of school.	<b>Key skill:</b> Pupils can use devices to create digital content e.g pictures, posters, video and audio recordings. Following a prompt sheet can save digital content.	<b>Key skill:</b> Turning a computer on and off using mouse and keyboard appropriately.	<b>Key skill:</b> Log in following a prompt sheet. Shut down computers correctly.	<b>Key skill:</b> Know what the internet is. Lots of people can use the internet at one time. Know what a stranger is and know that they exist online.
Year 2	<b>Key skill:</b> Recognise a sequence of instructions as an example of an algorithm. Create and debug simple programs using a sequence of instructions. Predict the behaviour of simple programs.	<b>Key skill:</b> Have the idea that IT can be used for communication across school. Be aware of emails, chats on games.	<b>Key skill:</b> Save and load digital content. e.g File, save as. File, Load – double click. For a given purpose they can create their own digital content.	<b>Key skill:</b> Operate technical devices appropriately. Show greater control of mouse and keyboard. Show respect and understand the fragility of hardware devices.	<b>Key skill:</b> Find and open using ‘double click’ with a mouse, the appropriate programme on the desk top.	<b>Key skill:</b> Understand can communicate online. Thinking about others feelings when using the internet. Recognise inappropriate content and who to tell.
Year 3	<b>Key skill:</b> Design, write and debug programs that	<b>Key skill:</b> Understand computers are connected via	<b>Key skill:</b> Can use some software with support. Children	<b>Key skill:</b> Understand the importance of a tidy workspace and	<b>Key skill:</b> Find the appropriate	<b>Key skill:</b> Recognise inappropriate content and how to

	<p>achieve a specific goal. Identify where a physical system has been simulated on screen. E.g. computer games. Create a sequence using on screen programming. Identify input (mouse and keyboard) and output devices and how these work together. Pupils can explain/predict what their algorithm will do onscreen. Pupils can spot errors in algorithms.</p>	<p>networks through the internet and people can communicate through messaging services.</p>	<p>can create digital content using laptops or desktop computers.  Children can use a computer to research information. Can also understand search engines to find content online. Different software has different uses.</p>	<p>keeping your hardware clean.</p>	<p>programme using the search bar. Save their work properly.</p>	<p>report online and who to tell. Explain good and bad example of online behaviour. Consider the content of a message and how the receiver will feel.</p>
Year 4	<p><b>Key skill:</b> Pupils can design some elements of a program to a given brief including simple inputs. Pupils can come up with simple adaptations to a program. Pupils can program commands in an appropriate order including loops.</p>	<p><b>Key skill:</b> Children understand that the internet is a network of networks e.g 'school network' can communicate with other 'networks' such as messaging services and public facing webpages.</p>	<p><b>Key skill:</b> Collect research with a specific topic in mind using browser and search tools on specific web pages. Can select web pages using key words through search engines. Children can select appropriate software for chosen topic. They can plan a project and use</p>	<p><b>Key skill:</b> Demonstrate good practice of a clean and tidy workspace when using digital hardware.</p>	<p><b>Key skill:</b> Retrieve previously saved work.</p>	<p><b>Key skill:</b> Can identify the dangers in online scenarios. Spot social networking opportunities through online activities and knows how to stay safe. Know the effects of cyberbullying.</p>

	Pupils can explain a simple sequence based algorithm. Pupils can use logical reasoning to detect errors in a code.		appropriate software to complete it. e.g making a presentation and using PowerPoint. Can collect data and present it.			
Year 5	<p><b>Key skill:</b> Pupils can adapt a given program to create their own. Pupils understand physical systems can be controlled by a computer. Pupils can break problems into their component parts. Pupils to use selection (as and if) in their programming. Pupils can write a program that uses keyboard inputs. Pupils can predict outcome of an algorithm using as and if. Pupils can identify errors in an algorithm.</p>	<p><b>Key skill:</b> Computing can communicate through broader networks such as Bluetooth accessing speakers etc.</p>	<p><b>Key skill:</b> Children can understand and use a safe search mode on a search engine. Understand how google looks for key words and reporting systems to identify if a website is safe. To identify how google ranks web pages based on what is searched. Child can use and combine software programmes to create a project. Pupils can evaluate information and its quality and reliability.</p>	<p><b>Key skill:</b> Understand that devices can be connected to share digital content.</p>	<p><b>Key skill:</b> Shortcuts using keyboard e.g ctrl C for copying.</p>	<p><b>Key skill:</b> Recognise different types of inappropriate content and how to report online. Act as a role model to others on how to stay safe online. Explain the dangers of communicating online.</p>
Year 6	<p><b>Key skill:</b> Pupils can apply programming skills to a new programming language. Pupils can write programs with a</p>	<p><b>Key skill:</b> Can explain how different networks are used for different purposes and choose the appropriate network</p>	<p><b>Key skill:</b> Use internet resources to learn new skills e.g use google to teach them a skill within programmes.</p>	<p><b>Key skill:</b> Connect devices together to transfer content beyond physical connection.</p>	<p><b>Key skill:</b> Learn further shortcuts using the keyboards including 'functions'</p>	<p><b>Key skill:</b> Understand the importance of privacy settings and how to use them online. How to block inappropriate content.</p>

	<p>physical system output.</p> <p>Children can plan a solution to a problem.</p> <p>Pupils to use variables in their programming.</p> <p>Pupils can identify errors in algorithms and explain why they think it is incorrect.</p>	<p>to match the task.</p> <p>E.g Bluetooth for speakers.</p>	<p>Children understand search engines work in other programmes. E.g such as the app store.</p> <p>Children can combine programmes across multiple devices.</p> <p>Children can use software to analyse numerical data.</p>	<p>e.g wireless connections.</p>		<p>Recognises the CEOP button and explains its use.</p>
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British Values	SMSC	Core Values
<p><b>Democracy</b> - <i>Pupils have the opportunity to select the manner in which the adapt programs or solve problems.</i></p> <p><b>Rule of law</b> – <i>Our Computing curriculum allows pupils to explore and learn about the ethical, legal, cultural and environmental concerns with regards to the use of digital technology.</i></p> <p><b>Individual liberty</b> - <i>Through the use of challenges pupils have the opportunity to express their ideas.</i></p> <p><b>Mutual respect and Tolerance of those of different faiths and beliefs.</b> - <i>Pupils share ideas and are encouraged to program collaboratively and to respectfully provide feedback to others.</i></p>	<p><b>Cultural</b> – <i>preparing for life in modern Britain; understand and appreciate personal influences</i></p> <p><b>Moral</b> – <i>developing and expressing personal views or values; investigating moral values and ethical issues; moral codes and models of moral virtue; recognise right and wrong and applying it; understanding the consequences of actions</i></p> <p><b>Social</b> – <i>develop personal qualities and using social skills</i></p> <p><b>Spiritual</b> – <i>understanding human feelings and emotions; using imagination and creativity in learning; experiencing fascination, awe and wonder</i></p>	<p><b>Resilience</b> – <i>Pupils are regularly faced with problems and given time to create, test and debug their own solutions building resilience as they refine and adapt their work.</i></p> <p><b>Respect</b> - <i>Pupils listen to each other and show respect by allowing everyone to speak. Pupils often work in pairs and ensure they respect their partner’s ideas for a project.</i></p> <p><b>Creativity</b> – <i>Pupils are provided with opportunities to create and test their own solutions to different problems.</i></p> <p><b>Kindness</b> – <i>As pupils work collaboratively and give peer feedback they are expected and encouraged to do so with kindness.</i></p>