



Computing



Progression Document

2026

Created using the Twinkl Digital Sparks curriculum map and whole-school progression maps for Digital Foundations, Digital Citizenship, Computer Systems and Networks, Creating Media, Data and Information, Physical Computing, Programming and Artificial Intelligence.

All eight Digital Sparks strands are included. The detailed appendices preserve the source progression statements so leaders and teachers can trace learning from Year 1 to Year 6.

Element		Progression model				
Substantive knowledge		Digital devices and operating systems; networks and search; programming concepts; media creation; data and information; physical computing; artificial intelligence and digital ethics.				
Disciplinary knowledge		Computational thinking develops through sequencing, decomposition, abstraction, pattern recognition, testing, debugging, evaluating digital content and making reasoned choices about tools and information.				
Progression model		KS1: recognise, use and follow. LKS2: explain, organise, combine and debug. UKS2: design, evaluate, refine and apply independently across authentic contexts.				
Local curriculum emphasis		Learning is contextualised through safe routines, school device systems, collaborative projects, responsible online behaviour, links to Safer Internet Day and opportunities to use technology to communicate, create and solve problems.				
Year group	Aut 1 (National Coding Week)	Aut 2	Spr 1 (Safer Internet Day)	Spr 2	Sum 1	Sum 2
Year 1	Digital Foundations 1 (6 steps)	Computer Systems and Networks 1 (4 steps)	Digital Citizenship 1 (4 steps)	Programming 1 (5 steps) Unplugged	Creating Media 1 (5 steps)	Data and Information 1 (5 steps)
Year 2	Digital Foundations 2 (6 steps)	Computer Systems and Networks 2 (5 steps)	Digital Citizenship 2 (4 steps)	Programming 2 (5 steps)	Creating Media 2 (5 steps)	Artificial Intelligence 1 (4 steps)
Year 3	Digital Foundations 3 (6 steps)	Computer Systems and Networks 3 (5 steps)	Digital Citizenship 3 (4 steps)	Programming 3 (5 steps)	Creating Media 3 (4 steps)	Data and Information 2 (5 steps)
Year 4	Digital Foundations 4 (6 steps)	Computer Systems and Networks 4 (5 steps)	Digital Citizenship 4 (5 steps) Unplugged	Physical Computing 2 (5 steps)	Creating Media 4 (4 steps)	Artificial Intelligence 2 (4 steps) Unplugged
Year 5	Digital Foundations 5 (6 steps)	Computer Systems and Networks 5 (5 steps)	Digital Citizenship 5 (6 steps)	Programming 4 (5 steps)	Creating Media 5 (5 steps)	Data and Information 3 (6 steps)
Year 6	Digital Foundations 6 (6 steps)	Computer Systems and Networks 6 (5 steps)	Digital Citizenship 6 (5 steps)	Physical Computing 3 (5 steps)	Creating Media 6A (5 steps)	Artificial Intelligence 3 (6 steps)
Strand		Key curriculum content		Year groups		How this secures progression
Digital Foundations		Technology and digital devices; operating systems; mouse and keyboard; icons and symbols; creating digital artefacts.		1,2,3,4,5,6		Core access strand every year: pupils build fluency with devices, file management, keyboard, mouse, operating systems and digital artefacts.
Computer Systems and Networks		Technology use; collaboration; technological change; search technology; safe searching and online information.		1,2,3,4,5,6		Builds from recognising technology and safe use to networks, collaboration, web crawlers, indexing, ranking and SEO.

Element		Progression model		
Digital Citizenship		Digital safety and responsible use; digital identity and online presence; online interactions and relationships; evaluating online information and security.	1,2,3,4,5,6	Builds from trusted-adult help, personal information and kind online behaviour to privacy, passwords, digital footprints, healthy online habits, cyberbullying, consent, misinformation, manipulation, scams and constructive participation.
Programming		Algorithms; sequencing; ScratchJr and Scratch; events; repetition; selection; variables; debugging.	1,2,3,5	Y1 uses unplugged sequencing before pupils progress to ScratchJr and Scratch; Y5 secures variables and more complex algorithms.
Creating Media		Digital art; text; images; presentations; animation; audio; video; 3D design and hyperlinks.	1,2,3,4,5,6	Progresses from simple digital art and image insertion to animation, audio/video editing, presentations, 3D objects and hyperlinks.
Data and Information		Data, information, tally charts, pictograms, tables, spreadsheets, charts, graphs, questionnaires, data sources and reliability.	1,3,5	Builds from collecting classroom data to spreadsheets, sorting/filtering and evaluating reliability of data sources.
Physical Computing		Bee-Bot; micro:bit; MakeCode; inputs/outputs; repetition; selection; variables; debugging.	1,4,6	Y1 introduces Bee-Bot and directional commands; LKS2/UKS2 move to micro:bit, sensors, selection and variables.
Artificial Intelligence		AI in daily life; machine learning; generative AI; data; bias; safety; ethics; human-led design.	2,4,6	Builds from recognising machines and simple AI uses to understanding training, data, bias, privacy, ethics and designing an ethical AI system.
National Curriculum requirement		Shawclough curriculum element		How this document secures coverage
Understand and apply fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.		Programming; Physical Computing; Data and Information		Algorithms, sequencing, repetition, selection, variables, debugging and data representation are revisited across KS1, LKS2 and UKS2.
Analyse problems in computational terms and have repeated practical experience of writing programs.		Programming; Physical Computing		Pupils move from unplugged sequences and Bee-Bots to Scratch, MakeCode and micro:bit projects with variables, inputs and outputs.
Evaluate and apply information technology analytically to solve problems.		Digital Foundations; Creating Media; Data and Information; Computer Systems and Networks		Pupils create digital artefacts, presentations, images, audio/video, spreadsheets and data visualisations, selecting tools for purpose and audience.
Become responsible, competent, confident and creative users of information and communication technology.		Digital Foundations; Digital Citizenship; AI; Computer Systems and Networks		Safe and responsible routines, search skills, privacy, bias, ethical AI and online collaboration are explicitly revisited.

Element	Progression model		
Area	KS1 progression	Lower KS2 progression	Upper KS2 progression
Digital Foundations	Use technology safely with support; name common devices; open/close programs; use mouse and keyboard basics; save and open work with support.	Explain input and output devices; describe IPO; organise and access files; use keyboard and mouse with increasing accuracy; recognise broader icons.	Explain computer networks; use logical folder structures; advanced search; keyboard shortcuts; create documents/presentations with layout, headers/footers and hyperlinks.
Computer Systems and Networks	Distinguish technology from information technology; identify IT in home, school and wider world; use child-friendly search safely.	Identify digital devices and how they connect/share information; understand collaboration; explain that the internet helps computers communicate.	Understand search engines, crawlers, indexing, ranking and SEO; describe communication technologies and safer networked collaboration.
Programming and Physical Computing	Follow, order and change simple algorithms; use Bee-Bot commands; debug simple sequences; recognise that instructions need to be precise.	Navigate Scratch/ScratchJr or MakeCode; combine blocks; use sequence, events, loops and simple debugging; understand inputs and outputs.	Use selection, repetition and variables; design and test programs for a purpose; debug using systematic strategies; explain how code controls outputs.
Creating Media	Create digital art; select drawing tools; insert and move images; format basic text; begin presentation and animation skills.	Create presentations, animations and audio; format slides/images; use multiple media elements and make deliberate design choices.	Edit audio/video and images; create 3D designs; apply hyperlinks and more advanced formatting; evaluate media choices for audience and purpose.
Data and Information	Collect classroom data using tally charts and represent it with pictograms/bar charts; answer simple questions from data.	Organise data in tables and spreadsheets; interpret bar charts and time graphs; collect data with consent.	Use spreadsheets to sort/filter; choose data sources; use questionnaires/surveys; identify trends; evaluate reliability, accuracy and presentation.
Artificial Intelligence and Online Ethics	Recognise machines in everyday life; compare older/newer machines; discuss what humans can do that machines cannot; use technology responsibly.	Explain AI simply as technology using data and patterns; recognise AI uses; understand privacy, public/user data, bias and safer use.	Explain generative AI, pattern recognition and data; discuss benefits, limits, bias and ethical concerns; design safe, fair, useful and human-led AI solutions.
Digital Citizenship	Know what personal information is; ask before sharing; communicate kindly; recognise upsetting content and	Protect personal information; understand websites and apps collect data; recognise	Manage privacy and passwords; evaluate online information sceptically;

Element		Progression model			
		seek help from a trusted adult; begin to understand digital footprints and online bullying.	cyberbullying, fake news, scams and age restrictions; use respectful strategies in online games and communities.	recognise influence, manipulation and persuasion; build a positive online presence; report harmful content and support online wellbeing.	
Skill area		Years 1-2	Years 3-4	Years 5-6	
Device fluency		Use a mouse/trackpad to click, drag and double-click; type letters, numbers and words; open and close programs.	Navigate an operating system; use file search; modify, save and delete files; use keyboard shortcuts increasingly accurately.	Use logical folder structures and permissions; use advanced search; work efficiently across applications and digital services.	
Computational thinking		Recognise everyday step-by-step instructions; sequence commands; predict simple outcomes.	Create algorithms using blocks; use loops/events; test and debug.	Use repetition, selection and variables; decompose problems; test, debug and refine code for purpose.	
Media creation		Draw using digital tools; add basic text/images; create simple digital artefacts.	Format presentations; insert/format images; create animations and audio.	Use advanced document/presentation formatting; edit video/audio/images; use hyperlinks and 3D objects.	
Data handling		Collect simple data; represent data visually; answer questions from data.	Use tables/spreadsheets; interpret charts; recognise patterns.	Select reliable sources; sort/filter; analyse trends; evaluate accuracy and presentation.	
Networks and search		Use child-friendly search safely; ask for help if something worries them.	Use keywords; explain basic internet functions; collaborate appropriately.	Explain web crawlers, indexing, ranking and SEO; evaluate search results and online information critically.	
AI and ethics		Identify machines and simple AI uses; discuss human differences.	Explain AI uses data/patterns; recognise bias and privacy issues.	Evaluate benefits/limitations; understand ethical concerns; design human-led AI systems.	
Year group		Core vocabulary			
Year 1		technology, information technology, device, program, icon, mouse, cursor, click, double-click, drag, keyboard, key, algorithm, sequence, command, debug, Bee-Bot, data, tally, pictogram, safe, responsible			
Year 2		digital device, desktop, laptop, search engine, keyword, ScratchJr, character, background, sprite, backdrop, text, font, colour, size, image, file, save, artificial intelligence, machine, pattern, privacy			
Year 3		input, output, IPO, file, folder, operating system, Scratch, coding block, event, loop, presentation, slide, alignment, border, animation, onion-skinning, table, spreadsheet, bar chart, time graph, consent			

Element	Progression model
Year 4	connected device, collaboration, MakeCode, micro:bit, simulator, sensor, input, output, repetition, selection, if...then, variable, audio, podcast, bias, AI bias, public data, user data, ethical
Year 5	network, component, connection, Scratch coordinates, x-axis, y-axis, selection, variable, algorithm, debug strategy, 3D object, ViewCube, orthographic, perspective, dataset, data source, questionnaire, survey, sort, filter, trend, reliability
Year 6	network type, communication technology, web crawler, spider, index, page ranking, algorithm, SEO, generative AI, pattern recognition, AI developer, limitation, benefit, ethical concern, human-led, safe, fair, useful, hyperlink, header, footer, margin, orientation

7. Online safety: Education for a Connected World alignment

Embedded approach. Twinkl Digital Sparks has been designed in alignment with the Department for Education's Education for a Connected World framework. Its guidance and recommended learning outcomes are embedded across the computing curriculum rather than being confined to one online-safety unit.

Online-safety knowledge is taught through recurring Cyber Smart starters and through the main content of Digital Foundations, Digital Citizenship, Computer Systems and Networks, Creating Media, Data and Information, Physical Computing, Programming and Artificial Intelligence. This enables pupils to revisit safe, responsible and confident online behaviour in authentic contexts as their knowledge and independence develop.

The eight areas used to check coverage are: self-image and identity; online relationships; online reputation; online bullying; managing online information; health, wellbeing and lifestyle; privacy and security; and copyright and ownership.

Appendix A: Digital Foundations detailed progression

Extracted from the Twinkl Digital Sparks Digital Foundations Strand Progression Map. This appendix completes the Digital Foundations strand by setting out the progression from Digital Foundations 1 to Digital Foundations 6 across the five Twinkl progression areas.

Technology and Digital Devices

KS1 milestone: Children understand the presence of technology in daily life, recognise digital devices and demonstrate responsible usage habits.

LKS2 milestone: Children comprehend the Input-Process-Output (IPO) model in computing and understand how devices are interconnected within digital systems.

UKS2 milestone: Children recognise the ever-changing landscape of technology and its impact on society, and understand the function and importance of computer networks in connecting computers and supporting communication and collaboration.

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
Safe and responsible use	I know simple rules that help me use technology safely and responsibly.	I know why safety rules are important when using technology. I know some different ways to stay safe when using technology.				
Digital devices and how they help us	I know the names of different digital devices. I know the different things you can do on digital devices. I know the common parts of digital devices and how they are used.	I know the names of a variety of digital devices. I know that a digital device contains a computer or microcomputer. I know that some digital devices can be used to create, share and save information. I know the common features of digital devices.	I know the difference between a device and a digital device and can name some examples. I know what input and output devices are and can give examples of them. I know the function of different input and output devices. I know why devices need to connect. I know how devices can be connected.	I can name some input and output devices. I can explain the stages of the IPO model for computing. I can give an example of the IPO model for computing. I know that a computing device is made of connected parts and can be connected to other computing devices. I can describe different ways that computing devices can connect to each other. I know some of the advantages and disadvantages of different connections. I can explain some reasons why computing devices might need to be connected to each other.	I know what a computer network is. I know the key components involved in a computer network. I know the types of connections used in a computer network.	I can explain different network types. I can explain how connecting computers together in a network supports communication and collaboration.
Technological change					I know that technology has changed over time. I can name at least three key developments in technology.	I know why technology changes. I can make predictions about future changes in technology.

Operating System Familiarity

KS1 milestone: Children identify the basic components of an operating system and navigate through simple tasks; they recognise common icons used across programs and applications.

LKS2 milestone: Children confidently navigate operating systems and access, save, modify and delete files.

UKS2 milestone: Children use folders to organise files efficiently and use the search function to locate files and applications swiftly.

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
Programs and files	I can open and close a program. I can minimise a program.	I can select, open and close programs independently. I can minimise, restore and resize a program.	I can find a file or program on my computing device in different ways.	I know that files and programs can be organised and accessed in different ways. I can modify the content in a file and save the results. I can select a file in a folder and delete it.	I know that files are organised in folders on a computer. I know how to create a new folder within file explorer. I know how to move a file from one folder to another.	I know the different levels of permissions within folders. I can use logical folder structures to organise my digital workspace.
Logging in and powering down	I know there are steps to log in to and power down a digital device.	I can log in with support. I can log out and power down a computer with support.				
Operating systems and search			I know what an operating system is.	I can identify the operating system of my device. I can navigate the operating system to find a file and open it.	I know how to use the search function to perform basic searches.	I can use advanced search functions to improve my search results.

Mouse and Keyboard Skills

KS1 milestone: Children confidently interact with technology by learning to use a mouse or trackpad and a keyboard for navigation and input.

LKS2 milestone: Children understand mouse and trackpad functionality and use both hands on a keyboard to type letters, numbers and symbols.

UKS2 milestone: Children recognise specific key combinations and use both hands to type letters, numbers and symbols at an increasing pace.

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
Mouse / trackpad	I can hold a computer mouse correctly. I can move the cursor on a computer screen. I can click on an object. I can click and drag to move an object. I know how to double-click on an object.	I can use a computer mouse or trackpad to move the cursor on a screen. I know the different parts of a computer mouse or trackpad and their functions. I can single-click and double-click. I can click and drag to move objects of different sizes and shapes.	I know some of the different actions that can be achieved with a mouse or trackpad.	I know that there are different types of click available when using a mouse or trackpad. I can explain the functions of different types of click.		

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
		I can use right-click to copy and paste objects.				
Keyboard	I know the names of some keys on a computer keyboard. I know where to find the letter and number keys. I can type a number, letter or word. I can use the Caps Lock key. I can use the Backspace key.	I know the name and function of the main keys on a computer keyboard. I can use the computer keyboard to add, delete and space text for others to read.	I know the locations of the main keys on a keyboard. I know which keys are better typed using the right or left hand.	I can find the keys on a keyboard. I can use the keys on a keyboard to type with increasing speed and accuracy.	I know a range of keyboard shortcuts. I know which fingers are best used for each key when typing. I know the location of the home keys.	I can successfully use the function keys on a keyboard. I can use both hands when typing.

Understanding Icons and Symbols

KS1 milestone: Children recognise and understand common icons used across programs and applications, and use icons for specific tools within a program.

LKS2 milestone: Children recognise and understand a broader variety of common icons in digital environments.

UKS2 milestone: Children identify and understand common icons encountered in online services and understand their functions.

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
Icons and symbols	I know some common icons used on digital devices. I can choose the correct icon to select a tool.	I can recognise and match icons that have a similar function. I can recognise icons that represent specific tools within a program.	I can identify the tool or action an icon represents. I can name a range of common icons and explain what they do.	I can name some tools and actions available on computing devices. I can recognise the icons that are used to represent common tools and actions. I know that the tools and actions available on a device or in a program are not always the same.	I know the name and function of the refresh, share, link, back and forward icons. I can recognise the padlock, bookmark and attachment icons.	I can recognise common icons such as the settings, Wi-Fi, search and toggle icons.

Creating Digital Artefacts

KS1 milestone: Children create, save, open and close files, and recognise and use icons for specific tools within a program.

LKS2 milestone: Children use formatting tools for text, manipulate images and use spelling and grammar tools to enhance digital artefacts.

UKS2 milestone: Children use advanced formatting tools and incorporate hyperlinks to improve document interactivity and navigation.

Progression area	Digital Foundations 1 Year 1	Digital Foundations 2 Year 2	Digital Foundations 3 Year 3	Digital Foundations 4 Year 4	Digital Foundations 5 Year 5	Digital Foundations 6 Year 6
Programs and saving	I can find and open a specific program. I can close the program when I have finished using it.					
Files	I can save digital work with support.	I can find and open a file with support. I can save digital work as a file.				
Tools and digital art	I can choose the correct icon to select a tool. I can select different tools to create digital work.	I can recognise icons that represent specific tools within a program. I can create a piece of digital art.				
Word processing and documents			I know that word processing software has tools to check the spelling of text on a page. I can use a mouse or trackpad to select words. I can change the appearance of text on a page.	I can change the layout of text on a page on screen. I can change the way the page is set up. I can use tools in a word processing program to check the spelling and grammar of the text. I can add images to a page and change how they fit in with the text.	I know how to copy and paste text and images into a document. I know how to crop and align text and images in a document. I know how to insert and edit a table in a document. I know how to link text and images within a document to an external website.	I know about page margins, page layout and page orientation in a document or presentation. I know about headers and footers in a document or presentation. I can use paste special to paste unformatted text. I can create internal hyperlinks in a document or presentation.

Source note: Digital Foundations statements are taken from the uploaded Twinkl Digital Sparks Digital Foundations Strand Progression Map and organised into the Shawclough progression document format.

Appendix B: Digital Citizenship detailed progression

Digital safety and responsible use; digital identity and online presence; online interactions and relationships; evaluating online information and security.

Digital Citizenship | Whole-School Progression Map

Digital Safety and Responsible Use Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Finding Information Online	I know some ways we can use technology to find information online.	I know that information can stay online for a long time and can be seen by others.			I know ways to find out information about others by searching online.	I can search for information about an individual online and summarise the information found.
Personal Information	I know some examples of information that is personal to me. I know why it is important to keep personal information private. I know ways I can protect my personal information online.		I know that websites and apps collect information about me.	I know strategies for keeping my personal information private.	I know how to take useful steps to stay safe online.	I know strategies for keeping personal information private. I know what to do if a password is shared, lost or stolen. I know ways people can manage passwords. I know that 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.

Digital Safety and Responsible Use Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Age Restrictions and Wellbeing	I know that information can stay online for a long time and can be seen by others.			I know that games have age restrictions and I know how to identify the age rating of a game. I know some of the methods used to encourage people to spend more time playing games and know how to recognise some of these methods. I know that online games can be a distraction from other things, in both a positive and negative way. I know strategies to help limit the amount of time spent playing games. I know strategies for safe and fun experiences while playing games online.	I know why some online activities have age restrictions and why this is important. I know what healthy and unhealthy online behaviour looks like. I know ways to develop healthy habits and online behaviours. I know some strategies to support my own wellbeing online.	I know how to identify, flag and report inappropriate content.

Digital Identity and Online Presence Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Digital Footprints		I know that our online information makes up our digital footprint. I know ways to reduce my digital footprint.	I know what a digital footprint is. I know that websites and apps collect information about me.			I know that 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.
Online Reputation	I know ways to communicate safely online.	I know that the way I behave and communicate online can impact my digital footprint.	I know that my online choices can create a positive or negative digital footprint.	I know that online behaviour can have real-life consequences.	I know some steps I can take to build a positive online presence. I know some steps I can take to protect my online reputation. I know that my online information can be used by others to make judgements. I know that information about someone online can be used by others to make judgments about them and why these judgments may be incorrect.	

Online Interactions and Relationships Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Appropriate Online Behaviour	I know what to do if I see something upsetting online.	I know to behave online in ways that do not upset others. I know why it is important to be kind to people online and to respect their choices. I know that people may not always think or feel the same way.	I know appropriate ways to behave towards other people online and why this is important. I know that someone's feelings can be hurt by what is said or written online.	I know strategies to help me be a respectful online gamer. I know how to identify how someone online is feeling and respond respectfully.	I know ways to make positive contributions. I know ways to collaborate constructively with others. I know strategies for finding safe online communities. I know how to be kind and show respect for others online.	
Online Bullying		I know that some people can be unkind online. I know what online bullying is and how it can happen. I know some ways online bullying can make someone feel. I know what to do if I or someone else is being bullied online.	I know what bullying is and how it is different from unkind behaviour. I know what cyberbullying is and know how to recognise it. I can identify and explain examples of cyberbullying. I know why someone might choose to cyberbully other people. I know how to recognise if someone is experiencing cyberbullying. I know strategies to respond to cyberbullying in a safe and respectful way.			I know that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my fault.

Evaluating Online Information and Security Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Sharing Information	I know the names of some technology that can be used to go online. I know what information can be shared online. I know who to ask before sharing any information online.	I know what information I should not put online without asking a trusted adult first. I know that our online information can be copied.			I know the benefits of the Internet. I know the risks of sharing certain information online. I know what information I should not put online without asking a trusted adult first. I know that what you share online can have an impact on your family, friends or future opportunities.	
Trust	I know when to get help from a trusted adult.		I know what it means to trust someone online and how it is different from liking someone online. I know why it is important to be cautious about who I trust and what information I choose to share online.	I know that others online can pretend to be someone else. I know that adults can monitor what I do online.	I know who I can talk to if others pressure me to do something online that makes me feel uncomfortable.	I know what is meant by being sceptical; I can give examples of when and why it is important to be sceptical about things online. I can use the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online. I know that someone can get help if they are having problems and can identify when to tell a trusted adult.

Evaluating Online Information and Security Whole-School Progression Map						
	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 3	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 6
Fake News		I know who to talk to if something has been put online without consent or if it is incorrect.		I know what is meant by the term fake news and why someone would want to create it.		I know how fake news may affect someone's emotions and behaviour and can explain why this may be harmful. I know the difference between online misinformation and disinformation. I know what is meant by a hoax. I know the difference between a belief, an opinion and a fact and can give examples.
Scams				I know what scams are and why people create them. I can use strategies to spot examples of scams and fake news online. I know strategies to help me notice suspicious online profiles.		I know how to evaluate digital content and can explain how to make choices about what is trustworthy. I know how to explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. I know ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content.

Appendix C: Computer Systems and Networks detailed progression

Technology and its uses; collaboration; technological change; networks, communication, search technology and safe searching.

Computer Systems and Networks | Whole-School Progression Map

Technology and Its Uses Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Technology and How It Helps Us	I know the difference between technology and information technology. I know some examples of information technology in the home, at school and in the wider world. I know how information technology is used in different places. I know some examples of how information technology is used by people in different jobs. I know some ways that information technology can help us.	I know the key parts of a desktop computer and a laptop. I know some common icons used on digital devices.		I can identify some different digital devices.		

Technology and Its Uses Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Collaboration	I know that digital devices can perform more than one task. I know that information technology can be connected to share information.	I know that digital devices use information technology to help them work.		I know some ways that digital devices have changed the way we work. I can identify the key skills for communicating and collaborating. I know the effective ways of communicating and collaborating with more than one person.	I can identify antivirus software. I can identify devices that help reduce the risk of hacking.	

Technology and Its Uses Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Technological Change	I know some ways that information technology has changed. I know the names of some people who have helped to change information technology. I can order some developments in information technology on a timeline. I know about some developments in information technology. I know some examples of how information technology might change. I know some ways information technology might help us in the future. I can create a new digital device of the future.			I can give examples of changes in communication technology. I know how communication technology has become more effective.		

Digital Literacy and Online Safety Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Search Technology		I know what a search engine is. I can use a child-friendly search engine to find images on the Internet. I can use keywords to narrow down search results.	I can use a search engine to find information. I can explain how the Internet works.			I can explain what a web crawler (or spider) is and how it visits pages on the World Wide Web. I can describe how search engines store information from the Internet by creating an index. I can explain how search engines make it easier for us to find the information we want. I know some of the criteria that page ranking programs use to decide page ranking. I know how algorithms are used to rank search results. I know what Search Engine Optimisation (SEO) is. I know why web pages use SEO. I know how SEO can help web pages improve their ranking on a search engine results page.

Digital Literacy and Online Safety Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Using Search Technology		I know some things that might go wrong while using the Internet. I know some ways to use the Internet safely. I know who can help me if I'm upset or worried by something I see on the Internet.	I know how to search for information safely. I can identify how to trust a website is safe.		I know what malware is. I can list at least three types of malware.	I know how to check if an online source is reliable. I can identify reliable online information by checking multiple sources. I can identify signs of bias by looking for language that reflects opinions rather than facts. I can analyse online sources to determine which are reliable and which are biased.

Digital Literacy and Online Safety Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
The Internet and Its Uses		I know what the Internet is. I know some ways we can use the Internet. I know some icons that help us access the Internet on digital devices. I can locate the address bar in a familiar web browser. I can use a keyboard to type a web address into an address bar.	I know what the Internet is. I know what the Internet can be used for. I know what the World Wide Web is. I know how content can be viewed on the World Wide Web. I know and understand how content can be created and posted online.	I can recognise and identify the different collaborative elements of online communication software. I can safely and effectively use online communication software to collaborate.		I know what critical thinking is. I understand why critical thinking is important. I know why I need to think critically when viewing online content. I can use critical thinking to form my own opinion about online content.

Networking and Connectivity Whole-School Progression Map						
	Computer Systems and Networks 1	Computer Systems and Networks 2	Computer Systems and Networks 3	Computer Systems and Networks 4	Computer Systems and Networks 5	Computer Systems and Networks 6
Connectivity			I can describe how devices are connected to each other. I can explain what devices can do once they are connected to each other. I can describe how the devices in my school are connected to each other.	I can explain how networks help us to communicate and collaborate with each other.	I can explain how the networks help us. I can explain the advantages and disadvantages of different network topologies.	
Networks			I can describe what a computer network is. I can name some of the devices that can form a computer network. I can describe my school network and the devices that form it.	I know what a network is.	I can list examples of networks. I can explain why a network is needed. I know what topology means. I can draw and identify different network topologies. I know the definition of a MAC address. I know the definition of an IP address. I can give an example of an IP address.	

Appendix D: Creating Media detailed progression

Progression in creating and editing digital content, including art, text, images, presentations, animation, audio, video and 3D design.

Creating Media | Whole-School Progression Map

Multimedia Elements Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Text		I can single-click, double-click and right-click. I can click and drag to select text. I can copy and paste text. I can change the text font. I can change the text colour. I can change the text size. I can bold and underline text. I can align the text. I can add a bullet point list. I can add a numbered list.	I can format text in presentation software. I can use keyboard shortcuts to edit text. I can organise text in presentation software. I can format, edit and organise text in a presentation.			I can create hyperlinks.	

Multimedia Elements Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Images and Presentation	I know how to choose and change drawing tools. I know how to change the thickness of my drawing tool. I know how to remove and correct mistakes. I know how to create my own shapes. I can use lines and shapes to create a picture. I can select and change colour. I know how to select a custom colour. I know how to fill shapes. I know what a pattern is. I can use shapes and colours in my art. I can resize objects. I can duplicate objects.	I know how to find and save an image online. I can insert an image into a document. I can make an image bigger or smaller. I can move an image.	I can format slides using colour, alignment and borders. I can format text using borders and colour. I can insert images into a presentation. I can insert and format images in a presentation. I can adjust the size of images using the resize handles. I can crop images using the crop handles.	I can create multiple frames to create a simple moving image. I can make small changes to each frame of my animation. I can use onion skinning to help me make small changes between frames. I can use a digital device to photograph a series of frames.		I can crop images to a specific shape. I can add borders to cropped images. I can add visual effects to cropped images. I can insert and edit images in a presentation.	I can add, delete, duplicate and move a 3D object. I can raise and lower a 3D object. I can align 3D objects. I can combine 3D objects. I can use the ViewCube to view 3D objects from different viewpoints. I know the difference between the Orthographic and Perspective view. I can use the Orthographic view to help me create designs.

Multimedia Elements Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Animation			I can improve slides using transitions and animations.	I know there are different types of animation. I can create multiple frames to create a simple moving image. I can make small changes to each frame of my animation. I can use onion skinning to help me make small changes between frames. I can use a digital device to photograph a series of frames. I know what different elements I will need to create to make my animation. I can use stop-motion animation software to create an animation.			

Multimedia Elements Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Audio				I know what different elements I will need to create to make my animation.	I can make a simple audio recording. I can import audio files to add background music to my project. I can manipulate the sound of my audio recording by adding effects. I can record and produce a podcast using multiple audio tracks and use effects appropriately.	I can add a voiceover to a video clip.	
Video				I can use stop-motion animation software to create an animation.		I can record videos from different camera angles. I can record videos with appropriate backgrounds and lighting. I can transfer video files from one device to another in preparation for editing. I can crop a video clip. I can add effects (such as filters) to a video.	

Multimedia Elements Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Design Principles	I know how to use the work of famous artists as inspiration to create my own work. I can follow a design brief. I know which tool to use depending on the task. I can give and receive feedback.	I can style my text for a specific purpose and audience. I can organise my text for a specific purpose and audience. I can insert and edit an image to support my text.	I can format slides using colour, animations and transitions. I can consider the audience when designing a presentation. I know how to consider the audience and purpose when designing a presentation.	I know that animators use storyboards to plan out an animation. I can create a simple story. I can plan out my animation using a storyboard. I can follow a storyboard. I know what different elements I will need to create to make my animation. I can present and evaluate my animation.	I know the features of an effective podcast advert. I can write my own advertisement with a target audience in mind. I can plan a podcast, considering the content and target audience. I can review someone else's work and offer constructive feedback to improve their project. I can read a review of my own project and use it to suggest improvements.	I can explain why I have made particular design choices.	I can use tools to resize, recolour, rotate and group 3D objects. I can modify 3D objects to create a simple design. I can follow a design brief to create design ideas. I can use the Scribble tool to draw unique shapes for my design. I can use 3D modelling skills in Tinkercad to create a 3D character. I can give and receive feedback to improve a design. I can evaluate my design work.

Digital Literacy Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Multimedia Literacy	I know if a piece of art is digital or not.	I know why text might need to be set out in different ways.	I know why images are used in presentations.	I know that an animation is made from multiple frames. I can navigate digital animation software.	I know what podcasts are. I know the key features of a podcast.	I can insert an image into a presentation. I can insert videos and audio into a presentation.	I know that a 3D object has three dimensions: width, depth and height. I know what 3D modelling is and why it is useful. I can combine readymade 3D objects.
File Management		I can save a document. I know how to find and save an image online.			I can save a project and export an audio file. I can download files from an online source and locate them on a digital device. I can import audio files to add background music to my project. I can export a project as an audio file and consider any copyright issues.	I can transfer video files from one device to another in preparation for editing.	

Digital Literacy Whole-School Progression Map							
	Creating Media 1	Creating Media 2	Creating Media 3	Creating Media 4	Creating Media 5	Creating Media 6	Creating Media 6A
Ethics and Copyright Some units do not include ethics and copyright in their Steps to Success; instead, these topics are covered within the Cyber Smart Online Safety starters.	I know the difference between copying and using artwork as inspiration.	I know that content online belongs to someone else.			I know the difference between facts, opinions and beliefs. I know about copyright laws and know that some online content can be reused. I know some of the risks and benefits of podcast advertising. I can export my project as an audio file and consider any copyright issues. I know what online reviews are and that they can contain facts and opinions. I know some of the risks and benefits of using online reviews.		

Appendix E: Data and Information detailed progression

Collecting, organising, representing, interpreting and evaluating data and information.

Data and Information | Whole-School Progression Map

Identifying Data and Information Whole-School Progression Map			
	Data and Information 1	Data and Information 2	Data and Information 3
Understanding What Data and Information Are	I know some examples of how data and information are used.	I know what data and information are. I know that data can be represented in different ways. I know the difference between discrete data and continuous data.	I know the main types of data. I know the differences between first-party, second-party and third-party data.
Recognising Patterns and Trends	I know there are different patterns in data. I can identify patterns and other important details in data.	I know that data can show patterns and trends.	I can analyse data, drawing out patterns and trends.
Data Sources and Types	I know what tally charts are and can describe their features. I know what pictograms are and can describe their features.	I know why data might be collected. I know some sources to collect data from.	I know why data is more useful when it is structured. I know ways that large datasets are collected and used. I know that data can be collected from different sources.

Collecting, Representing and Analysing Data Whole-School Progression Map			
	Data and Information 1	Data and Information 2	Data and Information 3
Collecting and Organising Data	I know why collecting data can be useful. I know examples of data collection within my classroom. I know some simple steps to follow for collecting data. I can collect data in a tally chart. I can collect data from my classroom.	I know some ways of collecting, organising and representing data. I can organise data in a table. I can organise data in a spreadsheet. I know that data should be collected with consent.	I know ways data can be collected and organised. I can choose the most appropriate data source for a given enquiry. I can collect data using questionnaires and surveys.
Representing Data	I know some ways of representing data. I know why charts and diagrams are good for representing data. I can represent the data I have collected from my classroom.	I know that data can be represented in different ways.	I know various ways data can be represented and how to select the most appropriate representation. I can represent data using pie charts and comparative graphs.
Analysing Data	I know ways that interpreting data can help us answer questions. I can identify patterns and other important details in data.	I can interpret data in a bar chart and a time graph. I know that data can show patterns and trends.	I can analyse data, drawing out patterns and trends. I know ways to analyse data critically.
Using Digital Tools for Data		I can use spreadsheet software to create a bar chart to compare different categories of data.	I can structure and organise data using spreadsheets. I know what it means to sort data. I know what it means to filter data. I can sort and filter data to help me focus my enquiry.

Evaluating Data Whole-School Progression Map			
	Data and Information 1	Data and Information 2	Data and Information 3
Evaluating data	I can interpret data to answer a question and draw conclusions.	I can use data to make decisions. I can evaluate which data source is the most helpful for a line of enquiry.	I can choose the most appropriate data source for a given enquiry. I can draw conclusions based on reliable data. I can make informed decisions using data.
Understanding Data Accuracy and Presentation	I know some examples of how data and information are used.	I know that data is not always accurate. I know that people may not always present data truthfully. I know that data should be protected.	I know ways that large datasets are collected and used. I know ways to analyse data critically.

Appendix F: Physical Computing detailed progression

Programming physical devices through commands, inputs, outputs, repetition, selection, variables, testing and debugging.

Physical Computing | Whole-School Progression Map

Device Interaction and Control Whole-School Progression Map			
	Physical Computing 1	Physical Computing 2	Physical Computing 3
Device Operation and Interface Familiarity	- I can use a Bee-Bot safely and share it with others. - I know the forward and backward commands. - I know the left turn and right turn commands. - I know that programmable toys follow instructions. - I can experiment with the buttons on a Bee-Bot to explore how it moves.	- I know the features and uses of a micro:bit. - I can navigate around the MakeCode interface. - I know the different types of coding blocks in MakeCode and where to find them. - I can flash a program to the micro:bit.	- I can confidently navigate around the MakeCode interface. - I can use MakeCode blocks to create a program.

Sequencing and Algorithmic Design Whole-School Progression Map			
	Physical Computing 1	Physical Computing 2	Physical Computing 3
Input and Output	I can press the correct buttons to make a Bee-Bot turn left and right. I can use the forward button to make a Bee-Bot move left and right. I can press the correct buttons to make a Bee-Bot move forwards and backwards. I can use the delete button correctly. I can program a Bee-Bot to move in different directions. I can program a Bee-Bot correctly to reach one or more targets.	I can animate an image on a micro:bit. I can display an image on a micro:bit. I know different ways that a program can be started on a micro:bit. I can include two or more different inputs in my project.	I can use additional objects to interact with the micro:bit. I know what the different input sensors on the micro:bit are and how I can use them.
Repetition	I can repeat commands to make a Bee-Bot reach a target.	I can use simple Loops blocks within a program. I know when to use repetition in a program.	I can use different repetition MakeCode blocks in an algorithm. I know that there are different ways to use repetition and selection in a program.

Sequencing and Algorithmic Design Whole-School Progression Map			
	Physical Computing 1	Physical Computing 2	Physical Computing 3
Selection and Variables		I can use the if [...] then Logic block within a program. I know when to use selection within a program.	I can use different selection MakeCode blocks in an algorithm. I can create variables and use them in a program. I can create a program using multiple variables. I know what a variable is and how it can be used in a program. I know when a variable has been used in a program and understand why it has been used. I know how variables can be used on the micro:bit. I can describe how my variable works.
Debugging and Problem Solving	I know why sequencing is important in algorithms. I can sequence commands to create an algorithm. I can debug an algorithm.	I can debug an algorithm. I can use the on-screen simulator when debugging my project. I know the importance of sequence when programming.	I know that it is important to test and debug an algorithm. I can use given strategies to debug an error and explain what the error was.

Appendix G: Programming detailed progression

Algorithmic thinking and design, including sequencing, events, repetition, selection, variables, debugging and problem solving.

Programming | Whole-School Progression Map

Programming Environment and Interface Whole-School Progression Map				
	Programming 1	Programming 2	Programming 3	Programming 4
Navigation and Interface Familiarity		I can navigate around the ScratchJr interface.	I can navigate around the Scratch interface. I know the different types of coding blocks in Scratch and where to find them.	I can confidently navigate around the Scratch interface. I know that the Stage is made from x and y coordinates.
Character and Backdrop Manipulation		I can insert different characters. I can insert a background.	I can insert a sprite. I can insert a backdrop.	I can change a background and costume in a program. I know there are different ways to change how something looks in Scratch.

Algorithmic Thinking and Design Whole-School Progression Map				
	Programming 1	Programming 2	Programming 3	Programming 4
Understanding Algorithms and Sequence	I know that an algorithm is made up of step-by-step instructions. I know some examples of everyday algorithms. I can recognise and follow the steps in a simple algorithm. I know that the steps in an algorithm can be changed. I know that changing the steps in an algorithm could change its outcome. I can change the steps in a simple algorithm to create a different outcome.		I know what an algorithm is. I know what sequence is. I can combine coding blocks to make a program.	I know that there are many different programming languages.
Controlling Programming Elements		I can make a character move in different ways. I can make a character grow and shrink. I can make a character hide and show. I can program a character to display a message. I can use the Send Message block to send a message to a character. I can program a character to reply to a message using the Start on Message block.	I can use simple Motion blocks within programs. I can use simple Looks blocks within programs. I can use simple Sensing blocks within programs. I can use simple Control blocks within programs.	I can use Control and Looks blocks in a program. I can use a Sensing block in a program. I can use an Operators block in a program. I can use x and y coordinates to move a sprite in Scratch. I know that a user can interact with a program in many different ways.

Algorithmic Thinking and Design Whole-School Progression Map				
	Programming 1	Programming 2	Programming 3	Programming 4
Repetition	I know that repetition means to do something more than once. I know why repetition is used in algorithms. I can create a simple algorithm that uses repetition.	I can use the Repeat block to repeat an action. I can use the Repeat Forever block to repeat an entire algorithm. I can set how many times I want an action to be repeated.	I know the importance of repetition in programming.	
Selection and Variables			I know what selection is in programming. I can use the if...then block for selection. I know the names and functions of simple Sensing blocks.	I know that Control blocks within Scratch use selection and repetition. I know the difference between an if...then and an if...then...else block and when to use them. I know what variables are and how they can be useful in programming. I can create a variable and use it in my program. I can explain what my variable is doing in my program.

Algorithmic Thinking and Design Whole-School Progression Map				
	Programming 1	Programming 2	Programming 3	Programming 4
Debugging and Problem Solving	I know that algorithms can have errors. I know that debugging is about finding and fixing errors in an algorithm. I can find and fix an error in a simple algorithm. I can run my algorithm to check it works correctly. I can debug my algorithm.	I can check my project for errors and debug it.	I can debug an algorithm.	I know that it is important to test and debug an algorithm.

Appendix H: Artificial Intelligence detailed progression

The impact and capabilities of AI technologies, alongside ethical concerns, responsible use and human-led design.

Artificial Intelligence | Whole-School Progression Map

The Impact of AI Technologies on Daily Life Whole-School Progression Map			
	Artificial Intelligence 1	Artificial Intelligence 2	Artificial Intelligence 3
Understanding Types of Artificial Intelligence	I know what a machine is. I know that AI technologies are created by humans to use data, find patterns and do certain jobs.	I can describe what AI systems are in simple terms. I know what generative AI models are.	I can explain some different types of AI systems in simple terms. I can design an AI system that is ethical and solves a real-world problem.
AI Technologies Within Society	I know ways AI technologies are used in everyday life.	I can give examples of where AI systems are used.	I can explain how and why AI systems are used in different fields. I know different types of problems that AI technologies can help solve. I understand and can explain how an AI system could impact society.
Emerging Technologies	I can spot differences between older and newer machines. I can talk about what machines might be like in the future.		I can discuss the potential impact of AI technologies in the future. I can discuss some benefits and explain how they could lead to advancements in the future.

The Capabilities of AI Technologies Whole-School Progression Map			
	Artificial Intelligence 1	Artificial Intelligence 2	Artificial Intelligence 3
Understanding How AI Technologies Are Trained	I know humans learn by seeing, listening, doing and trying again. I can talk about how I get better at something. I can explain what helps me learn. I can say how different machines work. I know that machines can be trained to spot patterns using lots of examples. I know that AI is a type of technology that follows patterns.	I know what pattern recognition is. I can explain how generative AI models use pattern recognition to generate content. I can explain how AI models use data. I know that some AI systems use public data from the Internet. I know that some AI systems use data from users.	I understand the role of an AI developer.
Benefits, Challenges and Limitations of AI Technologies	I can name machines I see around me and say what they do.	I can give examples of where AI systems are used. I can explain what AI bias is.	I can discuss some benefits of AI technologies and explain how they could lead to advancements in the future. I can discuss some limitations of AI technologies and explain how they could lead to problems in the real world. I know ways to evaluate the potential benefits and limitations of an AI system.
The Role of Humans	I can talk about things only humans can do, such as feeling or imagining. I know that AI technologies are created by humans to use data, find patterns and do certain jobs.	I know that some AI systems use public data from the Internet. I know that some AI systems use data from users.	I understand what it means to be human-led.

Ethical Concerns and Considerations Whole-School Progression Map			
	Artificial Intelligence 1	Artificial Intelligence 2	Artificial Intelligence 3
Understanding Ethical Concerns	I know that machines don't think or feel like humans. I can explain how humans and AI technologies are different.	I can explain what bias is. I can explain what AI bias is. I know why AI bias is a problem. I know how generative AI models can generate biased content. I know that some AI systems use data from users.	I understand what it means to be ethical. I know some ethical concerns of using AI technologies. I understand what makes an AI system safe, fair and useful. I can discuss some ethical considerations that AI developers have to think about.
Using AI Technologies Ethically and Responsibly	I know ways AI technologies are used in everyday life.	I can explain the importance of data privacy when using AI systems.	I know ways to make AI systems safer and fairer. I know ways to use AI technologies ethically and responsibly. I can design an AI system that is ethical and solves a real-world problem.

Appendix I: Online safety links across the eight Education for a Connected World strands

This overview is based on the supplied Digital Sparks online-safety curriculum maps for KS1, lower KS2 and upper KS2. Unit references show where objectives are taught through Cyber Smart starters and/or main unit content. CSN is used below for Computer Systems and Networks.

Connected World strand	Coverage focus	KS1 unit links	Lower KS2 unit links	Upper KS2 unit links
Self-image and identity	How online identity can be shaped, presented and affected; recognising uncomfortable contact and seeking help.	AI 1; Digital Foundations 1-2; Programming 1; Creating Media 2; Data and Information 1	Programming 3; AI 2; Digital Citizenship 4	Digital Foundations 5-6; AI 3; Creating Media 5; Digital Citizenship 5-6
Online relationships	Safe, respectful communication; consent and permission; judging risk when communicating with people online.	Programming 1; AI 1; Creating Media 2; Digital Citizenship 1-2	Digital Foundations; Creating Media 4; Programming 3; Physical Computing 2; Digital Citizenship 3-5	Creating Media 4; Physical Computing 3; Programming 4; Digital Foundations 6; Digital Citizenship 5-6
Online reputation	Understanding that online information can persist, be copied and influence how others perceive a person.	Programming 2; Digital Foundations 1-2; Digital Citizenship 1-2	AI 2; Digital Citizenship 3 and 5	Digital Foundations; Digital Citizenship 5-6
Online bullying	Recognising unkind behaviour and cyberbullying; understanding impact, responsibility, reporting and support.	AI 1; Programming 1; Digital Foundations 1-2; Physical Computing 1; Digital Citizenship 2	Creating Media 4; Digital Citizenship 3-5	Creating Media 5-6A; Programming 4; Digital Citizenship 5-6
Managing online information	Searching, navigating, questioning reliability and recognising misinformation, persuasion and manipulation.	Creating Media 1-2; Data and Information 1; CSN 1-2; AI 1; Digital Citizenship 1	CSN 3-4; Data and Information 2-3; Digital Foundations 3-4; Creating Media 3; AI 2-3; Digital Citizenship 4 and 6	CSN 5-6; AI 3; Data and Information 3; Digital Foundations 5-6; Physical Computing 3; Digital Citizenship 4 and 6
Health, wellbeing and lifestyle	Making balanced choices about technology use, recognising persuasive design and seeking support when needed.	CSN 1-2; Programming 2	CSN 3; Creating Media 3; Digital Foundations 3; Physical Computing 2; Digital Citizenship 4-5	CSN 5-6; Creating Media 5-6A; Physical Computing 3; Programming 4; AI 3; Digital Citizenship 4-5
Privacy and security	Protecting personal information, accounts and devices; passwords, consent, privacy settings and secure use.	Creating Media 1; Digital Foundations 1-2; Programming 2; Data and Information 1; Digital Citizenship 1-2	CSN 3-4; Digital Foundations 3 and 6; Physical Computing 2; Data and Information 2-3; Digital Citizenship 3-6	Digital Citizenship 5-6
Copyright and ownership	Recognising ownership of digital work; naming, saving, crediting and using others' content appropriately.	Creating Media 1-2; Digital Foundations 1-2; Programming 2	Creating Media 3-4; Physical Computing 2; Data and Information 2; Digital Foundations 3-4; Programming 3	Creating Media 6; CSN 6; Digital Foundations 5-6

Digital Sparks Curriculum Overview: Online Safety

The Education for a Connected World framework is a tool created by the Department for Education, intended to provide guidance for anyone working to support children to live knowledgeably, responsibly and safely in a digital world.

The framework is divided into eight key aspects of online safety education:

1. Self-Image and Identity
2. Online Relationships.
3. Online Reputation
4. Online Bullying
5. Managing Online Information
6. Health, Wellbeing and Lifestyle
7. Privacy and Security
8. Copyright and Ownership

Aligned with the Education for a Connected World framework, Digital Sparks aims to teach children how to be safe, responsible and confident online.

This document outlines objective coverage across Digital Sparks. Not all of the objectives are covered within the suggested age group. This approach was taken to ensure that objectives are aligned with the most relevant unit content. A key is used to indicate whether the objective is covered within the Cyber Smart online safety starter or within the main content of the unit.

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Digital and Online Safety Disclaimer: Children should be shown how to use the Internet safely and responsibly. Children should be consistently reminded of the SMART rules for online safety. Devices should be used in a public area with screens visible at all times.



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Digital Sparks Curriculum Overview: Online Safety

KS1

 Cyber Smart Starter  Main Content

Self-Image and Identity				
I can recognise, online or offline, that anyone can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset.	I can recognise that there may be people online who could make someone feel sad, embarrassed or upset.	I can explain how other people may look and act differently online and offline.	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 and how they can help.	I can 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.
Artificial Intelligence 1 Digital Foundations 2	Programming 1	Creating Media 2 Data and Information 1	Digital Foundations 1 Programming 1	Creating Media 2

Online Relationships						
I can recognise some ways in which the Internet can be used to communicate.	I can give examples of when I should ask permission to do something online and explain why this is important.	I can 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).	I can give examples of how I (might) use technology to communicate with people I know.	I can use the Internet with adult support to communicate with people I know (e.g. video call apps or services).	I can explain who I should ask before sharing things about myself or others online.	I can explain why it is important to be considerate and kind to people online and to respect their choices.
Programming 1	Artificial Intelligence 1	Creating Media 2	Programming 1			
	Digital Citizenship 1			Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 2

Online Relationships

I can describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.	I can explain why things one person finds funny or sad online may not always be seen in the same way by others.	I can explain why I have a right to say 'no' or 'I will have to ask someone'. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do.	I can identify who can help me if something happens online without my consent.	I can explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online.	I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online.
Data and Information 1		Data and Information 1			
	Digital Citizenship 2		Digital Citizenship 2	Digital Citizenship 2	Digital Citizenship 2

Online Reputation

I can identify ways that I can put information on the Internet.	I can recognise that information can stay online and could be copied.	I can explain how information put online about someone can last for a long time.	I can describe what information I should not put online without asking a trusted adult first.	I can describe how anyone's online information could be seen by others.	I know who to talk to if something has been put online without consent or if it is incorrect.
Programming 2			Digital Foundations 1 Digital Foundations 2		
	Digital Citizenship 2	Digital Citizenship 2	Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 2

Online Bullying

I can describe ways that some people can be unkind online.	I can describe how to behave online in ways that do not upset others and can give examples.	I can explain what bullying is, how people may bully others and how bullying can make someone feel.	I can offer examples of how this can make others feel.	I can explain why anyone who experiences bullying is not to blame.	I can talk about how anyone experiencing bullying can get help.
Artificial Intelligence 1 Programming 1	Digital Foundations 1 Digital Foundations 2 Physical Computing 1	Physical Computing 1	Programming 1	Physical Computing 1	Physical Computing 1
	Digital Citizenship 2	Digital Citizenship 2		Digital Citizenship 2	Digital Citizenship 2

Managing Online Information				
I can talk about how to use the Internet as a way of finding information online.	I can give simple examples of how to find information using digital technologies, e.g. search engines, voice activated searching).	I can use simple keywords in search engines.	I can identify devices I could use to access information on the Internet.	I 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.
Creating Media 1			Data and Information 1	Computer Systems and Networks 1
	Digital Citizenship 1	Computer Systems and Networks 2		
I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).	I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened.	I can 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).	I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.	I can explain why some information I find online may not be real or true.
Creating Media 2	Computer Systems and Networks 1 Computer Systems and Networks 2	Computer Systems and Networks 2	Computer Systems and Networks 2	Artificial Intelligence 1 Computer Systems and Networks 2
	Digital Citizenship 1			

Health, Wellbeing and Lifestyle				
I can identify rules that help keep us safe and healthy in and beyond the home when using technology.	I can explain rules to keep myself safe when using technology both in and beyond the home.	I can 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 give some simple examples of these rules.	I can say how those rules / guides can help anyone accessing online technologies.
Computer Systems and Networks 1	Computer Systems and Networks 1 Computer Systems and Networks 2	Programming 2	Computer Systems and Networks 1	Programming 2

Privacy and Security

I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location).	I can describe who would be trustworthy to share this information with; I can explain why they are trusted.	I can explain that passwords are used to protect information, accounts and devices.	I can explain how passwords can be used to protect information, accounts and devices.	I can recognise more detailed examples of information that is personal to someone (e.g. where someone lives and goes to school, family names).
Creating Media 1	Creating Media 1	Digital Foundations 1 Digital Foundations 2		Digital Foundations 1
Digital Citizenship 1		Digital Citizenship 1	Digital Citizenship 2	Digital Citizenship 1
I can explain and give examples of what is meant by 'private' and 'keeping things private'.	I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.	I can describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords).	I can explain how some people may have devices in their homes connected to the Internet and give examples (e.g. lights, fridges, toys, televisions).	
Programming 2			Data and Information 1	
	Digital Citizenship 1	Digital Citizenship 2		

Copyright and Ownership

I know that work I create belongs to me.	I can explain why work I create using technology belongs to me.	I can recognise that content on the Internet may belong to other people.	I can name my work so that others know it belongs to me.
Creating Media 1	Digital Foundations 1 Digital Foundations 2	Creating Media 1 Programming 2	Creating Media 1
		Creating Media 2	
I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it').	I can describe why other people's work belongs to them.	I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content).	I understand that work created by others does not belong to me even if I save a copy.
Digital Foundations 1 Digital Foundations 2	Creating Media 1 Programming 2		Digital Foundations 2
	Creating Media 2	Creating Media 2 Digital Foundations 2 Digital Foundations 1	Creating Media 2

Digital Sparks Curriculum Overview: Online Safety

The Education for a Connected World framework is a tool created by the Department for Education, intended to provide guidance for anyone working to support children to live knowledgeably, responsibly and safely in a digital world.

The framework is divided into eight key aspects of online safety education:

1. Self-Image and Identity
2. Online Relationships.
3. Online Reputation
4. Online Bullying
5. Managing Online Information
6. Health, Wellbeing and Lifestyle
7. Privacy and Security
8. Copyright and Ownership

Aligned with the Education for a Connected World framework, Digital Sparks aims to teach children how to be safe, responsible and confident online.

This document outlines objective coverage across Digital Sparks. Not all of the objectives are covered within the suggested age group. This approach was taken to ensure that objectives are aligned with the most relevant unit content. A key is used to indicate whether the objective is covered within the Cyber Smart online safety starter or within the main content of the unit.

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Digital Sparks Curriculum Overview: Online Safety

LKS2

 Cyber Smart Starter  Main Content

Self-Image and Identity					
I can explain what is meant by the term 'identity'.	I can explain how my online identity can be different to my offline identity.	I can explain how people can represent themselves in different ways online.	I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.	I can 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.	I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.
Programming 3	Digital Foundations 6	Artificial Intelligence 2		Programming 3	
	Digital Citizenship 4		Digital Citizenship 4		Digital Citizenship 4

Online Relationships				
I can describe ways people who have similar likes and interests can get together online.	I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms).	I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.	I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.	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.
Digital Foundations 5	Creating Media 4	Programming 3	Physical Computing 2	Physical Computing 2
	Digital Citizenship 4		Digital Citizenship 4 Digital Citizenship 5	Digital Citizenship 3 Digital Citizenship 5

Online Relationships

I can explain how someone's feelings can be hurt by what is said or written online.	I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos.	I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.
		Artificial Intelligence 2	Programming 3
Digital Citizenship 3 Digital Citizenship 5	Digital Citizenship 3		

Online Reputation

I can explain how to search for information about others online.	I can describe how to find out information about others by searching online.	I can 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.	I can explain ways that some of the information about anyone online could have been created, copied or shared by others.	I can explain who someone can ask if they are unsure about putting something online.
			Artificial Intelligence 2	
Digital Citizenship 3	Digital Citizenship 5	Digital Citizenship 3 Digital Citizenship 5	Digital Citizenship 5	Digital Citizenship 3 Digital Citizenship 5

Online Bullying

I can describe appropriate ways to behave towards other people online and why this is important.	I can recognise when someone is upset, hurt or angry online.	I can give examples of how bullying behaviour could appear online and how someone can get support.	I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).	I can 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).
	Creating Media 4			
Digital Citizenship 3 Digital Citizenship 5	Digital Citizenship 4	Digital Citizenship 3	Digital Citizenship 3	Digital Citizenship 5

Managing Online Information					
I can demonstrate how to use key phrases in search engines to gather accurate information online	I can 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.	I can explain what autocomplete is and how to choose the best suggestion.	I can 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).	I can explain how the Internet can be used to sell and buy things.	I can 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.
Computer Systems and Networks 3	Data and Information 2 Digital Foundations 3 Digital Foundations 4	Creating Media 3		Computer Systems and Networks 3	Data and Information 2
	Digital Citizenship 4		Digital Citizenship 4		Digital Citizenship 4
I can 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.	I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.	I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed).	I can 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.	I can 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.	I can 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.
Data and Information 3	Artificial Intelligence 2	Artificial Intelligence 3 Computer Systems and Networks 4	Computer Systems and Networks 4	Computer Systems and Networks 4 Physical Computing 2	Data and Information 2 Digital Foundations 3
Digital Citizenship 6			Digital Citizenship 4		Digital Citizenship 4

Health, Wellbeing and Lifestyle

I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships; I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos).	I can explain how using technology can be a distraction from other things, in both a positive and negative way.	I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).	I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.
Computer Systems and Networks 3 Creating Media 3	Digital Foundations 3 Physical Computing 2	Creating Media 3	Digital Foundations 3 Physical Computing 2
	Digital Citizenship 4	Digital Citizenship 5	Digital Citizenship 4

Privacy and Security

I can describe simple strategies for creating and keeping passwords private.	I can describe strategies for keeping personal information private, depending on context.	I can give reasons why someone should only 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.	I can explain that Internet use is never fully private and is monitored, e.g. adult supervision.	I can describe how connected devices can collect and share anyone's information with others.	I can 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.	I know what the digital age of consent is and the impact this has on online services asking for consent.
Computer Systems and Networks 3 Physical Computing 2	Digital Foundations 3	Computer Systems and Networks 4	Computer Systems and Networks 4	Computer Systems and Networks 3	Data and Information 2 Data and Information 3 Digital Foundations 6	Data and Information 2
	Digital Citizenship 4 Digital Citizenship 6	Digital Citizenship 3 Digital Citizenship 4 Digital Citizenship 5	Digital Citizenship 4 Digital Citizenship 5	Digital Citizenship 3	Digital Citizenship 4 Digital Citizenship 6	Digital Citizenship 4

Copyright and Ownership		
I can explain why copying someone else's work from the Internet without permission isn't fair and can explain what problems this might cause.	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.	I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images.
Creating Media 3 Physical Computing 2	Digital Foundations 3 Digital Foundations 4 Programming 3	Creating Media 4 Data and Information 2 Digital Foundations 3

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Digital Sparks Curriculum Overview: Online Safety

UKS2

 Cyber Smart Starter  Main Content

Self-Image and Identity				
I can explain how identity online can be copied, modified or altered.	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 demonstrate how to make responsible choices about having an online identity, depending on context.	I can 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.	I can explain the importance of asking until I get the help needed.
Digital Foundations 6	Artificial Intelligence 3	Digital Foundations 5	Creating Media 5	
		Digital Citizenship 5		Digital Citizenship 5 Digital Citizenship 6

Online Relationships				
I can give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs).	I can explain how sharing something online may have an impact either positively or negatively.	I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my / our fault.	I can 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.	I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups).
Creating Media 4	Physical Computing 3 Digital Foundations 6	Physical Computing 3	Programming 4	
	Digital Citizenship 5	Digital Citizenship 6	Digital Citizenship 5	Digital Citizenship 5

Online Relationships

I can describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs.	I can explain how someone can get help if they are having problems and identify when to tell a trusted adult.	I can 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.	I can demonstrate how to support others (including those who are having difficulties) online.
		Physical Computing 3	Programming 4
Digital Citizenship 5	Digital Citizenship 6	Digital Citizenship 5	

Online Reputation

I can search for information about an individual online and summarise the information found.	I can explain the ways in which anyone can develop a positive online reputation.	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.	I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.
		Digital Foundations 4	
Digital Citizenship 6	Digital Citizenship 5	Digital Citizenship 5	Digital Citizenship 5

Online Bullying

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 to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me.	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 someone would report online bullying in different contexts.
Creating Media 6A	Creating Media 6A		Programming 4
		Creating Media 5	
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 (e.g. Childline or The Mix).
		Creating Media 6A	Creating Media 6A
Creating Media 5	Creating Media 5		

Managing Online Information					
I can 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 e.g. voice-activated searching giving one result.	I can explain how search engines work and how results are selected and ranked.	I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'.	I can explain how to use search technologies effectively.	I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.	I can describe how some online information can be opinion and can offer examples.
Computer Systems and Networks 5	Computer Systems and Networks 6	Artificial Intelligence 3 Computer Systems and Networks 5	Computer Systems and Networks 6	Digital Foundations 5 Physical Computing 3	
		Digital Citizenship 6		Digital Citizenship 6	Computer Systems and Networks 6
I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.	I can 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.	I can identify ways the Internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads.	I can 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)	I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers).	I understand the concept of persuasive design and how it can be used to influence peoples' choices.
	Computer Systems and Networks 5 Creating Media 5	Data and Information 3		Data and Information 3	Programming 4
Digital Citizenship 6	Digital Citizenship 4		Computer Systems and Networks 6 Digital Citizenship 6		

Managing Online Information					
I can explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others.	I can demonstrate how to analyse and evaluate the validity of 'facts' and information and I can explain why using these strategies are important.	I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful.	I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this.	I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share.	I can describe the difference between online misinformation and dis-information.
Artificial Intelligence 3	Digital Foundations 6				
Creating Media 5	Computer Systems and Networks 6 Digital Citizenship 6	Digital Citizenship 6	Computer Systems and Networks 6	Digital Citizenship 6	Artificial Intelligence 3 Digital Citizenship 6
I can 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).	I can identify, flag and report inappropriate content.				
Digital Foundations 6					
	Digital Citizenship 6				

Health, Wellbeing and Lifestyle			
I can describe ways technology can affect health and wellbeing both positively (e.g. mindfulness apps) and negatively.	I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.	I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology.	I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this.
Computer Systems and Networks 5 Physical Computing 3	Creating Media 6	Computer Systems and Networks 5	Creating Media 6A
		Digital Citizenship 5	
I recognise the benefits and risks of accessing information about health and wellbeing online and how we should balance this with talking to trusted adults and professionals.	I can recognise features of persuasive design and how they are used to keep users engaged (current and future use).	I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.	I can 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).
Artificial Intelligence 3		Computer Systems and Networks 5 Creating Media 5	Programming 4
	Computer Systems and Networks 6	Digital Citizenship 4	

Privacy and Security

I can explain what a strong password is and demonstrate how to create one.	I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser).	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 to do if a password is shared, lost or stolen.	I can explain what app permissions are and can give some examples.	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 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.
Digital Foundations 3 Digital Foundations 4	Digital Foundations 6	Digital Foundations 5	Physical Computing 3	Data and Information 3 Digital Foundations 5		Digital Foundations 6		Artificial Intelligence 3 Data and Information 3
	Digital Citizenship 6	Digital Citizenship 5	Digital Citizenship 6	Digital Citizenship 5	Digital Citizenship 6	Digital Citizenship 6	Digital Citizenship 6	

Copyright and Ownership

I can assess and justify when it is acceptable to use the work of others.	I can demonstrate the use of search tools to find and access online content which can be reused by others	I can give examples of content that is permitted to be reused and know how this content can be found online.	I can demonstrate how to make references to and acknowledge sources I have used from the Internet.
Creating Media 6 Digital Foundations 5	Computer Systems and Networks 6	Creating Media 6 Digital Foundations 5	Computer Systems and Networks 6 Creating Media 6
	Digital Foundations 6		