



Progression of Skills in Computing

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety	<p>Be aware that some online content is inappropriate.</p> <p>Be aware that information can be public or private.</p> <p>Know to tell an appropriate adult if they see something on the computer that upsets them.</p>	<p>Use a simple password when logging on, where relevant.</p> <p>Explain why we use passwords.</p> <p>Recognise examples of personal information e.g. name, image.</p> <p>Know who to tell if concerned about content or contact online.</p> <p>Recognise that digital content belongs to the person who created it.</p> <p>Talk about children's use of technology at home.</p>	<p>Identify rules for acceptable use of technology in school.</p> <p>Recognise what personal information is and the need to keep it private.</p> <p>Recognise that spending a lot of time in front of a screen can be unhealthy.</p> <p>Recognise that some information found online may not be true.</p>	<p>Explain why we need to keep our password safe.</p> <p>Recognise that digital content belongs to the person who first created it, but we can give permission for others to use it.</p> <p>Recognise when to share personal information and when not to.</p> <p>Recognise that some people lie about who they are online.</p> <p>Are aware that games and films have age ratings.</p>	<p>Remember and use an individual password.</p> <p>Recognise what kinds of websites are trustworthy sources of information.</p> <p>Recognise the benefits and risks of different apps and websites.</p> <p>Recognise that the media can portray groups of people differently.</p> <p>Can rate a game or film they have made and explain their rating.</p>	<p>Know where to find copyright free images and audio, and why this is important.</p> <p>Critically evaluate websites for reliability of information and authenticity.</p> <p>Demonstrate responsible use of a online services, and know a range of ways to report concerns.</p>	<p>Explain what makes a strong password and why this is important at school and in the wider world.</p> <p>Explain how algorithms are used to track online activities with a view to targeting advertising and information.</p> <p>Know that there are laws around the purchase of games; the production, sending and storage of images; what is written online; and around online gambling.</p>
Digital Literacy	<p>Use different digital devices.</p> <p>Recognise that you can access content on a digital device.</p> <p>Use a mouse, touchscreen or appropriate access device to target and select options on screen.</p> <p>Recognise a selection of digital devices.</p> <p>Recognise the basic parts of a computer, e.g. mouse, screen, keyboard.</p> <p>Select a digital device to fulfil a specific task, e.g. to take a photo.</p>	<p>Recognise a range of digital devices.</p> <p>Select a digital device to fulfil a specific task, e.g. to take a photo.</p> <p>Name a range of digital devices, e.g. laptop, phone, games console.</p> <p>Log on to the school computer / unlock the school tablet with support.</p> <p>Identify the basic parts of a computer, e.g. mouse, keyboard, screen.</p> <p>Use a suitable access device (mouse, keyboard, touchscreen, switch) to</p>	<p>Recognise what a computer is (input > process > output).</p> <p>Recognise that a range of digital devices contain computers, e.g. phone, games console, smart speaker.</p> <p>Explain what the basic parts of a computer are used for.</p> <p>Identify and use input devices, e.g. mouse, keyboard; and output devices, e.g. speakers, screen.</p> <p>Open key applications independently.</p>	<p>Describe what a computer is (input > process > output).</p> <p>Explain the difference between input and output devices on a computer.</p> <p>Know where to save and open files (e.g. in shared folder).</p> <p>Save files with appropriate names.</p> <p>Use a keyboard effectively to type in text.</p> <p>Use left-, right- and double-click on the mouse.</p>	<p>Recognise that you can organise files using folders.</p> <p>Explain what a good file name would look like.</p> <p>Delete and move files.</p> <p>Use key parts of a keyboard effectively, e.g. shift, arrow keys, delete).</p> <p>Know how to copy and paste text or images in a document.</p> <p>Crop an image and apply simple filters.</p> <p>Use a search engine to find specific information.</p>	<p>Type using fingers on both hands.</p> <p>Use common keyboard shortcuts, e.g. ctrl C (copy), ctrl V (paste).</p> <p>Explain what makes a strong password.</p> <p>Use folders to organise files.</p> <p>Know how to mute and unmute audio on a computer or tablet.</p> <p>Recognise that there is more than one search engine, and they may produce different results.</p>	<p>Type efficiently using both hands.</p> <p>Use a range of keyboard shortcuts.</p> <p>Recognise that different devices may have different operating systems.</p> <p>Organise files effectively using folders and files names.</p> <p>Use the advanced search tools when using a search engine to find specific information and images.</p> <p>Explain the basic function of an operating system.</p>

		<p>access and control an activity on a computer.</p> <p>Open key applications independently.</p> <p>Save and open files with support.</p> <p>Add an image to a document from a given folder/source with support.</p>	<p>Save and open files to/from a given folder.</p> <p>Add an image to a document from a given folder/source.</p> <p>Resize an image in a document.</p> <p>Highlight text and use arrow keys.</p> <p>Capture media independently (e.g. take photos, record audio).</p>	<p>Add an image to a document from the internet.</p> <p>Resize and move an image in a document.</p> <p>Use a search engine to find simple information.</p> <p>Recognise that school computers are connected.</p>	<p>Recognise that school computers are connected together on a network.</p>	<p>Use a search engine effectively to find information and images.</p> <p>Know how to search for an application on a computer/tablet.</p>	<p>Recognise common file types and extensions e.g. jpeg, png, doc, wav</p> <p>Recognise a range of Internet services, e.g. email, VOIP (e.g. Skype, FaceTime), World Wide Web, and what they do.</p>
<p>Computer Science – Theory & Programming</p>	<p>Data & Information Access content in a range of formats, e.g. image, video, audio.</p> <p>Answer basic questions about information displayed in images e.g. more or less.</p>	<p>Data & Information Recognise different forms of digital content, i.e. text, image, video and audio.</p> <p>Collect simple data (e.g. likes/dislikes) on a topic.</p> <p>Present simple data using images, e.g. number of animals.</p> <p>Recognise charts and pictograms and why we use them.</p> <p>Explain information shown in a simple chart or pictogram.</p> <p>Modify simple charts/pictograms, e.g. add title, item or labels.</p> <p>Identify the key features of a chart or pictogram.</p> <p>Collect data on a topic (eye colour, pets etc.) and present in a pictogram or chart.</p>	<p>Data & Information Identify different forms of digital content, i.e. text, image, video and audio.</p> <p>Recognise charts, pictograms and branching databases, and why we use them.</p> <p>Identify an object using a branching database.</p> <p>Recognise an error in a branching database.</p> <p>Create a branching database using pre-prepared images and questions</p> <p>Identify the features of a good question in a branching database.</p> <p>Independently plan out and create a branching database.</p> <p>Evaluate a given branching database and suggest improvements.</p>	<p>Data & Information Recognise charts, pictograms and databases, and why we use them.</p> <p>Present information using a suitable chart.</p> <p>Explore a record card database to find out information.</p> <p>Use filters in a database to find out specific information.</p> <p>Name the key parts of a database, e.g. record, field, search.</p> <p>Answer questions about information in a database.</p> <p>Name some benefits of using a computer to create charts and databases.</p> <p>Recognise that search engines store information in databases.</p>	<p>Data & Information Draw conclusions from information stored in a database, chart or table.</p> <p>Design a questionnaire and collect a range of data on a theme.</p> <p>Choose appropriate formats to present data to convey information.</p> <p>Recognise that school computers are connected together on a network.</p> <p>Recognise that the Internet is made up of computers and other digital devices connected together all around the world.</p> <p>Know that you use a web browser to access information stored on the internet. - Appreciate that you need to use specific software to work with video, images, audio etc.</p>	<p>Data & Information Explain the difference between data and information.</p> <p>Appreciate that different programs work with different types of data, e.g. text, number, video.</p> <p>Explain the difference between the Internet and the World Wide Web.</p> <p>Know the difference between a search engine and a web browser.</p> <p>Explain the basics of how search engines work, and that different search engines may give different results.</p> <p>Perform complex searches for information using advanced settings in search engines.</p> <p>Recognise the benefits and risks of sharing data online.</p>	<p>Data & Information Recognise what a spreadsheet is and what it is used for.</p> <p>Explain the difference between physical, mobile and wireless networks.</p> <p>Use simple formulae in a spreadsheet to find out information from a set of data.</p> <p>Collect data for a purpose and plan out a spreadsheet to present it effectively, using relevant formulae.</p> <p>Produce graphs from data in a spreadsheet to answer a question.</p> <p>Analyse and evaluate data and information in a spreadsheet, chart or database.</p> <p>Recognise that poor-quality data leads to unreliable results.</p>

	<p>Programming Explore technology.</p> <p>Repeat an action with technology to trigger a specific outcome.</p> <p>Recognise the success or failure of an action.</p> <p>Follow simple instructions to control a digital device.</p> <p>Recognise that we control computers.</p> <p>Input a short sequence of instructions to control a device.</p>	<p>Programming Recognise that computers don't have a brain.</p> <p>Explain that we control computers by giving them instructions.</p> <p>Create a simple program e.g. to control a floor robot.</p> <p>Create a simple algorithm.</p> <p>Predict the outcome of a simple algorithm or program.</p> <p>Explain what an algorithm is – a sequence of instructions to make something happen.</p> <p>Recognise that the order of instructions in an algorithm is important.</p> <p>Debug an error in a simple algorithm or program e.g. for a floor robot.</p>	<p>Programming Explain that computers have no intelligence and we have to program them to do things.</p> <p>Create a program with multiple steps e.g. to control a floor robot.</p> <p>Predict the outcome of an algorithm or program with multiple steps.</p> <p>Recognise that the instructions in an algorithm need to be clear and unambiguous.</p> <p>Identify and correct errors in a given algorithm or program, and recognise the term debugging.</p> <p>Explain what an algorithm is, and that when inputted on a computer it is called a program.</p> <p>Plan out a program by creating an algorithm, and evaluate its success.</p>	<p>Programming Predict the outcome of a block or text-based program (Scratch/Logo).</p> <p>Successfully modify an existing program, e.g. change background, number of times things happen.</p> <p>Identify repeated steps in a program or algorithm.</p> <p>Create examples of algorithms containing count-controlled loops.</p> <p>Use a count-controlled loop (e.g. repeat 3 times) to make a program more efficient.</p> <p>Recognise that we can create an algorithm to help plan out a program.</p> <p>Recognise a forever loop in a program or algorithm.</p> <p>Use a forever loop in a program to keep something happening.</p> <p>Identify errors in a block or text-based program and correct them.</p> <p>Recognise that different inputs can be used to control a program.</p>	<p>Programming Create a program using a range of events/inputs to control what happens.</p> <p>Recognise that we can decompose a problem into smaller parts to help solve it.</p> <p>Explain when to use forever loops and count-controlled loops, and use them in programs.</p> <p>Recognise selection in a program or algorithm.</p> <p>Use selection in algorithms in programs to alter what happens when a condition changes, e.g. if...then...</p> <p>Design a program for a purpose. Decompose into parts and create an algorithm for each one.</p> <p>Recognise common mistakes in programs and how to correct them.</p>	<p>Programming Name a range of sensors in physical systems.</p> <p>Recognise that different solutions may exist for the same problem.</p> <p>Predict what will happen in a program or algorithm when the input changes (e.g. sensor, data or event).</p> <p>Use two-way selection in programs and algorithms, i.e. if...then...else...</p> <p>Recognise variables in a program and what they do.</p> <p>Create programs including repeat until loops.</p> <p>Create and use simple variables, e.g. to keep score.</p> <p>Evaluate a program and make improvements to the code or design accordingly.</p> <p>Create an algorithm for a physical system containing a sensor.</p>	<p>Programming Design and program a physical computing system that uses sensors.</p> <p>Recognise and use procedures (sub-routines) in programs.</p> <p>Plan out a program in detail, including task, algorithm, code and execution level.</p> <p>Explain common errors in programs and how to fix them.</p> <p>Use nested selection statements in a program or algorithm effectively.</p> <p>Combine a variable with relational operators ($q = G$) to determine when a program changes, e.g. if score $G \geq 5$, say "well done".</p> <p>Recognise key concepts (sequence, selection, repetition and variables) in a range of languages and contexts.</p>
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<p>Information Technology</p>	<p>Creating Media Use technology to explore and access digital content.</p> <p>Operate a digital device with support to fulfil a task.</p> <p>Create simple digital content, e.g. digital art.</p> <p>Choose media to convey information, e.g. image for a poster.</p>	<p>Creating Media Create digital content, e.g. digital art.</p> <p>Choose media from a selection (e.g. images, video, sound) to present information on a topic.</p> <p>Recognise that you can find out information from a website.</p> <p>Recognise that you can edit digital content to change its appearance.</p> <p>Select basic tools/options to change the appearance of digital content, e.g. filter on an image / font / size of paintbrush.</p> <p>Combine media with support to present information, e.g. text and images.</p>	<p>Creating Media Create simple digital content for a purpose, e.g. digital art.</p> <p>Recognise that we can use technology to record and playback audio or take and view photographs.</p> <p>Apply edits to digital content to achieve a particular effect, e.g. emphasise part of a text.</p> <p>Present ideas and information by combining media, e.g. text and images.</p> <p>Explain that you can search for information on the internet.</p> <p>Plan out digital content, e.g. a simple sketch or storyboard.</p> <p>Identify the common features of digital content, e.g. title, images.</p> <p>Recognise that we can use different types of media to convey information, e.g. text, image, audio, video.</p>	<p>Creating Media Present ideas and information by combining media independently, e.g. text and images.</p> <p>Design and create simple digital content for a purpose/audience, e.g. poster.</p> <p>Edit digital content to improve it, e.g. resize text.</p> <p>Identify the features of a good piece of digital content.</p> <p>Explain why we use technology to create digital content.</p> <p>Recognise why we use different types of media to convey information, e.g. text, image, audio, video.</p>	<p>Creating Media Collect, organise and present information using a range of media.</p> <p>Design and create digital content for a specific purpose, e.g. poster, animation.</p> <p>Edit digital content to improve it according to feedback.</p> <p>Identify the features of a good piece of digital content and apply these in own design.</p> <p>Explain the benefits of using technology to present information.</p> <p>Know where to find copyright-free content, e.g. creative commons images.</p> <p>Collaborate with peers using online tools, e.g. blogs, Google Drive, Office 365, if available.</p>	<p>Creating Media Identify and use appropriate hardware and software to fulfil a specific task.</p> <p>Remix and edit a range of existing and their own media to create content.</p> <p>Consider the audience when designing and creating digital content.</p> <p>Recognise the benefits of using technology to collaborate with others</p> <p>Identify success criteria for creating digital content for a given purpose and audience.</p> <p>Evaluate their own content against success criteria and make improvements accordingly.</p>	<p>Creating Media Select, combine and remix a range of media to create original content.</p> <p>Consider all steps of the design process when creating content (e.g. identify problem, plan, create, evaluate, share.)</p> <p>Identify the most effective tools to present information for a specific purpose.</p> <p>Explain the benefits of using technology to collaborate with others.</p> <p>Evaluate existing digital content in terms of effectiveness and design.</p>
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