

'SwitchedOn' Computing Curriculum Plan, Glossary of Terms & Skills Progression - 2020-21

<p>EYFS</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16 17, 28, 29 31, 34, 36</p>	<p>1 We have confidence - Recording and playing back sounds:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Showing a 'can do' attitude. Taking a risk, engaging in new experiences and learning by trial and error. <p>Active learning:</p> <ul style="list-style-type: none"> Being proud of how they accomplish something - not just the end result. 	<p>2 We can take turns - Manipulating objects on screen:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Showing a 'can do' attitude. <p>Active learning:</p> <ul style="list-style-type: none"> Paying attention to details. Reviewing how well the approach worked. 	<p>3 We are successful - Taking digital photographs and combining them with text and sounds:</p> <p>Active learning:</p> <ul style="list-style-type: none"> Showing satisfaction in meeting their own goals. Being proud of how they accomplish something - not just the end result. Maintaining focus on their activity for a period of time. 	<p>4 We have feelings - Taking and displaying digital photographs:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Showing curiosity about objects, events and people. <p>Active learning:</p> <ul style="list-style-type: none"> Paying attention to details. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Reviewing how well the approach worked. 	<p>5 We can drive - Investigating everyday technologies:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Engage in open-ended activity. Acting out experiences with other people. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Planning, making decisions about how to approach a task, solve a problem and reach a goal. 	<p>6 We are DJs - Controlling digital sound files and videos:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Taking on a role in their play. Acting out experiences with other people. <p>Active learning:</p> <ul style="list-style-type: none"> Show high levels of energy, fascination.
	<p>7 We can exercise - Using digital timers and thermometers:</p> <p>Active learning:</p> <ul style="list-style-type: none"> Maintaining focus on their activity for a period of time. Show high levels of energy, fascination. <p>Playing and exploring: Showing a 'can do' attitude.</p>	<p>8 We are healthy - Internet research, opening applications:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Showing curiosity about objects, events and people. <p>Active learning - motivation:</p> <ul style="list-style-type: none"> Maintaining focus on their activity for a period of time. Persisting with an activity when challenges occur. 	<p>9 We can listen - Using technology to communicate verbally:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Engage in open-ended activity. Taking on a role in their play. <p>Being involved and concentrating:</p> <ul style="list-style-type: none"> Maintaining focus on their activity for a period of time. 	<p>10 We can understand instructions - Controlling (kitchen) equipment:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Using their senses to explore the world around them. <p>Active learning - motivation:</p> <ul style="list-style-type: none"> Maintaining focus on their activity for a period of time. Being proud of how they accomplish something - not just the end result. 	<p>11 We can understand messages - Controlling and using sound:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Seeking challenge. <p>Active learning - motivation:</p> <ul style="list-style-type: none"> Paying attention to details. <p>Creating and thinking critically - thinking:</p> <ul style="list-style-type: none"> Making predictions 'why' questions about their experiences and in response to stories and events. 	<p>12 We are talkers - Using video cameras to record video clips:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Showing a 'can do' attitude. Taking a risk, engaging in new experiences and learning by trial and error. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Checking how well their activities are going.

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<p>EYFS</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16 17, 28, 29 31, 34, 36</p>	<p>13 We are digital readers - Choosing and opening applications and engaging with digital texts:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Engaging in open-ended activity. <p>Active learning - motivation:</p> <ul style="list-style-type: none"> Maintaining focus on their activity for a period of time. <p>Creating and thinking critically - thinking:</p> <ul style="list-style-type: none"> Making predictions. 	<p>14 We can email - Using email to communicate:</p> <p>Finding out and exploring:</p> <ul style="list-style-type: none"> Showing curiosity about objects, events and people. <p>Having their own ideas:</p> <ul style="list-style-type: none"> Making predictions. 	<p>15 We can blog - Communicating with digital text:</p> <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Thinking of ideas. Checking how well their activities are going. Reviewing how well the approach worked. 	<p>16 We can count - Programming a programmable toy:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Engaging in open-ended activity. Taking a risk, engaging in new experiences and learning by trial and error. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Finding ways to solve problems. 	<p>17 We are designers - Controlling a remote controlled toy:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Taking a risk, engaging in new experiences and learning by trial and error. <p>Active learning:</p> <ul style="list-style-type: none"> Showing a belief that more effort or a different approach will pay off. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Planning, making decisions about how to approach a task, solve a problem and reach a goal. 	<p>18 We are shape makers - Using light projectors, switching on technology:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Showing curiosity about objects, events and people. <p>Active learning - motivation:</p> <ul style="list-style-type: none"> Paying attention to detail. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Reviewing how well the approach worked.
	<p>19 We are community members - Taking and displaying digital photographs, recording sound:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Showing curiosity about objects, events and people. <p>Active learning:</p> <ul style="list-style-type: none"> Being proud of how they accomplish something - not just the end result. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Planning, making decisions about how to approach a task, solve a problem and reach a goal. 	<p>20 We can observe - Taking photographs using a digital microscope:</p> <p>Finding out and exploring:</p> <ul style="list-style-type: none"> Using their senses to explore the world around them. <p>Active learning:</p> <ul style="list-style-type: none"> Paying attention to details. 	<p>21 We are games players - Opening and closing files:</p> <p>Active learning:</p> <ul style="list-style-type: none"> Persisting with the activity when challenges occur. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Finding ways to solve problems. Testing their ideas. 	<p>22 We are creative - Choosing and using tools in an art application:</p> <p>Playing and exploring - engagement:</p> <ul style="list-style-type: none"> Engaging in open-ended activity. <p>Active learning:</p> <ul style="list-style-type: none"> Paying attention to details. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Reviewing how well the approach worked. 	<p>23 We can record soundtracks - Recording a sound track:</p> <p>Playing and exploring:</p> <ul style="list-style-type: none"> Engaging in open-ended activity. <p>Active learning:</p> <ul style="list-style-type: none"> Paying attention to details. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Finding new ways to do things. 	<p>24 We are film producers - Recording video clips for a short film:</p> <p>Active learning:</p> <ul style="list-style-type: none"> Showing a belief that more effort or a different approach will pay off. <p>Creating and thinking critically:</p> <ul style="list-style-type: none"> Checking how well their activities are going. Reviewing how well the approach worked.

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Programming	Computational Thinking	Creativity	Computer Networks	Communication / Collaboration	Productivity
<p>Year 1</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16, 17, 28, 29, 31, 34, 36</p>	<p>1.1 We are treasure hunters - Using programmable toys:</p> <ul style="list-style-type: none"> Understand that a programmable toy can be controlled by inputting a sequence of instructions. Develop and record sequences of instructions as an algorithm. Program the toy to follow their algorithm. Debug their programs. Predict how their programs will work. <p>Curriculum links: English, Maths, Geography, History, PSHE</p>	<p>1.2 We are TV chefs - Filming the steps of a recipe:</p> <ul style="list-style-type: none"> Break down a process into simple, clear steps, as in an algorithm. Use different features of a video camera. Use a video camera to catch moving images. Develop collaboration skills. Discuss their work and think about how it could be improved. <p>Curriculum links: English, Maths, Science, Art & Design, PSHE</p>	<p>1.3 We are painters - Illustrating an eBook:</p> <ul style="list-style-type: none"> Use the web safely to find ideas for an illustration. Select and use appropriate painting tools to create and change images on the computer. Understand how this use of ICT differs from using paint and paper. Create an illustration for a particular purpose. Know how to save, retrieve and change their work. Reflect on their work and act on feedback received. <p>Curriculum links: Maths, Art & Design, History</p>	<p>1.4 We are collectors - Finding images using the web:</p> <ul style="list-style-type: none"> Find and use pictures on the web. Know what to do if they encounter pictures that cause concern. Group images on the basis of a binary (yes/no) question. Organise images into more than two groups according to clear rules. Sort (order) images according to some criteria. Ask and answer binary (yes/no) questions about their images. <p>Curriculum links: English, Maths, Science, PSHE</p>	<p>1.5 We are storytellers - Producing a talking book:</p> <ul style="list-style-type: none"> Use sound recording equipment to record sounds. Develop skills in saving and storing sounds on the computer. Develop collaborative skills as they work together in a group. Understand how a talking book differs from a paper-based book. Talk about and reflect on their use of ICT. Share recordings with an audience. <p>Curriculum links: English, Music, PSHE</p>	<p>1.6 We are celebrating - Creating a card digitally:</p> <ul style="list-style-type: none"> Develop basic keyboard skills, through typing and formatting texts. Develop basic mouse skills. Use the web to find and select images. Develop skills in storing and retrieving files. Develop skills in combining text and images. Discuss their work and think about whether it could be improved. <p>Curriculum links: English, Art & Design, Music, RE, PSHE</p>

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GLOSSARY

Acceptable Use Policy (AUP): An Acceptable Use Policy comprises a set of rules applied by the owner / manager / of a network, website or large computer system that defines the ways in which the network, site or system may be used.

Algorithm: An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.

Binary: A system in which any data or information is represented by a sequence of on/off signals, represented as 1 and 0.

Classification guide: Rules for determining which of several classes an object belongs to, such as determining the species of an animal or plant.

Creative Commons: A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: www.creativecommons.org .

Debug: To fix the errors in a program – the term 'bug' was used by the computing pioneer Grace Hopper in relation to a moth that had to be removed from an automatic switch in an early computer in order for the program to run.

E-safety: Used to describe behaviours and policies intended to minimise the risks to a user of using digital technology, particularly the internet.

Google Custom Search: The ability, via Google, to create a customised search facility for a predefined list of websites.

Google Maps: A web-based interactive geographical information service providing mapping, satellite and aerial photography, directions and additional information. See google.com/maps.

Google Translate: A free online language service from Google, which translates text and web pages using statistical matching techniques. See www.translate.google.com .

Input: Data supplied to a computer, typically via the keyboard or mouse.

Interface: The link between one system and another, typically between the user of a program and the computer on which it runs.

Network server: A computer connected to a local area network providing services - such as file storage, printing, authentication, web access or email - automatically to other computers on the network.

Output: Information produced by computer processing systems, typically on the screen or through speakers.

Phonemes: The smallest unit of sound that signals a distinct, contrasting meaning.

Podcast: A series of audio (or sometimes video) files, such as episodes of a radio programme and associated metadata, which can be imported directly and played on appropriate software or digital devices.

Programmable toys: Robots designed for children to use, accepting input, storing short sequences of simple instructions and moving according to this stored program.

Screencast: A recording of on-screen action that is often accompanied by an audio narration.

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	Autumn 1 Programming	Autumn 2 Computational Thinking	Spring 1 Creativity	Spring 2 Computer Networks	Summer 1 Communication / Collaboration	Summer 2 Productivity
Year 2 UN Convention on the Rights of the Child Articles: 13, 15, 16 17, 28, 29 31, 34, 36	2.1 We are astronauts - Programming on screen: <ul style="list-style-type: none"> • Have a clear understanding of algorithms as sequences of instructions. • Convert simple algorithms to programs. • Predict what a simple program will do. • Spot and fix (debug) errors in their programs. Curriculum links: English, Maths, Art & Design, D&T	2.2 We are games testers - Exploring how computer games work: <ul style="list-style-type: none"> • Describe carefully what happens in computer games. • Use logical reasoning to make predictions of what a program will do. • Test these predictions. • Think critically about computer games and their use. • Be aware of how to use games safely and in balance with other activities. Curriculum links: English, Science	2.3 We are photographers - Taking better photos: <ul style="list-style-type: none"> • Consider the technical and artistic merits of photographs. • Use a digital camera or camera app. • Take digital photographs. • Review and reject or rate the images they take. • Edit and enhance their photographs. • Select their best images to include in a shared portfolio. Curriculum links: Maths, Art & Design	2.4 We are researchers - Researching a topic: <ul style="list-style-type: none"> • Develop collaboration skills through working as part of a group. • Develop research skills through searching for information on the internet. • Improve note-taking skills through the use of mind mapping. • Develop presentation skills through creating and delivering a short multimedia presentation. Curriculum links: English, History	2.5 We are detectives - Collecting clues: <ul style="list-style-type: none"> • Understand that email can be used to communicate. • Develop skills in opening, composing and sending emails. • Gain skills in opening and listening to audio files on the computer. • Use appropriate language in emails. • Develop skills in editing and formatting text in emails. • Be aware of e-safety issues when using email. Curriculum links: English	2.6 We are zoologists - Collecting data about bugs: <ul style="list-style-type: none"> • Sort and classify a group of items by answering questions. • Collect data using tick charts or tally charts. • Use simple charting software to produce pictograms and other basic charts. • Take, edit and enhance photographs. • Record information on a digital map. Curriculum links: Maths, Science, Geography
	GLOSSARY Algorithm: An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective. Bitly: A web service that provides shortened links; can also be used to provide a bundle of links. Blog: An online journal or website made of a series of individual posts, usually displayed in reverse chronological order. Creative Commons: A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: www.creativecommons.org . Debug: To fix the errors in a program – the term ‘bug’ was used by the computing pioneer Grace Hopper in relation to a moth that had to be removed from an automatic switch in an early computer in order for the program to run. E-safety: Used to describe behaviours and policies intended to minimise the risks to a user of using digital technology, particularly the internet. Global Position System (GPS): This system allows a user to determine their exact location using a network of military satellites. Google Custom Search: The ability, via Google, to create a customised search facility for a predefined list of websites. Google Maps: A web-based interactive geographical information service providing mapping, satellite and aerial photography, directions and additional information. See google.com/maps . Interface: The link between one system and another, typically between the user of a program and the computer on which it runs. IWB: Interactive whiteboard. Learning platform: A term used by some schools to describe a virtual learning environment; a collection of web-based tools designed to support learning at home or in school. Logical reasoning: A systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules. MP3: A common format for audio files. Open Air Laboratories (OPAL): A network of UK-wide citizen science initiatives: www.opalexplornature.org . Programmable toys: Robots designed for children to use, accepting input, storing short sequences of simple instructions and moving according to this stored program. Sequence: To place programming instructions in order, with each executed one after the other. Sprite: A computer graphics object that can be controlled (programmed) independently of other objects or the background.					

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	Autumn 1 Programming	Autumn 2 Computational Thinking	Spring 1 Creativity	Spring 2 Computer Networks	Summer 1 Communication / Collaboration	Summer 2 Productivity
<p>Year 3</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16, 17, 28, 29, 31, 34, 36</p>	<p>3.1 We are programmers - Programming an animation:</p> <ul style="list-style-type: none"> • Create an algorithm for an animated scene in the form of a storyboard. • Write a program in Scratch to create the animation. • Correct mistakes in their animation programs. <p>Curriculum links: English, Art & Design, Music, Languages</p>	<p>3.2 We are bug fixers - Finding and correcting bugs in programs:</p> <ul style="list-style-type: none"> • Develop a number of strategies for finding errors in programs. • Build up resilience and strategies for problem solving. • Increase their knowledge and understanding of Scratch. • Recognise a number of common types of bug in software. <p>Curriculum links: English, Maths, Science</p>	<p>3.3 We are presenters - Videoing performance:</p> <ul style="list-style-type: none"> • Gain skills in shooting live video, such as framing shots, holding the camera steady, and reviewing. • Edit video, including adding narration and editing clips by setting in/out points. • Understand the qualities of effective video, such as the importance of narrative, consistency, perspective and scene length. <p>Curriculum links: English, Maths, PE</p>	<p>3.4 We are network engineers - Exploring computer networks, including the internet:</p> <ul style="list-style-type: none"> • Understand the physical hardware connections necessary for computer networks to work. • Understand some features of internet protocols. • Understand some diagnostic tools for investigating network connections. • Develop a basic understanding of how domain names are converted to IP addresses. <p>Curriculum links: D&T, Geography</p>	<p>3.5 We are communicators - Communicating safely on the internet:</p> <ul style="list-style-type: none"> • Develop a basic understanding of how email works. • Gain skills in using email. • Be aware of broader issues surrounding email, including 'netiquette' and e-safety. • Work collaboratively with a remote partner. • Experience video conferencing. <p>Curriculum links: English, PE, Art & Design, History, Music, Languages</p>	<p>3.6 We are opinion pollsters - Collecting and analysing data:</p> <ul style="list-style-type: none"> • Understand some elements of survey design. • Understand some ethical and legal aspects of online data collection. • Use the web to facilitate data collection. • Gain skills in using charts to analyse data. • Gain skills in interpreting results. <p>Curriculum links: English, Maths, PSHE</p>

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GLOSSARY

Algorithm: An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.

Arithmetic bugs: Errors in a program caused by problems with mathematical calculations, such as dividing by zero, working with numbers that are too large to store, or loss of precision owing to rounding.

Computer networks: Computers and their connections, allowing data to be transferred – typically at very high speed – between one computer and another.

Conceptual bugs: Errors in programs owing to a misunderstanding of the system or processes being modelled.

Creative Commons: A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: <http://creativecommons.org>.

Debug: To fix the errors in a program.

Domain Name Service (DNS): The distributed automatic system that converts domain names into the IP addresses which are used for routing packets via the internet.

Input: Data supplied to a computer, typically via the keyboard or mouse.

Internet: Global network connecting computers and local networks using automated switches, routers and fibreoptic, copper wire and radio connections.

Internet Protocol (IP) addresses: Numeric addresses uniquely specifying computers directly connected to the internet, also used on private networks to uniquely identify computers on that network.

ipconfig: A Windows command to show (or modify) information about the computer's network interface. The Mac/Linux equivalent is ifconfig.

ISPs: Internet service providers.

Mail client: Software running on a computer (including tablets and smartphones) that allows emails to be sent and received, e.g. Microsoft Outlook.

Mail server: A service that sends email messages out to the internet or receives email messages from the internet.

Malware: Software designed with malicious intent, such as viruses, trojan horses, rootkits and keyloggers.

Multi-thread bugs: Errors in programs that involve more than one process running simultaneously, such as two processes where each is waiting for the other to complete, or one process racing ahead of the other.

Network switch: Dedicated computer hardware that routes data packets to particular connections according to their IP address header.

nslookup: Windows (and Mac/Linux) command allowing DNS lookups to be performed manually and providing further diagnostic information.

Off-by-one bugs: An error in a program caused when a loop repeats once too many or too few times, usually fixed by checking the end connection of the loop.

Output: Information produced by computer processing systems, typically on the screen or through speakers.

Packets of data: A small set of numbers that get transmitted together via the internet, typically enough for 1000 or 1500 characters.

Performance bugs: Poor functioning of computer programs owing to inadequate interfacing with hardware components (such as memory or disk) or inefficient algorithm design.

Programs: A stored set of instructions encoded in a language understood by the computer that does some form of computation, processing input and/or stored data to generate output.

Repetition: A programming construct in which one or more instructions are repeated, perhaps a certain number of times, until a condition is satisfied or until the program is stopped.

'Rushes' of footage: Raw, unedited footage.

Screencast: A way of recording the action on a computer screen; often accompanied by a voice-over.

Selection: A programming construct in which the instructions that are executed are determined by whether a particular condition is met.

Sequence: To place programming instructions in order, with each executed one after the other.

Spam: Unwanted, unsolicited advertising, typically by email.

Spoofed links: Links that look as though they point to one website but actually point to another.

Sprite: A computer graphics object that can be controlled (programmed) independently of other objects or the background.

tracert: A Windows command to show the IP addresses (and sometimes DNS names) of the routers, switches and other computers through which a data packet travels. The Linux/Mac equivalent is traceroute.

Variables: A way in which computer programs can store, retrieve or change simple data, such as a score, the time left, or the user's name.

Web server: A service running on a computer (or sometimes the computer itself) that returns HTML data for a web page when it receives a request via the local network or the internet.

World wide web: A service provided by computers connected to the internet (web servers), in which pages of hypertext (web pages) are transmitted to users; the pages typically include links to other web pages and may be generated by programs automatically.

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<p>Year 4</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16 17, 28, 29 31, 34, 36</p>	<p>4.1 We are software developers - Developing a simple educational game:</p> <ul style="list-style-type: none"> • Develop an educational computer game using selection and repetition. • Understand and use variables. • Start to debug computer programs. • Recognise the importance of user interface design, including consideration of input and output. <p>Curriculum links: English, Maths, Languages</p>	<p>4.2 We are toy designers - Prototyping an interactive toy:</p> <ul style="list-style-type: none"> • Design and make an on-screen prototype of a computer-controlled toy. • Understand different forms of input and output (such as sensors, switches, motors, lights and speakers). • Design, write and debug the program for their toy. <p>Curriculum links: English, D&T, Music</p>	<p>4.3 We are musicians - Producing digital music:</p> <ul style="list-style-type: none"> • Use one or more programs to edit music. • Create and develop a musical composition, refining their ideas through reflection and discussion. • Develop collaboration skills. • Develop an awareness of how their composition can enhance work in other media. <p>Curriculum links: Maths, Music</p>	<p>4.4 We are HTML editors - Editing and writing HTML:</p> <ul style="list-style-type: none"> • Understand some technical aspects of how the internet makes the web possible. • Use HTML tags for elementary mark up. • Use hyperlinks to connect ideas and sources. • Code up a simple web page with useful content. • Understand some of the risks in using the web. <p>Curriculum links: English, History</p>	<p>4.5 We are co-authors - Producing a wiki:</p> <ul style="list-style-type: none"> • Understand the conventions for collaborative online work, particularly in wikis. • Be aware of their responsibilities when editing other people's work. • Become familiar with Wikipedia, including potential problems associated with its use. • Practise research skills. • Write for a target audience using a wiki tool. • Develop collaboration skills. • Develop proofreading skills. <p>Curriculum links: English</p>	<p>4.6 We are meteorologists - Presenting the weather:</p> <ul style="list-style-type: none"> • Understand different measurement techniques for weather, both analogue and digital. • Use computer-based data logging to automate the recording of some weather data. • Use spreadsheets to create charts • Analyse data, explore inconsistencies in data and make predictions • Practise using presentation software and, optionally, video. <p>Curriculum links: English, Maths, Science, Geography</p>

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GLOSSARY

Algorithm: An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.

Anchor tag: The ... tag in HTML that creates hyperlinks from one web page to (typically) another.

Audacity@: Open source software for recording and editing audio: <http://audacity.sourceforge.net>.

Computational thinking: Looking at systems and problems in a way that would allow computer systems to be used to model or solve these.

Creative Commons: A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: <http://creativecommons.org>.

Cup anemometer: A device for measuring wind speed in which hemispherical cups rotate about a shaft, the speed of the rotation being proportional to the wind speed.

Debug: To fix the errors in a program – the term 'bug' was used by the computing pioneer Grace Hopper in relation to a moth that had to be removed from an automatic switch in an early computer in order for the program to run.

Decomposing: The process through which problems or systems are broken down into its component parts, each of which may then be considered separately.

Digital technology: Technology in which information is represented in digital form, including modern computers but also MP3 players, DVD players, digital televisions, digital cameras, etc.

Hypertext mark-up language (HTML): HTML is the predominant language for web pages.

HTML tags: The information in web pages that describes the form or structure of part of the page. The tags are typically matched, angle-bracketed pairs, at the beginning and end of each element, e.g.: <p>This would be a paragraph.</p>.

Hyperlinks: Text or images that, when clicked, opens another page or moves to another part of the document.

Hypertext transfer protocol (HTTP): HTTP is the standard protocol for the request and transmission of HTML web pages between browser and web server.

Interface: The link between one system and another, typically between the user of a program and the computer on which it runs.

Kickstarter: A popular website in which entrepreneurs can seek funding from large numbers of users for a product or service: <https://www.kickstarter.com>.

LMMS: Open source digital audio workstation software for Windows or Linux: <http://lmms.sourceforge.net>.

Logical reasoning: A systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules.

Loop: A programming construct in which one or more instructions are repeated, perhaps a certain number of times, until a condition is satisfied or until the program is stopped.

Micro blog: A form of blog in which posts are very short, e.g. Twitter.

Mix: The process through which multiple sources (e.g. audio tracks) are combined into one or more channels, such as two-channel stereo.

Plenary: A lesson component characterised by whole-class discussion, often to review work accomplished during independent or group work activities.

Pressure pad: A sensor in which a signal is generated or a circuit completed by pressing down on the pad, e.g. a sensor hidden under a carpet as part of a burglar alarm.

Protocol: A set of agreed rules and procedures for communication.

Prototype: An early sample of a product or program built to test the concept.

Proximity sensor: A hardware sensor that gives a measure of the distance to an object, usually by timing the reflection of an ultrasound or infrared pulse.

Pseudocode: An informal but detailed written description of an algorithm, allowing it to be coded in a range of programming languages.

Raspberry Pi: A small, low-cost Linux-based computer.

Repeat block: A Scratch program block used for repetition.

Repetition: A programming construct in which one or more instructions are repeated, perhaps a certain number of times, until a condition is satisfied or until the program is stopped.

Screencast: A way of recording the action on a computer screen; often accompanied by a voice-over.

Simulation: Using a computer to model the state and behaviour of real-world (or imaginary) systems, including physical and social systems; an integral part of most computer games.

Smartphone: A mobile phone on which user-selected apps (programs) can be installed, typically with a touchscreen interface and internet connectivity.

Thimble editor: A browser-based HTML editor that shows a live preview of the HTML as it would be displayed by a web browser: <https://thimble.webmaker.org>.

Uniform Resource Locator (URL): A standard for specifying the location on the internet of certain data files, such as <http://info.cern.ch/hypertext/WWW/TheProject.html>. In this case (and typically), the URL includes the protocol used to transmit the data, the computer on which it is stored, the file path and the file name of the data.

Wiki: A website that allows the creation and editing of any number of interlinked web pages via a web browser; often used to create collaborative works.

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	Autumn 1 Programming	Autumn 2 Computational Thinking	Spring 1 Creativity	Spring 2 Computer Networks	Summer 1 Communication / Collaboration	Summer 2 Productivity
<p>Year 5</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16 17, 28, 29 31, 34, 36</p>	<p>5.1 We are game developers - Developing an interactive game:</p> <ul style="list-style-type: none"> • Create original artwork and sound for a game. • Design and create a computer program for a computer game, which uses sequence, selection, repetition and variables. • Detect and correct errors in their computer game. • Use iterative development techniques (making and testing a series of small changes) to improve their game. <p>Curriculum links: Art & Design, Music</p>	<p>5.2 We are cryptographers - Cracking codes:</p> <ul style="list-style-type: none"> • Be familiar with semaphore and Morse code. • Understand the need for private information to be encrypted. • Encrypt and decrypt messages in simple ciphers. • Appreciate the need to use complex passwords and to keep them secure. • Have some understanding of how encryption works on the web. <p>Curriculum links: Maths, Science, D&T, History, PSHE</p>	<p>5.3 We are artists - Fusing geometry and art:</p> <ul style="list-style-type: none"> • Develop an appreciation of the links between geometry and art. • Become familiar with the tools and techniques of a vector graphics package. • Develop an understanding of turtle graphics. • Experiment with the tools available, refining and developing their work as they apply their own criteria to evaluate it and receive feedback from their peers. • Develop some awareness of computer generated art, in particular fractal-based landscapes. <p>Curriculum links: Maths, PE, Art & Design, RE</p>	<p>5.4 We are web developers - Creating a website about cyber safety:</p> <ul style="list-style-type: none"> • Develop their research skills to decide what information is appropriate. • Understand some elements of how search engines select and rank results. • Question the plausibility and quality of information. • Develop and refine their ideas and text collaboratively. • Develop their understanding of e-safety and responsible use of technology. <p>Curriculum links: English, History</p>	<p>5.5 We are bloggers - Sharing experiences and opinions:</p> <ul style="list-style-type: none"> • Become familiar with blogs as a medium and a genre of writing. • Create a sequence of blog posts on a theme. • Incorporate additional media. • Comment on the posts of others. • Develop a critical, reflective view of a range of media, including text. <p>Curriculum links: English, History</p>	<p>5.6 We are architects - Creating a virtual space:</p> <ul style="list-style-type: none"> • Understand the work of architects, designers and engineers working in 3D. • Develop familiarity with a simple CAD (computer aided design) tool. • Develop spatial awareness by exploring and experimenting with a 3D virtual environment. • Develop greater aesthetic awareness. <p>Curriculum links: Maths, Science, Art & Design</p>

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GLOSSARY

Algorithm: An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.

Bitmap: A way of representing an image as an array of pixels (dots), where the colour of each is specified.

Blog: An online journal or website made of a series of individual posts, usually displayed in reverse chronological order.

Buggy code: Computer programs with mistakes.

Caesar cipher: A simple cryptographic system in which the plain text is encrypted by shifting each letter along the alphabet a certain, agreed number of places.

Computer-Aided Design (CAD): using computer software to help design real-world artefacts, from engineering components to buildings.

Cascading Style Sheet (CSS): A document that describes the format and presentation of HTML content on the web.

Computer networks: Computers and their connections, allowing data to be transferred – typically at very high speed – between one computer and another.

Creative Commons: A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: <http://creativecommons.org>.

Cryptanalysis: The process of decrypting an encrypted message without prior access to the encryption key.

Cryptography: The science of keeping communication and information secret.

Cyberbullying: To use online systems with the deliberate intention of hurting or upsetting another person.

Debug: To fix the errors in a program – the term 'bug' was used by the computing pioneer Grace Hopper in relation to a moth that had to be removed from an automatic switch in an early computer in order for the program to run.

Decrypt: To convert an encrypted message into plain text so that it can be read and understood.

Encrypt: To convert a plain, readable message into an encrypted form so that it cannot be read by those without a secret key.

Firewall: A service protecting a local network from external access, or preventing access to some internet services from a local network.

Fractal: A self-similar repeating (or almost repeating) structure in which ever greater detail becomes apparent as the structure is examined more and more closely.

Hyperlinks: Text or images that, when clicked, opens another page or moves to another part of the document.

Hypertext mark-up language (HTML): HTML is the predominant language for web pages.

Iterative development: A trial and improvement approach to programming or other work, in which each successive version builds on the previous one by the fixing of mistakes or the adding of features.

Logical reasoning: A systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules.

Morse code: A simple code for converting letters and numbers into patterns of short and long electrical pulses.

Page Rank: Google's main search algorithm in which search results are ranked according to the number and quality of inbound links.

Photorealistic: An image indistinguishable (or nearly indistinguishable) from a digital photograph.

Semaphore: A simple code for converting letters and numbers into different positions of two flags, one held in each hand.

Tessellation: A regular pattern of one shape that fills a space without overlapping or leaving spaces between.

Vector graphics: A way of representing an image by specifying the lines, arcs and regions from which it is made.

Web server: A service running on a computer (or sometimes the computer itself) that returns HTML data for a web page when it receives a request via the local network or the internet.

WordPress: A popular open source blogging platform; also used as a general content management system.

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Programming	Computational Thinking	Creativity	Computer Networks	Communication / Collaboration	Productivity
<p>Year 6</p> <p>UN Convention on the Rights of the Child</p> <p>Articles: 13, 15, 16 17, 28, 29 31, 34, 36</p>	<p>6.1 We are app planners - Planning the creation of a mobile app:</p> <ul style="list-style-type: none"> • Develop an awareness of the capabilities of smartphones and tablets. • Understand geolocation, including GPS. • Identify interesting, solvable problems. • Evaluate competing products. • Pitch a proposal for a smartphone or tablet app. <p>Curriculum links: English, Art & Design, Geography, Music</p>	<p>6.2 We are project managers - Developing project management skills:</p> <ul style="list-style-type: none"> • Scope a project to identify different components that must be successfully combined. • Identify their existing talents and plan how they can develop further knowledge and skills. • Identify the component tasks of a project and develop a timeline to track progress. • Identify the resources they'll need to accomplish a project. • Use web-based research skills to source tools, content and other resources. • Consider strategies to ensure the quality of a collaborative project. <p>Curriculum links: English, Maths</p>	<p>6.3 We are market researchers - Researching the app market:</p> <ul style="list-style-type: none"> • Create a set of good survey questions. • Analyse the data obtained from a survey. • Work collaboratively to plan questions. • Conduct an interview or focus group. • Analyse and interpret the information obtained from interviews or a focus group. • Present their research findings. <p>Curriculum links: English, Maths</p>	<p>6.4 We are interface designers - Designing an interface for an app:</p> <ul style="list-style-type: none"> • Work collaboratively to design the app's interface. • Use wire-framing tools to create a design prototype of their app. • Develop or source the individual interface components (media assets) they will use. • Address accessibility and inclusion issues. • Document their design decisions and the process they've followed. <p>Curriculum links: English, Art & Design, D&T, PSHE</p>	<p>6.5 We are app developers - Developing a simple mobile phone app:</p> <ul style="list-style-type: none"> • Become familiar with another programming toolkit or development platform. • Import existing media assets to their project. • Write down the algorithms for their app. • Program, debug and refine the code for their app. • Thoroughly test and evaluate their app. <p>Curriculum links: English, Maths, Art & Design, D&T, PSHE</p>	<p>6.6 We are marketers - Creating video and web copy for a mobile phone app:</p> <ul style="list-style-type: none"> • Consider key marketing messages, including identifying a unique selling point. • Develop a printed flyer or brochure incorporating text and images. • Further develop knowledge, skills and understanding in relation to creating a website. • Further develop skills relating to shooting and editing video. <p>Curriculum links: English, Maths, Art & Design, D&T</p>

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GLOSSARY

- **Algorithm:** An unambiguous set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.
- **App:** Short for application – a program for a smartphone or tablet computer designed to achieve a specific goal.
- **Creative Commons:** A licensing scheme where the creator of an original work allows others to use it without seeking further permission, subject to a number of agreed conditions: <http://creativecommons.org>.
- **Debug:** To fix the errors in a program – the term 'bug' was used by the computing pioneer Grace Hopper in relation to a moth that had to be removed from an automatic switch in an early computer in order for the program to run.
- **Digital signage system:** The use of large computer screens as displays of visual information, sometimes including video.
- **Gantt charts:** Project management bar charts showing the schedule and dependencies for component tasks in a project.
- **Geotagging:** The process of tagging media, such as photographs, with geographical identification information (using latitude and longitude coordinates).
- **Global Position System (GPS):** This system allows a user to determine their exact location using a network of military satellites.
- **Hypertext mark-up language (HTML):** HTML is the predominant language for web pages.
- **Interface:** The link between one system and another, typically between the user of a program and the computer on which it runs.
- **iOS:** Apple's operating system for iPhone, iPad and iPod Touch.
- **MP4:** An example of a standard format for video footage.
- **OS X:** Apple's operating system for Macintosh computers (laptops, desktops and servers).
- **Page Rank:** Google's main search algorithm in which search results are ranked according to the number and quality of inbound links.
- **Prototype:** An early sample of a product or program built to test the concept.
- **Pseudocode:** An informal but detailed written description of an algorithm, allowing it to be coded in a range of programming languages.
- **QR code:** A two-dimensional binary (black/white) pattern encoding text, typically URLs, for easy access from smartphones or tablets.
- **Tablet:** A handheld or portable computer with a pen or touch-based interface.
- **Uniform Resource Locator (URL):** A standard for specifying the location on the internet of certain data files, such as <http://info.cern.ch/hypertext/WWW/TheProject.html>. In this case (and typically), the URL includes the protocol used to transmit the data, the computer on which it is stored, the file path and the file name of the data.
- **Widget:** A widget is an element of the graphical user interface that displays information or allows the user to control some aspect of the app.
- **Wireframe:** A visual guide representing the design of the graphical elements of a program or web page.

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Computing Skills Progression

Computing Skills Progression						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety / E-Sense	Pupils should be taught to 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 their online technologies.		Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable / unacceptable behaviour, identify a range of ways to report concerns about content and contact. Be discerning in evaluating digital content.			
	<ul style="list-style-type: none"> I can keep my password private. I can tell you what personal information is. I can tell an adult when I see something unexpected or worrying online. I can talk about why it's important to be kind and polite. I can recognise an age appropriate website. I can agree and follow sensible e-safety rules. 	<ul style="list-style-type: none"> I can explain why I need to keep my password and personal information private. I can describe the things that happen online that I must tell an adult about. I can talk about why I should go online for a short amount of time. I can talk about why it is important to be kind and polite online and in real life. I know that not everyone is who they say they are on the internet. 	<ul style="list-style-type: none"> I can talk about what makes a secure password and why they are important. I can protect my personal information when I do different things online. I can use the safety features of websites as well as reporting concerns to an adult. I can recognise websites and games appropriate for my age. I can make good choices about how long I spend online. I ask an adult before downloading files and games from the internet. I can post positive comments online. 	<ul style="list-style-type: none"> I can choose a secure password when I am using a website. I can talk about the ways I can protect myself and my friends from harm online. I can use the safety features of websites as well as reporting concerns to an adult. I know that anything I post online can be seen by others. I choose websites and games that are appropriate for my age. I can help my friends make good choices about the time they spend online. I can talk about why I need to ask a trusted adult before downloading files and games from the internet. I comment positively and respectfully online. 	<ul style="list-style-type: none"> I protect my password and other personal information. I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. I know that anything I post online can be seen, used and may affect others. I can talk about the dangers of spending too long online or playing a game. I can explain the importance of communicating kindly and respectfully. I can discuss the importance of choosing an age-appropriate website or game. I can explain why I need to protect my computer or device from harm. I know which resources on the internet I can download and use. 	<ul style="list-style-type: none"> I protect my password and other personal information. I can explain the consequences of sharing too much information about myself online. I support my friends to protect themselves and make good choices online, including reporting concerns to an adult. I can explain the consequences of spending too much time online or on a game. I can explain the consequences to myself and others of not communicating kindly and respectfully. I protect my computer or device from harm on the internet.

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Computing Skills Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Programming	<p>Pupils should be taught to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.</p>		<p>Pupils should be taught to design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.</p>			
	<ul style="list-style-type: none"> I can give instructions to my friend and follow their instructions to move around. I can describe what happens when I press buttons on a robot. I can press the buttons in the correct order to make my robot do what I want. I can describe what actions I will need to do to make something happen and begin to use the word ‘algorithm’. I can begin to predict what will happen for a short sequence of instructions. I can begin to use software / apps to create movement and patterns on a screen. I can use the word ‘debug’ when I correct mistakes when I Program. 	<ul style="list-style-type: none"> I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions. I can tell you the order I need to do things to make something happen and talk about this as an algorithm. I can program a robot or software to do a particular task. I can look at my friend’s program and tell you what will happen. I can use programming software to make objects move. I can watch a program execute and spot where it goes wrong so that I can debug it. 	<ul style="list-style-type: none"> I can break an open-ended problem up into smaller parts. I can put programming commands into a sequence to achieve a specific outcome. I keep testing my program and can recognise when I need to debug it. I can use repeat commands. I can describe the algorithm I will need for a simple task. I can detect a problem in an algorithm which could result in. 	<ul style="list-style-type: none"> I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. I can use an efficient procedure to simplify a program. I can use a sensor to detect a change which can select an action within my program. I know that I need to keep testing my program while I am putting it together. I can use a variety of tools to create a program. I can recognise an error in a program and debug it. I can recognise that an algorithm will help me sequence more complex programs. I recognise that using algorithms will also help solve problems in other learning such as maths, science and design technology. 	<ul style="list-style-type: none"> I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. I can refine a procedure using repeat commands to improve a program. I can use a variable to increase programming possibilities. I can change an input to a program to achieve a different output. I can use ‘if’ and ‘then’ commands to select an action. I can talk about how a computer model can provide information about a physical system. I can use logical reasoning to detect and debug mistakes in a program. I use logical thinking, imagination and creativity to extend a program. 	<ul style="list-style-type: none"> I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. I can explain and program each of the steps in my algorithm. I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. I can recognise when I need to use a variable to achieve a required output. I can use a variable and operators to stop a program. I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen. I can use logical reasoning to detect and correct errors in algorithms and programs.

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Computing Skills Progression

Computing Skills Progression							
Year 1		Year 2		Year 3	Year 4	Year 5	Year 6
<p>Pupils should be taught to use technology purposefully to organise and manipulate digital content.</p>		<p>Pupils should be taught to 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>Pupils should be taught to 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>Pupils should be taught to 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>Pupils should be taught to 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>Pupils should be taught to 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>

Handling Data	<ul style="list-style-type: none"> I can talk about the different ways in which information can be shown. I can use technology to collect information, including photos, video and sound. I can sort different kinds of information and present it to others. I can add information to a pictograph and talk to you about what I have found out. 	<ul style="list-style-type: none"> I can talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. I can make and save a chart or graph using the data I collect. I can talk about the data that is shown in my chart or graph. I am starting to understand a branching database. I can tell you what kind of information I could use to help me investigate a question. 	<ul style="list-style-type: none"> I can talk about the different ways data can be organised. I can search a ready-made database to answer questions. I can collect data to help me answer a question. I can add to a database. I can make a branching database. I can use a data logger to monitor changes and can talk about the information collected. 	<ul style="list-style-type: none"> I can organise data in different ways. I can collect data and identify where it could be inaccurate. I can plan, create and search a database to answer questions. I can choose the best way to present data to my friends. I can use a data logger to record and share my readings with my friends. 	<ul style="list-style-type: none"> I can use a spreadsheet and database to collect and record data. I can choose an appropriate tool to help me collect data. I can present data in an appropriate way. I can search a database using different operators to refine my search. I can talk about mistakes in data and suggest how it could be checked. 	<ul style="list-style-type: none"> I can plan the process needed to investigate the world around me. I can select the most effective tool to collect data for my investigation. I can check the data I collect for accuracy and plausibility. I can interpret the data I collect. I can present the data I collect in an appropriate way. I use the skills I have developed to interrogate a database.
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Computing Skills Progression									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6				
<p>Pupils should be taught to use technology purposefully to create digital content</p> <ul style="list-style-type: none"> I can be creative with different technology tools. I can use technology to create and present my ideas. I can use the keyboard or a word bank on my device to enter text. I can save information in a special place and retrieve it again 		<p>Pupils should be taught to 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.</p> <ul style="list-style-type: none"> I can create different effects with different technology tools. I can combine a mixture of text, graphics and sound to share my ideas and learning. I can use appropriate keyboard commands amend text on my device, including making use of a spellchecker. I can evaluate my work and improve its effectiveness. I can use an appropriate tool to share my work online. 		<p>Pupils should be taught to 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.</p> <ul style="list-style-type: none"> I can use photos, video and sound to create an atmosphere when presenting to different audiences. I am confident to explore new media to extend what I can achieve. I can change the appearance of text to increase its effectiveness. I can create, modify and present documents for a particular purpose. I can use a keyboard confidently and make use of a spellchecker to write and review my work. I can use an appropriate tool to share my work and collaborate online. I can give constructive feedback to my friends to help them improve their work and refine my own work. 		<p>Pupils should be taught to 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.</p> <ul style="list-style-type: none"> I can use text, photo, sound and video editing tools to refine my work. I can use the skills I have already developed to create content using unfamiliar technology. I can select, use and combine the appropriate technology tools to create effects that will have an impact on others. I can select an appropriate online or offline tool to create and share ideas. I can review and improve my work and support others to improve their work. 		<p>Pupils should be taught to 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.</p> <ul style="list-style-type: none"> I can talk about audience, atmosphere and structure when planning a particular outcome. I can confidently identify the potential of unfamiliar technology to increase my creativity. I can combine a range of media, recognising the contribution of each to achieve a particular outcome. I can tell you why I select a particular online tool for a specific purpose. I can be digitally discerning when evaluating the effectiveness of my work and the work of others. 	
Multimedia									

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Computing Skills Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Technology in our Lives	<p>Pupils should be taught to use technology purposefully to store and retrieve digital content and to recognise common uses of information technology beyond school.</p>		<p>Pupils should be taught to understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.</p>			
	<ul style="list-style-type: none"> I can recognise the way we use technology in our classroom. I can recognise ways that technology is used in my home and community. I can use links to websites to find information. I can begin to identify some of the benefits of using technology 	<ul style="list-style-type: none"> I can tell you why I use technology in the classroom. I can tell you why I use technology in my home and community. I am starting to understand that other people have created the information I use. I can identify benefits of using technology including finding information, creating and communicating. I can talk about the differences between the internet and things in the physical world. 	<ul style="list-style-type: none"> I can save and retrieve work on the internet, the school network or my own device. I can talk about the parts of a computer. I can tell you ways to communicate with others online. I can describe the World Wide Web as the part of the internet that contains websites. I can use search tools to find and use an appropriate website. I can think about whether I can use images that I find online in my own work. 	<ul style="list-style-type: none"> I can tell you whether a resource I am using is on the internet, the school network or my own device. I can identify key words to use when searching safely on the World Wide Web. I think about the reliability of information I read on the World Wide Web. I can tell you how to check who owns photos, text and clipart. I can create a hyperlink to are source on the World Wide Web. 	<ul style="list-style-type: none"> I can describe different parts of the internet. I can use different online communication tools for different purposes. I can use a search engine to find appropriate information and check its reliability. I can recognise and evaluate different types of information I find on the World Wide Web. I can describe the different parts of a webpage. I can find out who the information on a webpage belongs to. 	<ul style="list-style-type: none"> I can tell you the internet services I need to use for different purposes. I describe how information is transported on the internet. I can select an appropriate tool to communicate and collaborate online. I can talk about the way search results are selected and ranked. I can check the reliability of a website. I can tell you about copyright and acknowledge the sources of information that I find online.