Computing Progression

Self-Image and Identity

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise that there may be people online who could make me 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.	Explain how other people's identity online can be different to their identity in real life. Describe ways in which people might make themselves look different online. 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.	Explain what is meant by the term 'identity'. Explain how I can represent myself in different ways online. Explain ways in which and why I might change my identity depending on what I am doing online (e.g. gaming; using an avatar; social media).	Explain how my online identity can be different to the identity I present in 'real life'. Knowing this, I can describe the right decisions about how I interact with others and how others perceive me.	Explain how identity online can be copied, modified or altered. Demonstrate responsible choices about my online identity, depending on context. Describe ways in which media can shape ideas about gender. Identify messages about gender roles and make judgements based on them.	Challenge and explain why it is important to reject inappropriate messages about gender online. Describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. Know and can give examples of how I might get help, both on and offline. Explain why I should keep asking until I get the help I need.

Online Relationships

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Use the internet with adult support to communicate with people I know. Explain why it is important to be considerate and kind to people online.	Use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country). Give examples of how I might use technology to communicate with others I don't know well	Describe ways people who have similar likes and interests can get together online. Give examples of technology-specific forms of communication (e.g. emojis, acronyms, text speak). Explain some risks of communicating online with others I don't know well. Explain how my and other people's feelings can be hurt by what is said or written online. Explain why I should be careful who I trust online and what information I can trust them with.	Explain why I can take back my trust in someone or something if I feel nervous, uncomfortable or worried. Explain what it means to 'know someone' online and why this might be different from knowing someone in real life. Explain what is meant by 'trusting someone online'. Explain why this is different from 'liking someone online'. Describe strategies for safe and fun experiences in a range of online social environments. Give examples of how to be respectful to others online	Explain that there are some people I communicate with online who may want to do me or my friends harm. Recognise that this is not my/our fault. Make positive contributions and be part of online communities. Describe some of the communities in which I am involved and describe how I collaborate with others positively.	Show I understand my responsibilities for the well-being of others in my online social group. Explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in live streaming). Demonstrate how I would support others (including those who are having difficulties) online. Demonstrate ways of reporting problems online for both myself and my friends

Computing Networks

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Understand that computers in a school are connected together in a network. Understand why computers are networked. Understand the difference between the Internet and the World Wide Web (WWW).		Understand that computers in a school are connected together in a network. Understand why computers are networked. Understand the difference between the Internet and the World Wide Web (WWW). Understand that servers on the Internet are located across the planet. Understand how email is sent across the Internet. Understand how the Internet enables us to collaborate.	

Online Bullying

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Describe how to behave online in ways that do not upset others and can give examples.	Give examples of bullying behaviour and how it could look online.	Explain what bullying is and can describe how people may bully others.	Identify some online technologies where bullying might take place.	Recognise when someone is upset, hurt or angry online.	Describe how to capture bullying content as evidence (e.g screengrab, URL, profile) to share

	Understand how bullying can make someone feel. Talk about how someone can/would get help about being bullied online or offline.	Describe rules about how to behave online and how I follow them.	Describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Explain why I need to think carefully about how content I post might affect others, their feelings and how it may affect how others feel about them (their reputation).	Describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone. Explain how to block abusive users. Explain how I would report online bullying on the apps and platforms that I use. Describe the helpline services who can support me and what I would say and do if I needed their help (e.g. Childline).	with others who can help me. Identify a range of ways to report concerns both in school and at home about online bullying.

Managing Online Relationships

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Talk about how I can use the internet to find things out.	Use keywords in search engines. Demonstrate how to navigate a simple	Use key phrases in search engines.	Analyse information and differentiate between 'opinions', 'beliefs' and 'facts'.	Use different search technologies. Evaluate digital content and can explain how I	Use search technologies effectively. Explain how search engines work and how

Identify devices I could use to access information on the internet. Give simple examples of how to find information (e.g. search engine, voice activated searching).	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 (e.g. Alexa, Google, Siri). Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'. Explain why some information I find online may not be true.	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'.	Understand what criteria have to be met before something is a 'fact'. Describe how I can search for information within a wide group of technologies (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 that some people I 'meet online' (e.g. through social media) may be computer programmes pretending to be real people. Explain why lots of people sharing the same opinions or beliefs online	make choices from search results. Explain key concepts including: data, information, fact, opinion belief, true, false, valid, reliable and evidence. Understand the difference between online mis-information (inaccurate information distributed by accident) and dis-information (inaccurate information deliberately distributed and intended to mislead). Explain what is meant by 'being sceptical'. Give examples of when and why it is important to be 'sceptical'. I can explain what is meant by a 'hoax'. Explain why I need to think carefully before I forward anything online.	results are selected and ranked. Demonstrate the strategies I would apply to be discerning in evaluating digital content. Describe how some online information can be opinion and can offer examples. Explain how and why some people may present 'opinions' as 'facts'. Define the terms 'influence', 'manipulation' and 'persuasion' and explain how I might encounter these online (e.g. advertising and 'ad targeting'). Demonstrate strategies to enable me to analyse and evaluate the validity of 'facts' and I can explain why using these strategies are important.

			does not make those opinions or beliefs true.	Explain why some information I find online may not be honest, accurate or legal. Explain why information that is on a large number of sites may still be inaccurate or untrue. Assess how this might happen (e.g. the sharing of misinformation either by accident or on purpose).	Identify, flag and report inappropriate content.

Computational Thinking

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understand what algorithms are. Write simple algorithms. Understand the sequence of algorithms is important.	Write algorithms for everyday tasks. Use logical reasoning to predict the outcome of algorithms. Understand decomposition is breaking objects/processes down.	Create algorithms for use when programming. Decompose tasks (such as animations) into separate steps to create an algorithm. Understand abstraction is focusing on important information.	Use abstraction to focus on what's important in my design. Write increasingly more precise algorithms for use when programming. Use simple selection in algorithms.	Solve problems by decomposing them into smaller parts. Use selection in algorithms. Recognise the need for conditions in repetition within algorithms.	Recognise, and make use, of patterns across programming projects. Write precise algorithms for use when programming. Identify variables needed and their use in selection and repetition.

Debug simple algorithms. Understand that algorithms are implemented as programs on digital devices.	Implement simple algorithms on digital devices (Bee Bots, Apps: Daisy the Dino). Debug algorithms.	Identify patterns in an algorithm I can use repetition in algorithms.	Use logical reasoning to detect and correct errors in programs.	Use logical reasoning to explain how a variety of algorithms work. Use logical reasoning to detect and correct errors in algorithms. Evaluate my work and identify errors.	Decompose code into sections for effective debugging. Critically evaluate my work and suggest improvements.

Health, Well-being and Lifestyle

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explain rules to keep us safe when we are using technology both in and beyond the home. Give examples of some of these rules.	Explain simple guidance for using technology in different environments and settings. Say how those rules/guides can help me.	Explain why spending too much time using technology can sometimes have a negative impact on me. Give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos).	Explain how using technology can distract me from other things I might do or should be doing. Identify times or situations when I might need to limit the amount of time I use technology. Suggest strategies to help me limit this time.	Describe ways technology can affect healthy sleep and can describe some of the issues. Describe some strategies, tips or advice to promote healthy sleep with regards to technology.	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 my health (e.g. nightshift mode, regular breaks, correct

| | | | | | posture, sleep, diet and exercise).

Explain the importance of self-regulating my use of technology.

Demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accident). |
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Coding and Programming

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Create a simple program e.g. sequence of instructions for a Bee Bot

Can use sequence in programs I can locate and fix bugs in my program. | Understand programs execute by following precise and unambiguous instructions.

Create programs on a variety of digital devices.

Debug programs of increasing complexity. | Design and create programs.

Write programs that accomplish specific goals.

Use repetition in programs I can work with various forms of input. | Use simple selection in programs.

Work with various forms of output.

Use logical reasoning to systematically detect and correct errors in programs.

Work with various forms of output. | Create programs by decomposing them into smaller parts.

Use selection in programs.

Use conditions in repetition commands.

Work with variables. | Use a range of sequence, selection and repletion commands combined with variables as required to implement my design.

Create procedures to hide complexity in programs.

Identify and write generic code for use across multiple projects. |

	Use logical reasoning to predict the outcome of simple programs.			Create programs that control or simulate physical systems. Evaluate my work and identify errors.	Critically evaluate my work and suggest improvements. Identify and use basic HTML tags (See Computer Networks objectives).

Privacy and Security

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school). Explain why I should always ask a trusted adult before I share any information about myself online. Explain how passwords can be used to protect information and devices.	Describe why other people's work belongs to them. Recognise that content on the internet may belong to other people.	Give reasons why I should only share information with people I choose to and can trust. Explain that if I am not sure or I feel pressured, I should ask a trusted adult. Understand and can give reasons why passwords are important. Describe simple strategies for creating	Explain what a strong password is. Describe strategies for keeping my personal information private, depending on context. Explain that others online can pretend to be me or other people, including my friends. Suggest reasons why they might do this.	Create and use strong and secure passwords. Explain how many free apps or services may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and	Use different passwords for a range of online services. Describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories). Know what to do if my password is lost or stolen. Explain what app permissions are and can give some examples from

| | | and keeping passwords private.

Describe how connected devices can collect and share my information with others. | Explain how internet use can be monitored. | explain why I should seek permission from a trusted adult before purchasing. | the technology or services I use.

Describe simple ways to increase privacy on apps and services that provide privacy settings.

Describe ways in which some online content targets people to gain money or information illegally.

Describe strategies to help me identify such content (e.g. scams, phishing). |
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Copyright and Ownership

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explain why work I create using technology belongs to me.	Describe why other people's work belongs to them.

Recognise that content on the internet may belong to other people. | Explain why copying someone else's work from the internet without permission can cause problems. | When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it. | Assess and justify when it is acceptable to use the work of others.

Give examples of content that is permitted to be reused. | Demonstrate the use of search tools to find and access online content which can be reused by others. |

Say why it belongs to me (e.g. 'it is my idea' or 'I designed it'). Save my work so that others know it belongs to me (e.g. filename, name on content).		Give examples of what those problems might be.	Give some simple examples.		Demonstrate how to make references to and acknowledge sources I have used from the internet.