Computing at Newbridge Primary School

Online Safety	Computing Systems and Networks	Creating Media	Programming	Data and Information
Understand risks when using technology, and how to protect individuals and systems. ***Jigsaw Scheme of Work*** ***Common Sense Media*** *(https://www.commonsense.org/education/digital-citizenship/curriculum?grades=)*	*Understand what a computer is, and how its constituent parts function together as a whole. Understand how networks can be used to retrieve and share information, and how they come with associated risks.*	*Select and create a range of media including text, images, sounds, and video.*	*Create software to allow computers to solve problems.*	*Understand how data is stored, organised, and used to represent real-world artefacts and scenarios*

Curriculum Thread	EYFS	KS1		LKS2		UKS2	
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Online Safety		**Common Sense Media** I know when and why to take breaks from device time. I consider the feelings of people around me, even when engaged in fun online activities. I can learn why it's important to be aware and respectful of people while using devices. I can learn the Pause, Breathe, Finish Up routine as a self-regulation strategy for transitioning from technology to face-to-face interactions. I can discover that the internet can be used to visit faraway places and learn new things. I can compare how staying safe online is similar to staying safe in the real world. I can explain rules for traveling safely on the internet.	**Common Sense Media** I can understand the importance of being safe, responsible, and respectful online. I can learn the "Pause & Think Online" song to remember basic digital citizenship concepts. I can recognise the different kinds of feelings I can have when using technology. I know what to do when I don't have a good feeling when using technology. I can understand that being safe online is similar to staying safe in real life. I can learn to identify websites and apps that are "just right" and "not right" for me. I know how to get help from an adult if I am unsure about a website.	**Jigsaw** I know and can use some strategies for keeping myself safe online. I know who to ask for help if I am worried or concerned about anything online. **Common Sense Media** I understand that being a good digital citizen means being safe and responsible online. I can take a pledge to be a good digital citizen. I recognise the kind of information that is private. I understand that I should never give out private information online. I can learn that the information I share online leaves a digital footprint or "trail". I can explore what information is OK to be shared online I can compare and contrast how I am connected to different people and places, in person and on the internet.	**Common Sense Media** I can examine both in-person and online responsibilities. I can describe the Rings of Responsibility as a way to think about how my behaviour affects myself and others. I can identify examples of online responsibilities to others. I can define the term "password" and describe a password's purpose. I understand why a strong password is important. I can practice creating a memorable and strong password. I can consider how posting selfies or other images will lead others to make assumptions about me. I can reflect on the most important parts of my unique identity. I can identify ways I can post online to best reflect who I am. I can define what a community is, both in person and online.	**Jigsaw** I understand how the media, social media and celebrity culture promotes certain body types. (Term 4) I can reflect on my own body image and know how important it is that this is positive and I accept and respect myself for who I am. (Term 4) I understand that belonging to an online community can have positive and negative consequences. (Term 5) I can recognise when an online community feels unsafe or uncomfortable. (Term 5) I understand there are rights and responsibilities in an online community or social network. (Term 5) I can recognise when an online community is helpful or unhelpful to me. (Term 5) I know there are rights and responsibilities when playing a game online. (Term 5) I can recognise when an online game is becoming unhelpful or unsafe. (Term 5)	**Jigsaw** I can judge whether something online is safe and helpful for me. (Term 5) I can resist pressure to do something online that might hurt myself or others. (Term 5) I can use technology positively and safely to communicate with my friends and family. (Term 5) I can take responsibility for my own safety and well-being. (Term 5) **Common Sense Media** I can reflect on how balanced I am in my daily life. I can consider what "media balance" means, and how it applies to me. I can create a personalized plan for healthy and balanced media use. I can define "the curiosity gap." I can explain how clickbait uses the curiosity gap to get your attention.

				I can demonstrate an understanding of how people can connect on the internet. I can understand what online meanness can look like and how it can make people feel. I can identify ways to respond to mean words online, using S-T-O-P. I can explain how giving credit is a sign of respect for people's work. I can learn how to give credit in my schoolwork for content I use from the internet.	I can explain how having norms helps people in a community achieve their goals. I can create and pledge to adhere to shared norms for being in an online community. I understand that it's important to think about the words we use, because everyone interprets things differently. I can identify ways to respond to mean words online, using S-T-O-P. I can decide what kinds of statements are OK to say online and which are not. I can recognise that photos and videos can be altered digitally. I can identify different reasons why someone might alter a photo or video. I can analyse altered photos and videos to try to determine why.	I can recognise when I am spending too much time using devices (screen time) (Term 5) I can identify things I can do to reduce screen time, so my health isn't affected. (Term 5) I can explain how to stay safe when using technology to communicate with my friends. (Term 5) I can recognise and resist pressures to use technology in ways that may be risky or may cause harm to myself or others. (Term 5) **Common Sense Media** I can learn the "What? When? How Much?" framework for describing their media choices. I can use this framework and my emotional responses to evaluate how healthy different types of media choices are. I can begin to develop my own definition of a healthy media balance. I can identify the reasons why people share information about themselves online. I can explain the difference between private and personal information. I can explain why it is risky to share private information online. I can define the term "digital footprint" and identify the online activities that contribute to it. I can identify ways I am -- and am not -- in control of my digital footprint.	I can use strategies for avoiding clickbait. I can define "gender stereotype" and describe how they can be present online. I can describe how gender stereotypes can lead to unfairness or bias. I can create an avatar and a poem that show how gender stereotypes impact who they are. I can compare and contrast different kinds of online-only friendships. I can describe the benefits and risks of online-only friendships. I can describe how to respond to an online-only friend if the friend asks something that makes me uncomfortable. I can recognise similarities and differences between in-person bullying, cyberbullying, and being mean. I can empathise with the targets of cyberbullying. I can identify strategies for dealing with cyberbullying and ways I can be an upstander for those being bullied. I understand the purposes of different parts of an online news page. I can identify the parts and structure of an online news article. I can learn about things to watch out for when reading online news

						I understand what responsibilities I have for the digital footprints of myself and others. I can define "social interaction" and give an example. I can describe the positives and negatives of social interaction in online games. I can create an online video game cover that includes guidelines for positive social interaction. I can reflect on the characteristics that make someone an upstanding digital citizen. I can recognise what cyberbullying is. I can show ways to be an upstander by creating a digital citizenship superhero comic strip. I can define "copyright" and explain how it applies to creative work. I can describe my rights and responsibilities as a creator. I can apply copyright principles to real-life scenarios.	pages, such as sponsored content and advertisements.
Coverage and knowledge				**Jigsaw** Relationships (Term 5)		**Jigsaw** Healthy Me (Term 4) **Jigsaw** Relationships (Term 5)	**Jigsaw** Relationships (Term 5)
Vocabulary		**Common Sense Media** Online Website App Balance Device Pause Frustrated	**Common Sense Media** Online Pause Uncomfortable Caution Just right	**Jigsaw** Safe Unsafe Risky Internet Social media Private Messaging (PM) Gaming **Common Sense Media** Digital Citizen Digital footprint	**Common Sense Media** Community Digital Citizen Responsibility Password Phrase Symbol Username Assumption Identity Selfie Norm	**Jigsaw** Social network Rights Trolled Gambling/ betting Screen time Mental health Physical health Personal information **Common Sense Media** Media balance	**Jigsaw** Influences Real/Fake Cyberbullying **Common Sense Media** Media balance Clickbait Avatar Bias Gender stereotypes Private Information

				Private information	Pledge Empathy Interpret Advertising Alter Persuade Photo retouching	Hardwired Digital footprint Griefing Cyberbullying Upstander Copyright Plagiarism	Bystander Cyberbullying Upstander
Computing Systems and Networks	I can locate the 'home button' and 'lock button' on the iPads. I can explore and investigate how things work.	I can recognise technology in school and using it responsibly.	I can identify IT and how its responsible use improves our world in school and beyond.	I can identify that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	I can recognise the internet as a network of networks including the World Wide Web (WWW), and why we should evaluate online content.	I can recognise IT systems in the world and how some can enable searching on the internet.	I can explore how data is transferred by working collaboratively online.
Coverage and knowledge	**Ongoing**	Technology around us (Term 1)	Information technology around us (Term 1)	Connecting Computers (Term 1)	The internet (Term 1)	Systems and searching (Term 1)	Communication and collaboration (Term 1)
Vocabulary		technology, keyboard, keys, mouse	Information technology (IT), devices, computer, PC, laptop, tablet	input, process, output, digital device, computer network	internet, world wide web, network, website, media,	input, output, process, search engine, web crawlers	IP addresses, protocols, Domain Name Server (DNS), data packets
Creating Media (x 2)	I can use the interactive whiteboard to express my creativity. I can use technology to enhance my play (lights, music filming).	I can choose appropriate tools in a program to create art, and making comparisons with working non-digitally. (Term 2) I can use a computer to create and format text, before comparing to writing non-digitally. (Term 5)	I can capture and change digital photographs for different purposes. (Term 2) I can use a computer as a tool to explore rhythms and melodies, before creating a musical composition. (Term 5)	I can capture and edit digital still images to produce a stop-frame animation that tells a story. (Term 2) I can create documents by modifying text, images, and page layouts for a specified purpose. (Term 5)	I can capture and edit audio to produce a podcast, ensuring that copyright is considered. (Term 2) I can manipulate digital images, and reflect on the impact of changes and whether the required purpose is fulfilled. (Term 5)	I can plan, capture, and edit video to produce a short film. (Term 2) I can create images in a drawing program by using layers and groups of objects. (Term 5)	I can design and create webpages, giving consideration to copyright, aesthetics, and navigation. (Term 2) I can plan, develop, and evaluate 3D computer models of physical objects. (Term 5)
Coverage and knowledge	**Ongoing**	Digital painting (Term 2) Digital writing (Term 5)	Digital photography (Term 2) Digital music (Term 5)	Stop-frame animation (Term 2) Desktop publishing (Term 5)	Audio production (Term 2) Photo editing (Term 5)	Video production (Term 2) Introduction to vector graphics (Term 5)	Webpage creation (Term 2) 3D modelling (Term 5)
Vocabulary		paint tools, brush size, brush tools (Term 2) word processor, keyboard, keys, toolbar, undo caps-lock, dragging (Term 5)	photograph, portrait, landscape, composition, focus, auto-focus (Term 2) rhythm pattern, notes, tempo, melody (Term 5)	stop-frame animation, frame, storyboard, onion skinning (Term 2) text, image, font style, orientation, placeholders, template, layout (Term 5)	input, output, podcast, edit, trim (Term 2) image, rotate, crop, effects, cloning, retouching (Term 5)	features, camera angles, storyboard, editing tools, trim (Term 2) vector drawings, move, resize, rotate, duplicate, group, ungroup (Term 5)	Hypertext Markup Language (HTML), home page, fair use, copyright, navigation path, linking to content (Term 2) resize, lift/lower, rotate, duplicate, group, resize, placeholders, objects, operands (Term 5)
Programming (x2)	I can operate simple equipment, like motorised toys. I can use basic ICT skills to use a camera or an iPad.	I can write short algorithms and programs for floor robots, and predict program outcomes. (Term 3) I can design and program the movement of a character on screen to tell stories. (Term 6)	I can create and debug programs, and use logical reasoning to make predictions. (Term 3) I can design algorithms and programs that use events to trigger sequences of code to make an interactive quiz. (Term 6)	I can create sequences in a block-based programming language to make music. (Term 3) I can write algorithms and programs that use a range of events to trigger sequences of actions. (Term 6)	I can use a text-based programming language to explore count-controlled loops when drawing shapes. (Term 3) I can use a block-based programming language to explore count-controlled and infinite loops when creating a game. (Term 6)	I can explore conditions and selection using a programmable microcontroller. (Term 2) I can explore selection in programming to design and code an interactive quiz. (Term 6)	I can explore variables when designing and coding a game. (Term 2) I can design and code a project that captures inputs from a physical device. (Term 6)

Coverage and knowledge	**Ongoing**	Moving a robot (Term 3) Programming animations (Term 6)	Robot algorithms (Term 3) Programming quizzes (Term 6)	Sequencing sounds (Term 3) Events and actions in programs (Term 6)	Repetition in shapes (Term 3) Repetition in games (Term 6)	Selection in physical computing (Term 3) Selection in quizzes (Term 6)	Variables in games (Term 3) Sensing movement (Term 6)
Vocabulary		button, command, directions: forward, backwards, turn left, turn right (Term 3) command, sprite, program, programming, run, project (Term 6)	sequences, algorithm, program, debugging (Term 3) sequence, commands, outcome, algorithm, debug (Term 6)	sprite, backdrop, command, sequence, code, program (Term 3) event, action, project, sprite, template (Term 6)	command, algorithm, debug, loop, procedure (Term 3) event, project, count-controlled loops, infinite loops (Term 6)	microcontroller, algorithm, infinite loop, count-controlled loops, condition, conditional loop (Term 3) selection, conditions, outcome, flow, debug (Term 6)	variables, value, algorithms, debug (Term 3) input, output, process, micro:bit, selection, statements, conditions, flow (Term 6)
Data and Information	I can use the iPads to use an eBook.	I can explore object labels, then use them to sort and group objects by properties.	I can collect data in tally charts and use attributes to organise and present data on a computer.	I can build and use branching databases to group objects using yes/no questions.	I can recognise how and why data is collected over time, before using data loggers to carry out an investigation.	I can use a database to order data and create charts to answer questions.	I can answer questions by using spreadsheets to organise and calculate data
Coverage and knowledge	**Ongoing**	Grouping data (Term 4)	Pictograms (Term 4)	Branching databases (Term 4)	Data logging (Term 4)	Flat-file databases (Term 4)	Introduction to spreadsheets (Term 4)
Vocabulary		labels, objects, properties, groups	tally, data, pictogram, more than, less than	database, attribute, branching database, objects	data set, sensors, data loggers, intervals,	database, records, fields, grouping, sorting, value, chart	data set, spreadsheet, cell, format, formula, range