

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
E-Safety							
Use technology safely and respectfully.	Using the equipment safely – computing rules and the importance of them. Where to use the iPad and how to hold it correctly.	<p>The child can keep themselves safe while using digital technology.</p> <p>The child can understand that they need to keep safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the web and that they should close the lid of a laptop (or similar action) if they find inappropriate images.</p>	<p>The child can keep safe and show respect to others while using digital technology.</p> <p>The child should know that they need to keep themselves safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the web and that they should close the lid of a laptop (or similar action) if they find inappropriate images. They should know to respect others' rights, including privacy and intellectual property when using computers, so should not look at someone else's work or copy it without permission and acknowledgement. They should observe age</p>	<p>The child can use digital technology safely and show respect for others when working online.</p> <p>The child should know that they need to keep themselves safe when using digital technology. E.g. They should show respect for others when filming and should not normally post videos online. If responding to online surveys, they should do so anonymously, thinking carefully about information they give out.</p>	<p>The child can demonstrate that they can act responsibly when using computers.</p> <p>The child can act responsibly when using computers. E.g. They should act responsibly when developing computer games or prototype products. They should behave responsibly when using sampled music or creating a composition. They should show responsibility when creating or remixing online content, including observing copyright and any terms and conditions.</p>	<p>The child can demonstrate that they can act responsibly when using the internet.</p> <p>The child can act responsibly when using the internet. E.g. They should act responsibly when participating in an online community, such as the Scratch community, if permitted to do so. They should demonstrate that they understand the importance of encrypted (HTTPS) connections when browsing the web and of using strong passwords to protect their identity online. They should act responsibly when creating, editing or commenting on web pages or blog posts.</p>	<p>The child can show that they can think through the consequences of their actions when using digital technology.</p> <p>The child can discuss likely and potential consequences of their actions when using digital technology in a range of contexts. Contexts might include developing smartphone apps; using online project management tools; collecting information for market research; posting original content online</p>

			restrictions on computer games.				
<p>Keeping personal information private.</p> <p>Recognise acceptable/unacceptable behaviour.</p>	<p>Explore traditional tales with moral dilemmas e.g. Little red riding hood, Goldilocks , Jack and the Beanstalk etc. – circle time discussion of right and wrong choices in the stories.</p>	<p>The child can understand that information on the internet can be seen by others.</p> <p>The child should be aware that information stored on the web or transmitted via the internet is available to other people. E.g. They should know that the images they find online can be found by others too, and that the queries they type in can be seen by those who run the search engine they use and the school's network.</p>	<p>The child can understand what to do if they have concerns about content or contact online.</p> <p>The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children; if someone they don't trust contacts them online; if someone makes inappropriate contact online. They should know to tell their teacher or their parents if this happens and be aware that they could talk to another trusted adult or to ChildLine about this.</p>	<p>The child can recognise unacceptable behaviour when using digital technology.</p> <p>The child can identify what would be unacceptable or inappropriate behaviour when using digital technology in a range of contexts. E.g. They should know what would be unacceptable when using online communities, such as the Scratch website, or when shooting or publishing video.</p>	<p>The child can understand the difference between acceptable and unacceptable behaviours when using digital technology.</p> <p>The child can discuss the difference between acceptable and unacceptable behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; the use of others' original content, such as music samples or web pages; wikis, including Wikipedia</p>	<p>The child can discuss the consequences of particular behaviours when using digital technology.</p> <p>The child can discuss the likely or possible consequences of particular behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; using cryptography and passwords; creating websites or writing blog posts.</p>	<p>The child can identify principles underpinning acceptable use of digital technologies.</p> <p>The child can identify some principles underpinning acceptable behaviour when using technologies in a range of contexts. Contexts could include smartphone or tablet use; the use of online project management tools; online surveys and recording of interviews; creating and sharing digital content.</p>
<p>Identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p>	<p>ELG- To explain understanding of Digi duck or Smarties the</p>	<p>The child can understand what to do if they see disturbing content online at home or at school.</p>	<p>The child can understand what to do if they have concerns about content or contact online.</p>	<p>Know who to talk to about concerns and inappropriate behaviour in school.</p>	<p>Know who to talk to about concerns and inappropriate behaviour at home or in school.</p>	<p>Know how to report concerns and inappropriate behaviour in a range of contexts.</p>	<p>Know how to report concerns and inappropriate behaviour in a range of contexts.</p>

Computing Skills Progression

	<p>penguin stories through recording of a sentence.</p>	<p>The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children. They should know to tell their teacher or their parents if this happens.</p>	<p>The child should know to close the laptop lid or turn the tablet over if they find content, such as inappropriate images, which might disturb them or other children; if someone they don't trust contacts them online; if someone makes inappropriate contact online. They should know to tell their teacher or their parents if this happens and be aware that they could talk to another trusted adult or to ChildLine about this.</p>	<p>Pupils should know to report inappropriate behaviour when using technology in school to their teacher or another trusted adult, and that they can discuss any concerns they have about technology at home with their parents or teacher.</p>	<p>Pupils should know to report inappropriate behaviour when using technology in school to their teacher, the IT lead or another trusted adult, and that they can discuss any concerns they have with their teacher or other trusted adults in school. They should also know that any concerns over, or inappropriate behaviour with, digital technology at home can be discussed with their parents, with you or with another trusted adult.</p>	<p>Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to their teacher or another trusted adult. They should know how to report any concerns over inappropriate behaviour, such as cyber bullying with digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or to the police.</p>	<p>Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to their teacher or another trusted adult. They should know how to report any concerns over inappropriate behaviour, such as cyber bullying with digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or to the police.</p>
<p>Recognise common uses of information technology beyond school.</p>		<p>The child can show an awareness of how IT is used for communication beyond school.</p>	<p>The child can show an awareness of how IT is used for a range of purposes beyond school.</p>	<p>The child can decide whether a web page is relevant for a given</p>	<p>The child can decide whether digital content is relevant for a given</p>	<p>The child can decide whether digital content is reliable and unbiased.</p>	<p>The child can form an opinion about the effectiveness of digital content.</p>

Computing Skills Progression

<p>Be discerning about evaluating digital content.</p>		<p>The child can mention some of the ways in which IT is used to communicate beyond school. E.g. They might know that some people use social media such as Facebook, email, video calls or online greetings to say happy birthday to their friends</p>	<p>The child can name a number of purposes for which IT is used beyond school. The child might know that adults can share work and discuss ideas in online communities; that photos can be taken, edited and shared easily using digital technology; that the web is made up of information shared by people and organisations; that people use email for a range of purposes and in a variety of contexts; that scientists use computers when collecting and analysing data.</p>	<p>purpose or question.</p> <p>The child can form a judgement about whether a web page is appropriate for finding out the answer to a question they have or for a given purpose.</p>	<p>purpose or question.</p> <p>The child can form a judgement about whether a web page, such as a Wikipedia article, or other digital content is appropriate for finding out the answer to a question they have or for a given purpose</p>	<p>The child can discuss whether particular content (such as a web page, other children's pages or blog posts) is reliable and whether it has been written from a neutral point of view. They should be able to spot some examples of bias in digital content.</p>	<p>Taking into account the intended audience and purpose of the content, the child can form a judgement as to, and provide reasons for, the extent to which they consider digital content to be effective. The content might be an app, media resources or marketing materials.</p>
--	--	--	---	--	--	--	---

Computing Skills Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy							
<p>Use technology purposefully to organise, store and retrieve digital content.</p>	<p>Create firework pictures using paint apps /Programmes.</p> <p>Use creative programmes to explore colours and mark making.</p> <p>Use colours to relate to feelings showing emotions and how they are feeling use of emoji's.</p> <p>Tool selection within the creative apps, size of brush etc.</p> <p>ELG - Simple photo editing of photos they have taken independently on the ipad.</p> <p>Continuation of pattern, possible tracing of pattern using the editing tools on photos.</p>	<p>The child can use digital technology to store and retrieve content.</p> <p>The child can use a range of digital technologies to store and access digital content.</p>	<p>The child can store, organise and retrieve content on digital devices for a given purpose.</p> <p>With a given purpose, the child can use a range of digital technologies to retrieve, organise and store digital content.</p>		<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. E.g. They might record audio and then use this as samples in a composition, analyse data in a spreadsheet and then create a presentation to show the results of their analysis.</p>	<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. E.g. They might use local media in conjunction with a cloud-based programming platform, such as Scratch; digital cameras and video cameras to capture content to use on an externally hosted website or blog; a digital camera to take photos they could import into design software on a laptop.</p>	<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>

Computing Skills Progression

<p>Use technology purposefully to create and manipulate digital content</p>		<p>The child can create original content using digital technology.</p> <p>The child can create their own original digital content using a range of technologies. Look for some indication of the child's creativity in this work.</p>	<p>The child can create and edit original content for a given purpose using digital technology.</p>	<p>The child can plan a project in their topic work</p> <p>Working with the teacher and, perhaps, other children, the child can develop an outline plan for a project in computing, involving multiple steps and resources, e.g. creating an animation, filming a video or conducting a survey. In video work, the plan might include identifying a subject; storyboarding the video; sourcing media; recording video; filming; editing; exporting</p>	<p>The child can design and create content on a computer in response to a given goal.</p> <p>With a given goal, 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. E.g. They could plan, research and develop a topic. plan how they could contribute to a shared collaboration and then do so; plan and create a presentation about the weather. They should evaluate how effectively they have met the requirements of the original goal.</p>	<p>The child can analyse and evaluate information.</p> <p>Working with text, audio, images or video, the child can analyse information, perhaps summarising this. They should evaluate the quality of the information, looking for bias or questioning assumptions that have been made. E.g. They could work with still and creative animations evaluating its quality and providing a clear and coherent summary</p>	
<p>Understand the opportunities networks offer for communication and collaboration</p>				<p>The child can use email and videoconferencing in class.</p>			<p>The child can understand that computer networks transmit information in a</p>

Computing Skills Progression

				When working as part of the class, the child can use email effectively and participate in a whole-class videoconference.			digital (binary) format. The child can explain that any information has to be converted to numbers before it can travel through computer networks . The child should understand that this conversion happens according to an agreed system or code.
Use search technologies effectively.				<p>The child can search for information within a single site.</p> <p>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>	<p>The child can use a standard search engine to find information.</p> <p>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>		

Computing Skills Progression

<p>Appreciate how search results are selected and ranked.</p>				<p>The child can understand that search engines select pages according to keywords found in the content.</p> <p>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>	<p>The child can understand that search engines rank pages according to relevance.</p> <p>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>		
<p>Select, use and combine a variety of software (including internet services) on a range of digital devices</p>				<p>The child can use a range of programs on a computer.</p> <p>The child can use a range of software on laptop or tablet computers with some degree of independence. Software might</p>	<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. E.g. They</p>		<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</p>

Computing Skills Progression

				include video editing, diagnostic tools, email clients and Apple and Microsoft office apps.	might record audio and then use this as samples in a composition, analyse data in a spreadsheet and then create a presentation to show the results of their analysis.		to achieve particular goals. E.g. They might choose which image editors and presentation software to use when making a presentation; which image and audio editors to use when creating media content for an app; which DTP, video editor and website tools to use when developing marking materials for an app.
Design and create a range of programs, systems and content that accomplish given goals.				<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. E.g. They could plan and shoot a video, plan and create a presentation on a given topic or plan and then create an online survey.</p>	<p>The child can design and create content on a computer in response to a given goal.</p> <p>With a given goal, 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. E.g. They could plan, research and develop a topic. plan how they could contribute to a shared collaboration</p>		

Computing Skills Progression

					and then do so; plan and create a presentation about the weather. They should evaluate how effectively they have met the requirements of the original goal.	
Collecting, analysing, evaluating and presenting data and information				<p>The child can collect and present information.</p> <p>The child can use computers to collect information and present this to an audience. E.g. They could shoot and then show a video, read and respond to an email or conduct an online survey and present the results. They should be able to do this with a degree of independence.</p>		<p>The child can analyse and evaluate information.</p> <p>Working with text, audio, images or video, the child can analyse information, perhaps summarising this. They should evaluate the quality of the information, looking for bias or questioning assumptions that have been made. E.g. They could work with still and creative animations</p>

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Coding							
<p>Understand what algorithms are.</p> <p>Use logical reasoning to explain how some simple algorithms work.</p>	<p>Use of Beebot Use of Botley Understanding that some toys need batteries to work. Remote control toys Use of Tynker Junior app (early levels) Use of Beebot app. learning to give instructions to a programme. (algorithms)</p>	<p>The child can understand algorithms as sequences of instructions in everyday contexts</p> <p>The child can take real-world problems and then plan a sequence of steps to solve these. The problems could be moving a Bee Bot from one point to another, or making some simple food items like a sandwich, smoothie or pizza.</p>	<p>The child can understand algorithms as sequences of instructions or sets of rules in everyday contexts.</p> <p>The child can recognise that common sequences of instructions or sets of rules can be thought of as algorithms. Examples could include recipes but might also be procedures or rules in class, spelling rules, simple arithmetic operations or number patterns.</p>	<p>The child can explain a simple, sequence-based algorithm in their own words.</p> <p>The child can give an explanation for a simple algorithm based on a sequence of instructions. The algorithm could be one of their own, or a simple one with which they have been provided. The algorithms could be recorded graphically, e.g. as a storyboard.</p>	<p>The child can write a program that accepts keyboard input and produces on-screen output.</p> <p>In Tynker (or similar), the child can write a program that displays a question, accepts typed input and responds in an appropriate way to what is typed. This might be used as the basis for a dialogue program or a simple maths game.</p>	<p>The child can explain a rule-based algorithm in their own words.</p> <p>When provided with a rule-based algorithm (e.g. for a computer game), the child should be able to explain what it does and how it works, in their own words.</p>	<p>The child can give clear and precise logical explanations of a number of algorithms.</p> <p>Given an algorithm, the child can describe what it does and, using logical reasoning, give precise explanations of how it works. Algorithms could be linked to programming projects but might include a key algorithm such as binary search.</p>
<p>Understand how algorithms are implemented as programs on digital devices; and that programs execute by following</p>		<p>The child can program Bee Bots or the Bee Bot app using sequences of instructions to implement an algorithm.</p>	<p>The child can program on screen using sequences of instructions to implement an algorithm.</p> <p>The child can create programs as</p>	<p>The child can use sequence in program</p> <p>In on-screen programming, the child's program should include a sequence</p>	<p>The child's program, typically written in Scratch, or similar, should include sequences of commands or blocks and some repetition. Repetition would</p>	<p>The child can use sequence, selection and repetition in programs.</p> <p>The child's program, typically written in Swift Playgrounds, or similar, should</p>	<p>The child can use sequence, selection, repetition and variables in programs.</p> <p>The child's program should include sequences of</p>

Computing Skills Progression

<p>precise and unambiguous instructions.</p> <p>Use sequence, selection and repetition in programs; work with variables.</p>		<p>The child can create a Bee Bot (or similar) program using a number of steps in order before pressing the Go button.</p>	<p>sequences of instructions when programming on screen. Their program could be written using simple programming apps (such as Blue Bot or Lightbot), Scratch Jr or Scratch, perhaps using pre-prepared blocks and sprites in this case.</p>	<p>of commands or blocks in an appropriate order.</p> <p>A typical program could be a simple scripted animation, e.g. telling a joke, a story or explaining an idea taken from elsewhere on the curriculum. The child's program might include multiple sprites; instructions could include movement, on-screen text, sound and/or costume changes.</p>	<p>typically be for a fixed number of times but might also include exit conditions (e.g. repeat...until...). Programs might include turtle graphics, simple music or a simple game.</p>	<p>include sequences of commands or blocks, some repetition and selection. Repetition might include exit conditions (e.g. repeat...until...). Selection would normally be of an if...then or if...then...else type. At this level, expect the child to be able to combine repetition with selection.</p>	<p>commands or blocks, repetition, selection and variables.</p>
<p>Create and debug simple programs.</p> <p>Design, write and debug programs that accomplish specific goals</p>		<p>The child can give a sequence of instructions to a floor turtle.</p> <p>The child can create a Bee Bot program using a sequence of instructions before running it using the Go button. The length of the child's programs might be expected to increase over the course of the year.</p>	<p>The child can create a simple program on screen, correcting any errors.</p> <p>The child can create a simple program on screen (e.g. using the Blue Bot app, Scratch Jr or with prepared sprites and blocks in Scratch) with a particular goal or purpose in mind (e.g. drawing a shape or moving a</p>	<p>The child can design and write a program using a block language, without user interaction.</p> <p>A typical program might be a scripted animation for a joke, part of a story, or linked to another area of the curriculum. Programs could use pre-built sprites or ones designed by the child. Expect</p>	<p>The child can design and write a program using a block language to a given brief, including simple interaction.</p> <p>The child can write a program in Tynker (or similar) in which the user has to provide some input, perhaps as an answer to a question on screen, or by using key presses or the</p>	<p>The child can design, write and debug a program using code language based on their own ideas.</p> <p>The child can design a program of their own and write this in a coding language such as Swift Playgrounds or Tynker. The child can test and debug their code, explain what bugs they found and how they</p>	

Computing Skills Progression

			<p>sprite from one place to another).</p> <p>The child can debug any errors in their own code.</p>	<p>programs to include movement and dialogue; they may also include sound effects and some use of costumes to allow for animated movement. There may be more than one sprite in the animation.</p>	<p>mouse. The program could be a simple game or a set of questions and typed responses</p>	<p>fixed them. The program need not be complex, but it should be accomplished with a degree of independent working.</p>	
<p>Use logical reasoning to predict the behaviour of simple programs.</p> <p>Use logical reasoning to detect and correct errors in algorithms and programs.</p>		<p>The child can give explanations for what they think a program will do.</p> <p>The child can explain to the teacher, and to peers, what they think a program will do. This could be a program they or their peers have written, or it could be a familiar piece of software (including computer games). The child could use an audio recorder or video camera to capture their explanations.</p>	<p>The child can give logical explanations for what they think a program will do</p> <p>The child can give logical explanations of what a program will do under given circumstances, including some attempt at explaining why it does what it does. The program could be one they themselves have written or it could be a computer game or a familiar piece of software. The child could use an audio recorder or a video camera to record their explanations.</p>	<p>The child can use logical reasoning to detect errors in programs</p> <p>The child can give well-thought-through reasons for errors they find in programs. Typically, the child can find errors by reasoning logically about the program code, but they might also be able to use logical reasoning to identify errors in programs when they are executed. The programs do not have to be written originally by the child.</p>	<p>The child can use logical reasoning to detect and correct errors in programs.</p> <p>The child can give well-thought-through reasons for errors they find in programs and explain how they have fixed these. The child can find and correct errors by reasoning logically about the program code; they might also be able to use logical reasoning to identify errors in programs when executed and confirm that they have fixed these by testing the new version of their program. The programs do not have to be written</p>	<p>The child can use logical reasoning to detect errors in algorithms.</p> <p>When given an algorithm for a particular purpose, e.g. a rule-based algorithm for a computer game or a sequence of steps to draw a geometric pattern, the child can use logical reasoning to identify possible errors in the algorithm, explaining why they believe the algorithm is incorrect.</p>	<p>The child can use logical reasoning to detect and correct errors in algorithms (and programs).</p> <p>When given an algorithm for a particular purpose, e.g. a rule-based algorithm for a smartphone app, the child can use logical reasoning to identify possible errors in the algorithm, explaining why they believe the algorithm is incorrect. The child can use logical reasoning to suggest possible corrections to the algorithm, explaining why these would correct</p>

Computing Skills Progression

					originally by the child.		the bug they identified.
Controlling or simulating physical systems.				<p>The child can explore simulations of physical systems on screen.</p> <p>The child can experiment with some on-screen simulations of physical systems, perhaps linked to topics from other curriculum areas, e.g. a ball bouncing on a bat or a car moving around a track. Many computer games include elements of computer simulations. The child can discuss what they have learned from using the simulation.</p>	<p>The child can work with others to plan a project.</p> <p>Given a particular project, the child can work as part of a team to plan how to accomplish their goal, breaking the project down into a set of tasks. Examples of projects could include creating an educational game or monitoring the weather.</p>		
Solve problems by decomposing them into smaller parts.						<p>The child can plan a solution to a problem using decomposition.</p> <p>The child can take a complex problem, identify component parts, use decomposition to</p>	<p>The child can solve problems using decomposition, tackling each part separately.</p> <p>The child can take a complex problem, identify component parts, use</p>

Computing Skills Progression

						break this problem down and then plan how they can solve the problem by working through the elements they have identified. Projects could include developing a computer game.	decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified, they can then use their plan to solve the original problem.
--	--	--	--	--	--	---	---