

Computing Progression Framework: Information Technology

National Curriculum Objective	Key Stage 1		Lower Key Stage 2		Upper Key Stage 2		
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
	Use technology purposefully to organise, store and retrieve digital content.		Select, use and combine a variety of software (including internet services) on a range of digital devices		Select, use and combine a variety of software (including internet services) on a range of digital devices.		
Creating Content	Expected Standard	<p>The child can use digital technologies to store, access and retrieve content, including laptop computers, tablets, smartphones, digital cameras, video cameras and audio recorders.</p> <ul style="list-style-type: none"> The child can film and upload another child performing an action for a project e.g cooking The child can create and develop their own e-book: <ul style="list-style-type: none"> open a new e-book import illustrations add illustrations to their e-book save their work. retrieve previous work import further illustrations save their work record audio import it to the computer save their work. 	<p>With a given purpose, the child can use a range of digital technologies to retrieve, organise and store digital content including laptop computers, tablets and smartphones with access to the internet, but the child might also be expected to use digital cameras, video cameras and audio recorders (or the equivalent apps on a tablet or smartphone).</p> <ul style="list-style-type: none"> The child can create projects in digital photography, searching for images online and creating image-based presentation slides: <ul style="list-style-type: none"> review, reject and rate the photographs they have taken. find useful information on websites. save and retrieve their presentations add images or other media as appropriate take, upload and organise photographs add information to their presentation 	<p>The child can use a range of software on laptop or tablet computers with some degree of independence. Software might include video editing, diagnostic tools, email clients, videoconferencing (with the teacher or another adult), survey design software, spreadsheets and presentation software.</p> <ul style="list-style-type: none"> The child can use Movie Maker The child can use the Command prompt and network program The child can use Outlook or webmail and Skype The child can use Google Forms, Google Sheets and Google Slides 	<p>The child can use and combine a range of programs on a computer.</p> <p>The child can use multiple programs on laptop or tablet computers to achieve particular goals:</p> <ul style="list-style-type: none"> The child can record audio and then use this as samples in a composition The child can create HTML content in a text editor and preview it in a browser The child can analyse data in a spreadsheet and then create a presentation to show the results of their analysis 	<p>The child can use and combine a range of programs on multiple devices.</p> <p>The child can use multiple digital devices (such as tablets and laptops or digital cameras and laptops) to achieve particular goals. The devices might include web servers, allowing them to use cloud-based applications:</p> <ul style="list-style-type: none"> The child can use local media in conjunction with a cloud-based programming platform, such as Scratch The child can use digital cameras and video cameras to capture content to use on an externally hosted website or blog The child can use a digital camera to take photos they could import into 3D design software on a laptop. 	<p>The child can select, use and combine a range of programs on multiple devices.</p> <p>The child can choose for themselves from a range of available programs on laptops, tablets or cloud-based services to achieve particular goals:</p> <ul style="list-style-type: none"> The child can choose which image editors and presentation software to use when making a presentation The child can choose which image and audio editors to use when creating media content for an app The child can choose which DTP, video editor and website tools to use when developing marking materials for an app.
		Use technologies purposefully to create and manipulate digital content.		Design and create a range of programs, systems and content that accomplish given goals.		Design and create a range of programs, systems and content that accomplish given goals	
	Expected Standard	<p>The child can create creative, original content using digital technologies</p> <p>The child can create their own original digital content using a range of technologies including laptop computers, tablets, smartphones, digital cameras, video cameras and audio recorders:</p> <ul style="list-style-type: none"> The child can create film digital video The child can create an original painting The child can create original digital audio The child can type their own text. 	<p>The child can create and edit their own original digital content using a range of technologies including laptop computers, tablets, smartphones with network connections, digital cameras, video cameras and audio recorders, although editing is likely to take place on laptops or tablets:</p> <ul style="list-style-type: none"> The child can create a project using digital photography (take and edit original digital photographs) to create an image-based presentation The child to compose an email (write and edit an email) The child to create and edit simple charts 	<p>The child can design and create content on a computer.</p> <p>The child can plan and execute a project in which they use software on a laptop or tablet to create digital content with some degree of independence:</p> <ul style="list-style-type: none"> The child to plan and shoot a video The child to plan and create a presentation on a given topic The child to plan and then create an online survey 	<p>The child can use and combine a range of programs on a computer.</p> <p>The child can use multiple programs on laptop or tablet computers to achieve particular goals:</p> <ul style="list-style-type: none"> The child can record audio and then use this as samples in a composition The child to create HTML content in a text editor and preview it in a browser The child to analyse data in a spreadsheet and then create a presentation to show the results of their analysis 	<p>The child can design and create programs on a computer in response to a given goal.</p> <p>The child can design a program of their own in response to a given goal and write this in a block-based language such as Scratch. The program need not be complex - a simple game or a turtle graphics program would suffice, but it should be accomplished with a degree of independent working:</p> <ul style="list-style-type: none"> The child to design and create a computer game in response to a given brief The child to design and create a geometric pattern using turtle graphics in response to a given brief 	<p>The child can design and create systems in response to a given goal.</p> <p>The child can plan, design and implement a system with multiple, interrelated components with a given goal in mind:</p> <ul style="list-style-type: none"> The child can develop a smartphone app, taking into account input, output and connectivity, the operating system, the algorithms, code and user interface of their own program.
		Collecting, analysing, evaluating and presenting data and information.		Collecting, analysing, evaluating and presenting data and information.		Collecting, analysing, evaluating and presenting data and information.	
Expected Standard			<p>The child can use computers to collect information and present this to an audience.</p> <ul style="list-style-type: none"> The child can shoot and then show a video The child to read and respond to an email The child to conduct an online survey and present the results. (They should be able to do this with a degree of independence) 	<p>The child can use computers to collect numerical data and present this to an audience.</p> <ul style="list-style-type: none"> The child can collect and present data about the weather over a period of time The child to record and use audio samples (They should be able to do this with a degree of independence) 	<p>Working with text, audio, images or video, the child can analyse information, perhaps summarising this.</p> <ul style="list-style-type: none"> The child can evaluate the quality of the information, looking for bias or questioning assumptions that have been made. The child can work with information on a particular subject (e.g. online safety), evaluating its quality and providing a clear and coherent summary. 	<p>The child can evaluate the quality of numerical data, deciding the extent to which it is affected by systematic or random errors.</p> <ul style="list-style-type: none"> The child to analyse their data, perhaps producing summary statistics, looking for relationships, trends and exceptions. The child could conduct market research for a smartphone app, and analyse and evaluate the data they obtain. 	

Searching			Use search technologies effectively.		Use search technologies effectively.	
	Expected Standard		<p>The child can search for information within a single site.</p> <ul style="list-style-type: none"> The child can use browser-specific tools (e.g. the Find command) and site-specific tools (such as the search tools for Wikipedia or YouTube) to locate particular information on a web page or within a website. 	<p>The child can use a standard search engine to find information.</p> <ul style="list-style-type: none"> The child can use a common search engine (such as Google with safe search mode locked in place) effectively, to search for particular information on the web, such as answers to questions they identify in a research project. 	<p>The child can use filters to make more effective use of a standard search engine.</p> <ul style="list-style-type: none"> The child can use a common search engine (such as Google with safe search mode locked in place) effectively, to search for particular information on the web, such as answers to questions they identify in a research project. They should use built-in search tools to filter their results, such as by time, location or reading level 	<p>The child can make use of a range of search engines appropriate to finding information that is required.</p> <ul style="list-style-type: none"> The child can show that they can use effectively a range of different search technologies, including alternatives to Google (such as Bing or Yahoo) and site-specific search engines (such as those for the App Store or Google Play). E.g. They could demonstrate how they would use a range of search engines when researching available smartphone apps for a particular purpose.
			Appreciate how search results are selected and ranked.		Appreciate how search results are selected and ranked.	
Expected Standard		<p>The child can understand that search engines select pages according to keywords found in the content.</p> <ul style="list-style-type: none"> When using search engines, the child should demonstrate their understanding that the pages shown include the keywords they have specified. The child can use this knowledge by thinking of good keywords appropriate for what they are searching. 	<p>The child can understand that search engines rank pages according to relevance.</p> <ul style="list-style-type: none"> The child can demonstrate their understanding that search engine results are ranked according to relevance, and that normally the top results on the first page are likely to be those most relevant to their query. If the child is unable to find good results on the first page, expect them to reconsider their keywords rather than looking at further pages of results. 	<p>The child can understand that search engines use a cached copy of the crawled web to select and rank results.</p> <ul style="list-style-type: none"> The child can explain how a search engine creates an index from a cached copy of the web and uses this to select and rank results. The child might also show an awareness of the Page Rank algorithm in which results are ranked according to the number and quality of in-bound links. 	<p>The child can appreciate that search engines rank pages based on the number and quality of in-bound links.</p> <ul style="list-style-type: none"> The child can demonstrate some awareness of the Page Rank algorithm, explaining that the quality of a page is determined largely on the basis of the number and quality of links pointing to that page in the engine's cached copy of the web, and that quality is itself determined recursively through Page Rank. 	