

Malvern Primary School– Computing Curriculum



Aspect	Year One	Year Two	Year Three	Year Four	Year Five	Year Six
Mandatory Skills	<p>I can use iPads and computers to carry out basic tasks e.g. play music, draw, type on a keyboard.</p> <p>I can take photos/videos using iPad and digital cameras.</p>	<p>I can save, share and retrieve my digital work (Seesaw) when prompted.</p> <p>I can use technology to organise and present my ideas e.g. a digital poster or short video.</p>	<p>I can troubleshoot and attempt to fix a problem before asking for help e.g. refresh unresponsive webpages, check Wi-Fi on devices is working accordingly, restart unresponsive apps.</p> <p>Use QR codes that link to a resource to be used during lessons.</p>	<p>I can discuss different types of digital content and file types e.g. images, videos, audio. Appropriately receiving these when shared via digital methods (Airplay).</p> <p>I can choose when and why not to accept 'cookie preferences'.</p>	<p>I can select appropriate digital content to edit together to produce my own content; saving and opening work effectively.</p> <p>I can capture evidence of online interactions (screen shot/cast) and know how to report, block, unfollow and unsubscribe.</p>	<p>I can collaborate online to contribute useful ideas to a partner/group.</p> <p>I can independently select the appropriate app or software for completing a specific task.</p>
Computer Science	<p>I can follow a simple algorithm.</p> <p>I can explain an algorithm is a sequence of instructions.</p> <p>I can create a simple/ everyday algorithm (with support) and follow it e.g. washing hands.</p> <p>I can create an algorithm using symbols e.g. directional arrows.</p> <p>I can program an algorithm into a robot or digital device.</p> <p>I can program an algorithm into a robot or digital device to complete a specific goal.</p> <p>I can explain what a bug is.</p> <p>I can find a bug in an algorithm.</p> <p>I can use logical reasoning to predict the outcomes of a short sequence of instructions (algorithm).</p>	<p>I can explain what an algorithm is.</p> <p>I can plan and create an algorithm with a sequence of detailed commands to solve a problem (forward 3, backwards 4).</p> <p>I can identify bugs in computer programs and use the term debug in context.</p> <p>I can compare programs and identify the most precise and clear programs.</p> <p>I can explore the use of different programming techniques to make programs more efficient.</p> <p>I can use selection to choose appropriate commands to complete a given task.</p> <p>I can begin to use block computer programming.</p> <p>I can predict the outcome of a sequence of commands in a computer program.</p>	<p>I can write a simple program independently.</p> <p>I can make logical choices when designing a program.</p> <p>I can use sequence and sprites in a program I write.</p> <p>I understand what debug means and can use the term confidently.</p> <p>I can demonstrate how to solve problems using decomposition. I can show commitment and perseverance.</p> <p>I can keep testing a program, reflecting on my tests and recognise where it needs to be debugged.</p> <p>I can use selection in a program I write.</p> <p>I can use logical reasoning to predict the outcome of algorithms and programs, explaining the steps sequentially.</p> <p>I can explore designing, writing and debugging my own programs independently to try to achieve a specific goal.</p> <p>I can work with various forms of input and output. E.g. keyboard, headphones, touch screen, microphones, speakers etc...</p>	<p>I can use sequence and selection, adapting the program where required.</p> <p>I can solve a problem by breaking it into smaller manageable sections (decomposition).</p> <p>I can explore patterns and repetition in computer programming.</p> <p>I can use repetition in a program I write, adapting the program where required.</p> <p>I can test existing programs to see how they could be improved or altered using logical reasoning techniques.</p> <p>I can produce a design and write a program to accomplish a specific goal.</p> <p>I can design a program to simulate a physical outputs, e.g. lights, motors and sensors).</p>	<p>I can use logical reasoning to predict and detect bugs (mistakes) in a program of my own creation, reflecting and adapting my program where necessary.</p> <p>I can decompose a problem into smaller parts when planning, writing and testing.</p> <p>I can plan, write and test my own algorithm or program to accomplish a specific goal.</p> <p>I can efficiently use sequence, selection, repetition within a program.</p> <p>I can explore the use of conditionals and functions in a program.</p> <p>I can use a variety of programming commands, e.g. conditionals and functions, to complete a specific goal.</p> <p>I can explore the relationship between programming and physical systems (sensors, motors, robotics etc..)</p> <p>I can design and write a program linked to physical systems (sensors, motors robotics etc..)</p>	<p>I can use sequence, selection, repetition techniques confidently when working in programs.</p> <p>I can use conditional and variable commands with increasing confidence when working on programs.</p> <p>I can use logical reasoning to detect and correct errors in algorithms and programs, finding the most efficient solution in my own creations.</p> <p>I can test, compare, decompose and modify a program to improve it.</p> <p>I can explore the use of variables and For loops when programming.</p> <p>I can use a variety of programming commands, e.g. variables and For loops , to complete a specific goal.</p> <p>I can work with various forms of input and output e.g. keyboard, headphones, touch screen, microphones, speakers, cameras, robotic devices etc.</p> <p>I can design and write more complex program, of my own creation, to accomplish a specific goal.</p>

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Information Technology	<p>I can identify uses of technology in the home.</p> <p>I can navigate a simple webpage/app.</p> <p>I can use technology to create and present my ideas e.g. short video, voice note conveying a concept.</p> <p>I can use simple formatting skills e.g. underlining titles, capitalising letters, adding numbers and punctuation.</p> <p>I can save work and explain the importance of saving content.</p> <p>I can retrieve a piece of digital work from a specific location?</p> <p>I can create and edit a piece of digital content for a specific purpose?</p>	<p>I can explore information from a given website.</p> <p>I can consider layout and design to present a piece of work with appropriate fonts sizes, images etc.</p> <p>I can organise and store data purposefully e.g. in a chart or table.</p> <p>I can identify uses of information technology in the wider community.</p> <p>I can create, organise and manipulate e.g. video or edited image with technology. (supported).</p> <p>I can organise content effectively to make working more efficient.</p> <p>I can store and retrieve my work e.g. storing images in a folder or app on a device.</p>	<p>I can improve the quality and presentation of my work using editing and formatting techniques with support e.g. images, font, background colours, tables etc.</p> <p>I can create with technology e.g. video, animation, e-book.</p> <p>I can carry out a questionnaire to collect, analyse, evaluate and present data and information.</p> <p>I can understand what key words are and how search engines put most useful websites at the top.</p> <p>I can use advanced search tools including filtering results by adding detail and awareness of most popular results being at the top.</p> <p>I can collect and store data e.g. sort images/documents into folders.</p>	<p>I can improve the quality and presentation of my work using editing and formatting techniques, while reflecting on my choices, with increasing competence (including transitions and sounds) e.g. images, font, background colours, tables etc.</p> <p>I can use a search engine, to navigate the internet, gathering information from a range of sources.</p> <p>I can understand that not all sources are accurate and can check information using different sites.</p> <p>I can explore what a computer network is.</p> <p>I can explain that any information has to be converted to numbers (binary) on a computer.</p> <p>I can make judgments of what apps may be required to create e.g. Microsoft word to create a document, iMovie to edit a video clip.</p> <p>I can confidently use a range of apps/software (combined) to create content.</p>	<p>I can improve the quality and presentation of my work choosing efficient editing and formatting techniques to accomplish a given goal.</p> <p>When using websites, I am aware that not everything I read online is true and I know strategies to check the validity of information on the internet.</p> <p>I can record and produce a short audio podcast and understand basic elements of audio editing e.g. background music, sound effects. I can explain what equipment may be required to record good audio.</p> <p>I can explain that computers use binary code to transfer information within computer networks.</p> <p>I can identify the different parts of a webpage e.g. heading, adverts, search bar etc. I can explore that HTML is used for creating webpages as part of the world wide web.</p>	<p>I can use a spreadsheet/database to collect and record data with support e.g. Numbers app to collect simple data.</p> <p>I can improve the quality and presentation of my work choosing efficient editing and formatting techniques independently. Reflecting on my choices.</p> <p>I can use a search engine and be aware that not everything I read online is correct and that other people may be attempting to influence my opinions e.g. bias news.</p> <p>I can appreciate that different search engines use their own algorithms and select and rank results in different ways.</p> <p>I understand that the internet and the world wide web are not the same.</p> <p>I can explore how information/data is transported on the internet and between devices using IP addresses.</p> <p>I can compare and appropriately select and combine a variety of software/devices in order to create content.</p>

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Digital Literacy	<p>I can help create rules 'code of conduct' rules when using technology in school.</p> <p>I can identify 'trusted adults' and discuss technology/online concerns with them.</p> <p>I can explore being safe when using technology.</p> <p>I can explore being respectful when using technology.</p> <p>I can explain what personal information is and give examples of it.</p> <p>I can share information in an online community in a safe and respectful way by following set rules.</p>	<p>I can follow the 'code of conduct' rules when using technology in school and compare these to using technology outside of school.</p> <p>I know that when working with technology, certain activities may require adult supervision or the help of a 'trusted adult'.</p> <p>I know ways to deal with digital content or digital contact I find concerning.</p> <p>I can be safe when using technology and internet services, e.g. not oversharing.</p> <p>I can be respectful when using technology and internet services, in an online community e.g. not upsetting others.</p> <p>I know what personal information I should and shouldn't share on technical devices/online communities.</p>	<p>I can explore what a good digital citizen is.</p> <p>I can explain why I cannot trust everyone online and where to go for help if something concerns/upsets me.</p> <p>I can explain what online bullying/cyber bullying is and know how to get help.</p> <p>I can understand the impact technology can have on my health, well-being and lifestyle.</p> <p>I can explain that content online is owned by the person who created it and copyright helps prevent people from stealing others work.</p>	<p>I can explain who I can share information with and how to keep my information secure.</p> <p>I can describe strategies to stay safe online in a range of online environments e.g. blocking, reporting content/users.</p> <p>I can describe what an avatar is and explain why using an avatar is advisable.</p> <p>I can explain what a secure, complex password is and give examples of weak and strong passwords.</p> <p>I can explain the term "digital footprint".</p> <p>I can define plagiarism and understand the legal and moral reasons not to plagiarise.</p> <p>I can distinguish the difference between free apps, paid apps and apps with in game purchases.</p>	<p>I can understand the impact of online bullying and know what to do if I am a victim or witness e.g. helpful websites and support lines to seek advice/help.</p> <p>I can understand that there are people online who may try to upset me. I can make a positive contribution to my online community.</p> <p>I can understand the impact technology can have on my health, well-being and lifestyle and discuss solutions such as "Digital 5 a day".</p> <p>I can discuss the positives and negatives of being an online influencer.</p> <p>I can discuss how identities can be copied by other users (catfishing) and can minimise the risk of this happening e.g. protecting devices from harm, limit personal information, strong passwords etc.</p> <p>I can explore how photos can be altered digitally distorting perceptions of beauty, potentially damaging physical and mental health.</p> <p>I can identify Spam, as well as messages from unknown users, and know how to deal with these.</p> <p>I can make informed choices when identifying Fake News and misinformation.</p>	<p>I can explain how to protect my computer or device from harm on the internet (anti-virus, firewall).</p> <p>I can explore the terms 'phishing, smishing and vishing'.</p> <p>I can support my friends to protect themselves and making good choices in their online communities, including reporting concerns to an adult.</p> <p>I can explain the ways in which media can shape our ideas about gender e.g. gender stereotypes. (in particular advertising).</p> <p>I know that digital technology can be potentially addictive and detrimental to our health and well-being.</p> <p>I can explore the positives and negative of AI (artificial intelligence).</p>

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Vocabulary	<p>Technical device, navigate, code of conduct, rules, trusted adults, online concerns, webpage, app, algorithm, sequence, instructions, explore, safe, respectful, formatting, underlining, capitalising, save, personal information, online community, robot, digital device, retrieve, location, create, edit, digital content, bug, logical reasoning, predict.</p>	<p>Rules, pledge, code of conduct, technology, compare, trusted adult, explore, website, layout, font, images, algorithm, sequence, commands, bugs, debug, digital content, digital contact, safe, oversharing, store, data, chart, table, wider community, create, organise, manipulate, programs, efficient, respectful, internet services, online community, personal information, share, retrieve, app, choose, block programming, predict.</p>	<p>SMART with a heart, online. Explore, digital citizen, editing, formatting, font, backgrounds, video, animation, e-book, program, logical choices, sequence, sprites, online bullying, health and well-being, lifestyle, questionnaire, collect, analyse, evaluate, data, key words, search engine, debug, decomposition, commitment, perseverance, testing, reflecting, content, copyright, advanced search, filtering, store, documents, selection, logical reasoning, algorithms, debugging, input, output.</p>	<p>Communication, internet, online bullying, share, secure, safe, online environment, blocking, reporting, content, user, editing, formatting, reflecting, search engines, navigate, sources, sequence, selection, adapting, program, decomposition, avatar, password, sites (websites), computer network, patterns, repetition, adapting, test, logical reasoning, digital footprint, plagiarism, plagiarise, free apps, paid apps, in app/game purchases, binary, software, simulate, physical output.</p>	<p>Poll, online bullying, victim, witness, online community, efficient, editing, formatting, validity, logical reasoning, predict, bugs, reflecting, adapting, program, health, well-being, lifestyle, digital, online influencer, record, audio, podcast, binary code, transfer, computer networks, write, test, sequence, selection, repetition, explore, conditionals, functions, catfishing, digitally altered, physical and mental health, webpage, hyper text mark up language (HTML), world wide web (WWW), commands, Spam, fake news, misinformation, physical systems.</p>	<p>Fake news, sources, device, internet, anti-virus, firewall, explore, phishing, smishing, vishing, spreadsheet, database, efficient, editing, formatting, reflecting, sequence, selection, repetition, programs, conditional, variable, online communities, reporting, media, gender stereotypes, advertising, search engine, influence, news bias, algorithms, rank, logical reasoning, test, compare, for loops, digital technology, addictive, health and well-being, artificial intelligence (AI), world wide web (WWW), IP addresses, software, content, commands, input, output.</p>