

COMPUTING PROGRESSION

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
COMPUTER SCIENCE (Programming & Control)	- Recognise common uses of information technology beyond school - Use technology purposefully to create, organise, store, manipulate, and retrieve digital content - 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 - 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	- Recognise common uses of information technology beyond school - Use technology purposefully to create, organise, store, manipulate and retrieve digital content - 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 - 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	- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - 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 - 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 - design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - use logical reasoning to explain how some	- 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 - 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable	- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output - 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 - 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 - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - Use technology safely, respectfully and	- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts - 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

			simple algorithms work and to detect and correct errors in algorithms and programs	behaviour; identify a range of ways to report concerns about content and contact.	responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact	presenting data and information • 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 • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact
INFORMATION TECHNOLOGY (Creating & Publishing)	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content • Use technology safely and respectfully	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content • Use technology safely and respectfully	• 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	• 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; • Use search	• 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; • Use search	• 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;

			concerns about content and contact Understand the opportunities [networks] offer for communication and collaboration	technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content identify a range of ways to report concerns about content and contact	technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
DIGITAL LITERACY (Online Safety, i internet & communication)	<u>Online Bullying</u> describe how to behave online in ways that do not upset others and can give examples.	<u>Online Bullying</u> - explain what bullying is, how people may bully others and how bullying can make someone feel - explain why anyone who experiences bullying is not to blame - talk about how anyone experiencing bullying can get help	<u>Online Bullying</u> - describe appropriate ways to behave towards other people online and why this is important - give examples of how bullying behaviour could appear online and how someone can get support with others	<u>Online Bullying</u> - recognise when someone is upset, hurt or angry 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)	<u>Online Bullying</u> - I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences - I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying - I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult - I can identify a range of ways to report concerns and access support both in school and at home about online bullying - I can explain how to block abusive users - I can describe the helpline services which can help people experiencing bullying, and how to access them	<u>Online Bullying</u> - I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me - I can explain how someone would report online bullying in different contexts

	<u>Managing Online Information</u> • give simple examples of how to find information using digital technologies, e.g. search engines, voice activated searching • know/understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe/a joke • know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened	<u>Managing Online Information</u> • 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 what voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri)	<u>Managing Online Information</u> • demonstrate how to use key phrases in search engines to gather accurate information online • explain what autocomplete is and how to choose the best suggestion • explain how the internet can be used to sell and buy things • 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 • explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed)	<u>Managing Online Information</u> • 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) • describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online • explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true • explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be • explain what is	<u>Managing Online Information</u> • explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with • 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 • identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads • describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by	<u>Managing Online Information</u> • 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 • 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) • understand the concept of persuasive design and how it can be used to influence peoples' choices • demonstrate how to analyse and evaluate the validity of 'facts' and information and I can explain why using these strategies are important • explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this • describe the
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				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	commercial companies or by vloggers, content creators, influencers) - explain what is by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others - describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful - explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share	difference between online misinformation and dis-information - explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation or disinformation) - identify, flag and report inappropriate content
	<u>Privacy & Security</u> - explain how passwords are used to protect information, accounts and devices - recognise more - detailed 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	<u>Privacy & Security</u> - 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' - describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords) - explain how some people may have devices in their homes connected to the	<u>Privacy & Security</u> - describe simple strategies for creating and keeping passwords private - give reasons why someone should only - describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened	<u>Privacy & Security</u> - describe strategies for keeping personal information private, depending on context - explain that internet use is never fully private and is monitored, e.g. adult supervision - describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure - know what the digital age of consent is and the impact this has	<u>Privacy & Security</u> - I can explain what a strong password is and demonstrate how to create one - I can 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 - I can explain what app permissions are and can give some examples	<u>Privacy & Security</u> - I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser) - I can explain what to do if a password is shared, lost or stolen - I can describe how and why people should keep their software and apps up to date, e.g. auto updates - I can describe simple ways to increase privacy on apps and

		internet and give examples (e.g. lights, fridges, toys, televisions)		on online services asking for consent		services that provide privacy settings • I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing) • I know that online services have terms and conditions that govern their use • I can demonstrate the use of search tools to find and access online content which can be reused by others • I can demonstrate how to make references to and acknowledge sources I have used from the internet
		<u>Self-Image and Identity</u> • explain how other people may look and act differently online and offline • give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help	<u>Self-Image and Identity</u> • explain what is meant by the term 'identity' • explain how people can represent themselves in different ways online • explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why	<u>Self-Image and Identity</u> • explain how my online identity can be different to my offline identity • describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them • explain that others online can pretend to be someone else, including my friends, and	<u>Self-Image and Identity</u> • I can explain how identity online can be copied, modified or altered • I can demonstrate how to make responsible choices about having an online identity, depending on context	<u>Self-Image and Identity</u> • 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. • I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know

				can suggest reasons why they might do this		and can give examples of how to get help, both on and offline. • can explain the importance of asking until I get the help needed.
		<u>Online Reputation</u> • explain how information put online about someone can last for a long time • describe how anyone's online information could be seen by others • know who to talk to if something has been put online without consent or if it is incorrect	<u>Online Reputation</u> • explain how to search for information about others online • give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal • explain who someone can ask if they are unsure about putting something online • share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult • describe how connected devices can collect and share anyone's information	<u>Online Reputation</u> • describe how to find out information about others by searching online • explain ways that some of the information about anyone online could have been created, copied or shared by others	<u>Online Reputation</u> • I can search for information about an individual online and summarise the information found • 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	<u>Online Reputation</u> • I can explain the ways in which anyone can develop a positive online reputation. • I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity