

Computing Key Milestones and Progression

EYFS	KS1	KS2
<p>Operate simple equipment, e.g. turns on CD player and uses remote control.</p> <p>Show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</p> <p>Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.</p> <p>Know that information can be retrieved from computers.</p> <p>When out in the locality, ask for help to press the button at the pelican crossing, or speak into an intercom to tell somebody you have come back.</p>	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognise common uses of information technology beyond school</p> <p>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>

	Nursery	Reception	Yr 1	Yr 2
Vocabulary	Push Press Choices Internet Website Equipment Buttons Movement Screen Mouse Images Keyboard Paint Technology Share Create Collect Set of photos Count		Instructions Buttons Robots Patterns Program Purpose Online tools Communicate Photographs Video Sound Data Pictogram Digitally	Forward Backward Right-angle turn Algorithm Sequence Debug Predict Paint effects Templates Animation Documents Enter/return Caps lock Backspace Questions Data collection Graphs Charts Save Retrieve
Computer Science Understanding the World (EYFS)	<ul style="list-style-type: none"> Children can operate simple equipment, e.g. turns on CD player and uses remote control. Children show an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones. Children can show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. Children know that information can be retrieved from computers. 	<ul style="list-style-type: none"> Children can complete a simple program on a computer. Children can use ICT hardware to interact with age-appropriate computer software. Children can recognise that a range of technology is used in places such as homes and schools. Children can select and use technology for particular purposes. 	<ul style="list-style-type: none"> Children can explain what an algorithm is Children understand that instructions need to be written clearly and in the correct order to complete a specific task Children understand that there can be more than one way of giving instructions to complete the same task Children can use logical reasoning to create a set of instructions (algorithm) to complete a specific task Children can debug a simple algorithm Children can follow instructions Children understand what a program is and how it is different to an algorithm Children can use logical thinking to predict the behaviour of simple route-based programs to control a physical device Children can write simple route-based programs to control a physical device from algorithms Children can debug a simple route-based program to control a physical device Children can create a simple route-based program for a screen turtle Children can debug their simple route-based program for a screen turtle Children know that there is more than one way to solve a problem, but some are more efficient than others Children can use logical thinking to evaluate their algorithm and route-based program to improve the outcome 	<ul style="list-style-type: none"> Children can give a sequence of commands to complete a specific task Children can follow a sequence of commands to complete a specific task Children can predict the movement of the sprite to create a route-based program before I test it out Children can debug their route-based program during running the program to correct any mistakes Children can use given code as a scaffold to modify and make their own Children can evaluate their algorithms to make judgements on its effectiveness before I create a route-based program to complete a given task Children can use logical thinking to reverse a route-based program
Information Technology Enabling Environments (EYFS)	<ul style="list-style-type: none"> When out in the locality, children can ask for help to press the button at the pelican crossing, or speak into an intercom to tell somebody you have come back. 	<ul style="list-style-type: none"> Children can play appropriately with a range of materials and objects that work in different ways for different purposes, for example, egg whisk, torch, other household implements, pulleys, construction kits and tape recorder. Children can use a range of programmable toys, as well as equipment involving ICT, such as computers. 	<ul style="list-style-type: none"> Children can represent data in tables, charts and pictograms Children can add data to a frequency table, interpret the data and present as a pictogram Children can begin to understand how the x and y axis on a chart relates to the data and questions asked Children can write sentences to explain the data presented in pictograms and charts Children can login to J2e/Entrust Launch with their own username and password Children can create a JITS 'Paint' page Children can use the drawing tools to resize their paint brush, use the fill tool and use the textures tool Children can name and save their work. I can retrieve their work from Their Files, edit it and save it again Children can save their drawing as both a Paint file and an image file Children can add a background image to their JITS 'Write' Children can use JITS 'Paint' tools to create drawings and save as a paint file, an image and a stamp Children can use stamps to create a picture Children can add text to a speech bubble stamp Children can add a photograph and write some sentences about themselves using JITS 'Write' software 	<ul style="list-style-type: none"> Children can identify appropriate questions and answers needed for data collection Children can design a data collection sheet Children can collect data via J2Vote Children can analyse results of a survey Children can make judgements based on the data e.g. say which food choice is most popular for school lunches Children can use a branching database to sort and organise data Children can create a painting using JITS 'Paint' Children can search for online pictures in Paint Children can create several paintings and save them as pictures to use later Children can use their paintings as backgrounds for their writing Children can create JITS 'animate' on their own

Digital Literacy	Self-Image and Identity	Children know that they can ‘Turn off and tell’ if they see something on the internet that makes them feel upset or uncomfortable.	Children know that they can ‘Turn off and tell’ if they see something on the internet that makes them feel upset or uncomfortable. Children know they must keep information about themselves safe and not tell anyone online.	<ul style="list-style-type: none"> Children can recognise that there may be people online who could make them feel sad, embarrassed or upset. If something happens that makes children feel sad, worried, uncomfortable or frightened they can give examples of when and how to speak to an adult they can trust. 	<ul style="list-style-type: none"> Children can explain how other people may look and act differently online and offline. Children can give examples of issues online that might make them feel sad, worried, uncomfortable or frightened; children can give examples of how they might get help.
	Online Relationships			<ul style="list-style-type: none"> Children can use the internet with adult support to communicate with people they know. Children can explain why it is important to be considerate and kind to people online. Children can give examples of when they should ask permission to do something online and explain why this is important. Children can explain why things one person finds funny or sad online may not always be seen in the same way by others. 	<ul style="list-style-type: none"> Children can give examples of how someone might use technology to communicate with others they don't know offline and explain why this might be risky. Children can explain who they should ask before sharing things about themselves or others online. Children can describe different ways to ask for, give and deny permission online and can identify who can help them if they are not sure. Children can explain why they have a right to say ‘no’ or ‘I will have to ask someone’. Children can explain who can help them if they feel under pressure to agree to something they are unsure about or don't want to do. Children can identify who can help them if something happens online without their consent. Children can explain how it may make others feel if they do not ask their permission or ignore their answers before sharing something about them online. Children can explain why they should always ask a trusted adult before clicking ‘yes’, ‘agree’ or ‘accept’ online.
	Online Reputation			<ul style="list-style-type: none"> Children recognise that information can stay online and could be copied. Children can describe what information they should not put online without asking a trusted adult first. 	<ul style="list-style-type: none"> Children can explain how information put online about them can last for a long time. Children can describe how anyone's online information can be seen by others. Children know who to talk to if something has been put online without consent or if it is incorrect.
	Online Bullying			<ul style="list-style-type: none"> Children can describe how to behave online in ways that do not upset others and can give examples. 	<ul style="list-style-type: none"> Children can explain what bullying is, how people may bully others and how bullying can make people feel. Children can explain why anyone who experiences bullying is not to blame. Children can talk about how anyone experiencing bullying can get help
	Managing Online Information			<ul style="list-style-type: none"> Children can give simple examples of how to find information using digital technologies e.g., search engines, voice activated searching. Children know/understand that we can encounter a range of things online including things they like and don't like as well as things which are real or make believe/ a joke. Children know how to get help from a trusted adult if they see content that makes them feel sad, uncomfortable worried or frightened. 	<ul style="list-style-type: none"> Children can use simple keywords in search engines. Children can demonstrate how to navigate a simple webpage to get to information they need (e.g. home, forward, back buttons; links, tabs and sections). Children can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri). Children can explain the difference between things that are imaginary, ‘made up’ or ‘make believe’ and things that are ‘true’ or ‘real’. Children can explain why some information I find online may not be true.
	Health, Well-being and Lifestyle			<ul style="list-style-type: none"> Children can explain rules to keep themselves safe when they are using technology both in and beyond the home. 	<ul style="list-style-type: none"> Children can explain simple guidance for using technology in different environments and settings. Children can say how those rules/guides can help them.
	Privacy and Security			<ul style="list-style-type: none"> Children can explain how passwords are used to protect information, accounts and devices. Children can recognise more detailed examples of information that is personal to someone (e.g. where they live, their family's names, where they go to school). Children can explain why they should always ask a trusted adult before they share any information about themselves online. 	<ul style="list-style-type: none"> Children can explain how passwords can be used to protect information, accounts and devices. Children can explain and give examples of what is meant by ‘private’ and ‘keeping things private’. Children can describe and explain some rules for keeping their information private. Children can explain how some people may have devices in their homes connected to the internet and can give examples
	Copyright and Ownership			<ul style="list-style-type: none"> Children can explain why work they create using technology belongs to them. Children can say why it belongs to them (e.g. ‘it is their idea’ or ‘I designed it’). Children can save their work so that others know it belongs to them (e.g. filename, name on content). Children understand that work created by others does not belong to them even if they save a copy. 	<ul style="list-style-type: none"> Children can recognise that content on the internet may belong to other people Children can describe why other people's work belongs to them.

	Yr 3	Yr 4	Yr 5	Yr 6
Vocabulary	Sequence instructions Sequence debugging Test + improve Logo commands Sequence programming Multimedia Presentations Alignment Brush size Repeats Reflections Green screening Amend Copy Paste Questioning Database Construct Contribute Recording data Data logger Present data	Creating + modifying Specific purpose Photo modifying Keyboard shortcuts Bullet points Spell check Database creation Database searches Inaccurate data	Explore procedures Refine procedures Variable Hardware + software control Change inputs Different outputs Articulate solutions Commands Online sharing Multimedia effects Multimedia modification Transitions Hyperlinks Editing tools Refining Spreadsheets Complex searches (and/or: </>) Problem solving Present answers Analyse information Question data Interpret	Appropriate online tools Audience Atmosphere Structure Copyright Information collection HTML code Storing Information movement Connecting devices Different audiences Research strategies Search result rankings Acknowledge resources
Computer Science	<ul style="list-style-type: none"> Children can use symbols to write an algorithm. Children can debug a simple algorithm. Children can create and write a simple algorithm. Children can change sprites Children can rename sprites Children can change the background of their scene and add their choice of sprites. Children can create a sequence of code in blocks in Visual Children can identify errors in blocks of code Children can write a program that creates simple shapes. Children can add a repeat loop into their written algorithm Children can debug their program. Children can write a program that creates simple shapes. Children can write a program that creates repeated shapes on the screen. Children can use a nested loop. Children can explain why I have used a nested loop. 	<ul style="list-style-type: none"> Children can write code using a sequence Children can use a repeat forever loop Children can use the drawing tools to edit sprite costumes Children can duplicate a sprite costume Children can debug a simple algorithm. Children can change sprites Children can change the background of their scene and add their choice of sprites in scratch. Children can add the music extensions blocks to scratch Children can write an algorithm that contains a forever loop to repeat a sequence Children can write code in scratch that uses a repeat loop Children can identify errors in blocks of code Children can modify a sequence of code blocks to fix errors Children can use Broadcast messages as inputs to trigger events Children can select their own Background and Sprites to create a simple algorithm that tells a short story / scene with characters interacting. Children can explain the difference between hardware and software Children can explain the difference between an input and an output device Children know that there are key parts needed to make a computer work which are kept safe inside the computers case Children know that data stored in the computer's memory are called BITS Children know that a BIT can either be 1 or 0 Children can name the internal parts of a computer that make it work Children can explain the function of the internal parts of a computer Children understand how one computer can be connected to another computer using a network to allow the computers to communicate with each other 	<ul style="list-style-type: none"> Children can use selection if then can be used to make something happen e.g. if touching another sprite then...do something Children know the term input – and understand that they can trigger an event, e.g. when the green flag is clicked then... Children know that sprites can be controlled by different inputs Children can use – if on the edge bounce block Children can identify 2 different ways to code a sprite to Children can use abstraction to identify what details I need to include in a game Children can compare code and explain why one is better than the other Children understand that code must be precise and that some scripts are more effective than others. Children can code a sprite to hide and show again in a random position. Children can create a range of variables e.g. for keeping score/time Children can write a script for a sprite to start at the top of the stage in a random position Children can 'hide' a sprite and send it back to the top of the screen if touching another sprite Children can use the ask block and know that this will require an input from the keyboard Children can create and use a procedure block Children can use other scratch examples to help plan their own maze game, carefully evaluating other people's code to help me Children know that the internet allows us to communicate with people all over the world through audio, text and video Children can explain what some of the risks are when Children know that instant/direct messaging can be to one person or to many at the same time Children know the difference between misinformation and disinformation Children can suggest suitable strategies to help with spotting fake news when gathering information online Children can name some famous men and women that have been instrumental in the development of computers and technology 	<ul style="list-style-type: none"> Children can increase the speed of a car based on a condition being met Children can write a programming plan using pseudo code Children can create several variables and use them correctly Children can use conditional if/else blocks Children can create a game that has multiple questions in a loop Children can explain what makes a good game. Children can identify the components of a game. Children know how a game is made. Children can explain what the internet is Children know that the World Wide Web is only one of the services provided by the Internet Children know the differences between a web browser and a web server Children know how information on the World Wide Web travels between networked computers to retrieve and deliver requested information Children know that information stored on computers is digitised (represented as numerical data) in the form of binary code Children know that digital images are broken down into pixels, each pixel is stored as a value to represent colour Children can use binary code to create and re-create a simple black and white image Children understand that information is broken down into small pieces known as packets Children understand that individual packets travel across networks, taking different routes in order to reach their destination quickly and efficiently Children know what a web browser is and how it is different to a search engine Children understand what a web crawler is and how it links to a search engine Children understand how important key words are when using a search engine to locate information Children understand how Boolean operators can be used with key words to improve their search techniques Children can read the anatomy of a search result to make better choices of the reliability and validity of a web site as an accurate information source Children know what misinformation and disinformation means

					<ul style="list-style-type: none">Children know that there are two types of fake newsChildren know what a hacker does and can give examples of how you can become a victimChildren can identify good practice advice to follow for better computer and network securityChildren understand what makes a strong password and know what to avoid when creating a passwordChildren know what phishing isChildren can identify the features of scam communicationsChildren understand some tactics employed by scammers
Information Technology		<ul style="list-style-type: none">Children can identify appropriate questions to sort dataChildren can create a branching database/binary tree by identifying appropriate questions to ask which sorts the data into sub-groups through to individualsChildren can use a branching database/binary tree to sort dataChildren can identify uses for databases in the real worldChildren can discuss where digital content can have advantages over paper when storingChildren can use a simple database and understand how:Children can use the data fields relate to questions askedChildren can search and sort information in a pre-defined database to answer questionsChildren can create charts and interpret data effectivelyChildren can understand the terms field and record in a database and the different views that data can be displayed in (form view, table view, chart view)Children can find the errors in a pre-defined database	<ul style="list-style-type: none">Children know the difference between open and closed questions and when to use them effectively for gathering dataChildren understand why multiple-choice responses are good to use for data collectionChildren can compare using paper and digital methods for storing, searching and sorting dataChildren can identify different data types and explain when they might be used (related to understanding why it is important to provide units for answers required)Children can create appropriate questions to gather useful data that is fit for purposeChildren can understand the relationship between a record and a databaseChildren can understand a simple database structure – enter data, in the form of records, into a pre-defined database placing information in the correct fields using the correct conventionsChildren can sort and search through the information to answer specific questionsChildren can use Boolean operators AND OR in a complex search to find answers to a specific question	<ul style="list-style-type: none">Children know what a cell reference/cell address isChildren can generate lists of numbers using the autofill toolChildren can create simple formulae to perform calculations in a spreadsheetChildren can use column labels appropriately in a spreadsheetChildren can explain how formulae work in a spreadsheetChildren can use a spreadsheet to help solve problemsChildren can present and interpret information in a graphChildren can explain what an infographic isChildren understand why infographics are used by businessesChildren know that infographics are easy to find in a web search because of the way the search engine algorithm works e.g. favouring content shared on social mediaChildren can make judgements on the design of an infographic to evaluate its effectivenessChildren understand that colour can impact the design of an infographic due to meanings and associations as wellChildren know what colours work well together and which colours to avoid usingChildren know that text styles are chosen for their effect and intended use when presenting informationChildren know that carefully selecting images to convey the right message is importantChildren understand that I should abide by copyright licences if I am to use someone else’s image in their own workChildren understand how to carry out an image search more effectively by using the appropriate search toolsChildren can use charts and graphs appropriately to display dataChildren understand that images and colours can impact on how a person may feel and I can justify their reasons for the colour scheme and images I have chosenChildren have considered the overall design and limited their use of colour and images so as not to distract from the intention of the infographicChildren have used a variety of presentation skills such as layering, transparent images, coloured text, filled text boxes and background fills to design their infographic	<ul style="list-style-type: none">Children can create simple formulaeChildren can create formulae to find the min and max scores in a gameChildren can express formulae correctlyChildren can create formulae to carry out each one of the four basic mathematical functionsChildren can use formatting tools, including conditional formatting, within the software to improve layout to make the presentation of the data clearer for the userChildren understand which variables to change and can predict what the effect of changing the variable will be to answer ‘what if?’ questionsChildren can design and create a functional spreadsheet that includes working formulae, to answer a real-life problemChildren can abstract information fit for purpose and use it in a spreadsheet to model answers toChildren understand what big data meansChildren can explain what digital footprints meansChildren can evaluate their own digital footprintChildren can explain why understanding terms and conditions for online platforms is importantChildren can give examples of some of the rights companies have when you agree to their terms and conditionsChildren know what an ethical hacker is and what they doChildren can explain why a hacker might want to steal dataI understand what website cookies areI know why someone would or would not want cookies enabled on their computerChildren can explain the pros and cons of accepting cookiesChildren can explain multiple ways in which big data is used for good
Digital Literacy	Self-Image and Identity	<ul style="list-style-type: none">Children can explain what is meant by the term ‘identity’.Children can explain how people can represent themselves in different ways online.Children 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).	<ul style="list-style-type: none">Children can explain how their online identity can be different to their offline identity.Children can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.Children can explain that others online can pretend to be someone else, including their friends and can suggest reasons why they might do this.	<ul style="list-style-type: none">Children can explain how identity online can be copied, modified or altered.Children can demonstrate responsible choices about their online identity, depending on context.	<ul style="list-style-type: none">Children 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.Children can describe issues online that could make anyone feel sad, worries, uncomfortable or frightened. Children know and can give examples of how to get help both on and offline.Children can explain the importance of asking until they get the help needed.
	Online Relationships	<ul style="list-style-type: none">Children can describe ways people who have similar likes and interests can get together online.Children can explain what it means to ‘know someone’ online and why this might be different from knowing someone offline.Children can explain what is meant by ‘trusting someone online’, why this is different to ‘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.Children can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.Children can explain how someone’s feelings might be hurt by what is said or written online.	<ul style="list-style-type: none">Children can describe strategies for safe and fun experiences in a range of online social environments.Children can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.Children can explain how content shared online may feel unimportant to one person but may be important to other people’s thoughts, feelings and beliefs.	<ul style="list-style-type: none">Children can give examples of technology specific forms of communication.Children can explain that there are some people they communicate with online who may want to do them or their friends harm. Children can recognise that this is not their fault.Children 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.Children can explain how someone can get help if they are having problems and identify when to tell a trusted adult.	<ul style="list-style-type: none">Children can explain how sharing something online may have an impact either positively or negatively.Children 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.Children can describe how things shared privately online can have unintended consequences for others.Children can explain that taking or sharing inappropriate images of someone even if they say it is ok may have an impact for the sharer and others.

		<ul style="list-style-type: none"> Children 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. 		<ul style="list-style-type: none"> Children can demonstrate how to support others (including those who are having difficulties) online. 	
	Online Reputation	<ul style="list-style-type: none"> Children can explain how to search for information about others online. Children can give examples of what anyone may or may not be willing to share about themselves online. Children can explain the need to be careful before sharing anything personal. Children can explain who someone can ask if they are unsure about putting something online. 	<ul style="list-style-type: none"> Children can describe how to find out information about others by searching online. Children can explain ways that some of the information about anyone online could have been created, copied or shared by others. 	<ul style="list-style-type: none"> Children can search for information about an individual online and create a summary report of the information I find. Children can describe ways that information about people online can be used by others to make judgments about an individual and why these may be incorrect. 	<ul style="list-style-type: none"> Children can explain the ways in which anyone can develop a positive online reputation. Children can explain strategies anyone can use to protect their digital personality and online reputation.
	Online Bullying	<ul style="list-style-type: none"> Children can describe appropriate ways to behave towards other people online and why this is important. Children can give examples of how bullying behaviour could appear online and how someone can get support. 	<ul style="list-style-type: none"> Children can recognise when someone is upset, hurt or angry online. Children can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Children 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). 	<ul style="list-style-type: none"> Children can recognise online bullying can be different to bullying in the physical world and can describe some of those differences. Children can describe how what one person perceives as playful joking or teasing (including banter) might be experienced by others as bullying. Children can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. Children can identify a range of ways to report concerns and access support both in school and at home about online bullying. Children can explain how to block abusive users. Children can describe the helpline services who can help people experiencing bullying and how to access them (e.g. Childline). 	<ul style="list-style-type: none"> Children can describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others who can help them. Children can explain how someone would report online bullying in different contexts.
	Managing Online Information	<ul style="list-style-type: none"> Children can demonstrate how to use key phrases in search engines. Children can explain what autocomplete is and how to choose the best suggestion. Children can explain how the internet can be used to sell and buy things. Children can explain the difference between a 'belief', an 'opinion' and a 'fact'. Children can explain that not all opinions shared may be accepted as true or fair by others. Children can describe and demonstrate how they can get help from a trusted adult if they see content that makes us feel sad, uncomfortable, worried or frightened. 	<ul style="list-style-type: none"> Children can analyse information to make a judgement about probable accuracy. They understand why it is important to make their own decisions regarding content and that those decisions are respected by others. Children can describe how they can 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). Children 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. Children can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. Children can explain that technology can be designed to act like or impersonate living things (e.g., bots) and describe what the benefits and risks might be. Children can explain what is meant by fake news. 	<ul style="list-style-type: none"> Children can explain the benefits and limitations of using different types of search technologies. Children can explain how some technology can limit the information they are presented with. Children can explain what is meant by 'being sceptical'. Children can give examples of when and why it is important to be 'sceptical'. Children can evaluate digital content and can explain how to make choices about what is trustworthy. Children can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. Children can identify ways the internet can draw us to information for different agendas. Children can describe ways of identifying when online content has been commercially sponsored or boosted. Children can explain what is meant by the term 'stereotype'; how stereotypes are amplified and reinforced online and how accepting stereotypes may influence how people think about others. Children can describe how fake news may affect someone's emotions and behaviour and explain why this may be harmful. Children can explain what is meant by a 'hoax'. Children can explain why they need to think carefully before they forward anything online. 	<ul style="list-style-type: none"> Children can explain how search engines work and how results are selected and ranked. Children can explain how to use search technologies effectively. Children can describe how some online information can be opinion and can offer examples. Children can explain how and why some people may present 'opinions' as 'facts'. Children can define the terms 'influence', 'manipulation' and 'persuasion' and explain how they might encounter these online (e.g. advertising and 'ad targeting'). Children understand the concept of persuasive design and how it can be used to influence people's choices. Children can demonstrate strategies to enable them to analyse and evaluate the validity of 'facts' and can explain why using these strategies are important. Children can explain how companies and news providers target people with online news stories they are more likely to engage with. Children can describe the difference between online misinformation and dis-information. Children can explain why information on a large number of sites may still be inaccurate or untrue. Children can identify, flag and report inappropriate content.
	Health, Well-being and Lifestyle	<ul style="list-style-type: none"> Children can explain why spending too much time using technology can sometimes have a negative impact on anyone; children can give some examples of activities where it is easy to spend a lot of time engaged (e.g. games, films, videos). Children can explain why some online activities have age restrictions, why it is important to follow them and know who they can talk to if others pressure them to watch or do something online that makes them feel uncomfortable. 	<ul style="list-style-type: none"> Children can explain how using technology can be a distraction from other things in both a positive and negative way. Children can identify times or situations when someone might need to limit the amount of time they use technology. 	<ul style="list-style-type: none"> Children can describe ways technology can affect health and wellbeing positively and negatively. Children can describe some strategies, tips and advice to promote healthy sleep with regards to technology. Children recognise the benefits and risks of accessing information about health and wellbeing online and how they should balance this with talking to trusted adults and professionals. Children can explain how and why some apps and games may request or take payment for additional content and explain the importance of seeking permission from a trusted adult before purchasing. 	<p>Children can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.</p> <p>Children recognise and can discuss pressures that technology can place on someone and how/when they could manage this. Children can recognise features of persuasive design and how they are used to keep users engaged.</p> <p>Children can assess and action different strategies to limit the impact of technology on their health (e.g. nightshift mode, regular breaks, correct posture, sleep, diet and exercise).</p>
	Privacy and Security	<ul style="list-style-type: none"> Children can describe simple strategies for creating and keeping passwords private. Children can give reasons why someone should only share information with people they choose to and can trust. Children can explain that if they are not sure or feel pressured then they can tell a trusted adult. Children can describe how connected devices can collect and share anyone's information with others. 	<ul style="list-style-type: none"> Children can describe strategies for keeping personal information private, depending on context. Children can explain that internet use is never fully private and is monitored. Children can describe how some online services may seek consent to store information about them; they know how to respond appropriately and who to ask if they are not sure. Children know what the digital age of consent is and the impact this has online services asking for consent. 	<ul style="list-style-type: none"> Children can explain what a strong password is and demonstrate how to create one. Children can explain how many free apps or services may read and share their private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Children can explain what app permissions are and can give examples. 	<ul style="list-style-type: none"> Children can describe effective ways people can manage passwords. Children can explain what to do if a password is shared, lost or stolen. Children can describe how and why people should keep their software and apps up to date. Children can describe simple ways to increase privacy on apps and services that provide privacy settings. Children can describe ways in which some online content targets people to gain money or information illegally. Children know that online services have terms and conditions that govern their use.
	Copyright and Ownership	<ul style="list-style-type: none"> Children can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause. 	<ul style="list-style-type: none"> When searching on the internet for content to use, children can explain why they need to consider who owns it and whether they have the right to reuse it. Children can give some simple examples of content which I must not use without the permission of the owner. 	<ul style="list-style-type: none"> Children can assess and justify when it is acceptable to use the work of others. Children can give examples of content that is permitted to be reused. 	<ul style="list-style-type: none"> Children demonstrate the use of search tools to find and access online content which can be reused by others. Children can demonstrate how to make references to and acknowledge sources they have used from the internet.