

## Computing Progression



### E-Safety

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>NC Objectives</b>	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.		Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.			
<b>Knowledge</b>	Understand what personal information is	Understand safe browsing and communication	Understand what a digital footprint is and how it can affect safety online.	Understand how cyberbullying can affect someone.	Understand the impact of online platforms and the meaning of online communities	Understand how to respond to challenges they might face when they leave primary school
<b>Skills</b>	<p>Have some knowledge of what personal information means</p> <p>Know when and who to share any concerns about content or contact</p> <p>I identify digital way to communicate, e.g. email or messaging.</p> <p>Introduce SMART safety rules</p>	<p>Use safe searching sites to find images.</p> <p>Understand that not everything online is real or true</p> <p>Identify different ways to report inappropriate online content and communication.</p> <p>Identify kind and unkind behaviour online.</p>	<p>Find cookies in browser and know what they do</p> <p>Know what makes up a strong password and why they are needed</p> <p>Use advanced search tools to authenticate facts</p> <p>Identify other platforms for digital communication, e.g. online gaming/apps and the safety aspects.</p>	<p>Identify cyberbullying, how it effects people and whys it can be addresses.</p> <p>List ways in which cyberbullying can happen</p> <p>Recognise why sharing images and videos can be harmful</p> <p>Create a safe online/offline profile</p>	<p>Show an understanding of the world of online 'influencers' and vloggers on YouTube.</p> <p>Explain the meaning of trolling, where it can be found and the impact it can have</p> <p>Identify spam emails and what to do with them.</p> <p>Discuss the impact of screen time</p>	<p>Identify how the media influences ideas and opinions.</p> <p>Explain the meaning of fake news, how its spread and its impact.</p> <p>know what privacy settings are, why they are important and where they can be changed in different social medial platforms</p> <p>Identify a range of ways to report concerns.</p>
<b>Vocabulary</b>	Safe, meet, accept, reliable, tell, personal information, online, safety, digital, communicate, email.	Search, inappropriate, communication	Digital platforms, advanced search, password,	password, secure, profile, privacy, cyberbullying	Influencers, vlogger, trolling, spam, screen time	Social media, fake news, privacy setting

## Technology, Software and Programs

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>NC Objectives</b>	Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Recognise common uses of information technology beyond school.		Understand computer networks including the internet; how they can provide multiple services, such as the WWW; and the opportunities they offer for communication and collaboration. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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.			
<b>Knowledge</b>	Identify and discuss forms of information technology in the home and school.  Begin to understand the purpose of a search engine.  Understand that information is presented in many ways (e.g. text, images and videos).	Identify and discuss forms of information technology in the wider world.  Understand the purpose of a search engine.  Understand the need for safety filters.  3 Describe some likes and dislikes about a webpage.	Name a range of programs and some of their basic features.  Begin to understand that not all information online is reliable.  Begin to decide whether a website is useful and appropriate.	Suggest a program that could be used based on its features.  Understand that not all information online is reliable and how it is inputted (Wikipedia).  Decide whether a website is useful and appropriate.	Justify why they have chosen to use a specific program.  Identify who a webpage may be aimed at and explain why.	Understand the purpose, strengths and drawbacks of different programs.  Understand how results are selected and ranked, including wording used for initial search.
<b>Skills-Internet</b>	Open the internet browser.  Use a given webpage to find some facts or an image to answer a specific question.	Use a safe search engine to find facts and images to answer a specific question, e.g. how high is the Eiffel Tower?  Identify key words in a question to use in a search engine.	Use a safe search engine to find facts and images about a specific topic, e.g. the Eiffel Tower.  Identify some key facts from a chunk of text or a video.	Use a safe search engine to find facts about a topic, e.g. Paris.  Identify relevant key facts from a chunk of text or a video.	Use a safe search engine to find facts about a wider topic, e.g. capital cities.  Navigate their way around a webpage to find relevant information, including using hyperlinks.	Select relevant information from a webpage.  Compare information from two different sources.

<p style="text-align: center;"><b>Skills- Microsoft Office</b></p>	<p>Switch on a computer and log on and off (with adult support).</p> <p>Open a program or previously saved work (with adult support) and close a program. (MS Word)</p> <p>Save a document with an appropriate name (with support). (MS Word)</p> <p>Print a document (with support). (MS Word)</p> <p>Type and draw shapes in a document. (MS Word)</p> <p>Use the computer mouse or trackpad to move, click and drag objects.</p> <p>Change font, colour or size of text. (MS Word)</p> <p>Insert, resize and rotate an image. (MS Word)</p>	<p>Log on and off safely.</p> <p>Open and close a program. Save a document with an appropriate name. (MS PowerPoint, MS Word, MS Excel)</p> <p>Print a document. (MS PowerPoint, MS Word, MS Excel)</p> <p>Use shift/caps lock to write upper- and lower-case letters when typing. (MS PowerPoint, MS Word)</p> <p>Align text/titles using the align text tool.</p> <p>Insert images using Online Pictures. (MS PowerPoint, MS Word)</p> <p>Insert shapes and begin to edit them, e.g. changing fill colour, size and outlines. (MS PowerPoint, MS Word)</p> <p>Use bold, italics and underline features. (MS PowerPoint, MS Word)</p> <p>Create a short presentation by inserting and editing slides. (MS PowerPoint)</p> <p>Use copy and paste.</p>	<p>Save documents in a specific location.</p> <p>Begin to type using both hands and use punctuation marks, including using shift. (MS PowerPoint, MS Word)</p> <p>Change the design and layout of a document, e.g. background, borders, orientation, columns, margins (MS PowerPoint, MS Word)</p> <p>Insert bullet points or a numbered list. (MS PowerPoint, MS Word)</p> <p>Use a range of slides (MS PowerPoint)</p> <p>Input data into a spreadsheet to create a database. (MS Excel)</p> <p>Find and highlight specific cells, rows and columns. (MS Excel)</p> <p>Use text boxes</p>	<p>Create a folder to save a document into.</p> <p>Begin to use simple shortcuts, e.g. ctrl and c to copy.</p> <p>Insert a hyperlink to a webpage (MS PowerPoint, MS Word)</p> <p>Insert a table and use editing tools to remove borders (MS PowerPoint, MS Word)</p> <p>Understand why the red and blue error lines occur and use right click to correct mistake (MS PowerPoint, MS Word)</p> <p>Insert a range of transitions and animations. (MS PowerPoint)</p> <p>Apply and use filters to order and sort data. (MS Excel)</p> <p>Format spreadsheet/tables or shade rows, columns and individual cells (MS Excel)</p>	<p>Use a wider range shortcuts.</p> <p>Use headers and footers, and add automatic page numbers and dates (MS Word)</p> <p>Use anchors to allow text to flow across multiple text boxes e.g. News paper writing (MS Word)</p> <p>Change text wrapping in images, allowing text to move closely around the objects automatically (MS Word)</p> <p>Use a range of tools to edit a table, e.g. merge cells, insert row, align text, shading (MS Excel, Word, PowerPoint)</p> <p>Use appropriate transition or animation for effect (PowerPoint)</p> <p>Use a wider range of formulas to find specific information (MS Excel)</p> <p>Create graphs from data (MS Excel)</p>	<p>Type proficiently.</p> <p>Insert objects and use a range of tools and features.</p> <p>Choose an appropriate layout, e.g. margins, tables, orientation, columns.</p> <p>Choose an appropriate design depending on the formality of the document, e.g. font, size, colour, borders.</p> <p>Review and edit documents using a range of tools.</p> <p>Create and present an effective presentation using a range of features.</p> <p>Sort, filter and use other formulas to find specific information more efficiently.</p> <p>Create a wider range of graphs and add a title and axis labels.</p>
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<b>Vocabulary</b>	Browser, log on, log off, open, save, print, type, draw, icon, resize, rotate, insert, font, drag, click, mouse, trackpad, left click, right click.	Search engine, filters, uppercase, lowercase, document, text box, copy, paste, shape, edit, outline, fill, bold, italics, underline, presentation, slide, hyperlink.	Source, folder, drive, A4/A3, shift, background, border, orientation, columns, margin, bullet points, spreadsheet, data, database, cell, row, column, reliable.	Shortcut, hyperlink, table, tab, control, header, footer, spell check, grammar, sort, filter, transition, animation, validity.	Replace, merge, split, align, centre, shading, formula, graph, wrapping, Transitions and animation	Software, review, axis, chart, title, align, justify.
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## Algorithms

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>NC Objectives</b>	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.		Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.			
<b>Knowledge</b>	Understand that an algorithm is a set of instructions given to a computer in order.	Understand why it is important to be precise when writing an algorithm.	Understand how to detect errors in code	Understand code can be activated in multiple ways	Understand the use of variables in code	To understand how one command can affect another
<b>Skills</b>	<p>Children follow a set of commands (stand, sit, spin and jump) ranging from single commands to an algorithm (string of code)</p> <p><b>Bee-Bot</b> Carry out a sequence using single command, one at a time e.g. forwards, backwards and turn.</p> <p>Programme the Bee-Bot to get from one point to another along a specific route.</p> <p>Make sensible predictions about where a Bee-Bot may stop from a simple set of instructions.</p>	<p><b>Bee-Bot</b> Carry out a sequence with multiple commands to go along a specific route.</p> <p>Make sensible predictions about where a Bee-Bot may stop from a set of instructions.</p> <p>Debug an algorithm e.g. robot turns in the wrong direction or rolls too far.</p> <p><b>Scratch Junior</b> Choose a new sprite or background.</p> <p>Carry out a sequence with multiple commands, including increasing or decreasing size of sprite.</p> <p>Use other simple commands, left, right, up, down, repeat and sounds.</p> <p>Debug a set of instructions when necessary.</p>	<p><b>Scratch</b> Create sprites and backdrops</p> <p>Carry out a sequence with multiple commands, including glide and turning.</p> <p>Use other code to change costume</p> <p>Detect and correct errors in a pre-made set of code (debug)</p>	<p><b>Scratch</b> Start commands in different ways e.g. flag, messages, key press and button</p> <p>Animate a sprite by using change costume and repeat functions.</p> <p>Use conditional statements within the program to control the sprite (e.g. if... then..)</p> <p>Detect and correct errors in algorithms as necessary.</p>	<p><b>Scratch</b> Create and edit variables.</p> <p>Use a wider range of conditional statements to control the sprite.</p> <p>Design a simple game including sprites, backgrounds, scoring and/or timers.</p> <p>Detect and correct errors in algorithms as necessary.</p> <p>Annotate code used</p>	<p><b>Scratch</b> Design a game using conditional statements, loops (repeat), variables and broadcast messages.</p> <p>Evaluate the effectiveness of the game and debug as required.</p> <p>Annotate any code used in detail</p>
<b>Vocabulary</b>	Algorithm, sequence, string, single command, forwards, backwards, turn, left, right, route, Bee-Bot, instructions, predictions.	Multiple commands, clockwise, anticlockwise, increase, decrease, sprite, background, debug, repeat.	Degrees, sprite, motion, code, detect, correct, errors, percentages	Conditional statements, repeat, costume.	Scoring, timers.	Broadcast messages, loops, effectiveness.

## Multimedia

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>NC Objectives</b>	Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Recognise common uses of information technology beyond school.		Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of content that accomplish given goals.			
<b>Knowledge</b>	To understand how images can be created and changed using a computer	To understand images can be captured and altered in different ways	To understand images can be combined to create movies	To understand the process of creating short movies	To understand how animations are produced	To understand the different mediums have different effects
<b>Skills</b>	Use ICT to generate ideas for their work.  Use various tools such as brushes, pens, rubber, stamps and shapes (smart notebook is very good for this)  Capture simple pictures and videos on a camera and share their work.  Use software to record different sound.	<b>Photography</b>  Capture still images using a range of simple angles and distances.  Use effects, crop and colour tools to manipulate images  Create a basic movie	<b>Photography</b>  Capture still images using a wide range of angles and distances.  Use angles and distance to create digital effects  Input still images into iMovie/movie maker and add shot name as title  Use a Ken burns effect	<b>iMovie/Movie Maker</b>  Story board and film a short movie.  Edit Trim and arrange clips to convey meaning.  Add titles, credits, slide transitions and special effects.	<b>Animation</b> Plan what they would like to happen in their animation.  Take a series of pictures to form an animation or design the backgrounds and characters if using scratch to animate  Move items within their animation to create movement on playback.	<b>Animation</b> Plan and create multi-scene animation including characters, scenes and special effects.  use a range digital skill e.g. movie and photography  Publish their animation and use a movie editing package to edit/refine and add titles.
<b>Vocabulary</b>	Tools, brush, pen, rubber, stamp, shape, software, photograph, capture, video, record, sound.	Save, retrieve, edit, purpose, delete.	Arrange, film, title, credits, discard, audience, clip.	Trim, slide transitions, special effects.	Animation, series of pictures, playback, scenes.	Multi-scene, camera angles, special effects, playback rate, quality, publish, refine.