

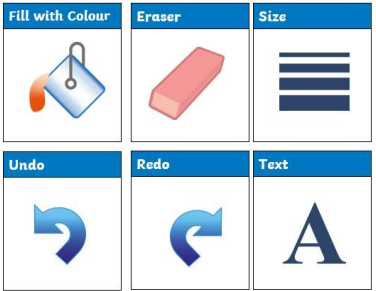


Computing Progression Map

EYFS	I wonder what is special about me?	I wonder who lives in my community?	I wonder what it would be like to live in the artic?	I wonder how I can look after the world?	I wonder what moves?	I wonder who lives in my garden?
Key Vocabulary	On Off Switch Backwards Forward Instruction Sound Moving					
	<p>Remember rules without needing an adult to remind them. Match their developing physical skills to tasks and activities in the setting. Explore how things work. Show resilience and perseverance in the face of a challenge. Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Explore, use and refine a variety of artistic effects to express their ideas and feelings. Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. Explain the reasons for rules, know right from wrong and try to behave accordingly. Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>					
SMSC	SpD – b,c MD – a, b, c SD - c					
Year 1	Online Safety	Programing Toys	Digital Painting	Computer Skills	Word Processing Skills	Scratch Jr Programming
Key Vocabulary	Username, password, log in, log out, my work, notification, topics, tools, save	Algorithm, bug, instruction, program, command, code, object	Brushes, fill, format, redo, eraser, text, tool, undo, software, bold, copy, cut, font, image, object. Text, video	Computer, cursor, double-click, keyboard, laptop, mouse, trackpad	Keyboard, typing, word processing, font, delete, back space	Digital, reasoning

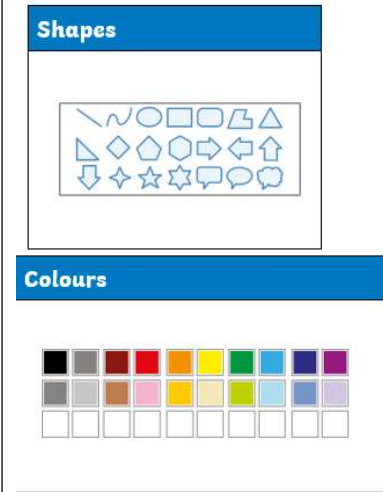


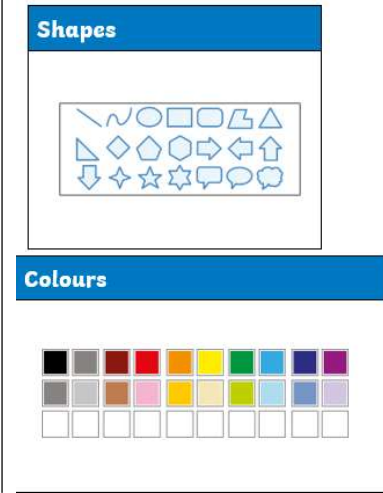
Computing Progression Map

<p>Substantive Knowledge</p>	<p>It is important to tell a trusted adult if you see anything worrying or unexpected online.</p> <p>It is important to be kind and polite online. Websites are aimed for different ages.</p> <p>It is important to follow Online Safety rules:</p> <p>SMART Safe Meet Accept Reliable Tell</p>	<p>A bee-bot is a programmable toy.</p> <p>A command is an instruction given to a computer program that tells it what to do.</p> <p>A code is a set of step by step instructions given to a computer program that tells it what to do.</p> <p>A set of instructions that a computer program will follow, to perform a certain action, is known as an algorithm.</p>	<p>A digital painting is when you use a PC device, such as a desktop computer, laptop or tablet, to create a picture.</p> <p>Painting software is a program on a desktop computer, laptop or tablet which lets you create digital painting.</p> <p>Tools in painting software can be used to create digital painting.</p> 	<p>A computer is a device for working with information.</p> <p>An arrow on a computer screen is controlled by the mouse or trackpad.</p> <p>A laptop is a portable computer that can be moved around easily to different places.</p> <p>A mouse is a small, handheld device that controls a cursor on the computer screen.</p> <p>When you press 'save' you store</p>	<p>The space bar places a space between words.</p> <p>Pressing the Caps Lock key will give a capital letter.</p> <p>The quicker you get at typing, the quicker you can complete computer based tasks.</p> <p>When work is saved you can come back to it and it will still be there.</p> <p>If you made a mistake you can use the undo button.</p>	<p>A set of instructions that a computer program will follow, to perform a certain action, is known as an algorithm.</p> <p>Algorithms can be implemented as programs on digital devices.</p> <p>You can predict the behaviour of simple programs using logical reasoning.</p>
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Computing Progression Map



				<p>the file on the screen, which you can then edit or view.</p>		
<p>Disciplinary Concepts</p>	<p>Type name and the date on a piece of work they have created.</p> <p>Choose the correct Safe Search filter when using a search engine.</p> <p>Make links between the online and offline world.</p>	<p>Say what an algorithm is.</p> <p>Say why it is important to be precise when writing an algorithm.</p> <p>Check work for mistakes (debug). Program a Bee-Bot (or similar programmable</p>	<p>Begin to use a painting software independently.</p> <p>Use brush tools effectively to create a digital painting.</p> <p>Select and use colours in a digital painting.</p> <p>Use shapes to recreate a digital painting and fill those shapes with colour.</p> <p>Recognise which tools would be helpful to alter a</p>	<p>Type their name and the date on a piece of work they have created.</p> <p>Choose the correct Safe Search filter when using a search engine.</p> <p>Make links between the online and offline world.</p>	<p>Save work in a folder.</p> <p>Edit text using backspace, delete and the arrow keys.</p> <p>Format the font.</p> <p>Select single words</p>	<p>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions.</p>



Computing Progression Map

	<p>Recall all of the SMART rules for Internet safety.</p> <p>Recognise which personal information they should keep safe from strangers.</p> <p>Help to construct an email.</p>	<p>toy) using the arrow buttons.</p> <p>Start programming sequence again if they need to.</p> <p>Check work for mistakes to debug a program.</p> <p>Plan and check an algorithm.</p>	<p>mistake on a digital painting and can access these independently.</p> <p>Add text to a digital painting. • Children can use skills learnt in the previous lessons to create a self-portrait.</p>	<p>Recall all of the SMART rules for Internet safety.</p> <p>Recognise which personal information they should keep safe from strangers.</p> <p>Help to construct an email.</p>		
SMSC	<p>SpD – b,c MD – a, b, c SD - c</p>					

Year 2	Online Safety	Technology Around Us	Computer Art	Turtle Logo and Scratch	Presentation Skills	Using the Internet
Key Vocabulary	Search, display board, internet, sharing, email,	Artificial intelligence (AI), augmented	Animation, audio, collaborate,	Coding block, control, debug, model, predict,	Underline, word processor,	Web address, hyperlink, bookmark,



Computing Progression Map

	attachment, digital footprint, online safety, privacy	reality (AR), digital device, world wide web (WWW), network	combine, insert, paste, layer	procedure, repetition, robot, selection, sequence	desktop publishing, italic	Internet, keyword, virus
Substantive Knowledge	<p>Passwords and personal information needs to be kept private to keep us safe.</p> <p>It is important to talk to adults about what you see online.</p> <p>It is good to only be online for short amounts of time.</p> <p>It is just as important to be kind and polite online as in real life.</p> <p>Not everyone is who they say they are on the internet.</p> <p>SMART Safe Meet</p>	<p>Information technology is:</p> <ul style="list-style-type: none"> -technology that creates, stores or exchanges information. -technology that is a computer of that needs a computer to work. <p>When two or more computers are connected to one another it is called a network.</p> <p>Digital devices have become smaller and more mobile over time. Modern digital devices work more quickly and</p>	<p>Technology can be used purposefully to create, organise store, manipulate and retrieve art.</p> <p>Recognising common uses of information technology beyond school.</p>	<p>A set of instructions that a computer program will follow, to perform a certain action, is known as an algorithm.</p> <p>Algorithms can be implemented as programs on digital devices.</p> <p>Programs can be executed by following precise and unambiguous instructions.</p> <p>Logical reasoning can be used to predict the</p>	<p>Technology can be used purposefully to create, organise store, manipulate and retrieve art.</p> <p>Recognising common uses of information technology beyond school.</p>	<p>The Internet is a network of computers that connects millions of computers worldwide.</p> <p>The Internet helps people all of the world keep in touch.</p> <p>Advances in technology have made using the Internet quicker and easier. No longer limited to personal computers, the Internet can be accessed via tablets, computers and most mobile</p>



Computing Progression Map

	<p>Accept Reliability</p>	<p>are more powerful.</p> <p>Ada Lovelace was the first computer programmer.</p> <p>Alan Turing designed the first modern computer.</p> <p>Bill Gates created an operating system called Windows.</p> <p>Sir Tim Berners-Lee created the World Wide Web.</p>		<p>behaviour of simple programs.</p>		<p>phones and televisions. As more and more people use the Internet, the quantity of information continues to grow.</p>
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Computing Progression Map

<p>Disciplinary Concepts</p>	<p>Use technology safely and respectfully, keeping personal information private.</p> <p>Identify where to go for help and support when they have concerns on the internet and other online technologies.</p>	<p>Identify examples of technology used in different settings.</p> <p>Describe how they use technology in their lives and explain the benefits of doing so.</p> <p>Identify risks of going online and can begin to think of some ways to keep safe.</p> <p>Identify some ways in which technology has changed over time.</p> <p>Are familiar with the work of a number of</p>	<p>Draw and manipulate 3D models independently.</p> <p>Inference points to draw lines and shapes.</p> <p>Use a wide range of SketchUp tools and concepts including: the dimensions toolbar and guides, tape measure, zoom extents and the 3D warehouse</p>	<p>Turn the Beebot using rt 90 and lt 90.</p> <p>Draw squares and rectangles with the Beebot.</p> <p>Create different algorithms using a number of different blocks. Use repeat to control algorithms.</p>	<p>Insert slides, add and type in a text box.</p> <p>Create folders.</p> <p>Print files.</p> <p>Add images.</p> <p>Format text and text boxes.</p>	<p>Search using the words "for kids".</p> <p>Follow a weblink.</p> <p>Locate their own blog.</p> <p>Understand how to blog safely and responsibly</p> <p>Identify search results that will give some useful information.</p> <p>Know where to find the address of a link.</p> <p>Log in and post a blog or comments.</p>
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Computing Progression Map

		<p>people who have been significant in shaping the world of information technology.</p> <p>Use prior knowledge to produce creative designs for the information technology of the future.</p>				
SMSC	<p>SpD – b,c MD – a, b, c SD - c</p>					

Year 3	Online Safety	Online Searchers and Surfers	Turtle Log and Scratch	Word Processing	Drawing and Desktop Publishing	Presentation Skills
Key Vocabulary	Concept map, website, web page, spoof website, PEGI rating, blog	Search engine. ISP (internet service provider), web browser	Program, network, loop	Cut, copy, past, resize	Profile, copyright, attachment, firewall	Spell checker, text wrapping,
Substantive Knowledge	Secure passwords that are unqiue are important to keep you safe.	The internet is a network of computers	Programs cab be designed and debugged	Technology can be used purposefully to	There is a variety of software	Technology can be used purposefully to



Computing Progression Map

	<p>It is important to protect personal information when I doing different things online.</p> <p>Website have safety features to keep us safe.</p> <p>Any concerns online must be reported to a trusted adult.</p> <p>There are websites and games appropriate for my age.</p> <p>It is important to make good choices about how long you spend online.</p> <p>An adult should be asked before downloading files and games from the Internet.</p>	<p>connected to each other all around the world.</p> <p>The concept of the Internet was created by Robert Kahn and Vinton Cerf.</p> <p>A web page is viewed on a web browser by entering a URL address.</p> <p>When looking for something like an image, a request is sent in a package to a web server.</p> <p>Requests can be made by fibre-optic cables under the sea (submarine</p>	<p>to accomplish specific goals including controlling or simulating physical systems.</p> <p>Problems can be solved by decomposing into smaller parts.</p>	<p>create, organise store, manipulate and retrieve art.</p> <p>Recognising common uses of information technology beyond school.</p>	<p>(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>create, organise store, manipulate and retrieve art.</p> <p>Recognising common uses of information technology beyond school.</p>
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Computing Progression Map

		<p>cables) or via satellite.</p> <p>Each computer has its own IP address which is like a postcode.</p>				
Disciplinary Concepts	<p>Use technology safely, respectfully and responsibly.</p> <p>Recognise acceptable/unacceptable behaviour.</p> <p>Identify a range of ways to report concerns about content and contact.</p>	<p>Identify what the Internet is and how it works, including how packets of data move along routes and the different connections that can be used.</p> <p>Use a search engine to find information and implement strategies to improve results when searching online, including using keywords.</p>	<p>Create and debug algorithms to draw regular polygons using the repeat command/block (Turtle Logo and Scratch).</p> <p>Draw regular polygons using Logo to calculate the angle (Turtle Logo).</p> <p>Create and debug algorithms to draw patterns by</p>	<p>Select single words.</p> <p>Cut, copy and paste text.</p> <p>Format the font.</p> <p>Insert images.</p> <p>Copy a screenshot into another application.</p> <p>Use a secure password.</p> <p>Use keyboard shortcuts.</p>	<p>Insert slides, add and type in a text box.</p> <p>Save files in an organised folder structure.</p> <p>Search for files on the computer.</p> <p>Set windows side by side.</p> <p>Format text boxes and images.</p> <p>Reorder slides and present</p>	<p>Create a simple presentation.</p> <p>Create shapes</p> <p>Create a hyperlink to another slide.</p> <p>Use slide transitions.</p> <p>Insert audio and video files (where possible).</p> <p>Record audio onto a slide</p> <p>Plan a branching story.</p>



Computing Progression Map

		<p>Know how to cross-reference using tabs and can identify reliable links through looking for a secured padlock in the URL address bar.</p> <p>Know how to bookmark or favourite an appropriate web page.</p> <p>Use a search engine to copy and paste images across to a blank document.</p>	<p>repeating regular polygons (Scratch).</p> <p>Draw shapes with spaces between using penup and pendown (Turtle Logo).</p> <p>Change and alter the pen settings (Scratch).</p>		<p>their presentation.</p> <p>Create folders.</p> <p>Print files.</p> <p>Add images.</p> <p>Format text and text boxes</p> <p>Draw objects.</p> <p>Insert text boxes and images.</p> <p>Manipulate objects.</p> <p>Create a layout of objects with no unnecessary space using colour and font effectively.</p> <p>Order and group objects.</p>	<p>Create simple slide templates.</p> <p>Copy and organise slides as required.</p>
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Computing Progression Map

						Move, resize and arrange text boxes and images effective	
SMSC	SpD – b,c MD – a, b, c SD - c						

Year 4	Online Safety	Communication and Collaboration	Scratch: Questions and Quizzes	Programming Turtle Logo	Word Processing	Animation
Key Vocabulary	Computer virus, cookies, copyright, identity theft, malware, phishing, plagiarism, spam	Cloud storage service, communication, collaboration, phishing, spam, protocols	Algorithm, debugging, variable, operators, duplication	Procedure, variable, selection	Align format, orientation, word count	Stop motion, green screen, record, combine, virtual reality (AR)
Substantive Knowledge	It is important to choose a secure password and screen name when I am using a	Online Communication is how we interact with other people using technology	An algorithm is a sequence of ordered instructions. In Scratch, algorithms are referred to as scripts.	Programs can be designed and debugged to accomplish specific goals including controlling or simulating physical systems.	Technology can be used purposefully to create, organise store, manipulate and retrieve art. Recognising common uses of information technology beyond school.	There is a variety of software to design and create new cartoon characters, adding a story



Computing Progression Map

	<p>website to keep safe.</p> <p>Keeping passwords private, talking openly to a trusted adult and sharing worrying or upsetting online content will help to protect myself and my friends from harm online.</p> <p>Website have safety features, it is still important to report concerns to an adult.</p>	<p>over the Internet.</p> <p>Online collaboration means we can work together on a task on a digital platform.</p> <p>There are a set of rules that allow emails to be sent and received across the Internet: -Simple Mail Transport Protocol -Post Office Protocol -Internet Message Access Protocol</p> <p>A cloud storage service allows users to save documents</p>	<p>Debugging is where you find, remove or correct errors in computer code.</p> <p>Block – a puzzle shaped code. They can connect to other blocks to create algorithms.</p> <p>Variable – a value that can be recorded in the memory of Scratch.</p> <p>A variable can be edited.</p>	<p>Problems can be solved by decomposing into smaller parts.</p>		<p>or description along with other elements before deciding how to present the work.</p>
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Computing Progression Map

	<p>Anything I share online can be seen by others.</p> <p>Websites, apps and games are appropriate for different ages.</p> <p>Always ask a trusted adult before downloading files and games from the Internet.</p> <p>Comment positively and respectfully online and through text messages.</p>	<p>online rather than saving locally to a device.</p> <p>Often, cloud storage services are used for online collaboration purpose. Examples include Google Drive and Microsoft OneDrive.</p>				
Disciplinary Concepts	Identify comments or	Recognising different	Design, write and debug	Write procedures using simple algorithms.	Use some of the main keyboard shortcuts.	Describe one or more



Computing Progression Map

	<p>messages that may be hurtful to others.</p> <p>Edit their own messages and comments to make sure they are kind.</p> <p>Understand that search results are ranked.</p> <p>Choose an appropriate number of words for a search term.</p> <p>Explain how to use other people's</p>	<p>methods of online communication and can identify the positives and negatives of communicating online.</p> <p>Identify and recognise features of email and demonstrate an understanding of spam emails and phishing.</p> <p>Send emails using the CC feature.</p> <p>Demonstrate their understanding of attachments.</p>	<p>programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p>	<p>Change the colour of the pen.</p> <p>Write text using the label command.</p> <p>Draw shapes using setpos or setxy.</p> <p>Fill shapes in different colours.</p> <p>Draw arcs of different shapes as required.</p>	<p>Suggest ways to improve a layout.</p> <p>Apply specific effects to an image.</p> <p>Add a spelling to the spelling dictionary.</p> <p>Add or delete rows or columns in a table.</p> <p>Suggest ways to change a table.</p> <p>Type at an appropriate speed.</p> <p>Choose a relevant website to link a document to.</p> <p>Create a hyperlink.</p>	<p>traditional methods of animation.</p> <p>Make slight changes to an image using onion skinning, understanding the term.</p> <p>Use a time slider to find a specific point in a film clip to insert or edit an object.</p> <p>Edit and refine images in a stop motion animation short film clip.</p> <p>Compare different animation software by looking at its</p>
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Computing Progression Map

	<p>work respectfully.</p> <p>Explain why it may be dangerous to share private information.</p> <p>Explain how to be a good digital citizen.</p> <p>Tell someone else more than one way to stay safe online.</p>	<p>Understand what a cloud storage service is and can explain how the tools available are used to collaborate online, considering the positives and negatives.</p> <p>Demonstrate their understanding of opening and editing a shared document using online collaborative tools and suggest how to be respectful online.</p>				<p>advantages and disadvantages.</p>
SMSC	<p>SpD – b,c MD – a, b, c SD - c</p>					






























Computing Progression Map

Year 5	Online Safety	Strategic Searching Online	Scratch: Developing Games	Flowol	Radio Station	3D Modelling: Sketch Up
Key Vocabulary	spam emails, plagiarism, indiscriminate, recipient	SEO (search engine optimisation), SERP (search engine results), URL (uniform resources locator), web crawler	Algorithm, debug, deconstruct, sequence, variable, consequence	Decisions, subroutines, program, inputs, outputs.	Broadcast, jingle, persuasion	2D 3D Abstraction Decomposition Function Interactive Modelling Perspective Physical system Playability Score Screenshot Simplify/simplified Stimulation Tab
Substantive Knowledge	<p>Plagiarism is where somebody takes somebody else's work and claims it as their own.</p> <p>Spam email is unsolicited and unwanted junk email sent out in bulk to an indiscriminate recipient list.</p>	Each search engine's results page will look different. The suggested web pages or websites are based on a users inputted search terms, which could be a word or set of keywords.	<p>Algorithms on a computer are exactly the same as everyday algorithms.</p> <p>A variable is a piece of data that can be recorded in the memory of Scratch.</p> <p>There are nine categories of blocks in Scratch. Blocks</p>	A flowchart is a diagram of the sequence of movements or actions of people or things involved in a complex system or activity.	<p>Software can be used to create own sounds by recording, editing and playing</p> <p>A radio jingle is a short and crisp audio that creates a long lasting impact on listeners.</p>	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



Computing Progression Map

	<p>A strong password helps you:</p> <ul style="list-style-type: none"> • Keep your personal info safe • Protect your emails, files, and other content • Prevent someone else from getting in to your account <p>Citation searching is a way of finding relevant research in a field or subject by looking at what an article has referenced.</p>	<p>When a user inputs their search terms, a search engine will scan its index of web pages to find results that relate to the search terms.</p> <p>A search engine makes its own index through a program called spider or web crawler.</p> <p>George Boole, who was a British mathematician and computer scientist, create the idea of Boolean logic. Boolean operators are simple words (AND, OR, NOT) used as</p>	<p>are shaped like puzzle pieces as they fit and connect together to create an algorithm.</p> <table border="1" data-bbox="1003 603 1292 1023"> <thead> <tr> <th colspan="2">Scratch Paint Editor</th> </tr> </thead> <tbody> <tr> <td></td> <td>Select - This cursor can be used to move an object, resize and rotate it.</td> </tr> <tr> <td></td> <td>Brush - This tool allows you to draw.</td> </tr> <tr> <td></td> <td>Fill - This tool allows you to fill in an object.</td> </tr> <tr> <td></td> <td>Line - This tool is used to draw straight lines.</td> </tr> <tr> <td></td> <td>Reshape - This tool can be used to bend or change shapes.</td> </tr> <tr> <td></td> <td>Eraser - This tool allows you to remove any drawings you have made.</td> </tr> <tr> <td></td> <td>Text - This tool can be used to type words onto a backdrop.</td> </tr> <tr> <td></td> <td>Circle - This tool allows you to draw circles or ovals.</td> </tr> <tr> <td></td> <td>Rectangle - This tool allows you to draw squares or rectangles.</td> </tr> </tbody> </table>	Scratch Paint Editor			Select - This cursor can be used to move an object, resize and rotate it.		Brush - This tool allows you to draw.		Fill - This tool allows you to fill in an object.		Line - This tool is used to draw straight lines.		Reshape - This tool can be used to bend or change shapes.		Eraser - This tool allows you to remove any drawings you have made.		Text - This tool can be used to type words onto a backdrop.		Circle - This tool allows you to draw circles or ovals.		Rectangle - This tool allows you to draw squares or rectangles.		<p>Audio effects can be combined to create an jingles.</p> <p>Persuasion is used in adverts to help sell or promote a particular product or service.</p>	<p>goals, including collecting, analysing, evaluating and presenting data and information;</p>
Scratch Paint Editor																										
	Select - This cursor can be used to move an object, resize and rotate it.																									
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	Rectangle - This tool allows you to draw squares or rectangles.																									



Computing Progression Map

		<p>conjunctions to combine or exclude keywords in a search.</p> <p>Using Boolean operators can help to narrow or broaden the search in a search engine.</p>				
Disciplinary Concepts	<p>Use technology safely, respectfully and responsibly.</p> <p>Recognise acceptable / unacceptable behaviour.</p> <p>Identify a range of ways to report concerns about content and contact.</p> <p>Identify a dangerous spam email.</p>	<p>Confident in recognising different methods of online communication and can identify the positives and negatives of communicating online.</p> <p>Identify and recognise features of email and demonstrate an</p>	<p>Design and create a simple maze game by: designing backdrops and sprites; using relevant coding blocks; programming consequences for actions completed; adding appropriate effects to enhance the game by including a backdrop and costume changes.</p>	<p>Create a program to control a simple sequence.</p> <p>Modify symbols in a flowchart for effect.</p> <p>Create flowcharts for multiple inputs and outputs.</p> <p>Use decisions and subroutines.</p>	<p>Listen to and improve on their own recordings by re-recording.</p> <p>Locate and download existing sound files to be imported into recording software.</p> <p>Combine two or more tracks to make a new,</p>	<p>Draw and manipulate 3D models independently.</p> <p>Use inference points to draw lines and shapes.</p> <p>Use a wide range of SketchUp tools and concepts including: the dimensions toolbar and guides, tape measure, zoom</p>



Computing Progression Map

	<p>Create multiple strong passwords for use across different platforms.</p> <p>Spot citations online.</p> <p>Alter a photograph.</p>	<p>understanding of spam emails and phishing.</p> <p>Send emails using the CC feature.</p> <p>Demonstrate understanding of attachments.</p> <p>Understand what a cloud storage service is and can explain how the tools available are used to collaborate online, considering the positives and negatives.</p> <p>Demonstrate their understanding of opening and editing a shared</p>	<p>Understand and use conditional statements in their code, including if...then and if...then...else blocks.</p> <p>Understand simple algorithms by predicting what may happen within their code.</p> <p>Understand how Operators blocks work and can use these within their code.</p> <p>Understand decomposition and can decompose a problem.</p> <p>Create variables and implement these variables within their code.</p>	<p>Program inputs and outputs.</p>	<p>original recording.</p> <p>Plan and record appropriate audio content for a podcast.</p> <p>Evaluate what features makes good quality audio content.</p>	<p>extents and the 3D warehouse.</p>
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Computing Progression Map

		document using online collaborative tools and suggest how to be respectful online.				
SMSC	SpD – b,c MD – a, b, c SD - c					

Year 6	Online Safety	Know your Network	Coding with Scratch: Animated Stories	Spreadsheets	Kodu Programming	Film Making
Key Vocabulary	Cyber bullying, stereotypes, reporting, anonymous, encrypted	Clients, encrypted, topology, router, streaming, network	Animate, debug, iteration, deconstruct	Cell, formula, function, range, relevant reference	Acceleration, node, Kodu	Animation





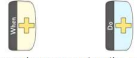


Computing Progression Map

<p>Substantive Knowledge</p>	<p>Sharing online can have both positive and negative impacts.</p> <p>Cyberbullying is electronic communication used to bully, typically by sending messages of threatening or intimidating behaviour.</p> <p>A secure website is one that you visit that contains https, which means that it is who it claims to be and the information you share with that site is encrypted.</p> <ul style="list-style-type: none"> Be careful who you chat with online, and don't meet up with strangers without 	<p>Routers are small computers that communicate between the Internet and devices that connect to the Internet.</p> <p>Topology is a term used to define the layout of a network and can tell us how different devices are connected.</p> <p>There are different types of topology, such as: star, bus, mesh, ring and hybrid.</p> <p>Cloud computing is the storage of files online. Cloud computing uses massive servers to store data and information and is classed as a network.</p>	<p>Scratch uses visual clock-based coding to create algorithms.</p> <p>Other computer programming software uses text-based coding, such as HTML.</p> <p>There are nine categories of blocks in Scratch. Blocks are shaped like puzzles as they fit together vertically to create an algorithm.</p> <table border="1" data-bbox="958 1107 1254 1353"> <thead> <tr> <th>Block Categories</th> <th>Key blocks used in your Haunted Castle Animated Story:</th> </tr> </thead> <tbody> <tr> <td> Motion</td> <td> Moves the sprite forward.</td> </tr> <tr> <td> Sensing</td> <td> A speech bubble appears over the sprite for a specified time.</td> </tr> <tr> <td> Looks</td> <td> Plays a chosen sound without pausing the algorithm.</td> </tr> <tr> <td> Sound</td> <td> When a broadcast message is received, the algorithm activates.</td> </tr> <tr> <td> Variables</td> <td> Used to repeat an algorithm for a specified amount of time. Each repeat of the algorithm contained within this block is one iteration.</td> </tr> <tr> <td> Events</td> <td></td> </tr> <tr> <td> Control</td> <td></td> </tr> </tbody> </table>	Block Categories	Key blocks used in your Haunted Castle Animated Story:	Motion	Moves the sprite forward.	Sensing	A speech bubble appears over the sprite for a specified time.	Looks	Plays a chosen sound without pausing the algorithm.	Sound	When a broadcast message is received, the algorithm activates.	Variables	Used to repeat an algorithm for a specified amount of time. Each repeat of the algorithm contained within this block is one iteration.	Events		Control		<p>A Spreadsheet is a computer program that imitates a paper worksheet.</p> <p>Users can put words or numbers into the cells, to make headings and store information (usually numbers).</p> <p>The primary reason most people use spreadsheets is for automatic calculations.</p> <p>Another strength of spreadsheets, is that they can produce diagrams, like graphs and pie-charts, based on the data the user enters. Sometimes the numbers make more sense when</p>	<p>Kodu is a simple visual programming language that uses picture files which can be added together to create a set of instructions.</p> <p>Kodu is great for computer games. You can build new worlds, add characters and objects and write the code to control game play.</p>	<p>Animation is the method of using photographed images to create the illusion of movement.</p> <p>Film making involves a number of complex and discrete stages. Successful film maker</p> <ul style="list-style-type: none"> Tell a story through visual story telling Use experienced cast and crew Create a production design Film the story Use camera techniques in a film Use lighting techniques Use editing techniques
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Computing Progression Map

	<p>telling someone you trust.</p> <ul style="list-style-type: none"> • Don't share personal info, such as your full name, address, phone number, or financial details, with anyone you don't know or trust online. • Double-check and verify links before you click on them, and avoid opening attachments or downloading files from unknown sources. 	<p>Malicious software can gain illegal access to your computer network and cause damage to your files, data and information. Malware includes worms, viruses, spyware and Trojans.</p>	<p>Block Shapes</p> <p>There are six different types of block shapes: Hat, Stack, Boolean, Reporter, C and Cap.</p> <p>The main shapes that you will be using for your project are:</p> <p>Hat blocks Used at the start of every script. </p> <p>Stack blocks Used to perform the main commands. </p> <p>C blocks Used for looping blocks within the C block </p>	<p>the computer turns them into a picture.</p>	<p>Worlds</p> <p>From the start up menu, you can choose to load a world designed by someone else or create a new world.</p> <p>You can also use the RESUME option to go back to a world you were working on before.</p> <p>Choose NEW WORLD and use the tools in the Tool Palette to design your own landscape. Use the Ground Brush to add more land to your world. Explore the tools to build hills and valleys and even add areas of water. </p> <p>Adding Objects</p> <p>Select the Object Tool on the Tool Palette and choose the object or character you want to add.</p> <p>Click somewhere on the world and the object will appear.</p> <p>Right click on the object to open a new menu. Here, you can choose to Change Settings or Program the object.</p> <p>Explore the Change Settings menu to find out how to control different aspects of how an object behaves, such as its rate of acceleration.</p> <p>Programming</p> <p>Once you have added an object to your world, you can program it. All programming in Kodu is based on the two simple ideas of when and do.</p> <p>When this happens... ...do this action.</p>  <p>To access the programming tiles, make sure that the Object Tool is selected. Right click on the object and select Program from the menu that appears.</p>	
<p>Disciplinary Concepts</p>	<p>Look in the address bar of a website so check for security.</p>	<p>Describe what a computer network is and identify what</p>	<p>Select appropriate sprites to fit within a scene and use</p>	<p>Enter formulae into cells.</p>	<p>Follow instructions given in the</p>	<p>Plan additional elements for film-</p>



Computing Progression Map

	<p>Identify the lock symbol in an address bar.</p> <p>Explain why someone might have an online friendship.</p> <p>Explain what the SMART acronym means.</p> <p>To explain what a stereotype is.</p> <p>Compare gender stereotypes</p>	<p>devices connect to a network.</p> <p>Identify three types of networks (LAN, MAN, WAN), explain how networks are defined and list two network topologies.</p> <p>List protocols and explain what they are used for and provide an example IP address.</p> <p>Explain the difference between the Internet and World Wide Web.</p> <p>Explain what cloud computing is and provide examples of what cloud computing is used for.</p>	<p>costume changes for motion effect.</p> <p>Use the broadcast message and receive block to structure and control the timing of events.</p> <p>Insert the show and hide block into a algorithm and locate the correct place to make a sprite appear visible.</p> <p>Select appropriate sprites and backdrops and plan a sequence of an animated story using timings.</p> <p>Order a series of backdrops to create a story narrative and narrate events with required timings.</p>	<p>Edit data and discuss the effect on results.</p> <p>Use further functions including AVERAGE, MIN and MAX. Create graphs.</p> <p>Design their own spreadsheet for a specific purpose.</p>	<p>Kodu programming environment.</p> <p>Describe the actions of a sequence of Kodu commands.</p> <p>Use tools to change the size of the ground and raise or lower the landscape.</p> <p>Decompose code into smaller parts and explain it in their own words.</p> <p>Create a race track with an end goal for a game.</p>	<p>making such as locations and props.</p> <p>Evaluate whether information is reliable or not.</p> <p>Speak clearly into the camera when being recorded.</p> <p>Frame an appropriate filming shot when interviewing;</p> <p>Arrange video files to form a complete film.</p>
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Computing Progression Map

		<p>Explain ways to communicate online and explain what streaming is.</p> <p>Identify different types of malware and explain how these can affect a computer network.</p>	<p>Record a sound to enhance an animated story and insert blocks to play the recorded sounds.</p>		<p>Program a character to follow a path</p>	
SMSC	<p>SpD – b,c MD – a, b, c SD - c</p>					