



Computing Skills and Knowledge Progression Map

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science Algorithms	Understand and follow simple instructions in real-world scenarios (e.g. completing a multi-step activity)	Understand what algorithms are Follow simple algorithms in real-world scenarios (e.g. making a sandwich) Create simple algorithms for everyday tasks (e.g. brushing your teeth)	Understand what algorithms are and how they are implemented as programs Use logical reasoning to predict the behaviour of simple programs Create and debug simple programs	Explain how some simple algorithms work Design, write and debug simple programs Use sequence (order), selection (if/then), and repetition in programs	Use logical reasoning to explain how some simple algorithms work Design, write and debug simple programs; solve problems by decomposing them into smaller parts Use sequence (order), selection (if/then), and repetition in programs	Use logical reasoning to explain how some simple algorithms work and to detect errors in algorithms and programs Design, write and debug programs that accomplish simple goals; solve problems by decomposing them into smaller parts Use sequence (order), selection (if/then), and repetition in programs; work with variables and various forms of input and output	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 (order), selection (if/then), and repetition in programs; work with variables and various forms of input and output
Computer Science Networks				Understand basic computer networks Investigate the history of the world wide web			Understand computer networks including the internet; how they can provide multiple services,



Computing Skills and Knowledge Progression Map

				Explore how to use search engines to find information			such as the world wide web; and the opportunities they offer for communication and collaboration Appreciate how search results are selected and ranked
Information Technology	Recognise technology in the home and school environment Explore age-appropriate technology	Recognise common uses of information technology in the home and school environment Use technology to purposely create digital content	Recognise common uses of information technology beyond school Use technology to purposely create, organise, store, manipulate and retrieve digital content, comparing the benefits of different programs		Recognise and use a range of input and output devices Select and use a variety of software on a range of digital devices to accomplish given goals	Select, use and combine a variety of software to design and create content for a given audience	Select, use and combine a variety of software to design and create content for a given audience, including collecting, analysing, evaluating and presenting data and information
Digital Literacy Self-image and identity	Recognise, online or offline, that anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who	Recognise that there may be people online who could make someone feel sad, embarrassed or upset	Explain how other people may look and act differently online and offline		Explain how their online identity can be different to their offline identity		



Computing Skills and Knowledge Progression Map

	<p>makes them feel sad, uncomfortable, embarrassed or upset</p>		<p>Give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened</p>		<p>Describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them</p> <p>Explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this</p>	
<p>Digital Literacy Online relationships</p>	<p>Recognise some ways in which the internet can be used to communicate</p> <p>Give examples of how they use technology to communicate with people they know</p>		<p>Explain who they should ask before sharing things about themselves or others online</p> <p>Explain why they have a right to say 'no' or 'I will have to ask someone'</p> <p>Identify who can help them if something</p>	<p>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</p>	<p>Describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms)</p> <p>Give examples of how to be respectful to</p>	<p>Explain how sharing something online may have an impact either positively or negatively</p> <p>Describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is</p>



Computing Skills and Knowledge Progression Map

			<p>happens online without their consent</p> <p>Explain how it may make others feel if they do not ask permission or ignore answers before sharing something about them online</p>	<p>Explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online are the same as sharing offline e.g. sharing images and videos</p>	<p>others online and describe how to recognise healthy and unhealthy online behaviours</p>		<p>shared about them online and how to support them if others do not</p> <p>Describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs</p> <p>Explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this</p>
Digital Literacy Online reputation	Identify ways that they can put information on the internet		Explain how information put online about someone can last for a long time			Search for information about an individual online and	Explain the ways in which anyone can develop a positive online reputation



Computing Skills and Knowledge Progression Map

			<p>Describe how anyone's online information could be seen by others</p> <p>Know who to talk to if something has been put online without consent or if it is incorrect</p>			<p>summarise the information found</p> <p>Describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect</p>	<p>Explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity</p>
<p>Digital Literacy Online bullying</p>	<p>Describe ways that some people can be unkind online</p> <p>Offer examples of how this can make others feel</p>			<p>Describe appropriate ways to behave towards other people online and why this is important</p> <p>Give examples of how bullying behaviour could appear online and how someone can get support</p>	<p>Describe ways people can be bullied through a range of media (e.g. image, video, text, chat)</p>	<p>Describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying</p> <p>Identify a range of ways to report concerns and access support both in school and at home about online bullying</p>	
<p>Digital Literacy Managing</p>	<p>Talk about how to use the internet as</p>	<p>Know how to get help from a trusted adult if</p>	<p>Use simple keywords in search engines</p>	<p>Demonstrate how to use key phrases in search engines</p>		<p>Explain what is meant by 'being sceptical' and</p>	



Computing Skills and Knowledge Progression Map

<p>online information</p>	<p>a way of finding information online</p> <p>Identify devices they could use to access information on the internet</p>	<p>they see content that makes them feel sad, uncomfortable worried or frightened</p>	<p>Demonstrate how to navigate a simple webpage to get to information they need (e.g. home, forward, back buttons; links, tabs and sections)</p> <p>Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'</p> <p>Explain why some information they find online may not be real or true</p>	<p>to gather accurate information online</p> <p>Explain what autocomplete is and how to choose the best suggestion</p> <p>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</p> <p>Explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed)</p>		<p>give examples of when and why it is important to be 'sceptical'</p> <p>Evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results</p> <p>Explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence</p>	
<p>Digital Literacy Health, well-</p>	<p>Identify rules that help keep us safe and healthy in</p>	<p>Explain rules to keep themselves safe when using</p>			<p>Explain how using technology can be a distraction</p>		<p>Describe common systems that regulate</p>



Computing Skills and Knowledge Progression Map

being and lifestyle	and beyond the home when using technology Give some simple examples of these rules	technology both in and beyond the home			from other things, in both a positive and negative way		age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose
Digital Literacy Privacy and security	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 and explain why they are trusted	Recognise examples of information that is personal to someone (e.g. where someone lives and goes to school, family names) Explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to themselves or others	Explain and give examples of what is meant by 'private' and 'keeping things 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 what a strong password is and demonstrate how to create one Explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others Explain what app permissions are and can give some examples	
Digital Literacy Copyright and ownership	Know that work they create belongs to them			Explain why copying someone else's work from the internet without permission	When searching on the internet for content to use, explain why they need to consider		Demonstrate the use of search tools to find and access online content which



Computing Skills and Knowledge Progression Map

	Name their work so that others know it belongs to them			isn't fair and can explain what problems this might cause	who owns it and whether they have the right to reuse it Give some simple examples of content which they must not use without permission from the owner, e.g. videos, music, images		can be reused by others Demonstrate how to make references to and acknowledge sources they have used from the internet
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