

## Computing Curriculum Map

### EYFS

Within the new EYFS curriculum the 'Technology' strand has been removed from 'Understanding the World' and has not been replaced with any updated guidance. However, computing and technology are still vitally important subjects to teach to Foundation children. Teaching computing within the curriculum ensures that children enter Year 1 with a strong foundation of knowledge. Computing lessons in the EYFS also ensure that children develop listening skills, problem-solving abilities and thoughtful questioning — as well as improving subject skills across the seven areas of learning.

We live in a technological world and there is no escape from the reality that technology is integrated into the lives of young children. Just as we ensure the children in our care are ready for the adult world by teaching them maths and literacy, we should also make sure that they are fluent in computer literacy and all-important online safety.

Further information can be found here : [W Computing.docx](#)

#### **Barefoot computing unplugged EYFS**

<https://drive.google.com/drive/folders/1cuOCRp9oQqjQ-489jpVTxuE7romOKf4a>

What is Computational Thinking?

'Computational Thinking' is a set of problem solving skills that we can use in everyday life.

Computational Thinking is a set of problem solving skills we can learn away from the computer. When children are older they will start to use their Computational Thinking skills to create computer systems that are part of solutions to problems - but not quite in Early Years. We might use online activities now and then to practise some aspects of Computational Thinking skills, but in EYFS we can learn Computational Thinking without computers. This is called an 'unplugged' approach.

[https://drive.google.com/file/d/1k40dW9Jwp9Q483To-qDzQIIWg64uCG1i/view?usp=share\\_link](https://drive.google.com/file/d/1k40dW9Jwp9Q483To-qDzQIIWg64uCG1i/view?usp=share_link)

## EYFS Computational Thinking simple definitions

EYFS Computational Thinking Skills	Simple definitions
Tinkering	Playing and exploring
Creating	Creating, checking and fixing things
Collaboration	Playing and working collaboratively
Persevering	Not giving up
Logic	Anticipating and explaining is logical reasoning
Pattern	Grouping things, comparing, spotting similarities and differences, working out rules
Abstraction	Naming and labelling, working out what is important, sticking to the main theme, ignoring what is not important, creating a summary
Algorithms and Decomposition	Responding to instructions, ordering things, sequencing things, introducing storylines, working out different ways to do things, breaking problems down into steps

## Cross-reference of the EYFS Computational Thinking concepts to the Prime Areas of Learning

	Communication and Language		Personal, Social and Emotional Development			Physical Development	
	Listening, Attention and Understanding	Speaking	Self-Regulation	Managing Self	Building relationships	Gross Motor Skills	Fine Motor Skills
Tinkering						✓	✓
Creating						✓	✓
Collaboration	✓		✓	✓	✓		
Persevering	✓			✓			
Logic	✓	✓					
Pattern	✓	✓					
Abstraction	✓	✓					
Algorithms and decomposition	✓	✓					

## Cross-reference of the Early Years Computational Thinking concepts to the Specific Areas of Learning

	Literacy			Mathematics		Understanding the world			Expressive arts and design	
	Comprehension	Word Reading	Writing	Number	Numerical Patterns	Past and Present	People, Culture and communities	The Natural World	Creating with Materials	Being imaginative and Expressive
Tinkering									✓	✓
Creating								✓	✓	✓
Collaboration						✓	✓		✓	
Persevering										
Logic	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pattern	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Abstraction	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Algorithms and decomposition	✓	✓	✓	✓	✓	✓	✓	✓	✓	

	Autumn	Spring	Summer
<b>EYFS See</b> <a href="#">EYFS Long ...</a>	Marvellous Me! Fantastic foods!  Links to Barefoot computing unplugged EYFS: <ul style="list-style-type: none"> <li>• Busy bodies</li> <li>• Tinkering Playing and exploring</li> <li>• Creating Creating, checking and fixing things</li> </ul>	Out and about Once upon a time  Links to Barefoot computing unplugged EYFS: <ul style="list-style-type: none"> <li>• Collaboration Playing and working collaboratively</li> <li>• Persevering and not giving up</li> <li>• Logic Anticipating and explaining is logical reasoning</li> </ul>	Supersonic space Awesome animals  Links to Barefoot computing unplugged EYFS: <ul style="list-style-type: none"> <li>• Abstraction Naming and labelling, working out what is important, sticking to the main theme, ignoring what is not important, creating a summary</li> <li>• Algorithms and Decomposition</li> </ul>

		<ul style="list-style-type: none"> <li>• Pattern Grouping things, comparing, spotting similarities and differences, working out rules</li> </ul>	Responding to instructions, ordering things, sequencing things, introducing storylines, working out different ways to do things, breaking problems down into steps
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**Year One and Two**

**Curriculum coverage**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>YEAR 1</b>	Online safety <a href="https://drive.google.com/drive/folders/1SaFNrJTrAEp5pnn_aEjxxE4FqtMCRrFRq">https://drive.google.com/drive/folders/1SaFNrJTrAEp5pnn_aEjxxE4FqtMCRrFRq</a>  Tech She Can Katie and Tex explore cashless payments <a href="https://www.techshecan.org/animated-lessons/explore-cashless-payments">https://www.techshecan.org/animated-lessons/explore-cashless-payments</a>	Computer skills <a href="https://drive.google.com/drive/folders/1FWsS0FGy2eS55z_VewB718W3g8Kkl3Bd">https://drive.google.com/drive/folders/1FWsS0FGy2eS55z_VewB718W3g8Kkl3Bd</a>  <b>Updated content</b>	Programming toys <a href="https://drive.google.com/drive/folders/18zLbzo-FG7ya7FE_bzQImogWT8k_CG77I">https://drive.google.com/drive/folders/18zLbzo-FG7ya7FE_bzQImogWT8k_CG77I</a>	Digital Painting <a href="https://drive.google.com/drive/folders/1SVraO4xXHW3ylA_HC9V6hPU-r3aDwLb8r">https://drive.google.com/drive/folders/1SVraO4xXHW3ylA_HC9V6hPU-r3aDwLb8r</a>  <b>Updated content</b>	Scratch <a href="https://drive.google.com/drive/folders/1FlqpVMAFAS2L449ahFWdyQFGk3W7xcKK">https://drive.google.com/drive/folders/1FlqpVMAFAS2L449ahFWdyQFGk3W7xcKK</a>	Word processing <a href="https://drive.google.com/drive/folders/1ax2XLmMQhYHRllztoNea1eQuDjlss1bO">https://drive.google.com/drive/folders/1ax2XLmMQhYHRllztoNea1eQuDjlss1bO</a>
<b>Links to NC PRIMARY_n...</b>	Children should be taught about: using technology purposefully to create; using technology purposefully to	Children should be taught about: using technology purposefully to manipulate; using technology purposefully to	Children should be taught about: algorithms and what they are; how algorithms are implemented as programs on digital	Children should be taught about: using logical reasoning to predict the behaviour of simple programs; using technology	Children should be taught about: algorithms and what they are; how algorithms are implemented as programs on digital	Children should be taught about: using technology purposefully to create; using technology purposefully to

	organise; using technology purposefully to store; using technology purposefully to manipulate; using technology purposefully to retrieve; recognising common uses of information technology beyond school; using technology safely and respectfully;	retrieve; using technology safely and respectfully;	devices; programs and how to execute by following precise and unambiguous instructions; using logical reasoning to predict the behaviour of simple programs; using technology purposefully to create; using technology purposefully to organise; using technology purposefully to retrieve;	purposefully to create; using technology purposefully to manipulate;	devices; programs and how to execute by following precise and unambiguous instructions; using logical reasoning to predict the behaviour of simple programs;	organise; using technology purposefully to store; using technology purposefully to manipulate; using technology purposefully to retrieve; recognising common uses of information technology beyond school;
<b>Software required</b>	Google Gmail			Google Draw 2Simple, 2Paint a Picture Microsoft Paint Paint 3D	Scratch Jr (Desktop Version)	Google Docs
<b>Hardware required</b>	Desktop computers/ laptops	Desktop computers/ laptops	Bee-Bots	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops
<b>Overview</b>	This is the first of the PlanIt online safety units and is aimed at teaching basic online safety and digital literacy skills. In this unit, children learn about the potential dangers in the online world and what basic steps we all need to take in order to have	In this unit about Computing Skills, children will learn the basic computer skills required to be able to use a PC device successfully. They will begin by exploring the different parts of a PC device, focusing particularly on a desktop computer and laptop.	In this unit about programming toys, children will be introduced to the principles of programming through unplugged tasks and the use of Bee-Bots. They will be introduced to algorithms as a set of step-by-step instructions given to a device, will learn	This Painting unit will teach your class basic painting skills in a painting application on a computer or tablet device. Children will use a simple painting program to paint with different colours and brushes, create shapes, fill areas, undo and redo and	This unit introduces children at Key Stage 1 to the principles of coding, using the age-appropriate ScratchJr software. A more accessible version of the popular Scratch Programming and aimed at age 5-7, ScratchJr is available as a free	<u>Word processing</u> This Word Processing Skills unit will teach your class basic typing and word processing skills. Children will learn how to type with two hands, use the shift, space and enter key properly, and edit work by using the

	<p>positive digital experiences. The first lesson, which is intended to be taught at the start of the school year, focuses on why it is important for children to name their creative work. They go on to learn about using a search engine safely to find pictures. Children learn the SMART rules and look at what information should be kept safe when using the Internet. The lessons then explore the positives and potential negatives of online communication, such as email, and children will develop the skills to recognise potential dangers and act accordingly to keep themselves and others safe.</p>	<p>Children will be taught how to switch on and shut down a PC device. Children will learn how to navigate a computer mouse or laptop trackpad and will have the opportunity to explore their functions, such as clicking, double-clicking and dragging. Children will also learn about the main keys on a keyboard and use an application to explore their functions. Children will be taught how to use their mouse, trackpad and keyboard skills to log on to and log off from a PC device. They will also apply these skills in the following ways: to launch an application; to adjust the window; to save, find and open a file in a folder. Children will end the unit by using the computing skills they have learnt to create a piece of work on their PC device.</p>	<p>how to debug simple algorithms and how to use logical reasoning to predict how a program will behave.</p>	<p>add text.</p>	<p>app for Apple, Amazon and Android tablets. The platform encourages basic understanding of algorithms and how to create precise instructions for visual working programs. It begins to develop a sense of creating, debugging and logical reasoning, which are required for further programming at KS2.</p>	<p>backspace, delete and arrow keys. Children will then go on to learn how to use undo and redo and to select and format text.</p>
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<b>YEAR 2</b>	<p>Familiarisation with Google Classroom.</p> <p>Online safety  <a href="https://drive.google.com/drive/folders/1-fbhnaA2vuvbgtaO0v7RJpNbYZVb9HR">https://drive.google.com/drive/folders/1-fbhnaA2vuvbgtaO0v7RJpNbYZVb9HR</a></p>	<p>Computer art  <a href="https://drive.google.com/drive/folders/1EUqXOg-PB2rUtSnNgv1rLjtRclhkf5zl">https://drive.google.com/drive/folders/1EUqXOg-PB2rUtSnNgv1rLjtRclhkf5zl</a></p>	<p>Presentation skills  <a href="https://drive.google.com/drive/folders/1RrJK15YGrFTYGoSd1FkoISZVMtEkBvCZ">https://drive.google.com/drive/folders/1RrJK15YGrFTYGoSd1FkoISZVMtEkBvCZ</a></p>	<p>Preparing for turtle  <a href="https://drive.google.com/drive/folders/16YtmVlppqxUs0Prdtytz_IHyz50dn4b">https://drive.google.com/drive/folders/16YtmVlppqxUs0Prdtytz_IHyz50dn4b</a></p> <p>Katie and Tex explore robotics and AI  <a href="https://www.techsh.ecan.org/animated-lessons/robotics-and-ai">https://www.techsh.ecan.org/animated-lessons/robotics-and-ai</a>  Video  Challenge - design a robot</p>	<p>Programming turtle, logo and scratch  <a href="https://drive.google.com/drive/folders/1KpRKJlNgwXXMvmiR-kmdG2d2XwlZISGE">https://drive.google.com/drive/folders/1KpRKJlNgwXXMvmiR-kmdG2d2XwlZISGE</a></p> <p>Katie and Tex explore autonomous shopping  <a href="https://www.techsh.ecan.org/animated-lessons/autonomous-shopping">https://www.techsh.ecan.org/animated-lessons/autonomous-shopping</a>  Video  Challenge - poster of technology seen or what technology could we have in the future.</p>	<p>Using the internet  <a href="https://drive.google.com/drive/folders/1rXek5we0sPngw9Iji90XrgB-6wAVAz9">https://drive.google.com/drive/folders/1rXek5we0sPngw9Iji90XrgB-6wAVAz9</a></p>
<b>Links to NC</b> <b>PRIMARY_n...</b>	<p>Children should be taught about: recognising common uses of information technology beyond school; using technology safely and respectfully; the need to keep personal information private; where to go for help and support when they have concerns about content or</p>	<p>Children should be taught about: using technology purposefully to create; using technology purposefully to organise; using technology purposefully to store; using technology purposefully to manipulate; using technology purposefully to</p>	<p>Children should be taught about: using technology purposefully to organise; using technology purposefully to store; using technology purposefully to retrieve; recognising common uses of information technology beyond school; using</p>	<p>Children should be taught about: algorithms and what they are; how algorithms are implemented as programs on digital devices; programs and how to execute by following precise and unambiguous instructions; creating and debugging simple programs;</p>	<p>Children should be taught about: algorithms and what they are; how algorithms are implemented as programs on digital devices; programs and how to execute by following precise and unambiguous instructions; creating and debugging simple programs; using logical reasoning to</p>	<p>Children should be taught about: using technology purposefully to create; using technology purposefully to organise; using technology purposefully to store; using technology purposefully to retrieve; recognising common uses of</p>



	contact on the Internet or other online technologies.	retrieve; recognising common uses of information technology beyond school;	technology safely and respectfully;		predict the behaviour of simple programs; using technology purposefully to create;	information technology beyond school; using technology safely and respectfully; the need to keep personal information private; where to go for help and support when they have concerns about content or contact on the Internet or other online technologies.
<b>Software required</b>		Windows Paint (alternatives include Doodle Buddy for iPads and PicsArt for Android tablets) Google Draw Paint 3D	Google Slides		<a href="#">Turtle</a> <a href="#">Scratch CS First</a>	Google Docs. Google Classroom (blogging)
<b>Hardware required</b>	Desktop computers/ laptops	Desktop computers/ laptops/tablets	Desktop computers/ laptops		Desktop computers/ laptops	Desktop computers/ laptops Cameras/tablets
<b>Overview</b>	In this unit, children learn about how what they do online leaves a trail called a digital footprint. They will look at how to improve the efficiency of their online searches, the types of websites that are best for children to access when	This 'Computer Painting' unit will teach your class key skills that will support progression within the KS1 Computing curriculum. The children will have the opportunity to learn about reproducing the painting styles of	Lessons 1 and 6 focus on important computer skills needed for safe and effective computer use and introduce some further skills concerning the use of folders, searching for files and printing. Lessons 2-5	This unit has two main aims, to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. The children begin by giving and following instructions to move forward and	This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and	<u>Using the internet</u> This unit introduces children to using the Internet safely and with a purpose. Children are shown how to search the Internet using one word; how to make sense of the returned results; how to use "for kids" to return more

	<p>looking for information, as well as how to identify inappropriate content and the actions they should take if they do. Children will be introduced to the term 'cyberbullying' and look at how they should communicate online and deal with instances of people being unkind via digital means.</p>	<p>great artists using computer programs. Each lesson focuses upon a different artist and their particular style. The children will use this as inspiration for mastering specific techniques within design-based software. The lessons do not specify any particular software to be used, though it is worth checking that whatever you are using will allow the children to meet the success criteria. At the end of the unit your class will have the opportunity to use a mixture of the styles and skills learnt within this topic to produce their own computer-painted masterpiece!</p>	<p>introduce children to presentations and teach the skills needed to create a simple presentation.</p>	<p>make quarter turns, followed by walking different rectilinear shapes. The language is extended to use the main Turtle Logo commands. Children will create, text and debug algorithms for shapes and routes around school in preparation for using the commands in online programs such as Turtle Logo/Logo Interpreter or MSWLogo.</p>	<p>draw using the turtle on screen, and then further develop algorithms using the "repeat" command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks.</p>	<p>suitable results; how to follow links and return to the search results. Children are encouraged to use a range of search engines, including Google, Bing and Yahoo, and some more child-friendly engines like Kidrex. (Note: many of the child-friendly searches use Google.) The children then learn to blog safely and responsibly. Teachers will need to ensure they follow their own school guidelines on blogging, particularly on the use of names and photographs. Suggested guidelines are included in the lessons, but may differ from those agreed by the school. The focus of the lessons is less on the technical aspects, which will vary according to which blogging site is used, and more on how to blog in a safe and</p>
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							responsible way, looking at how to blog well, and how to post and respond to comments effectively.
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Threshold Concepts							
To code	<ul style="list-style-type: none"> <li>• Control motion by specifying the number of steps to travel, direction and turn.</li> <li>• Add text strings, show and hide objects and change the features of an object.</li> <li>• Select sounds and control when they are heard, their duration and volume.</li> <li>• Control when drawings appear and set</li> </ul>	To connect	<ul style="list-style-type: none"> <li>• Participate in class social media accounts.</li> <li>• Understand online risks and the age rules for sites.</li> </ul>	To communicate	<ul style="list-style-type: none"> <li>• Use a range of applications and devices in order to communicate ideas, work and messages</li> </ul>	To collect	<ul style="list-style-type: none"> <li>• Use simple databases to record information in areas across the curriculum.</li> </ul>

the pen colour, size and shape.

- Specify user inputs (such as clicks) to control events.
- Specify the nature of events (such as a single event or a loop).
- Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?).

### Key Knowledge Categories

**Computer Science:** Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming.

**Digital literacy:** the skills and knowledge required to be an effective, safe, and discerning user of a range of computer systems.

**Information Technology:** Information technology provides a context for the use of computers in society. It focuses on how computers are used in different sectors and describes the methods used to create digital artefacts such as presentations, spreadsheets and videos.

**Year Three and Four**

**Curriculum coverage**

	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Year 3</b>	<p>Familiarisation with Google Classroom and Make a Noise - Google Form on the Children's Hub</p> <p>Online Safety  <a href="https://drive.google.com/drive/folders/1K8YSEEpb4fz_1fvVleFedjOuznetetK">https://drive.google.com/drive/folders/1K8YSEEpb4fz_1fvVleFedjOuznetetK</a></p>	<p>Drawing and DTP  <a href="https://drive.google.com/drive/folders/1Ncc0PuwW96jHvEk3-f7kVQv2YQOwPBZd">https://drive.google.com/drive/folders/1Ncc0PuwW96jHvEk3-f7kVQv2YQOwPBZd</a></p>	<p>Word Processing  <a href="https://drive.google.com/drive/folders/1X1kRfg4N-YcP3kwqV55uB7hfwN6aT XR">https://drive.google.com/drive/folders/1X1kRfg4N-YcP3kwqV55uB7hfwN6aT XR</a></p>	<p>Online Searchers and Surfers  <a href="https://drive.google.com/drive/folders/1gJRgMG-7HmYRFYQIEk8xx9Sf8tGI7_Kj">https://drive.google.com/drive/folders/1gJRgMG-7HmYRFYQIEk8xx9Sf8tGI7_Kj</a></p> <p><b>New Unit</b></p> <p>Tech for Toys  <a href="https://www.techsh.ecan.org/on-demand-lessons/toys">https://www.techsh.ecan.org/on-demand-lessons/toys</a></p>	<p>Presentation skills  <a href="https://drive.google.com/drive/folders/1AGW_Ee1sN_yOPwR-0ZjeM86I5dApb5rn">https://drive.google.com/drive/folders/1AGW_Ee1sN_yOPwR-0ZjeM86I5dApb5rn</a></p>	<p>Turtle, Logo and Scratch  <a href="https://drive.google.com/drive/folders/1R2ZZuXxIIH2OPYzAs9wT6eTh2hLeQOlf">https://drive.google.com/drive/folders/1R2ZZuXxIIH2OPYzAs9wT6eTh2hLeQOlf</a></p> <p>Tech for the Planet  <a href="https://www.techsh.ecan.org/on-demand-lessons/the-plane-t">https://www.techsh.ecan.org/on-demand-lessons/the-plane-t</a></p>
<b>Links to NC PRIMARY_n...</b>	<p>Children should be taught about: computer networks including the Internet; how computer networks can provide multiple services, such as the world wide web; opportunities computer networks offer for communication and collaboration; using technology safely, respectfully and responsibly; how to recognise acceptable and</p>	<p>Children should be taught about: selecting, using and combining 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>Children should be taught about: selecting, using and combining 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; using</p>	<p>Children should be taught about: computer networks including the Internet; how computer networks can provide multiple services, such as the World Wide Web; opportunities computer networks offer for communication and collaboration; using search technologies effectively; how results are selected and ranked; how to</p>	<p>Children should be taught about: selecting, using and combining 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>Children should be taught about: designing, writing and debugging programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing into smaller parts; using sequence, selection and repetition in programs; working with variables and various forms of input and output; using logical</p>

	unacceptable behaviour; how to identify a range of ways to report concerns about content and contact.		technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact.	be discerning in evaluating digital content; selecting, using and combining 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; using technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact.		reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs;
<b>Software required</b>		Google Draw Google Docs Google Slides	Google Docs	Google Chrome Google Docs Google Slides	Google Slides	<a href="#">Turtle Logo</a> <a href="#">Scratch CS First</a>
<b>Hardware required</b>	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops Microphones	Desktop computers/ laptops

<p><b>Overview</b></p>	<p>In this unit, children are introduced to email and other forms of online communication. They will look at how to write and send emails, as well as how to decide if an email is safe to open. They will build on their existing knowledge of cyberbullying and how to deal with unkind behaviour online. The use and importance of privacy settings is introduced and children will discuss the types of information we should not share online. They will build on the idea of a digital footprint by thinking about how the adverts they see online are targeted at them. Children will finish the unit by using the knowledge they have gained to plan a party using online communication methods.</p>	<p>This unit is aimed at developing children's graphic and presentation skills by introducing drawing as opposed to painting. It also goes on to further children's understanding of layouts using a desktop publishing application. Children will learn to draw, order, group and manipulate objects to make a picture. They will also learn to evaluate and create effective layouts, combining text and images. The Lesson Pack contains six Lesson Plans, each with their own Lesson Presentation, alongside challenge cards, home learning tasks, posters and word cards.</p>	<p>This is the third word processing unit, following the units in Years 1 and 2, aimed at teaching basic word-processing skills to children. In this unit, children will learn to use various features for formatting text. The Lesson Pack contains six Lesson Plans, each with their own Lesson Presentation, alongside a home learning task, challenge cards, posters and help cards. The first lesson, which is intended to be used at the start of the school year, focuses on some important computer skills and introduces children to screenshots and the Snipping Tool, and secure use of passwords.</p>	<p>In this unit about Online Searchers and Surfers, children will learn about what the Internet is, how the Internet works and the three different types of connections that can be used. They will then have the opportunity to explore web browsers and search engines, learning how to detect if a web page can be trusted whilst also ensuring that they know how to stay safe online. Finally, they will learn how to copy and paste images from the web and complete their own scavenger hunt project at the end of the unit.</p>	<p>This unit develops children's use of presentation software. The first three lessons teach children new skills, following on from previous skills learnt; setting the theme, slide transitions, animating objects onto the slide, creating hyperlinks in the action settings and adding audio and video</p>	<p><u>Turtle, Logo and Scratch</u> This Programming Turtle Logo and Scratch unit will teach your class to create and debug algorithms. Following on from the earlier Year 2 unit on Preparing for Turtle Logo, the children use the basic commands in Logo to move and draw using the turtle on screen, and then further develop algorithms using the "repeat" command. These skills are then developed by teaching children to create algorithms in Scratch using a selection of blocks.</p>
<p><b>Year 4</b></p>	<p>Familiarisation with</p>	<p>Year 4: Word</p>	<p>Year 4: Animation</p>	<p>Year 4:</p>	<p>Year 4: Scratch</p>	<p>Year 4:</p>

	<p>Google Classroom and Make a Noise - Google Form on the Children's Hub</p> <p><b>For this year only: See Year 3: Online Safety See above for extra information</b></p> <p>From 2024-2025: Year 4:Online safety  <a href="https://drive.google.com/drive/folders/1zEQfOdBckNo4vE52NeRVSTfJmf83LmOK">https://drive.google.com/drive/folders/1zEQfOdBckNo4vE52NeRVSTfJmf83LmOK</a></p>	<p>processing  <a href="https://drive.google.com/drive/folders/1dLSWgOjJu9nyM58QWxW2PDLUOdNowhi3">https://drive.google.com/drive/folders/1dLSWgOjJu9nyM58QWxW2PDLUOdNowhi3</a></p> <p>Year 4 - lesson 1 Tech for Celebrations  <a href="https://www.techsh.ecan.org/on-demand-lessons/celebrations">https://www.techsh.ecan.org/on-demand-lessons/celebrations</a></p>	<p><a href="https://drive.google.com/drive/folders/1Ncuz_yKLA7DYjtPh6-jk1Jeta6Mz-UN3">https://drive.google.com/drive/folders/1Ncuz_yKLA7DYjtPh6-jk1Jeta6Mz-UN3</a></p>	<p>Programming Turtle Logo  <a href="https://drive.google.com/drive/folders/1Ph_IDwHuQYicju4OcED9hPSNhtiQkSpC">https://drive.google.com/drive/folders/1Ph_IDwHuQYicju4OcED9hPSNhtiQkSpC</a></p>	<p>questions and quizzes  <a href="https://drive.google.com/drive/folders/1dAj03-HarKyVh3wl6FvfFHbo3S81x0e9">https://drive.google.com/drive/folders/1dAj03-HarKyVh3wl6FvfFHbo3S81x0e9</a></p> <p><b>Updated Content</b></p>	<p>Communication and Collaboration  <a href="https://drive.google.com/drive/folders/180W_Lrln2KzGx93aO5d500EBAXu-8zSr">https://drive.google.com/drive/folders/180W_Lrln2KzGx93aO5d500EBAXu-8zSr</a></p> <p>Year 4 - lesson 2 Tech for Money  <a href="https://www.techsh.ecan.org/on-demand-lessons/money">https://www.techsh.ecan.org/on-demand-lessons/money</a></p> <p><b>New Unit</b></p>
<p><b>Links to NC PRIMARY_n...</b></p>	<p>Children should be taught about: using search technologies effectively; how results are selected and ranked; how to be discerning in evaluating digital content; using technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact</p>	<p>Children should be taught about: selecting, using and combining 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>Children should be taught about: selecting, using and combining 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>Children should be taught about: designing, writing and debugging programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to</p>	<p>Children should be taught about: designing, writing and debugging programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to</p>	<p>Children should be taught about: computer networks including the Internet; how computer networks can provide multiple services, such as the World Wide Web; opportunities computer networks offer for communication and collaboration; using search technologies effectively; how results are selected and ranked; how to be discerning in evaluating digital</p>



				explain how some simple algorithms work and to detect and correct errors in algorithms and programs;	explain how some simple algorithms work and to detect and correct errors in algorithms and programs;	content; selecting, using and combining 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; using technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact
<b>Software required</b>		Google Docs.	Pivot Animator MovieSoup	<a href="#">Turtle Logo</a>	<a href="#">Scratch CS First</a>	Gmail Google Drive
<b>Hardware required</b>	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops Cameras/tablets	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops
<b>Overview</b>	In this unit, children learn about preventing and dealing with	This is the fourth word processing unit, following the units in year 1, 2	This unit teaches children the basic principles and techniques of	This Programming Turtle Logo unit will teach children how to create an	This unit follows up the earlier units on programming Scratch on a	In this unit about Communication and Collaboration, the children will

	<p>cyberbullying; how to use search engines efficiently; how to avoid plagiarism online; and how to be a good digital citizen. The unit ends with children applying their new knowledge to design a character to be displayed around school to promote online safety.</p>	<p>and 3 aimed at teaching basic and word processing and text formatting skills. In this unit children will learn about formatting images and organising content into an effective layout. The unit contains six lesson packs, each with its own lesson presentation, alongside a home learning task, challenge cards, display posters and help cards. The first lesson focuses on formatting images and making them suitable for a poster advertising a cake sale. Throughout the rest of the unit, children will learn new skills and techniques and apply them to creating a range of different word documents (posters, letters to parents, job rotas, recipe cards and e-vouchers) which they will use during the cake sale project.</p>	<p>simple animation. Beginning with the history of animation, children research some of the early animation techniques used before the use of computers. The lessons then compare a range of free animation software and children incorporate the different techniques into their own animation. After experimenting, children are then given the opportunity to evaluate their experiences in the final lesson.</p>	<p>algorithm to program a procedure. Lessons are designed to be used with online programs such as Turtle Logo/Logo Interpreter or MSWLogo. Children are reminded of the basic commands and how to repeat alongside a variable. The children are then shown how to program their own procedures, use colour and set the position of the turtle using coordinates. In the concluding lesson they use the arc command to create patterns using different shapes and randomly selected colours, which they are encouraged to share with the rest of the class.</p>	<p>computer/tablet or Pyonkee with iPads. In this unit the children write quizzes by combining questions. While specific skills in Scratch are taught, the unit aims to teach children the wider programming skills of solving problems, testing, debugging, improving and evaluating.</p>	<p>begin by gaining an understanding of the difference between online and offline communication. Then, they will explore online communication in detail, as well as looking at the positives and negatives of different online communication methods. Children will also learn all about emails. They will learn about: the features of email in detail; the process of how emails are sent; explore what email protocols are and then practise sending emails themselves. They will also learn how to send attachments in an email and understand what spam emails are, delving into the concept of phishing. Finally, children will explore how to collaborate online using a cloud storage service and the</p>
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						tools they offer for editing online documents, working collaboratively alongside others.
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Threshold Concepts							
To code	<ul style="list-style-type: none"> <li>• Use specified screen coordinates to control movement.</li> <li>• Set the appearance of objects and create sequences of changes.</li> <li>• Create and edit sounds. Control when they are heard, their volume, duration and rests.</li> <li>• Control the shade of pens.</li> <li>• Specify conditions to trigger events.</li> <li>• Use IF THEN conditions to</li> </ul>	To connect	<ul style="list-style-type: none"> <li>• Contribute to blogs that are moderated by teachers.</li> <li>• Give examples of the risks posed by online communications.</li> <li>• Understand the term 'copyright'.</li> <li>• Understand that comments made online that are hurtful or offensive are the same as bullying.</li> <li>• Understand how online services work.</li> </ul>	To communicate	<ul style="list-style-type: none"> <li>• Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally.</li> </ul>	To collect	<ul style="list-style-type: none"> <li>• Devise and construct databases using applications designed for this purpose in areas across the curriculum.</li> </ul>

control events or objects.

- Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions).

- Use variables to store a value.

- Use the functions define, set, change, show and hide to control the variables.

- Use the Reporter operators

() + ()

() - ()

() \* ()

() / ()

	to perform calculations.						
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**Key Knowledge Categories**

Computer Science: Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming.

Digital literacy: the skills and knowledge required to be an effective, safe, and discerning user of a range of computer systems.

Information Technology: Information technology provides a context for the use of computers in society. It focuses on how computers are used in different sectors and describes the methods used to create digital artefacts such as presentations, spreadsheets and videos.

**Year Five and Six**

**Curriculum coverage**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>YEAR 5 - will not be taught 2023-2024</b>	Make a Noise - Google Form on the Children's Hub  Google Classroom  Online Safety <a href="https://drive.google.com/drive/folders/1jK0ypEyPmnNGIPvH2122cba1m6NzQhRL">https://drive.google.com/drive/folders/1jK0ypEyPmnNGIPvH2122cba1m6NzQhRL</a>	Flowol <a href="https://drive.google.com/drive/folders/1Nxed-DXBEV5FZYp5gu9flNldVJYV0o-c">https://drive.google.com/drive/folders/1Nxed-DXBEV5FZYp5gu9flNldVJYV0o-c</a>  Tech for Space <a href="https://www.techsh.ecan.org/on-demand-lessons/space">https://www.techsh.ecan.org/on-demand-lessons/space</a>	Radio Stations <a href="https://drive.google.com/drive/folders/15pVyucITcvmgCoEF1YBEz7xegewvcvP">https://drive.google.com/drive/folders/15pVyucITcvmgCoEF1YBEz7xegewvcvP</a>	Internet Research and Website Design <a href="https://drive.google.com/drive/folders/1TJ-Oclx2uMVOyPAzxALh5nBYq-UYqafw">https://drive.google.com/drive/folders/1TJ-Oclx2uMVOyPAzxALh5nBYq-UYqafw</a>	3D Modelling <a href="https://drive.google.com/drive/folders/14cdYXzQsjzL3y0YwcJqzD9LHP1dQstpe">https://drive.google.com/drive/folders/14cdYXzQsjzL3y0YwcJqzD9LHP1dQstpe</a>  Tech for Energy <a href="https://www.techsh.ecan.org/on-demand-lessons/energy">https://www.techsh.ecan.org/on-demand-lessons/energy</a>	Scratch 3.0 Developing Games <a href="https://drive.google.com/drive/folders/1kadhIF2y5kf-gbtek6Lc1cSc26iXsQK-">https://drive.google.com/drive/folders/1kadhIF2y5kf-gbtek6Lc1cSc26iXsQK-</a>  <div style="background-color: red; color: black; padding: 2px; display: inline-block;"><b>Updated content</b></div>
<b>Links to NC PRIMARY_n...</b>	Children should be taught about: using search technologies	Children should be taught about: designing, writing and debugging	Children should be taught about: selecting, using and combining a variety	Children should be taught about: using search technologies	Children should be taught about: selecting, using and combining a variety	Children should be taught about: designing, writing and debugging

	effectively; how results are selected and ranked; how to be discerning in evaluating digital content; using technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact	programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs;	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;	effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content in the context of identifying the key features of a webpage. Selecting, using and combining 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 in the context of creating a Google Website.	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;	programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs;
<b>Software required</b>	Photo editing software (Glimpse, <a href="#">Canva</a> )	Flowol software (version 4.0)	Audacity software	Google Sites	<a href="#">SketchUp</a>	<a href="#">Scratch CS First</a>
<b>Hardware required</b>	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops Microphones Headphones	Desktop computers/ laptops	Desktop computers/ laptops	Desktop computers/ laptops
<b>Overview</b>	In this unit, children	This unit introduces	This unit allows	This unit combines	In this unit the	This unit builds on

	<p>will learn about email safety with a focus on preventing and dealing with spam. They will consider the importance of strong passwords and learn how to create them. Children will build on their knowledge of plagiarism and fair use of people's work by learning how to write citations and references for websites they may use. They will scrutinise photographs that they see online and learn how easy it is to manipulate pictures and present them as reality.</p>	<p>children to flowcharts and how they are used to program and control devices. Lessons are designed to be used with Flowol software (version 4.0), which includes simulations of real life automatic computer systems. Children are taught to build sequences of instructions, control multiple outputs and structure algorithms with decisions and inputs. Although many external hardware interfaces can be attached and linked to a computer using Flowol, this unit is designed as an introduction to the software and the concepts of flowchart programming. Further learning can be extended by using external devices.</p>	<p>children to use software and digital devices for recording sound. Based around the theme of a Radio Station, it is designed to encourage a creative approach that includes interviewing, making adverts and using jingles. Other software is incorporated where children write scripts and design additional advertising for their Radio Station. Opportunities are included for children to present, listen, review and evaluate their own content as well as professional and commercial examples, plus those created by their peers.</p>	<p>the further development of children's skills for searching the Internet with the introduction of creating and editing a webpage using Google Sites. Children will learn how to use some of the other advanced search features in Google, such as fill in the blanks; and how to create a webpage with a layout of their choosing which includes images and links to other webpages. Children are encouraged to consider related e-safety issues such as use of logins and passwords, and the use of their own images and photos and those of others.</p>	<p>children extend their drawing skills to create 3D models based on using the software SketchUp Make. This is a free application available for download on Windows or OSX (Mac). Children will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.</p>	<p>the previous unit in Year 4 (Questions and Quizzes) using Scratch to build and edit algorithms for simple games. The unit is designed to help children develop their skills in writing their own algorithms as well as editing and debugging existing codes.</p>
<p><b>YEAR 5 &amp; 6</b></p>	<p>Make a Noise - Google Form on the Children's Hub</p>	<p>Scratch Animated Stories <a href="https://drive.google.com/drive/folders/1">https://drive.google.com/drive/folders/1</a></p>	<p>Spreadsheets <a href="https://drive.google.com/drive/folders/1">https://drive.google.com/drive/folders/1</a></p>	<p>Kodu <a href="https://drive.google.com/drive/folders/1">https://drive.google.com/drive/folders/1</a></p>	<p>Film Making <a href="https://drive.google.com/drive/folders/1">https://drive.google.com/drive/folders/1</a></p>	<p>Know Your Network <a href="https://drive.google.com/drive/folders/1">https://drive.google.com/drive/folders/1</a></p>

	<p>Google Classroom</p> <p>Online Safety  <a href="https://drive.google.com/drive/folders/1iEbRBzF4tKPqaB2rOP02IjT-Ykr8x3jN">https://drive.google.com/drive/folders/1iEbRBzF4tKPqaB2rOP02IjT-Ykr8x3jN</a></p>	<p><a href="https://drive.google.com/drive/folders/1uLWN-ANA-i--cTQmfxHR5qzWKZeUDUH9">com/drive/folders/1uLWN-ANA-i--cTQmfxHR5qzWKZeUDUH9</a></p> <p><b>Updated content</b></p>	<p><a href="https://drive.google.com/drive/folders/710bkXwN1MalKf1NNbaWPbryNBfRd_WT">710bkXwN1MalKf1NNbaWPbryNBfRd_WT</a></p> <p>Tech She Can  Tech for Safety and Security  <a href="https://www.techshecan.org/on-demand-lessons/safety-and-security">https://www.techshecan.org/on-demand-lessons/safety-and-security</a></p>	<p><a href="https://drive.google.com/drive/folders/nt02yVFIHlq9pP8YfCyLuoHFqu-t6OmZ">nt02yVFIHlq9pP8YfCyLuoHFqu-t6OmZ</a></p>	<p><a href="https://drive.google.com/drive/folders/pk46Rny95HMEViXtZBtKaH5TZPKyj62S">pk46Rny95HMEViXtZBtKaH5TZPKyj62S</a></p>	<p><a href="https://drive.google.com/drive/folders/92d1gaur6JJQiVGuVg8ibvGJr9QIM8wC">92d1gaur6JJQiVGuVg8ibvGJr9QIM8wC</a></p> <p>Tech She Can  Tech for Sport  <a href="https://www.techshecan.org/on-demand-lessons/sport">https://www.techshecan.org/on-demand-lessons/sport</a></p>
<p><b>Links to NC PRIMARY_n...</b></p>	<p>Children should be taught about: how to be discerning in evaluating digital content; using technology safely, respectfully and responsibly; how to recognise acceptable and unacceptable behaviour; how to identify a range of ways to report concerns about content and contact</p>	<p>Children should be taught about: designing, writing and debugging programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs;</p>	<p>Children should be taught about: selecting, using and combining 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>Children should be taught about: designing, writing and debugging programs that accomplish specific goals including controlling or simulating physical systems; solving problems by decomposing them into smaller parts; using sequence, selection and repetition in programs; work with variables and various forms of input and output; using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs; selecting, using and combining a variety</p>	<p>Children should be taught about: selecting, using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals in the context of writing and planning a short documentary film. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Understand computer networks including the internet and the opportunities they offer for communication</p>	<p>Children should be taught about: computer networks including the Internet; how computer networks can provide multiple services, such as the World Wide Web; opportunities computer networks offer for communication and collaboration;</p>



				<p>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>and collaboration in the context of using the Internet to research their chosen documentary topic. Use a variety of software on a range of digital devices to design and create a range of content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information in the context of filming documentaries using digital devices and importing them into video editing software. Select, use and combine a variety of software on a range of digital devices to design and create a range of content that accomplish given goals, including presenting information in the context of using video editing software to combine and edit their videos into a</p>	
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					finished film. Select, use and combine a variety of software on a range of digital devices to design and create a range of content that accomplish given goals, including presenting information in the content of adding final touches to turn their videos into a finished film, saving as a movie file and presenting with a screening.	
<b>Software required</b>		<a href="#">Scratch CS First</a>	Google Sheets	Kodu Game Lab	Google Docs Clipchamp Adobe Premiere Elements	Google Chrome
<b>Hardware required</b>		Desktop computers/ laptops Microphones Headphones	Desktop computers/ laptops	Desktop computers/ laptops	Digital video camera/tablet Microphones Desktop computers/ laptops Green screen	Desktop computers/ laptops
<b>Overview</b>	In this unit about online safety, children will be taking a more in depth look at a	This unit builds on the previous unit in Year 5 (Scratch: Developing Games) as well as prior	Children are given an understanding of spreadsheets and how they can be used. In the first	This unit introduces children to programming with Kodu, a simple visual programming	The aim of this unit is to allow children to explore various aspects of film-making. In	In this unit about Know Your Networks, children will develop a deeper

	<p>variety of online safety issues, most of which they will have been familiarized with in previous years. They will be introduced to the idea of the internet, as a type of media, and how it can shape our ideas about boys and girls through stereotypes. Children will be given ways to deal with online content that they find worrying or even believe to be dangerous.</p>	<p>units introducing Scratch in Year 2 and Year 4. The unit is designed to help children in continuing to develop their skills in writing their own algorithms as well as editing and debugging existing codes. New skills are introduced to structure code and animate characters and scenes, gradually building to create a short animated story. These lessons are intended for use in conjunction with Scratch 2 software installed. They can also be used with the Pyonkee App on iPads.</p>	<p>five lessons, a different spreadsheet template is provided in which children learn skills in formatting and entering specific formulas. Lessons 4 and 5 include investigative skills in using the spreadsheet to solve specific problems. Examples include number calculations, sports league tables, test scores, and budget planning. The final lesson allows an open-ended task for pupils to design their own spreadsheet, with ideas and direction provided for particular purposes. This final lesson can also be used for some pupils to return to or complete any previous spreadsheet tasks which may not have been finished.</p>	<p>language made specifically for creating games. The distinguishing features of Kodu are visual icons that are added together like building blocks to form instructions and game environments constructed by the user in a 3D scene editor. It is designed to be accessible by children and enjoyable by anyone. As well as on PC, Kodu is also available via Xbox 360, which adds appeal for many children. If you are unfamiliar with Kodu, then a useful starting point are the sample games and tutorials that are provided as 'Built-in Worlds'. Each sample game is editable so after playing, they can be opened up to see how they work.</p>	<p>doing so, they must choose and use appropriate software in order to complete tasks such as writing a script, researching information, filming and editing. As well as using digital devices for recording (video camera or tablet), children work through pre- and post-production stages, planning good-quality interviews for a documentary and completing the process with use of video editing software such as Windows Movie Maker. You may like to complete the unit with a special screening or awards ceremony for the budding young film-makers!</p>	<p>understanding of computer networks and be introduced to technical key words and phrases associated with computer networks. Children will study home networks, global networks, and network protocols, such as IP, HTTP and DNS. Finally, children will learn about cloud computing, broadband, communication online and malware.</p>
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**Threshold Concepts**

<p>To code</p>	<ul style="list-style-type: none"> <li>• Set IF conditions for movements. Specify types of rotation giving the number of degrees.</li> <li>• Change the position of objects between screen layers (send to back, bring to front).</li> <li>• Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation.</li> <li>• Combine the use of pens with movement to create interesting effects.</li> <li>• Set events to control other events by 'broadcasting' information as a trigger.</li> <li>• Use IF THEN ELSE</li> </ul>	<p>To connect</p>	<ul style="list-style-type: none"> <li>• Collaborate with others online on sites approved and moderated by teachers.</li> <li>• Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.</li> <li>• Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.</li> <li>• Understand the effect of online comments and show</li> </ul>	<p>To communicate</p>	<ul style="list-style-type: none"> <li>• Choose the most suitable applications and devices for the purposes of communication.</li> <li>• Use many of the advanced features in order to create high quality, professional or efficient communications.</li> </ul>	<p>To collect</p>	<ul style="list-style-type: none"> <li>• Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner.</li> </ul>
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conditions to control events or objects.

- Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions.

- Use lists to create a set of variables.

- Use the Boolean operators

() < ()

() = ()

() > ()

()and()

()or()

Not()

to define conditions.

- Use the Reporter operators

() + ()

responsibility and sensitivity when online.

- Understand how simple networks are set up and used.

() - ()  
() \* ()  
() / ()  
to perform  
calculations.  
Pick Random ()  
to ()  
Join () ()  
Letter () of ()  
Length of ()  
() Mod () This  
reports the  
remainder  
after a division  
calculation  
Round ()  
() of ().


### Key Knowledge Categories

Computer Science: Computer science covers knowledge of computers and computation, including concepts such as data, system architecture, algorithms and programming.

Digital literacy: the skills and knowledge required to be an effective, safe, and discerning user of a range of computer systems.

Information Technology: Information technology provides a context for the use of computers in society. It focuses on how computers are used in different sectors and describes the methods used to create digital artefacts such as presentations, spreadsheets and videos.

## Vocabulary Progression

To be used in conjunction with  Vocabulary Spine  
<https://teachcomputing.org/primary-computing-glossary>  
<https://www.teach-ict.com/glossary/A.htm>

### EYFS

App	An application in a software program which enables you to perform a range of useful tasks. Examples of applications are word processing programs, spreadsheet software, databases or graphics packages.
button	When referring to hardware, a button is a physical switch that controls a device's function. The picture is an example of the power button found on the front of a computer.
Computer	A programmable machine that accepts and processes inputs and produces outputs (input, process, output; IPO)
control	In general, control refers to the ability to manage, organise, or run something on a computer. When working with a computer a user controls the computer using input devices, such as a keyboard, mouse, joystick, and gamepads. For example, you can control the mouse pointer on the screen by moving the mouse.
Google	A very popular search engine. A search engine returns a list of websites (or documents) that meet the search criteria you put into the search box.
information	Data put into a context that provides meaning
instruction	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
instructions	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
internet	The global system of interconnected computer networks
iPad	A touchscreen tablet.
keyboard	A computer keyboard is an input device that enables the user to enter characters (letters, numbers and symbols) into a computer.

	<p>The keyboard consists of rows of keys with each key representing a different character.</p> <p>There are different types of keyboards available, for example, QWERTY keyboards, ergonomic keyboards, braille keyboards.</p>
mouse	<p>A mouse is a hand held pointing device that is classed as a manual input device.</p> <p>A mouse usually has between 1 to 3 buttons which users 'click' in order to point and select objects on the screen. The data from the mouse is transmitted to the computer.</p>
online	<p>Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network</p>
password	<p>In order to log onto a network, you need a User ID and a password.</p> <p>Your User ID identifies you to the network, it enables the server to retrieve your files and it defines your access rights. Your User ID does not need to be kept a secret.</p> <p>Your password is the second part of the log-on security. It identifies that you are the person to whom the User ID belongs. It must be kept a secret.</p>
robot	<p>A mechanical device that has a number of input and output devices with a control system allowing intelligent decisions to be made depending on the feedback received.</p>
safety	<p>In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage.</p> <p>Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.</p>
save	<p>In terms of handling computer files you 'save' a file in order to be able to use it again at some later time.</p> <p>Files are saved to some type of storage device such as a hard disk or a memory stick.</p>
screen	<p>A monitor is an output device similar to a television screen. It receives signals from the computer and displays that information for the user to view.</p> <p>There are many different types of monitors available, CRT, TFT, LCD etc</p>
search	<p>A search is a function or process of finding letters, words, files, web pages, or other data. Many operating systems, software programs, and websites contain a search or find feature to locate data.</p>
sequence	<p>Sequence is one of the three basic logic flows in computing programming. The other two being selection and iteration</p> <p>Sequence means to set down instructions one after another for the computer to execute in turn. The instructions are put together to</p>



	<p>form a software program.</p> <p>Algorithms are programmed as a sequence of instructions with iteration and selection modifying the execution flow if a certain condition is met.</p>
tablet	<p>A form of computer.</p> <p>A tablet is a type of computer that typically is very thin, hand held, battery powered and its main interface is a glass touch screen.</p> <p>The enabling technology is the touch screen as it allows a wide variety of interaction without the use of a keyboard. Its operating system is designed specifically with a touch interface in mind.</p> <p>Typical commercial examples include the iPad and the Galaxy.</p>

Year One	
Online Safety	
address	<p>With a web page, its location is defined by its Uniform Resource Location or URL</p> <p>With email, a specific inbox is defined by a local part followed by the @ symbol followed by a domain</p>
communicate	If you communicate with someone, you share or exchange information with them
copyright	<p>This is the legal recognition that a creative work belongs to you if you are the 'copyright' owner.</p> <p>This means that anyone wishing to make use of the work for non-personal use will need to get your agreement.</p>
danger	the possibility of suffering harm or injury.
digital	When something is done, saved, or stored on a computer or other electronic device, it's done digitally. For example, when you write, edit, and save a document on your computer, you're doing it digitally. However, when you print a hard copy of that document, it's no longer digital.
Email	<p>Email is short for 'Electronic Mail'.</p> <p>Electronic mail is a form of communication where mainly text based messages are exchanged by using computers attached to a network.</p> <p>Email can also include attachments such as a PDF document or an image file.</p>
filter	A filter removes or hides unwanted items.

	<p>An e-mail filter will try to recognise spam emails and will store them in a separate mail box from your main emails.</p> <p>A filter in a program such as a database can be used to display the records that match a criteria and hide those which don't.</p>
folder	<p>Another name for a file directory.</p> <p>A directory structure allows you to organise the files and folders on your computer in a sensible manner. For example you could store all your documents in a folder called "My Docs" or something similar.</p> <p>Different operating systems have different rules about how you can name directories, but they all have the same basic function.</p>
google	A very popular search engine.
image	This is another name for a picture.
Information	Information is the word used for data that has meaning attached to it.
Internet	The global system of interconnected computer networks
keyboard	A computer keyboard is an input device that enables the user to enter characters (letters, numbers and symbols) into a computer.
meet	arrange or happen to come into the presence or company of (someone).
online	Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network
paint	Microsoft Paint, also known as Paint or MS Paint, is a simple program that allows users to create basic graphic art on a computer.
personal	Personal information includes all things that are true about a person e.g. name, age, address, school.
reliable	the quality of being trustworthy
safe	<p>In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage.</p> <p>Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.</p>
safety	<p>In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage.</p> <p>Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.</p>
save	<p>In terms of handling computer files you 'save' a file in order to be able to use it again at some later time.</p> <p>Files are saved to some type of storage device such as a hard disk or a memory stick.</p>
Search	A search is a function or process of finding letters, words, files, web pages, or other data. Many operating systems, software programs, and websites contain a search or find feature to locate data.
search engine	A Search engine is a database on the World Wide Web that helps us to quickly and easily find the web pages we want.

	The user enters 'key words' or phrases on the subject that they are interested in. The search engine searches its database looking for references to the key words. It then returns web pages with links to the relevant websites it found.
sender	a person who sends or transmits a message, letter, email, etc.
SMART	Rules created by Child Net <a href="https://www.childnet.com/resources/be-smart-online/">Posters can be found here https://www.childnet.com/resources/be-smart-online/</a>
stranger	Someone who you do not know
subject	A title or brief description of a message or document. For example, in an e-mail, the subject describes the contents of the e-mail.
tell	communicate information to someone in spoken or written words.
text	This is a term used to describe the words and characters on a page.
toolbar	A 'toolbar' is an area on screen that consists of a group of icons and selection boxes. Each icon in the toolbar is a 'tool' that has a specific purpose. Perhaps to save or print a file.
Trusted adult	A trusted adult is someone that you have a good relationship with. It is someone who you think has your best interests in mind.
type	To type or typing means to input characters into a computer using a keyboard.

### Computer Skills

application	An application in a software program which enables you to perform a range of useful tasks. Examples of applications are word processing programs, spreadsheet software, databases or graphics packages.
button	When referring to hardware, a button is a physical switch that controls a device's function. The picture is an example of the power button found on the front of a computer.
click	Click describes the action of pressing a mouse button (usually the left mouse button, if the mouse has two buttons) one or more times. The action performed when clicking the mouse depends on the computer and program you're using.
close	In general, close is the action performed to terminate a program or exit a file.
display	Alternatively known as a desktop display, a display or display device describes the device used to view video, images, or text.
double click	Double-click describes quickly pressing a mouse button twice while keeping it still. In most cases, a double-click with the left mouse button is used to open or execute a file, folder, or software program.
drag	The term drag describes the action of selecting an object or section of text and moving it, usually to drop in an alternate area.
exit	Exit is a command or option used to close a program or file.
file	In computer terms, a 'file' is a chunk of data that is treated as a single item by the operating system. A file is given a name. For example MYDOCUMENT.DOC The name is used by the operating system to store and fetch the file. This one happens to be split into two parts

	<p>separated by dot. Files can be stored on various storage devices such as hard disk and memory stick.</p>
folder	<p>Another name for a file directory. A directory structure allows you to organise the files and folders on your computer in a sensible manner. For example you could store all your documents in a folder called "My Docs" or something similar. Different operating systems have different rules about how you can name directories, but they all have the same basic function.</p>
headphones	<p>These are an example of an 'output device'. Headphones may be connected to the computer's sound card so you can listen to a sound file.</p>
keyboard	<p>A computer keyboard is an input device that enables the user to enter characters (letters, numbers and symbols) into a computer.</p>
Launch	<p>Launch is a term used to describe the opening or execution of a program or task.</p>
minimise	<p>An action in GUI operating systems to hide a window, but keep the program running in the background.</p>
Monitor	<p>A monitor is an output device similar to a television screen. It receives signals from the computer and displays that information for the user to view.</p>
Mouse	<p>A mouse is a hand held pointing device that is classed as a manual input device. A mouse usually has between 1 to 3 buttons which users 'click' in order to point and select objects on the screen. The data from the mouse is transmitted to the computer.</p>
move	<p>go in a specified direction or manner; change position.</p>
open	<p>When referring to computer software, open commonly refers to executing or running a program or accessing and reading a file.</p>
restore	<p>Restoring is the process of taking a window that was minimised and enlarging it back to maximised or its "Normal" size.</p>
Save	<p>In terms of handling computer files you 'save' a file in order to be able to use it again at some later time. Files are saved to some type of storage device such as a hard disk or a memory stick.</p>
screen	<p>A monitor is an output device similar to a television screen. It receives signals from the computer and displays that information for the user to view. There are many different types of monitors available, CRT, TFT, LCD etc</p>
size	<p>The size of something is how big or small it is</p>
switch	<p>A switch is a component which is used within a computer network.</p>
system unit	<p>Alternatively referred to as a box, main unit, and system box, a system unit is the case containing all the main parts of a computer.</p>

Trackpad	An input device on laptops and some keyboards. It allows the user to move a cursor with their finger. It can be used in place of an external mouse.
window	A rectangular section of the computer's display in a GUI that shows the program currently being used. For example, the browser window you're using to view this web page is a window. Windows allow a user to work with multiple programs or view multiple programs at once. Almost all windows allow you to minimise and maximise them, allowing you to hide and view a program temporarily.
Programming toys	
Algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
anticlockwise	in the opposite direction to the way in which the hands of a clock move round.
clockwise	in the same direction as the way in which the hands of a clock move round.
debug	The process of finding and correcting errors in a program
instruction	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
left	The left is one of two opposite directions, sides, or positions.
order	If you do something in order to achieve a particular thing or in order that something can happen, you do it because you want to achieve that thing.
photograph	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
program	A set of ordered commands that can be run by a computer to complete a task
right	The right is one of two opposite directions, sides, or positions.
sequence	Sequence is one of the three basic logic flows in computing programming. The other two being selection and iteration  Sequence means to set down instructions one after another for the computer to execute in turn. The instructions are put together to form a software program.  Algorithms are programmed as a sequence of instructions with iteration and selection modifying the execution flow if a certain condition is met.
turn	Move in a circular direction wholly or partly round an axis or point.
Paint	
brush	Tool used in creating images with a drawing program. The brush is similar to a paint brush, capable of having bold, vivid, and unique

	strokes that fill a much large area than other tools such as the pencil.
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
edit	correcting, condensing, or otherwise modifying
fill	With computer graphics, fill describes changing a portion of an image to a colour or pattern. For example, in most graphic programs, a fill is done with the paint bucket tool.
Paint	Microsoft Paint, also known as Paint or MS Paint, is a simple program that allows users to create basic graphic art on a computer.
	Pixel is short for Picture Element.
	A pixel is the smallest individual dot that can be displayed on a computer monitor. Each pixel is given a colour and brightness value.
pixels	An image is made up of many pixels. The quality of the image depends on the number of pixels per inch that make up the image.
redo	The undo function is used to reverse a mistake, such as deleting the wrong word in a sentence. The redo function restores any actions that were previously undone using an undo.
select	Selecting is highlighting text or picking an object. For example, you can select text to copy, cut, or move that text to an alternate location.
settings	In general, a setting is an adjustment in a software program or hardware device that changes it to the user's preference. For example, you may have difficulty seeing small fonts, so you change the font setting to a larger size.
shape	A tool to create shapes
size	The size of something is how big or small it is
text	In general, text is a collection of words or letters that are understandable by the reader. On a computer, text is added, viewed, edited, and modified using a text editor or word processing program. To add text, a keyboard is the most common input device. However, may also be added using touch and an on-screen keyboard or through voice recognition.
tools	When referring to software, tools (also known as toolkits) are a set of basic components and accessories that help software developers create programs in a more efficient manner.
undo	Undo is a function performed to reverse the action of an earlier action.
<b>Scratch</b>	
background	the part of a picture, scene, or design that forms a setting for the main figures or objects
blocks	Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other vertically like a jigsaw puzzle, where each block type (hat, stack, reporter, boolean, or cap) has its own shape and its own slot shape for it to be inserted into, which prevents syntax errors. Series of connected blocks are called scripts.

connect	to join or link together directly
grow	Increase in size.
instructions	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
invisible	unable to be seen.
move	go in a specified direction or manner; change position.
predict	say or estimate that (a specified thing) will happen in the future or will be a consequence of something.
programs	A program is a set of instructions that enable the computer hardware to perform a task.
project	A project is a creation made in the Scratch Program. Projects can be games, simulations, animations, pieces of art or music, or anything else possible to create with the Scratch software, although they usually fit into one of six main genres, most commonly games and animations.
record	If a musician or performer records a piece of music or a television or radio show, they perform it so that it can be put online or onto CD or film.
repeat	do (something) again or more than once.
repeat forever	Repeat a set of statements forever, never stopping until you click on the red stop sign icon on the screen to end your program
ScratchJr	ScratchJr is a visual programming language designed to introduce programming skills to children ages 5–7. The app is considered an introductory programming language. It is available as a free app for iOS, Android and Chromebook.
sequence	A set of programming blocks that make actions happen one after another
shrink	Decrease in size.
size	The size of something is how big or small it is
sound	A sound is an item which one hears that can be played in a Scratch project, available by importing, Scratch's built-in sound library, or recording. Sounds are played by using the sound blocks, which control a sound's volume, tempo, and more. All sounds in Scratch are played in mono.[1
speed	The rate at which someone or something moves or operates or is able to move or operate.
sprite	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
tablet	A touchscreen tablet.
wait	The Wait () Seconds block is a Control block and a Stack block. It pauses its script for the specified amount of seconds — the wait can

also be a decimal number.

## Word Processing Skills

arrow key	The arrow keys are usually located between the standard section and the numeric pad on computer keyboards. It is made up of four keys: the left arrow (back arrow), up arrow, down arrow, and the right arrow (forward arrow)
backspace	The Backspace key or Back space key is a keyboard key that deletes any character before the cursor's current position.
bold	Bold, bold face, or bold font creates the appearance of darker text by applying a thicker stroke weight to the letters.
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
delete	A command or key on a computer which erases text. Pressing the Delete key removes the character to the right of the cursor, and the cursor does not change position.
enter	Alternatively known as a Return key, with a keyboard, the Enter key sends the cursor to the beginning of the next line or executes a command or operation. Most full-sized PC keyboards have two Enter keys; one above the right Shift key and another on the bottom right of the numeric keypad.
enter key	Alternatively known as a Return key, with a keyboard, the Enter key sends the cursor to the beginning of the next line or executes a command or operation. Most full-sized PC keyboards have two Enter keys; one above the right Shift key and another on the bottom right of the numeric keypad.
folder	A folder, also called a directory, is a space used to store files, other folders, and shortcuts on a computer.
font	A font is a graphical representation of text that may include a different typeface, point size, weight, colour, or design.
format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English documents is aligned to the left of a page.
italics	Italic is a style of font that slants the letters evenly to the right.
key	a key is one of the keyboard's buttons. Letters, numbers, functions, and symbols are all represented on keys.
Keyboard	A computer keyboard is an input device that enables the user to enter characters (letters, numbers and symbols) into a computer. The keyboard consists of rows of keys with each key representing a different character.
redo	The undo function is used to reverse a mistake, such as deleting the wrong word in a sentence. The redo function restores any actions that were previously undone using an undo.
return	Alternatively known as a Return key, with a keyboard, the Enter key sends the cursor to the beginning of the next line or executes a command or operation. Most full-sized PC keyboards have two Enter keys; one above the right Shift key and another on the bottom right of the numeric keypad.
return key	Alternatively known as a Return key, with a keyboard, the Enter key sends the cursor to the beginning of the next line or executes a



	command or operation. Most full-sized PC keyboards have two Enter keys; one above the right Shift key and another on the bottom right of the numeric keypad.
save	Save is writing data to a storage medium, such as a floppy disk, CD-R, USB flash drive, or hard drive.
select	Selecting is highlighting text or picking an object.
shift	Shift is the name of a computer keyboard key. The Shift key is a keyboard modifier key that allows users to type a single capital letter and change the top number keys to a symbol.
size	The size of something is how big or small it is
space bar	The spacebar or space bar is a long horizontal key on the lower edge of a keyboard. It's always the largest and longest key on the keyboard. When the spacebar key is pressed, it creates an empty space known as a space character or whitespace that helps separate words and other characters in a sentence.
symbol	A character that is not a number or a letter.
type	To type or typing means to input characters into a computer using a keyboard.
underline	An underline is a section of text in a document where the words have a line running beneath them.
undo	Undo is a function performed to reverse the action of an earlier action.

## Year Two

### Online Safety

	suitable or proper in the circumstances
appropriate	Age-appropriate - suitable for a particular age or age group.
chat	Chat is a text-based communication that is live or in real-time.
content	Content describes the text within an email, web page, or another file. Although this often refers to text, content can refer to pictures, videos, or anything else on the viewable page or file.
cyberbullying	This is when the internet and the mobile phone is used to deliberately upset someone.
Digital footprint	A digital footprint describes activities that can be tracked when an individual uses the Internet or other online services such as a search engine.
e-Safety	Internet safety or online safety or cyber safety and E-Safety is trying to be safe on the internet
Internet	The global system of interconnected computer networks
Keyword	With a search function, a keyword is a word or group of words that help the search locate a better match for their search.
messenger	Messenger is a software program that allows a user to chat online (Internet) with other users.

online	Being online refers to when a user, computer, or another device connects to the Internet.
post	When referring to a message board, comment section, or social network, a post is a message, such as text or images, published online by a user. "To post" is also a verb, meaning to publish a message.
public	In general, public refers to anything that is out in the open for anyone to see.
rank	If an official organisation ranks someone or something 1st, 5th, or 50th, for example, they calculate that the person or thing has that position on a scale.
rating	Age ratings are recommendations for parents and carers to help them decide what is appropriate for their child depending on what stage of development they are at.
review	Alternatively called a product review or customer review, a review is a partial or overall judgement on a product or service performed by a person or company.
safe	In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage.  Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.
search engine	A search engine is software accessed on the Internet that searches a database of information according to the user's query. The engine provides a list of results that best match what the user is trying to find.
secure	certain to remain safe and unthreatened.
social media	Alternatively known as a virtual community or profile site, a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media.
trail	a series of actions or events on the internet that you can follow to find out who is responsible for them
website	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
Computer art	
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
Copy and Paste	Paste is an operating system and programs action that lets you copy an object or text from one location and place it to another location.
Cubism	an early 20th-century style and movement in art, especially painting, in which perspective with a single viewpoint was abandoned and use was made of simple geometric shapes, interlocking planes, and, later, collage.
dots	A small round mark.
duplicate	A duplicate is anything that is an exact copy of another thing.
fill	With computer graphics, fill describes changing a portion of an image to a colour or pattern. For example, in most graphic programs, a fill is done with the paint bucket tool.
Impressionism	Impressionism was a 19th-century art movement characterised by relatively small, thin, yet visible brush strokes, open composition,

	emphasis on accurate depiction of light in its changing qualities (often accentuating the effects of the passage of time), ordinary subject matter, unusual visual angles, and inclusion of movement as a crucial element of human perception and experience.
manipulate	Manipulate is any modification made to text, images, sounds, video, or other data.
Mondrian	An artist.
Monet	An artist
Picasso	An artist
Pixel	A pixel is the smallest individual dot that can be displayed on a computer monitor. Each pixel is given a colour and brightness value. An image is made up of many pixels. The quality of the image depends on the number of pixels per inch that make up the image.
Pointillism	A technique of neo-impressionist painting using tiny dots of various pure colours, which become blended in the viewer's eye. It was developed by Seurat with the aim of producing a greater degree of luminosity and brilliance of colour.
Pop Art	Pop art is an art movement that emerged in the 1950s and flourished in the 1960s in America and Britain, drawing inspiration from sources in popular and commercial culture.
primary colours	The three most basic shades — red, blue, and yellow — are the primary colours. By combining primary colours, you can theoretically create every other possible hue.
program	A program is a set of instructions that enable the computer hardware to perform a task.
retrieve	A term used to describe the process of searching for, locating, and returning data.
rotate	When referring to an image or image editor, rotate is a feature that lets you turn an image in a clockwise or anticlockwise direction.
screen-print	Alternatively referred to as a print screen, screen dump, snapshot, or screen capture, a screen shot or screenshot is an image of what's currently displayed on a screen.
Seurat	An artist.
shade	adds black to a colour to darken it down.
shapes	a shape or figure is a graphical representation of an object
size	The size of something is how big or small it is
tool	When referring to software, tools (also known as toolkits) are a set of basic components and accessories that help software developers create programs in a more efficient manner.
Warhol	An artist
Presentation skills	
aspect ratio	The viewable area and shape of a display are referred to as its aspect ratio. For example, most common computer monitors and televisions have an aspect ratio of 1.77:1 (16:9).
background	When referring to a location or position, a background is what is underneath another object.

colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
copy	First developed by Larry Tesler, copy and paste or copy is the act of duplicating text, data, files, or disks, producing two or more of the same file or segments of data. Copying a file to an alternate location, such as a USB jump drive, is a common procedure for backing up or sharing a file.
drag	The term drag describes the action of selecting an object or section of text and moving it, usually to drop in an alternate area.
folder	Another name for a file directory. A directory structure allows you to organise the files and folders on your computer in a sensible manner.
font	A font is a graphical representation of text that may include a different typeface, point size, weight, colour, or design.
format	Format or document format is the overall layout of a document or spreadsheet.
Google Slides	Google Slides (formerly known as Google Presentations) is a free presentation web application. It includes nearly all the capabilities of a traditional presentation program, such as Microsoft PowerPoint. Google Slides offers the benefit of cloud storage, which means that users' documents are saved automatically, and may be retrieved even if their hard drive or SSD fails.
Image	An image, digital image, or still image is a binary representation of visual information, such as drawings, pictures, graphs, logos, or individual video frames.
insert	In general, the term insert describes placing an object within another object.
Keynote	a presentation software application.
line	A line is a long thin mark which is drawn or painted on a surface.
log off	to stop a computer being connected to a computer system, usually when you want to stop working
log on	to start using a computer system or program by giving a password.
Microsoft PowerPoint	Sometimes abbreviated as PP or PPT, PowerPoint is a presentation program developed by Microsoft that creates a slideshow of important information, charts, and images for a presentation.
monitor	Alternatively referred to as a VDT (video display terminal) and VDU (video display unit), a monitor is an output device that displays video images and text.
network	A network is a collection of computers, servers, mainframes, network devices, peripherals, or other devices connected to allow data sharing.
New slide	With a slide show or slide presentation, a slide is a single page or image shown in a slideshow.
OpenOffice Impress	tool for creating effective multimedia presentations.
photo	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
picture	Sometimes abbreviated as pic, a picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer.

Presentation	A presentation program is a software program that helps create a slideshow that addresses a topic.
print	To print is a computer transferring data to a computer printer and generating a hard copy (printed copy) of the electronic data being printed.
Search	Sometimes referred to as seek, a search is a function or process of finding letters, words, files, web pages, or other data.
shut down	Shut down is a term used to describe closing all software programs in preparation to turn off a computer's power. The operating system is the last program to be closed as part of a computer's shut down process.
Slide	With a slide show or slide presentation, a slide is a single page or image shown in a slideshow.
slide layout	slide layout refers to the design and placement of different elements on a slide.
Slide Sorter View	Slide Sorter view displays all the slides in your presentation in horizontally sequenced, thumbnails. Slide show view is helpful if you need to reorganise your slides—you can just click and drag your slides to a new location, or add sections to organise your slides into meaningful groups.
switch	A switch is also a button or lever that can be switched to turn a device on or off.
System unit	The case containing all the main parts of a computer.
text box	A text box is a section or object on a page that allows a user to enter text.
windows	In general, a window is a fundamental part of a computer GUI (graphical user interface). A window is an area of the display containing a single running application. The window can be moved, resized, hidden, or maximised as desired by the user.

#### Preparing for turtle

Algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
Backward	in the direction that is opposite to the one in which you are facing
Commands	When referring to a programming language, a command is a unique word used to perform a specific operation.
Debug	The process of finding and correcting errors in a program
fd	Forward
Forward	in the direction that one is facing or travelling; towards the front.
Half turn	reversal of direction (as in a staircase) either by one 180-degree turn or two right-angle turns
Instructions	In computing terms, an instruction is a single command for the computer to carry out a task.  Computer programs are made up of instructions.
Left	The left is one of two opposite directions, sides, or positions.
Left 90	a turn of 90° to the left.
lt	left

Move	go in a specified direction or manner; change position.
Quarter turn	a turn of 90°
Right	The right is one of two opposite directions, sides, or positions.
Right 90	a turn of 90° to the right.
rt	Right
Turn	Move in a circular direction wholly or partly round an axis or point.
Programming turtle, logo and scratch	
add sound	A sound is an item which one hears that can be played in a Scratch project, available by importing, Scratch's built-in sound library, or recording. Sounds are played by using the sound blocks, which control a sound's volume, tempo, and more. All sounds in Scratch are played in mono.[1]
Algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
block	Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other vertically like a jigsaw puzzle, where each block type (hat, stack, reporter, boolean, or cap) has its own shape and its own slot shape for it to be inserted into, which prevents syntax errors. Series of connected blocks are called scripts.
clear screen (cs)	Clear describes removing all text or images from the screen.
commands	When referring to a programming language, a command is a unique word used to perform a specific operation.
forward (fd)	in the direction that one is facing or travelling; towards the front.
green flag	The Green Flag is a programming feature that, when clicked, will start all scripts in that project that are halted with the When Green Flag Clicked block.
instructions	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
left (lt)	The left is one of two opposite directions, sides, or positions.
move	go in a specified direction or manner; change position.
repeat	do (something) again or more than once.
right (rt)	The right is one of two opposite directions, sides, or positions.
say something	The block gives its sprite a speech bubble with the specified text — the speech bubble stays until another speech or thought block is activated, or the stop sign is pressed.
sprite	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
turn	Move in a circular direction wholly or partly round an axis or point.

variable	A variable is a changeable value recorded in Scratch's memory.
Using the internet	
back	The back button is a user interface feature that takes a user back to their previous location. For instance, in an Internet browser, clicking the back button takes you back to the last web page you visited.
Bing	web search engine owned and operated by Microsoft.
blog	Blogs are often maintained and run by a single individual, updated daily, or contain personal remarks about a topic, a personal ramble, or an update on the person's life. Weblogs are like a personal journal, offering the user a way to publicly discuss their life. It provides a personal way to learn more about people, events, places, and people around the world.
browser	A web browser is a software application that provides a way to view and interact with pages on the World Wide Web.
comment	A comment is a form of engagement in which a user replies to your social media post.
find	Find describes locating a specified text, file, document, or other objects on a computer, in a file, or on the Internet.
Google	A web search engine
image	This is another name for a picture
Internet	The global system of interconnected computer networks
link	On the Internet, a link is more appropriately referred to as a hyperlink and is what connects web pages to other web pages.
password	<p>In order to log onto a network, you need a User ID and a password.</p> <p>Your User ID identifies you to the network, it enables the server to retrieve your files and it defines your access rights. Your User ID does not need to be kept a secret.</p> <p>Your password is the second part of the log-on security. It identifies that you are the person to whom the User ID belongs. It must be kept a secret.</p>
photo	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
photograph	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
picture	Sometimes abbreviated as pic, a picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer.
post	When referring to a message board, comment section, or social network, a post is a message, such as text or images, published online by a user. "To post" is also a verb, meaning to publish a message. For instance, "You can click here to post this message," or, "Many forum users are posting frequently."
results	Search results are a list of webpages from a search engine that appear in response to a particular search query.
search	A search is a function or process of finding letters, words, files, web pages, or other data. Many operating systems, software programs, and websites contain a search or find feature to locate data.

search engine	A search engine is software accessed on the Internet that searches a database of information according to the user's query. The engine provides a list of results that best match what the user is trying to find.
upload	Sometimes abbreviated as UL or U/L, upload is sending a file to another computer through a modem or network.
username	Alternatively referred to as an account name, login ID, nickname, and user ID, username or user name is the name given to a user on a computer or computer network.
web page	A web page or webpage is a document, commonly written in HTML, that is viewed in an Internet browser. A web page can be accessed by entering a URL address into a browser's address bar. A web page may contain text, graphics, and hyperlinks to other web pages and files.
World Wide Web (WWW)	The WWW is different from the Internet although most people today think the WWW is the Internet. The Internet is what connects your computer with other computers. The WWW is what you're viewing while looking at your browser (e.g., this web page).
Yahoo	A web search engine

**Year Three**  
Online safety

advert	An advert is an announcement online, in a newspaper, on television, or on a poster about something such as a product, event, or job.
chat	Chat is a text-based communication that is live or in real-time.
comment	A comment is a form of engagement in which a user replies to your social media post.
comments	A comment is a form of engagement in which a user replies to your social media post.
communication	Communication is a message.
community	A particular community is a group of people who are similar in some way.
Cyberbullying/bullying	This is when the internet and the mobile phone is used to deliberately upset someone.
device	In general, a device can refer to any electronic device, including a laptop, tablet, and smartphone.
digital	When something is done, saved, or stored on a computer or other electronic device, it's done digitally. For example, when you write, edit, and save a document on your computer, you're doing it digitally. However, when you print a hard copy of that document, it's no longer digital.
digital footprint	A digital footprint describes activities that can be tracked when an individual uses the Internet or other online services such as a search engine.
email	Email is short for 'Electronic Mail'.



	<p>Electronic mail is a form of communication where mainly text based messages are exchanged by using computers attached to a network.</p> <p>Email can also include attachments such as a PDF document or an image file.</p>
forum	An area where users share thoughts, ideas, or help by posting text messages.
inbox	A term used to describe the place where e-mail messages are received in an e-mail client or online email account.
Internet	The global system of interconnected computer networks
Online	Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network
password	In order to log onto a network, you need a User ID and a password.
posts	When referring to a message board, comment section, or social network, a post is a message, such as text or images, published online by a user. "To post" is also a verb, meaning to publish a message.
privacy	With the Internet, privacy describes an individual or group's control over their selective anonymity and how safe they feel about the storage and sharing of information.
private	In general, private refers to anything that is secret or hidden from something else.
safe	<p>In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage.</p> <p>Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.</p>
secure	certain to remain safe and unthreatened.
settings	<p>In general, a setting is an adjustment in a software program or hardware device that changes it to the user's preference.</p> <p>Privacy settings are controls available on many websites and apps to limit who can access your profile and what information visitors can see.</p>
social media	Alternatively known as a virtual community or profile site, a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media.
website	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
Drawing and DTP	
aspect ratio	The viewable area and shape of a display are referred to as its aspect ratio. For example, most common computer monitors and televisions have an aspect ratio of 1.77:1 (16:9).
backward	in the direction that is opposite to the one in which you are facing

colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
Draw	When used as a verb, draw or drawing describes the making of lines, shading, or other marks with a pencil or pen on paper. With computers, draw is any program or program feature that lets you draw digitally using your mouse, drawing tablet, stylus, or finger (with touch screen).
fill colour	With computer graphics, fill describes changing a portion of an image to a colour or pattern. For example, in most graphic programs, a fill is done with the paint bucket tool.
font	A font is a graphical representation of text that may include a different typeface, point size, weight, colour, or design.
format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English documents is aligned to the left of a page.
forward	in the direction that one is facing or travelling; towards the front.
image	This is another name for a picture.
layout	The overall appearance of a document, image, text, or another medium designed to be more appealing to the viewer and help them identify what they are observing.
photo	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
photograph	A photo is a picture taken by a camera, digital camera, or smartphone that is capable of producing a hard copy or digital copy.
picture	Sometimes abbreviated as pic, a picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer.
Text	In general, text is a collection of words or letters that are understandable by the reader. On a computer, text is added, viewed, edited, and modified using a text editor or word processing program. To add text, a keyboard is the most common input device. However, may also be added using touch and an on-screen keyboard or through voice recognition.
text box	A section or object on a page that allows a user to enter text.
wrap text	Text wrap is a feature supported by many word processors that enables you to surround a picture or diagram with text.
Word Processing	
<ctrl> key	Short for control, Ctrl is a modifier key found on IBM-compatible computer keyboards in the bottom left and right portion of the main keyboard.
align text	Align or alignment is a term that describes how text is placed on the screen. For example, left-aligned text creates a straight line of text on the left side of the page.
application	An application in a software program which enables you to perform a range of useful tasks. Examples of applications are word processing programs, spreadsheet software, databases or graphics packages.
arrow keys	The arrow keys are usually located between the standard section and the numeric pad on computer keyboards. It is made up of four

	keys: the left arrow (back arrow), up arrow, down arrow, and the right arrow (forward arrow)
backspace	The Backspace key or Back space key is a keyboard key that deletes any character before the cursor's current position.
bullet point	Bullet points are often used in documents and presentations to help organise information and make it easier to read or understand.
capitals	Alternatively known as caps and capital, and sometimes abbreviated as UC, uppercase is a typeface of larger characters. For example, typing a, b, and c shows lowercase, and typing A, B, and C shows uppercase.
Caps Lock	Sometimes abbreviated as CAPS and CAPSLK, Caps Lock is a toggle key on a computer keyboard, that when pressed, causes all letters typed to be in uppercase.
centre	Alternatively known as middle or centre, the centre is the position that's horizontally or vertically aligned with the middle of an object.  When editing a rich text file in Microsoft Word or another rich text editor, you can usually centre text using the keyboard shortcut Ctrl+E. You may also click the centre alignment icon
change case	When referring to writing, the case describes the capitalization state of text characters. For example, when letters are uppercase, they're all capital, and lowercase has no capital letters.
close	In general, close is the action performed to terminate a program or exit a file.
control key	Short for control, Ctrl is a modifier key found on IBM-compatible computer keyboards in the bottom left and right portion of the main keyboard.
create	In general, create refers to making something new.
delete	A command or key on a computer which erases text. Pressing the Delete key removes the character to the right of the cursor, and the cursor does not change position.
edit	correcting, condensing, or otherwise modifying
exit	Exit is a command or option used to close a program or file.
file	In computer terms, a 'file' is a chunk of data that is treated as a single item by the operating system. A file is given a name. For example MYDOCUMENT.DOC The name is used by the operating system to store and fetch the file. This one happens to be split into two parts separated by dot. Files can be stored on various storage devices such as hard disk and memory stick.
folder	Another name for a file directory. A directory structure allows you to organise the files and folders on your computer in a sensible manner. For example you could store all your documents in a folder called "My Docs" or something similar. Different operating systems have different rules about how you can name directories, but they all have the same basic function.
format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English documents is aligned to the left of a page.

indent	When referring to text, indent or indentation is the increase or decrease of space between the left and right margin of a paragraph.
justified	Justify, justified, justification, or full justified is text that is both left-aligned and right-aligned.
Keyboard	A computer keyboard is an input device that enables the user to enter characters (letters, numbers and symbols) into a computer. The keyboard consists of rows of keys with each key representing a different character.
Launch	Launch is a term used to describe the opening or execution of a program or task.
left	The left is one of two opposite directions, sides, or positions.
lower case	Sometimes abbreviated as LC, lowercase is a typeface of small characters. For example, a, b, and c is lowercase and A, B, and C is uppercase.
Menu buttons	Launches a menu.
minimise	An action in GUI operating systems to hide a window, but keep the program running in the background.
move	go in a specified direction or manner; change position.
numbered point	Numbered points are very similar in format to bulleted points except that you usually use numbers when the order of the list is important
organise	arrange systematically.
password	In order to log onto a network, you need a User ID and a password.  Your User ID identifies you to the network, it enables the server to retrieve your files and it defines your access rights. Your User ID does not need to be kept a secret.  Your password is the second part of the log-on security. It identifies that you are the person to whom the User ID belongs. It must be kept a secret.
print	To print is a computer transferring data to a computer printer and generating a hard copy (printed copy) of the electronic data being printed.
redo	The undo function is used to reverse a mistake, such as deleting the wrong word in a sentence. The redo function restores any actions that were previously undone using an undo.
restore	Restoring is the process of taking a window that was minimised and enlarging it back to maximised or its "Normal" size.
right	The right is one of two opposite directions, sides, or positions.
ruler	The ruler is a measurement tool found with some software programs that allow the program's user to align graphics, text, tables, or other elements on a page. When enabled, the horizontal ruler appears at the top of the document, and the vertical ruler on the left.

save	In terms of handling computer files you 'save' a file in order to be able to use it again at some later time. Files are saved to some type of storage device such as a hard disk or a memory stick.
screen	A monitor is an output device similar to a television screen. It receives signals from the computer and displays that information for the user to view. There are many different types of monitors available, CRT, TFT, LCD etc
screenshot	Alternatively referred to as a print screen, screen dump, snapshot, or screen capture, a screen shot or screenshot is an image of what's currently displayed on a screen.
search	Sometimes referred to as seek, a search is a function or process of finding letters, words, files, web pages, or other data.
select	Selecting is highlighting text or picking an object. For example, you can select text to copy, cut, or move that text to an alternate location.
shift	Shift is the name of a computer keyboard key. The Shift key is a keyboard modifier key that allows users to type a single capital letter and change the top number keys to a symbol.
shortcut	A range of keyboard shortcuts <a href="https://support.google.com/chrome/answer/157179?hl=en-GB&amp;co=GENIE.Platform%3DDesktop">https://support.google.com/chrome/answer/157179?hl=en-GB&amp;co=GENIE.Platform%3DDesktop</a>
size	The size of something is how big or small it is.
Snipping Tool	The Snipping Tool is a feature introduced in Windows 7 and is also available in Windows 8, Windows 10, and Windows 11. It can take a screenshot of the entire screen, window, or a rectangular area of the screen and save that screenshot as an image file.
space bar	The spacebar or space bar is a long horizontal key on the lower edge of a keyboard. It's always the largest and longest key on the keyboard. When the spacebar key is pressed, it creates an empty space known as a space character or whitespace that helps separate words and other characters in a sentence.
split	Taking one whole object and dividing it into two or more sections. For example, a user may take one full window and split that window into two windows allowing two or more files to show at once
Text box	A text box is a section or object on a page that allows a user to enter text.
typing	To type or typing means to input characters into a computer using a keyboard.
undo	Undo is a function performed to reverse the action of an earlier action.
Uppercase	Alternatively known as caps and capital, and sometimes abbreviated as UC, uppercase is a typeface of larger characters. For example, typing a, b, and c shows lowercase, and typing A, B, and C shows uppercase.
window	A rectangular section of the computer's display in a GUI that shows the program currently being used. For example, the browser window you're using to view this web page is a window. Windows allow a user to work with multiple programs or view multiple programs at once. Almost all windows allow you to minimise and maximise them, allowing you to hide and view a program

	temporarily.
wrap text	Text wrap is a feature supported by many word processors that enables you to surround a picture or diagram with text.
Online Searchers and Surfers	
Internet Protocol Address	Each computing device that connects to the Internet, has something called an Internet Protocol address (IP address). This its own unique address which is made up of numbers.
Internet Service Provider (ISP)	A company that provides access to the Internet, either using cables, such as fibre-optic or copper or using wireless technology.
search engine	A search engine is a service you use on the Internet to help you find information via the World Wide Web.
web browser	A web browser allows you to access the Internet, including search engines and other web pages.
web page	This is a specific page that is viewed on a web browser by entering a URL address. It can display text, images and hyperlinks to other web pages.
website	This is a collection of web pages grouped together.
World Wide Web	The World Wide Web is a collection of web pages found on a network of computers.
Uniform Resource Locator (URL)	This is the address given to find web pages on a web browser, for example, <a href="http://www.twinkl.co.uk">www.twinkl.co.uk</a> .
Presentation skills	
action settings	An action button is an object on a slide that performs an action when clicked or pointed to, such as jumping to another slide or playing a sound. Action buttons are most commonly used for self-running presentations—for example, presentations that are presented at a booth or kiosk.
animation	Animation is the illusion of movement created by showing several still pictures in rapid succession. In the world of computers, graphics software used to create this effect.
audio	<p>Audio refers to anything to do with sound.</p> <p>In ICT terms it usually refers to either sound files such as MP3 formatted digital files or it refers to applications that handle sound, such as open source Audacity.</p> <p>There are many audio sound file formats. Some are designed to sound good even when compressed (MP3) or perhaps copy-protected audio files which most music download companies use.</p>
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
embed	When referring to HTML, the <code>&lt;embed&gt;</code> tag is used to designate an area for interactive content (plug-in) or an external application.

	With computer hardware and software embedded describes an object, software, or hardware that's independent and does not need an external program or device to run.
file format	The file format is the structure of a file that tells a program how to display its contents. For example, a Microsoft Word document saved in the .DOC file format is best viewed in Microsoft Word. Even if another program can open the file, it may not have all the features needed to display the document correctly.
hyperlink	Alternatively known as a link and web link, a hyperlink is an icon, graphic, or text that links to another file or object. The World Wide Web is comprised of hyperlinks linking trillions of pages and files to one another.
image	This is another name for a picture.
layout	The overall appearance of a document, image, text, or another medium designed to be more appealing to the viewer and help them identify what they are observing.
movie	A movie is an electronic signal of moving graphics, pictures, or text used to combine a steady stream of images used for entertainment, education, or other uses.
picture	Sometimes abbreviated as pic, a picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer.
plan	If you plan what you are going to do, you decide in detail what you are going to do, and you intend to do it.
slide	With a presentation or program like Microsoft PowerPoint, a slide is one page of text, images, or animations.
sound	In general, a sound refers to a vibration that is picked up by the human ear. As a sound is generated, it is blasted in waves that vibrate in a frequency measured in hertz (Hz). Computers generate sound using a sound card that is either connected to headphones or speakers to output the sound.
text	In general, text is a collection of words or letters that are understandable by the reader. On a computer, text is added, viewed, edited, and modified using a text editor or word processing program. To add text, a keyboard is the most common input device. However, may also be added using touch and an on-screen keyboard or through voice recognition.
Theme	The term theme describes the general layout, design, and "feel" of a website or software program.
transition	When referring to video or a slide, a transition is a visual effect that happens between each photo, slide, or video clip. For example, a fade transition can fade in or out of each picture in a slide show.
video	In general, a video or video clip is multiple electronic signals used to generate a steady source of still images, which simulate movement. Videos can utilise graphics, pictures, or text, and are used for entertainment, education or other purposes. Today, many web pages have downloadable or streaming video that visitors can watch on their computer.
Turtle, Logo and Scratch	
algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
background or backdrop	A backdrop is an image that can be shown on the Stage. It is similar to a costume, except that it is shown on the stage instead. They are located in the backdrops library.

block	Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other vertically like a jigsaw puzzle, where each block type (hat, stack, reporter, boolean, or cap) has its own shape and its own slot shape for it to be inserted into, which prevents syntax errors. Series of connected blocks are called scripts.
clear screen (cs)	Clear describes removing all text or images from the screen.
command	When referring to a programming language, a command is a unique word used to perform a specific operation.
commands	When referring to a programming language, a command is a unique word used to perform a specific operation.
forward (fd)	in the direction that one is facing or travelling; towards the front.
green flag	The Green Flag is a programming feature that, when clicked, will start all scripts in that project that are halted with the When Green Flag Clicked block.
instructions	In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions.
key press	The Key () Pressed? block is a Sensing block and a Boolean block. The block checks if the specified key is pressed. If the key is being pressed, the block returns "true"; if it is not, it returns "false".
left (lt)	The left is one of two opposite directions, sides, or positions.
move	go in a specified direction or manner; change position.
move	go in a specified direction or manner; change position.
pen	The pen is a feature in Scratch that allows a sprite to draw shapes, plot colored pixels, and so forth on the screen with the pen blocks.
pen down	Turns the pen feature on inside a sprite; the sprite will leave pen marks on the screen wherever it moves until the pen is turned off
pen up	The Pen Up block is a pen block and a stack block. If a sprite is currently using the pen because of the Pen Down block, the block will cause the sprite to stop drawing a trail.
repeat	do (something) again or more than once.
right (rt)	The right is one of two opposite directions, sides, or positions.
Sprite	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
turn	Move in a circular direction wholly or partly round an axis or point.
turn	Move in a circular direction wholly or partly round an axis or point.



variable	A variable is a changeable value recorded in Scratch's memory.
<b>Year Four</b>	
<b>Online Safety</b>	
account	An account is a membership with a multi user network, online service, computer, or other service that keeps track of personal information and settings.
citation/cite	The term cite, or citation, describes quoting or mentioning an author, book, passage, or website when referencing another writer's work.
cyberbullying	This is when the internet and the mobile phone is used to deliberately upset someone.
digital citizenship	Digital citizenship is the responsible use of technology to engage socially with other people. In short, it is an unwritten code of conduct for teaching people (digital citizens) to behave properly online.
e-Safety	Internet safety or online safety or cyber safety and E-Safety is trying to be safe on the internet
keywords	With a search function, a keyword is a word or group of words that help the search locate a better match for their search.
Online	Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network
plagiarism	The term plagiarism describes the act of taking another individual's work and claiming it as yours. To prevent plagiarism, either quote the original work and indicate the source, or paraphrase the section you want to add to your document.
private	In general, private refers to anything that is secret or hidden from something else.
profiles	Your profile on a social media website is the part where you post your name, picture, and personal information.
public	In general, public refers to anything that is out in the open for anyone to see.
register	If you register to do something, you put your name on an official list, in order to be able to do that thing or to receive a service.
results	Search results are a list of web pages from a search engine that appear in response to a particular search query.
search engine	"A Search engine is a database on the World Wide Web that helps us to quickly and easily find the web pages we want.
	The user enters 'key words' or phrases on the subject that they are interested in. The search engine searches its database looking for references to the key words. It then returns web pages with links to the relevant websites it found."
social media	Alternatively known as a virtual community or profile site, a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media.
synonyms	A synonym is a word or expression which means the same as another word or expression.
<b>Word processing</b>	
A4	A4 is an international standard paper size defined by ISO (standard ISO 216). Its dimensions are 210 x 297 mm, or 8.27 x 11.69

	inches. I
A5	An A5 piece of paper measures 148 × 210 mm or 5.8 × 8.3 inches.
add to dictionary	Adds a new word to Microsoft Word's dictionary.
align	Align or alignment is a term that describes how text is placed on the screen. For example, left-aligned text creates a straight line of text on the left side of the page.
border	In computer terms, a border can mean several things. One is a visual border in a document, sometimes a solid line, dotted or dashed line, or one made up of various objects, like flowers, baseballs, animals, or virtually any other object. These borders can represent the outer edge of a document or separate sections within a document from each other.
bullets	Bullet points are often used in documents and presentations to help organise information and make it easier to read or understand.
cell	Cells are the small rectangular boxes on spreadsheets which are used to enter data (text, numbers or symbols) and to perform calculations using formulae
change	Correct the word to the suggestion.
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
Columns	A column is a vertical series of cells in a chart, table, or spreadsheet.
combine	To join or unite two or more objects together. For example, a user may combine two or more files together to make one file.
copy	First developed by Larry Tesler, copy and paste or copy is the act of duplicating text, data, files, or disks, producing two or more of the same file or segments of data. Copying a file to an alternate location, such as a USB jump drive, is a common procedure for backing up or sharing a file.
copyright	"This is the legal recognition that a creative work belongs to you if you are the 'copyright' owner. This means that anyone wishing to make use of the work for non-personal use will need to get your agreement."
create	In general, create refers to making something new.
cursor	1. Alternatively referred to as a caret or a cursor, a text cursor is a visual representation of where you'll see text appear when you begin typing. 2. With a mouse, a cursor describes an object (e.g, an arrow or pointing finger) that is used to point, click, drag, and drop items on a GUI (graphical user interface) operating system.
document	A document or document file describes an electronic copy or hard copy of reference material for a product. To write and create an electronic document on a computer, use a word processor or other text editor. Once a document is created, it can be made into a hard copy by printing it.
edit	correcting, condensing, or otherwise modifying

features	Sometimes abbreviated as feat, a feature is a special addition that, by default, is not enabled or included in previous releases of the product. For example, a new feature may be the capability to spell check a document in a word processor.
folder	"Another name for a file directory. A directory structure allows you to organise the files and folders on your computer in a sensible manner. For example you could store all your documents in a folder called ""My Docs"" or something similar. Different operating systems have different rules about how you can name directories, but they all have the same basic function."
font	A font is a graphical representation of text that may include a different typeface, point size, weight, colour, or design.
Format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English documents is aligned to the left of a page.
Google Docs	Google Docs is a free word processor web application. It includes nearly all the capabilities of a traditional word processor like Microsoft Word. Google Docs offers the benefit of cloud storage, which means that users' documents are saved automatically, and may be retrieved even if their hard drive or SSD fails.
highlight	A highlight is a visual indication that text or another object is selected with the mouse or keyboard.
Hyperlink	Alternatively known as a link and web link, a hyperlink is an icon, graphic, or text that links to another file or object. The World Wide Web is comprised of hyperlinks linking trillions of pages and files to one another.
ignore	Leave the word how it is.
ignore all	Leave the word how it is in the whole document.
image	This is another name for a picture
images	This is another name for a picture
improve	If something improves or if you improve it, it gets better.
insert	In general, the term insert describes placing an object within another object.
Layout	The overall appearance of a document, image, text, or another medium designed to be more appealing to the viewer and help them identify what they are observing.
manipulate	Manipulate is any modification made to text, images, sounds, video, or other data.
menu	Alternatively referred to as the file menu, a menu is a list of commands or choices offered to the user through the menu bar.
Microsoft Word	Sometimes called Winword, MS Word, or Word, Microsoft Word is a word processor published by Microsoft. It is one of the office productivity applications included in the Microsoft Office suite.
navigate	With a computer, navigation refers to the act of opening and moving through computer menus, like the Start menu in Windows, opening software programs, or viewing files in Windows Explorer. More generally, to navigate is to move your mouse around the screen to access icons and the other features of an operating system.
numbering	Numbered points are very similar in format to bulleted points except that you usually use numbers when the order of the list is

	important
page layout	The overall appearance of a document, image, text, or another medium designed to be more appealing to the viewer and help them identify what they are observing.
page size	With print documents, page size refers to the size of the paper for the final printed document.
paste	First developed by Larry Tesler, copy and paste or copy is the act of duplicating text, data, files, or disks, producing two or more of the same file or segments of data. Copying a file to an alternate location, such as a USB jump drive, is a common procedure for backing up or sharing a file.
picture	Sometimes abbreviated as pic, a picture is a visual capture of an object. Pictures can be created using devices such as a digital camera, scanner, smartphone, or are works of art created on the computer.
rota	a list showing when each of a number of people has to do a particular job.
save	"In terms of handling computer files you 'save' a file in order to be able to use it again at some later time. Files are saved to some type of storage device such as a hard disk or a memory stick."
select	Selecting is highlighting text or picking an object. For example, you can select text to copy, cut, or move that text to an alternate location.
shading	Shading consists of three components: background color, an optional pattern, and an optional pattern color.
size	The size of something is how big or small it is
spellcheck	A software program or program feature designed to locate misspelt words and notify the user of the misspellings. Depending on the spell checker, the feature may either autocorrect the word or allow the user to select from potential corrections on the misspelt word.
table	A table is an arrangement of information in rows and columns containing cells that make comparing and contrasting information easier.
text	In general, text is a collection of words or letters that are understandable by the reader. On a computer, text is added, viewed, edited, and modified using a text editor or word processing program. To add text, a keyboard is the most common input device. However, may also be added using touch and an on-screen keyboard or through voice recognition.
text box	A text box is a section or object on a page that allows a user to enter text.
tool	When referring to software, tools (also known as toolkits) are a set of basic components and accessories that help software developers create programs in a more efficient manner.
toolbar	A 'toolbar' is an area on screen that consists of a group of icons and selection boxes. Each icon in the toolbar is a 'tool' that has a specific purpose. Perhaps to save or print a file.
tools	When referring to software, tools (also known as toolkits) are a set of basic components and accessories that help software developers create programs in a more efficient manner.
type	To type or typing means to input characters into a computer using a keyboard.

URL	Also known as an internet address or web address, a URL (Uniform Resource Locator) is a URI and standardised naming convention for addressing documents accessible over the Internet and Intranet. The URL makes it possible for a computer to locate and open a web page on a different computer on the Internet.
webpage	A web page or webpage is a document, commonly written in HTML, that is viewed in an Internet browser. A web page can be accessed by entering a URL address into a browser's address bar. A web page may contain text, graphics, and hyperlinks to other web pages and files.
word processing	Word processing describes creating or editing a document using a word processor, such as Microsoft Word, Google Docs, or OpenOffice Writer.
wrap	Text wrap is a feature supported by many word processors that enables you to surround a picture or diagram with text.
Animation	
Animate	give (a film or character) the appearance of movement using animation techniques.
animation	Animation is the illusion of movement created by showing several still pictures in rapid succession. In the world of computers, graphics software used to create this effect.
backdrop	the part of a picture, scene, or design that forms a setting for the main figures or objects
flip book	a series of illustrations of an animated scene bound together in sequence so that an illusion of movement can be imparted by flipping them rapidly
Frame	A frame is a single, still image displayed by the computer, video hardware, or software application and part of a larger sequence of images that make up a video or computer game. Also, see FPS and frame rate.
frame rate	The rate at which a video frame is displayed or projected; usually measured in frames per second (fps).
image	An image, digital image, or still image is a binary representation of visual information, such as drawings, pictures, graphs, logos, or individual video frames.
loop	A loop is a software program or script that repeats the same instructions or processes the same information over and over until receiving the order to stop.
onion skinning	Onion skinning, in 2D computer graphics, is a technique used in creating animated cartoons and editing movies to see several frames at once.
play	A button found in all media players that allows the user to play the music file or watch a video file. The play button is often a single triangle that is pointing to the right.
record	If a musician or performer records a piece of music or a television or radio show, they perform it so that it can be put online or onto CD or film.
stereoscope	a device by which two photographs of the same object taken at slightly different angles are viewed together, creating an impression of depth and solidity.
still image	An image, digital image, or still image is a binary representation of visual information, such as drawings, pictures, graphs, logos, or

	individual video frames.
stop	a button on a video or music player which can be pressed to temporarily stop the playing of the recording.
stop frame	of or relating to animated films involving models, puppets, etc, in which each frame is photographed individually
stop motion	a cinematographic technique whereby the camera is repeatedly stopped and started, for example to give animated figures the impression of movement.
thaumatrope	a scientific toy devised in the 19th century, consisting of a disc with a different picture on each of its two sides, these appearing to combine into one image when the disc is rapidly rotated.
upload	Uploading is sending information from your computer to another computer or server.
zoetrope	a 19th-century optical toy consisting of a cylinder with a series of pictures on the inner surface that, when viewed through slits with the cylinder rotating, give an impression of continuous motion.
zoopraxiscope	The zoopraxiscope is an early device for displaying moving images and is considered an important predecessor of the movie projector.

### Programming Turtle Logo

Algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
arc	a curved line
calculation	Calculation is the process of working something out mathematically.
clear screen (cs)	Clear describes removing all text or images from the screen.
commands	When referring to a programming language, a command is a unique word used to perform a specific operation.
fill	With computer graphics, fill describes changing a portion of an image to a colour or pattern. For example, in most graphic programs, a fill is done with the paint bucket tool.
forward (fd)	in the direction that one is facing or travelling; towards the front.
instructions	"In computing terms, an instruction is a single command for the computer to carry out a task. Computer programs are made up of instructions."
left (lt)	The left is one of two opposite directions, sides, or positions.
move	go in a specified direction or manner; change position.
pendown	Turns the pen feature on inside a sprite; the sprite will leave pen marks on the screen wherever it moves until the pen is turned off
penup	The pen is a feature that allows a sprite to draw shapes, plot colored pixels, and so forth on the screen with the pen blocks.
procedure	In computer programming, a procedure is a set of coded instructions that tell a computer how to run a program or calculation.

random	A random sample or method is one in which all the people or things involved have an equal chance of being chosen.
right (rt)	The right is one of two opposite directions, sides, or positions.
setcolor	is used to set the current drawing color to the new color.
setfloodcolour	This allows you to set the flood color with which the turtle FILLS.
setpc	an abbreviation for SETPENCOLOR
setpensize	The setpensize command decides the drawing pen size.
setpos	Moves the turtle to an absolute X,Y coordinate. The position input is a list of two numbers, the X and Y coordinates.
setx	SETX moves the turtle horizontally to the point specified by the input number.
setxy	The turtle sets its x-coordinate to x and its y-coordinate to y.
sety	SETY moves the turtle vertically to the point specified by the input number.
turn	Move in a circular direction wholly or partly round an axis or point.
variable	A variable is a changeable value recorded.
Scratch questions and quizzes	
algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
backdrop	A backdrop is an image that can be shown on the Stage. It is similar to a costume, except that it is shown on the stage instead. They are located in the backdrops library.
background	A backdrop is an image that can be shown on the Stage. It is similar to a costume, except that it is shown on the stage instead. They are located in the backdrops library.
block	Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other vertically like a jigsaw puzzle, where each block type (hat, stack, reporter, boolean, or cap) has its own shape and its own slot shape for it to be inserted into, which prevents syntax errors. Series of connected blocks are called scripts.
broadcast	A broadcast is a message that is sent through the Scratch program, activating scripts with the matching hat blocks. Broadcasts are sent with the blocks Broadcast () and Broadcast () and Wait, and are received by the hat block When I Receive ().
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
command	When referring to a programming language, a command is a unique word used to perform a specific operation.
cons	Its disadvantages
correct	If someone is correct, what they have said or thought is true.
costume	A costume is one out of possibly many "frames" or alternate appearances of a sprite. Sprites can change their look to any of its

	costumes. They can be named, edited, created, and deleted, but every sprite must have at least one costume. One of the most common uses of costumes is to make an animation for a game or other project.
decompose	It involves breaking down a complex problem or system into smaller parts that are more manageable and easier to understand.
decomposing	It involves breaking down a complex problem or system into smaller parts that are more manageable and easier to understand.
errors	An error is something you have done which is considered to be incorrect or wrong.
flowchart	A flowchart is a graphical representation of decisions and their results mapped out in individual shapes that were first developed by Herman Goldstine and John von Neumann in the 1940s. Flowcharts can provide a step-by-step diagram for mapping out complex situations, such as programming code or troubleshooting problems with a computer.
key press	The Key () Pressed? block is a Sensing block and a Boolean block. The block checks if the specified key is pressed. If the key is being pressed, the block returns "true"; if it is not, it returns "false".
logical sequence	a sequence of instructions that have been designed to be executed one after the other one.
online	Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network
play	A button found in all media players that allows the user to play the music file or watch a video file. The play button is often a single triangle that is pointing to the right.
program	A program is a set of instructions that enable the computer hardware to perform a task.
pros	its advantages
Quiz	A quiz is a game or competition in which someone tests your knowledge by asking you questions.
quiz	a test of knowledge, especially as a competition between individuals or teams as a form of entertainment.
repeat	do (something) again or more than once.
score	If you score a particular number or amount, for example as a mark in a test, you achieve that number or amount.
size	The size of something is how big or small it is
sound effects	a sound other than speech or music made artificially for use in a play, film, or other broadcast production.
sounds	A sound is an item which one hears that can be played in a Scratch project, available by importing, Scratch's built-in sound library, or recording. Sounds are played by using the sound blocks, which control a sound's volume, tempo, and more. All sounds in Scratch are played in mono.[1
sprite	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
variables	A variable is a changeable value recorded in Scratch's memory.
visual effects	Visual effects (sometimes abbreviated VFX) is the process by which imagery is created or manipulated outside the context of a live-action shot in filmmaking and video production.



## Communication and Collaboration

cloud storage service	A group of computers that provide storage services through the Internet.
email	Short for electronic mail. It is a way to send and receive digital messages over the Internet using an email address.
email address	A unique name chosen by the account owner. It can contain letters, characters and numbers and includes the @ symbol followed by the email domain name.
email clients	These are computer programs which allow you to send and receive emails. It is your email provider. They can be app-based, web-based or both.
Internet	The Internet is a large network of computers connected to each other all around the world.
phishing	The word phishing describes a person or group of people who try to scam you by sending emails or creating web pages that look real. It is a cyber-attack where cybercriminals try to gain sensitive information from you by pretending to be someone you would normally trust.

## Year Five - will not be taught 2023 - 2024

### Online Safety

account	An account is a membership with a multi user network, online service, computer, or other service that keeps track of personal information and settings.
adverts	An advert is an announcement online, in a newspaper, on television, or on a poster about something such as a product, event, or job.
apps	Alternatively referred to as a mobile app, an app is a program developed for smartphones or tablets running a mobile operating system, such as iOS or Android. Mobile apps can be installed from the App Store, Google Play, or the default application store installed on a mobile device.
bibliography	bibliography lists all the sources you used
citation	The term cite, or citation, describes quoting or mentioning an author, book, passage, or website when referencing another writer's work.
Cite	The term cite, or citation, describes quoting or mentioning an author, book, passage, or website when referencing another writer's work.
copyright	This is the legal recognition that a creative work belongs to you if you are the 'copyright' owner. This means that anyone wishing to make use of the work for non-personal use will need to get your agreement.
digital	When something is done, saved, or stored on a computer or other electronic device, it's done digitally. For example, when you write,

	edit, and save a document on your computer, you're doing it digitally. However, when you print a hard copy of that document, it's no longer digital.
edit	correcting, condensing, or otherwise modifying
editing	correcting, condensing, or otherwise modifying
Email	<p>Email is short for 'Electronic Mail'.</p> <p>Electronic mail is a form of communication where mainly text based messages are exchanged by using computers attached to a network.</p> <p>Email can also include attachments such as a PDF document or an image file.</p>
filter	a filter is a digital effect used to modify images
image	This is another name for a picture.
inbox	A term used to describe the place where e-mail messages are received in an e-mail client or online email account.
junk	advertisements and publicity materials that you receive through the post or by email which you have not asked for and which you do not want.
link	On the Internet, a link is more appropriately referred to as a hyperlink and is what connects web pages to other web pages.
media	More commonly known as digital media or medium, media is the plural form of medium and describes computer storage. For example, a floppy diskette, CD, DVDs, Blu-ray discs, and USB flash drives are all physical media used to store data. See our storage device definition for further information and a listing of all examples.
online	Online means to be connected to a network - either a local network such as a school intranet or the Internet. As opposed to 'Offline' which means not to be connected to a network
Passwords	<p>In order to log onto a network, you need a User ID and a password.</p> <p>Your User ID identifies you to the network, it enables the server to retrieve your files and it defines your access rights. Your User ID does not need to be kept a secret.</p> <p>Your password is the second part of the log-on security. It identifies that you are the person to whom the User ID belongs. It must be kept a secret.</p>
personal information	Personal information includes all things that are true about a person e.g. name, age, address, school.
phishing	Pronounced like fishing, phishing is a term used to describe a malicious individual or group who scam users. They do so by sending e-mails or creating web pages designed to collect an individual's online bank, credit card, or other login information. Because these e-mails and web pages look legitimate, users trust them and enter their personal information.

photographs	A photograph is a picture made using a camera.
photography	Photography is the skill, job, or process of producing photographs.
photoshop	a brand of digital image editing software to alter (a digital image) using Photoshop or other image editing software
plagiarism	The term plagiarism describes the act of taking another individual's work and claiming it as yours. To prevent plagiarism, either quote the original work and indicate the source, or paraphrase the section you want to add to your document.
Posts	When referring to a message board, comment section, or social network, a post is a message, such as text or images, published online by a user. "To post" is also a verb, meaning to publish a message.
privacy	With the Internet, privacy describes an individual or group's control over their selective anonymity and how safe they feel about the storage and sharing of information.
private	In general, private refers to anything that is secret or hidden from something else.
safe	In general, safe describes a feeling or location where you or what you're doing is not in danger of harm or damage. Online safety refers to the act of staying safe online. It is also commonly known as internet safety, e-safety and cyber safety. It encompasses all technological devices which have access to the internet from PCs and laptops to smartphones and tablets.
scam	A scam is a term that describes any fraudulent business or scheme that takes money or other goods from an unsuspecting person. With the world becoming more connected thanks to the Internet, online scams have increased, and it's often up to you to help stay cautious with people on the Internet.
secure	certain to remain safe and unthreatened.
sender	a person who sends or transmits a message, letter, email, etc.
social media	Alternatively known as a virtual community or profile site, a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media.
social media	Alternatively known as a virtual community or profile site, a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media.
software	Sometimes abbreviated as SW and S/W, software is a collection of instructions that enable the user to interact with a computer, its hardware, or perform tasks.
source	In general, a source is the location from which information is gathered.
spam	Alternatively referred to as mass email marketing, UCE (unsolicited commercial e-mail) and bulk email, spam (not the meat product) is slang that describes junk e-mail on the Internet. Spam is an e-mail sent to thousands and sometimes millions of people without prior approval, promoting a particular product, service, or a scam to get other people's money.
subject	A title or brief description of a message or document. For example, in an email, the subject describes the contents of the e-mail.

virus	A computer virus is a malicious program, script, macro, or code designed to damage, steal personal information, modify data, send email, display messages, or a combination of these actions.
website	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
Flowol	
algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
control	In general, control refers to the ability to manage, organise, or run something on a computer. When working with a computer a user controls the computer using input devices, such as a keyboard, mouse, joystick, and gamepads. For example, you can control the mouse pointer on the screen by moving the mouse.
decision	Use the Decision symbol to branch the flowchart based on a condition. If the condition is true (if YES) then proceed one way, if false (if NO), proceed another way. Decision symbols can check the status of an input switch (Is Input 1 on?) or of an analog sensor (Is Temperature > 50°C?). A decision symbol is also used to check the value of a variable (Is x = 10?). Every decision symbol must have both a YES and a NO line proceeding from it
delay	To hold off or postpone an action or process. For example, a script or program may be set up to delay performing any instructions until one minute has passed.
flowchart	A flowchart is a graphical representation of decisions and their results mapped out in individual shapes that were first developed by Herman Goldstine and John von Neumann in the 1940s. Flowcharts can provide a step-by-step diagram for mapping out complex situations, such as programming code or troubleshooting problems with a computer.
Flowol	Flowol 4 allows students of all ages to develop logical reasoning and problem solving talents, develop programming skills and explore the world of automatic, autonomous systems and robots.
input	Any information or data sent to a computer for processing is considered input.
insert	In general, the term insert describes placing an object within another object.
loop	A loop is a software program or script that repeats the same instructions or processes the same information over and over until receiving the order to stop.
mimic	Flowol 'Mimics' are controllable pictures that make it possible for pupils/students to model their control solutions on the computer screen.
output	. Any information processed by and sent out from a computer or other electronic device is considered output. An example of output is anything viewed on your computer monitor screen, such as the words you type on your keyboard. Without some type of output that a human could see, feel, or hear, a human could not interact with the computer.
process	A process or running process refers to a set of instructions currently being processed by the computer processor.
simulation	In general, sim or simulation refers to a computerised imitation of a real object or real action.

start	Use the Start symbol at the beginning of the flowchart program. Multiple Start symbols can be placed, and their programs will run in parallel.
stop	Use the Stop symbol to end a program. Or use the Stop symbol to end a subroutine.
subroutine	A routine or subroutine, also referred to as a function, procedure, method, and subprogram, is code called and executed anywhere in a program. For example, a routine may be used to save a file or display the time. Instead of writing the code each time these commonly performed tasks are needed, routines are created and called when these tasks need to be performed.
symbol	A character that is not a number or a letter. For example, the less than ( < ) is considered a symbol.
<b>Radio Stations</b>	
audio	<p>Audio refers to anything to do with sound.</p> <p>In ICT terms it usually refers to either sound files such as MP3 formatted digital files or it refers to applications that handle sound, such as open source Audacity.</p> <p>There are many audio sound file formats. Some are designed to sound good even when compressed (MP3) or perhaps copy-protected audio files which most music download companies use.</p>
backing track	a recorded instrumental or vocal accompaniment for a pop singer or pop number
digital content	Digital content is data that is produced and supplied in a digital form - for example, computer system software, films, downloaded music or mobile phone application software (an app).
download	Sometimes abbreviated as DL, D/L, or DLing, download describes copying data from one computer to another, either over a network or modem.
downloadable	(of data) able to be copied from one computer system to another
edit	correcting, condensing, or otherwise modifying
gain	Gain in audio is a term for the amount of amplification applied to a signal by any process that increases its strength. It's measured in decibels, or dB for short.
input	Any information or data sent to a computer for processing is considered input.
jingle	A jingle is a short, simple tune, often with words, which is used to advertise a product or programme on radio or television.
listen	If you listen to someone who is talking or to a sound, you give your attention to them or it.
mute	A software setting that completely disables the sound. Mute enables a user to get rid of sound without stopping the audio file or movie. To re-enable the sound, press the mute button or setting again.
output	Any information processed by and sent out from a computer or other electronic device is considered output.
play	A button found in all media players that allows the user to play the music file or watch a video file. The play button is often a single

	triangle that is pointing to the right.
podcast	Alternatively referred to as an audioblog, a podcast (sometimes abbreviated as pod) is a digital audio broadcast distributed on the Internet.
record	If a musician or performer records a piece of music or a television or radio show, they perform it so that it can be put online or onto CD or film.
rehearse	to practise a play, a piece of music, etc. in order to prepare it for public performance:
skip	Alternatively referred to as Next, Skip is a feature found in media players, often represented by two arrows pointing to the right followed by a vertical line. This feature enables the user to move to the next track or chapter depending on the media type.
Sound	In general, a sound refers to a vibration that is picked up by the human ear. As a sound is generated, it is blasted in waves that vibrate in a frequency measured in hertz (Hz). Computers generate sound using a sound card that is either connected to headphones or speakers to output the sound.
stop	a button on a video or music player which can be pressed to temporarily stop the playing of the recording.
voiceover	The voice-over of a film, television programme, or advertisement consists of words which are spoken by someone who is not seen.
waveform	Alternatively referred to as a waveform, a wave is the signal pattern, such as that generated by sound, that changes at regular intervals.

### Internet Research and Website Design

advanced search	Advanced search is a built-in feature of Google (and most search websites) that allows a user to specify additional requirements for a search. When used for searching the Web, an advanced search gives additional information to Google, which helps refine the search.
advertising	An advert is an announcement online, in a newspaper, on television, or on a poster about something such as a product, event, or job.
animation	Animation is the illusion of movement created by showing several still pictures in rapid succession. In the world of computers, graphics software used to create this effect.
authority	The authorities are the people who have the power to make decisions and to make sure that laws are obeyed. An authority is an official organisation or government department that has the power to make decisions. Authority is the right to command and control other people.
bias	Bias is a tendency to prefer one person or thing to another, and to favour that person or thing.
browser	A web browser is a software application that provides a way to view and interact with pages on the World Wide Web.
colour	The colour of something is the appearance that it has as a result of the way in which it reflects light.
Creative Commons	Creative Commons (CC) is an internationally active non-profit organisation that provides free licences for creators to use when making their work available to the public.
font	A font is a graphical representation of text that may include a different typeface, point size, weight, colour, or design.
format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English

	documents is aligned to the left of a page.
Google	A very popular search engine.
heading	<p>A title at the head of a page or section of a book.</p> <p>A header or heading is text at the top of a page in an electronic document or hard copy. For example, in Microsoft Word, a header could be created in a document to display the page number of each page. By contrast, a footer is at the bottom of a page in an electronic document or hard copy.</p>
hyperlink	Alternatively known as a link and web link, a hyperlink is an icon, graphic, or text that links to another file or object. The World Wide Web is comprised of hyperlinks linking trillions of pages and files to one another.
image	This is another name for a picture.
Internet	The global system of interconnected computer networks
layout	The overall appearance of a document, image, text, or another medium designed to be more appealing to the viewer and help them identify what they are observing.
permission	Alternatively referred to as rights and privileges, permissions are access details given by users or network administrators that define access rights to files on a network.
publish	to make information available to people, especially in a book, magazine, or newspaper, or to produce and sell a book, magazine, or newspaper:
results	Search results are a list of web pages from a search engine that appear in response to a particular search query.
search	A search is a function or process of finding letters, words, files, web pages, or other data. Many operating systems, software programs, and websites contain a search or find feature to locate data.
search engine	A search engine is software accessed on the Internet that searches a database of information according to the user's query. The engine provides a list of results that best match what the user is trying to find.
share	On the Internet, a share or social share is a feature that allows a website visitor to share something they find interesting with their friends. For example, on most web pages (including this one), you can find a share link that lets you share the page on social networking websites like Facebook and Twitter. When shared on a social networking website, it's posted on a timeline that shares the page with your friends or people capable of seeing your posts.
sponsored link	A sponsored link is an advertisement which is displayed on the search engine results page after a user searches for certain keywords.
tab	In computer software (e.g., Internet browser), a tab is a clickable area at the top of a window that shows another page or area. When a tab is clicked, the tab's contents are shown, and any other open tab is hidden.
terms of use	Short for terms of service, TOS is a contract or agreement made between a company and the end-user using the product. If the user voids the agreement, the user may be inflicted with penalties. For example, a user disobeying a TOS may be banned from the service.
text	In general, text is a collection of words or letters that are understandable by the reader. On a computer, text is added, viewed, edited,

	and modified using a text editor or word processing program. To add text, a keyboard is the most common input device. However, may also be added using touch and an on-screen keyboard or through voice recognition.
video	In general, a video or video clip is multiple electronic signals used to generate a steady source of still images, which simulate movement. Videos can utilise graphics, pictures, or text, and are used for entertainment, education or other purposes. Today, many web pages have downloadable or streaming video that visitors can watch on their computer.
webpage	A web page or webpage is a document, commonly written in HTML, that is viewed in an Internet browser. A web page can be accessed by entering a URL address into a browser's address bar. A web page may contain text, graphics, and hyperlinks to other web pages and files.
website	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
window	A rectangular section of the computer's display in a GUI that shows the program currently being used. For example, the browser window you're using to view this web page is a window. Windows allow a user to work with multiple programs or view multiple programs at once. Almost all windows allow you to minimise and maximise them, allowing you to hide and view a program temporarily.
World Wide Web (WWW)	The WWW is different from the Internet although most people today think the WWW is the Internet. The Internet is what connects your computer with other computers. The WWW is what you're viewing while looking at your browser (e.g., this web page).

### 3d Modelling

2D shape	A two-dimensional (2D) shape can be defined as a flat figure or a shape that has two dimensions—length and width.
3D shape	3D (three-dimensional) shapes are solid shapes that have three dimensions including length, depth and width.
dimension	A dimension is a measurement such as length, width, or height. If you talk about the dimensions of an object or place, you are referring to its size and proportions.
eraser	Erase is a term that describes the process of removing or deleting data.
measurement	extent, quality, or size as determined by measuring
move	go in a specified direction or manner; change position.
orbit	Rotates a 3D model around pivot points.
pan	For 3D modelling in computer graphics, panning means moving parallel to the current view plane.[1] In other words, the camera moves perpendicular to the direction it is pointed.
rectangle	A shape.
zoom	When referring to an image, graphic, or document, zoom describes the function of focusing on a section of an image and increasing its overall size for greater detail. Zoom can also refer to magnifying the image on a screen.

### Scratch 3.0 Developing Games

Algorithm	A precise set of ordered steps that can be followed by a human or a computer to achieve a task
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backdrop	A backdrop is an image that can be shown on the Stage. It is similar to a costume, except that it is shown on the stage instead. They are located in the backdrop library.
block	Blocks are puzzle-piece shapes that are used to create code in Scratch. The blocks connect to each other vertically like a jigsaw puzzle, where each block type (hat, stack, reporter, boolean, or cap) has its own shape and its own slot shape for it to be inserted into, which prevents syntax errors. Series of connected blocks are called scripts.
commentary	Comments in the Scratch program are adjustable text boxes that can be attached to blocks, or left floating. The comment boxes can be adjusted both horizontally and vertically, dragged around the Scripts Area, and deleted.
consequence	The consequences of something are the results or effects of it.
costume	A costume is one out of possibly many "frames" or alternate appearances of a sprite. Sprites can change their look to any of its costumes. They can be named, edited, created, and deleted, but every sprite must have at least one costume. One of the most common uses of costumes is to make an animation for a game or other project.
debug	The process of finding and correcting errors in a program
events	Events is one of the ten categories of Scratch blocks. They are colour-coded light yellow and are used to sense events, which trigger scripts to run. Event blocks are essential for every project
fill	With computer graphics, fill describes changing a portion of an image to a colour or pattern. For example, in most graphic programs, a fill is done with the paint bucket tool.
gradient	A gradient fill is a graphical effect that produces a three-dimensional colour look by blending one colour into another. Multiple colours can be used, where one colour gradually fades and changes to the other colour, such as the gradient blue to white
levels	Sometimes abbreviated as lvl, level or is a term used to describe the overall status of a player. For example, in games that use level as a ranking method, all players start at level 1. As the player gains experience, they level up, acquiring new abilities and access to new content.
repeat	do (something) again or more than once.
script	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
sequence	Sequence is one of the three basic logic flows in computing programming. The other two being selection and iteration  Sequence means to set down instructions one after another for the computer to execute in turn. The instructions are put together to form a software program.  Algorithms are programmed as a sequence of instructions with iteration and selection modifying the execution flow if a certain condition is met.
sprite	A sprite is an object or character in Scratch that can be programmed to perform actions based on scripts in a project using blocks.
test	A step or group of steps performed to verify a software program or hardware device is properly working is referred to as a test.

## Year Five & Six

### Online Safety

acronym	an abbreviation formed from the initial letters of other words and pronounced as a word
address bar	The term address bar refers to the text field in a web browser that identifies the user's location on the web and allows them to access different websites. The address bar is known as a location bar, and in Google Chrome, it's called the omnibox.
anonymous	Anonymous is a term that describes a person or computer that cannot be identified.
attachments	An email term. An attachment is a file that you want to include with your email message. You can add many attachments to an email message.
browser	A web browser is a software application that provides a way to view and interact with pages on the World Wide Web.
Cyberbullying	This is when the internet and the mobile phone is used to deliberately upset someone.
domain	When referring to an Internet address or name, a domain or domain name is the location of a website. For example, the domain name "google.com" points to the IP address "216.58.216.164". Generally, it's easier to remember a name rather than a long string of numbers. A domain name contains a maximum of sixty three characters, with one character minimum, and is entered after the protocol in the URL.
email	Email is short for 'Electronic Mail'. Electronic mail is a form of communication where mainly text based messages are exchanged by using computers attached to a network. Email can also include attachments such as a PDF document or an image file.
fraud/fraudulent	Computer fraud is the use of computers, the Internet, Internet devices, and Internet services to defraud people or organisations of resources. Illegal computer activities include phishing, social engineering, viruses, and DDoS attacks are examples used to disrupt service or gain access to another's funds.
https	HTTPS, which stands for Hypertext Transfer Protocol Secure, is a protocol for transmitting HTTP over a connection that is encrypted by TLS (transport-layer security). HTTPS is used to protect transmitted data from eavesdropping. It's the default protocol for conducting financial transactions on the web, and can protect a website's users from censorship by a government or an ISP.
instant messaging	IM is short for instant message, which is a message directly sent from one person to another. IM is also short for Instant Messenger, which is a program that connects users to the Internet or network to send text messages. When used as a verb, IM (instant messaging) is the act of sending a message and chatting in an IM program.
media	More commonly known as digital media or medium, media is the plural form of medium and describes computer storage. For example, a floppy diskette, CD, DVDs, Blu-ray discs, and USB flash drives are all physical media used to store data. See our storage device definition for further information and a listing of all examples.

message	A message is a brief segment of data of information distributed to one or more users. For example, using an IM (Instant Messenger) program, a user can distribute messages of communication with other users. With text messaging, messages are sent using a smartphone.
online	Being online refers to when a user, computer, or another device connects to the Internet.
online media	In short, online media refers to content that is presented electronically (digital media formats) on websites or servers whereby detail is able to be retrieved through web browsers.
personal	Personal information includes all things that are true about a person e.g. name, age, address, school.
personal information	Personal information includes all things that are true about a person e.g. name, age, address, school.
policy	Site Policies are a defined set of rules that govern how users can view and edit account management data on your site, such as users and organizations.
privacy	With the Internet, privacy describes an individual or group's control over their selective anonymity and how safe they feel about the storage and sharing of information.
private	In general, private refers to anything that is secret or hidden from something else.
private/personal	In general, private refers to anything that is secret or hidden from something else.
reporting	Telling a trusted adult or pressing a report button on a website or platform.
Secure	certain to remain safe and unthreatened.
security	Computer security refers to the protection of a computer's hardware and the data that it holds. Computer security can be implemented using passwords, encryption, and firewalls, and denying physical access to a computer's location.
site	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
SMART	Rules created by Child Net Posters can be found here <a href="https://www.childnet.com/resources/be-smart-online/">https://www.childnet.com/resources/be-smart-online/</a>
stereotype	a widely held but fixed and oversimplified image or idea of a particular type of person or thing.
victim	a person harmed, injured, or killed as a result of a crime, accident, or other event or action.
website	A site or website is a central location of web pages that are related and accessed by visiting the home page of the website using a browser.
Scratch Animated Stories	
Animate	give (a film or character) the appearance of movement using animation techniques.

animation	Animation is the illusion of movement created by showing several still pictures in rapid succession. In the world of computers, graphics software used to create this effect.
audio	<p>Audio refers to anything to do with sound.</p> <p>In ICT terms it usually refers to either sound files such as MP3 formatted digital files or it refers to applications that handle sound, such as open source Audacity.</p> <p>There are many audio sound file formats. Some are designed to sound good even when compressed (MP3) or perhaps copy-protected audio files which most music download companies use.</p>
broadcast	<p>A broadcast is a message that is sent through the Scratch program, activating scripts with the matching hat blocks. Broadcasts are sent with the blocks Broadcast () and Broadcast () and Wait, and are received by the hat block When I Receive ().</p> <p>Broadcasts allow scripts to continue into other sprites, as some values are different to different sprites. They can also be used to branch a single sending script into many receiving scripts, or to close many sending scripts into a single receiving script.</p> <p>Broadcasts are useful in games and animations, as they trigger specific scripts. They are similar to events, which are scripts triggered when certain actions, like mouse moves or key presses, are performed.</p>
debug	The process of finding and correcting errors in a program
hide	The Hide block is a Looks block and a stack block. If the block's sprite is shown, it will hide the sprite — if the sprite is already hidden, nothing happens. This block is one of the most commonly used Looks blocks.[citation needed] A hidden sprite cannot be touched.
interactive	Interactive describes software or hardware whose behaviour changes in response to interaction with a human.
invisible	unable to be seen.
iteration	With computing, iteration describes going through a set of operations that deal with computer code. For example, in a computer program, one form of iteration is a loop. A loop repeats code until a certain condition is met. Each time the computer runs through a loop, it's referred to as an iteration.
project	A project is a creation made in the Scratch Program. Projects can be games, simulations, animations, pieces of art or music, or anything else possible to create with the Scratch software, although they usually fit into one of six main genres, most commonly games and animations.
record	If a musician or performer records a piece of music or a television or radio show, they perform it so that it can be put online or onto CD or film.
remix	A remix is a modified and shared version of an uploaded project.
repeat	do (something) again or more than once.
sequence	Sequence is one of the three basic logic flows in computing programming. The other two being selection and iteration

	<p>Sequence means to set down instructions one after another for the computer to execute in turn. The instructions are put together to form a software program.</p> <p>Algorithms are programmed as a sequence of instructions with iteration and selection modifying the execution flow if a certain condition is met.</p>
show	<p>The Show block is a Looks block and a stack block. If the block's sprite is hidden, it will show the sprite — if the sprite is already showing, nothing will change.</p> <p>This block is one of the simplest and most commonly used Looks blocks.</p>
transition	When referring to video or a slide, a transition is a visual effect that happens between each photo, slide, or video clip. For example, a fade transition can fade in or out of each picture in a slide show.
visible	able to be seen.
Spreadsheets	
ascending	The order that information is sorted or arranged, ascending order is always arranged from lowest to highest.
average	a number expressing the central or typical value in a set of data, in particular the mode, median, or (most commonly) the mean, which is calculated by dividing the sum of the values in the set by their number.
calculate	determine (the amount or number of something) mathematically.
cell	Cells are the small rectangular boxes on spreadsheets which are used to enter data (text, numbers or symbols) and to perform calculations using formulae
column	<p>A common spreadsheet term.</p> <p>A column is made up of all the cells that are lying directly below each other, starting from the top of the spreadsheet down to the last cell. It is a vertical group of adjacent cells.</p>
descending	The order in how information is sorted or arranged, descending order is arranged from highest to lowest.
edit	correcting, condensing, or otherwise modifying
format	Format or document format is the overall layout of a document or spreadsheet. For example, the formatting of text on many English documents is aligned to the left of a page.
formula/ formulas/formula e	<p>A formula is used to do every single calculation in the spreadsheet.</p> <p>A formula can be as simple as adding up two numbers in different cells or it can be as complex as working out a statistical result from millions of pieces of data collected over months.</p>

insert	In general, the term insert describes placing an object within another object.
percent	by a specified amount in or for every hundred.
	A spreadsheet term.
row	A row is made up of all the cells lying next to each other going from left to right. It is a horizontal group of adjacent cells.
Spreadsheet	A spreadsheet is a file made of rows and columns that help sort, organise, and arrange data efficiently, and calculate numerical data. What makes a spreadsheet software program unique is its ability to calculate values using mathematical formulas and the data in cells.
Kodu	
acceleration	Acceleration is the rate at which a car or other vehicle can increase its speed, often seen in terms of the time that it takes to reach a particular speed.
bump	If you bump into something or someone, you accidentally hit them while you are moving.
character	A person or animal in which you control.
finish	The end of a race track.
Kodu	Kodu Game Lab is a 3D game development environment that is designed to teach kids basic programming principles. Kodu allows creators to build the world's terrain, populate it with characters and props, and then program their behaviours and game rules in a bespoke visual programming language.
node	A small sphere
object	A material thing that can be seen and touched.
obstacle	An obstacle is an object that makes it difficult for you to go where you want to go, because it is in your way.
program	As a verb, to program a computer is the writing of instructions, statements, or commands that instruct the computer how to process data.
settings	This is where you can change the language and screen resolution.
start	The beginning of a race track.
tool palette	A Tool Palette appears along the bottom of the screen. This is the control panel for Kodu game making.
track	A racetrack is a track for races, for example car or bicycle races.
turning	Move in a circular direction wholly or partly round an axis or point.
world	World is the location in that a Kodu project takes place, Worlds can be made with different ground colour and texture,
Film Making	
angle	The camera angle marks the specific location at which the movie camera or video camera is placed to take a shot.

background	anything occurring in a rear plane of action (the background as opposed to the main action or attention in the foreground)
close-up	a photograph or film image taken at close range and showing the subject on a large scale.
convert	A conversion describes the ability to transfer one file or a segment of data from one format to another format.
Documentary	using pictures or interviews with people involved in real events to provide a factual report on a particular subject.
edit	Film editing is the art and craft of cutting and assembling finished film.
file	A file is an object on a computer that stores data, information, settings, or commands used with a computer program.
film-making	the direction or production of films for the cinema or television.
frame	a frame is one of the many still images which compose the complete moving picture.
high-angle	A high angle shot is when the camera looks down on the character or subject from an elevated perspective.
import	The process of moving data or settings used in one program to another.
improvise	If you improvise, you make or do something using whatever you have or without having planned it in advance.
interview	An interview is a conversation in which a journalist puts questions to someone such as a famous person or politician.
interviewee	An interviewee is a person who is being interviewed.
interviewer	An interviewer is a person who is asking someone questions at an interview.
location	a place where some or all of a film or television series is produced
low-angle	A low angle shot is a film shot taken from a camera angle positioned below the average eye line and pointing up
pan	In cinematography, a pan shot is a horizontal camera movement where the camera pivots left or right while its base remains in a fixed location.
post-production	Postproduction is the editing of audio and visual materials to create a film.
pre-production	Pre-production is the process of planning some of the elements involved in a film, television show, play, or other performance, as distinct from production, and post-production.
Production	the process or activity of producing films.
prop	A prop, or property, is any moveable item that can be seen on a film.
screening	A film screening is the displaying of a motion picture or film, generally referring to a special showing as part of a film's production and release cycle.
Shot	In production, a shot is the moment that the camera starts rolling until the moment it stops.

side view	In a side view it's more as if we're just watching them as an observer.
trim	to reduce the length of that section of the video.
upload	Uploading is sending information from your computer to another computer or server.
zoom	A zoom shot is when the focal length of a camera lens is adjusted to give the illusion of moving closer or further away from the subject.
<b>Know Your Network</b>	
clients	Computers or computer controlled devices that can connect to the server are called clients.
encrypted	The process of changing a message so it cannot be read by anyone except who it is sent too.
protocol	A protocol is a set of rules that say how information and data should be sent.
router	Routers are small computers that communicate between the Internet and devices that connect to the Internet. They keep the packets in a network moving to their destination as smoothly and quickly as possible.
server	A server is a piece of hardware that has a large memory drive where lots of files and resources are stored. It also responds to requests across a computer network.
streaming	A method that allows people to transmit or receive data. This happens when people listen to music or watch videos over a computer network. People can stream whenever they like as long as they are connected to the Internet.
switch	A device that has lots of connection ports for lots of other devices to connect to a computer network.
topology	Topology is a term used to define the layout of a network and can tell us how different devices are connected. There are different types of topology, such as: star, bus, mesh, ring and hybrid.
LAN:	A small wired or wireless network.
MAN:	A network that covers a city. Mainly uses fibre-optic cable connections between buildings.
WAN:	A network that covers more than 48km (30 miles). WAN networks are connected using copper wires, fibre-optic cables or satellites.



Computer Science

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	I can begin to understand what an algorithm is.	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	I know that an algorithm written for a computer is called a program.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	I can create my own algorithm using programming software.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	I can start to recognise that algorithms help to form more complex programs.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	I can break down a problem into smaller parts and design a complex algorithm to write a program.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	I can write, test and debug a program whilst working on it and use logical methods to identify the cause of bugs.
	I understand that algorithms need to be precise, simple, clear and limited.		I can use programming software to make objects move.		I can test my program and start to debug the algorithm to make it work.		I can identify errors in my code by looking through lines of code and debugging them.		I can organise my code carefully, e.g. naming variables, to help me to debug my code more efficiently		I can identify errors with lines of code and then attempt to debug them.
			I can program a robot or software to make something happen and talk about this as an algorithm.		I can use repeat commands in my program.		I can use repetition in my code, for example using a loop.		I can use algorithms that contain sequence, selection and repetition to make my coding program work.		I can use outputs and inputs, such as sound and movement and button clicks within my program.
Create and debug simple programs.	I can write a simple program and piece of code.	Create and debug simple programs.	I can start to identify bugs in mine or a friend's program.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	I can program commands into a sequence to make my program work.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	I can use an 'IF statement' in my code to make my program take one of two paths.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output	I can look at my code and identify causes of bugs and attempt to fix them.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	I can detect and correct errors in my algorithms and programs.
	I can input simple instructions into a programmable device or coding program to see what happens.		I can start to debug a program by watching it carry out the code and spotting where it goes wrong.		I can turn a real-life situation into an algorithm for a program. For example, how to make a cake.		I can read a program that contains several steps and predict what is going to happen.		I can look at my code and identify causes of bugs and attempt to fix them.		I can detect and correct errors in my algorithms and programs.
Use logical reasoning to predict the behaviour of simple programs.	I can work out what is wrong with a simple algorithm, for example when the steps are in the wrong order.	Use logical reasoning to predict the behaviour of simple programs.	I can look at a program and predict what will happen.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	I can start to read programs with several steps and predict what it will do	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.		Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.		Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	
	I can give commands including straight/forward/backwards/ turn, one at a time.				I can tell a friend how the Internet is used for people to communicate with each other		I can tell a friend the main pieces of hardware that allows computers to join and form a computer network.		I can recognise the dangers of computer networks.		I can identify different network protocols, such as HTTP, DNS, IP addresses and URL.
	I can explore what happens when a sequence of instructions is given.				I can send and reply to an email from a friend.		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		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		I can explain the differences between the Internet and the World Wide Web.

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6							
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	I can switch on and shut down a computer	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	I can collect and organise data within a database.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	I can use a search engine safely to research a given topic.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	I can use a search engine accurately	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	I can explain how searches return results.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	I can use and apply filters when searching for digital content using a search engine.	
	I can name, save, print and retrieve my files.		I can use formatting tools to change the font in a computer program.				I can explain the function, features and layout of a search engine.		I can explain in detail, how credible a web page is and the information it contains.		I can find a range of digital content sources and compare them by their quality and accuracy	
	I can use a computer mouse or trackpad.		I can align text using formatting tools.				I can use search engine results to find reliable information.		I can identify how word order affects search results.			
	I can use a computer keyboard shortcuts.		I can use bullets and numbering.				I can identify appropriate websites to visit on a search engine results page.					
	I can type on a keyboard.		I can use some computer keyboard shortcuts.				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.		I can choose the correct software to use for creating a document or presentation.		I can use word processing software to plan digital content or projects.	I can design and create digital content using appropriate software.
	I can select, edit and format text.		I can insert and format text boxes.				I can use software tools to check my spelling and grammar.		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.		I can use presentation software to create and present digital content.	I can improve my work and make refinements using the formatting tools available within the software that I am using.
	I can identify how to make changes using the tools available to me to improve my work.		I can retrieve a file to edit in a computer program.				I can create and use folders to save my files.		I can change the layout of documents, add transitions and add animations to different types of documents.		I can use audio software to create sounds by recording, editing and playing them back.	I can use spreadsheet software to create a document that calculates data.
	I can create shapes and fill areas with colour.		I can use a range of skills to create images.				I can add and format an image within a document.		I can insert audio and videos into documents.		I can use software to present and evaluate digital content.	I can use spreadsheet software to present data, order, edit and use formulae
		I can order and group objects within a document.	I can use photo editing software to edit and enhance photos.	I can use spreadsheet software to export data to create charts and graphs.	I can use more than one digital recording device, such as a camera, tablet or microphone.							

Year 1		Year 2		Year 3		Year 4		Year 5		Year 6				
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.	I can create, name and save digital work.	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.	I understand that the information put online leaves a digital footprint.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.	I can explain how to stay safe when communicating online.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.	I can explain how to be a responsible digital citizen.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.	I can identify spam emails and explain what to do with them.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concern about content and contact.	I can find similarities and differences between in-person bullying and cyberbullying.			
	I can safely search for images online.		I can use a search engine safely									I can explain why I need to be responsible online.	I can recognise inappropriate online messages and know to tell a trusted adult.	I can create strong passwords for my accounts.
	I understand how to safely communicate online.		I recognise whether a website is appropriate for children.									I can explain what cyberbullying is and how to address it.	I understand the importance of online safety.	I can apply online safety rules when I am using other technologies.
	I understand what personal information I need to keep safe.		I can identify kind and unkind behaviour online and recognise the signs of online bullying.									I can create strong passwords and understand privacy settings.	I can recognise when, why and how photographs online may have been edited.	I can apply online safety knowledge to online activities.
	I can apply my knowledge to help others make good choices online.		I can identify when to speak to a trusted adult when something online upsets me									I can explore different ways of communicating online.	I can explain what appropriate online behaviour is and know how to protect myself and others online.	I can demonstrate the safe and respectful use of a range of different technologies and online services.
Recognise common uses of information technology beyond school.	I can begin to identify technology that is used in our classroom and at home	Recognise common uses of information technology beyond school.	I can tell a friend why I use technology in the classroom and at home.											
	I can begin to recognise the benefits of using technology in school and at home.		I can start to recognise when I have spent enough time on technology at home and I need to take a break.											