



Singlewell Primary School

cares about being...

Curious
Ambitious
Resilient
Equal
Safe

Computing Curriculum Document

Intent for Computing Curriculum

At Singlewell Primary School, we recognise that computing is an essential part of everyday life and a vital skill for the future. Our computing curriculum aims to develop **confident, capable and responsible digital learners**, supporting children to become *thinkers of the future* through a modern, **ambitious** and relevant computing education.

Our curriculum is designed to reflect our **CARES school values**, promoting **curiosity** and enjoyment when using computing systems, where problem solving is engaging and meaningful. Pupils are encouraged to explore new technologies, think creatively and develop **resilience** by learning from mistakes, persevering with challenges and adapting their thinking when things do not work first time.

Being safe online is a core priority. We aim to ensure that all pupils develop a strong understanding of how to stay **safe** online and behave with respect towards others when communicating digitally. Children are taught to recognise potential risks, protect personal information, and understand the importance of digital citizenship.

Using Purple Mash as a core platform, pupils develop essential skills in computer science, information technology and digital literacy. Learning is carefully sequenced to ensure clear progression, enabling pupils to apply their skills across the wider curriculum with increasing independence.

Our curriculum promotes an **equal** approach to learning, ensuring all pupils have opportunities to succeed, collaborate and express themselves through technology. By linking computing to real-life contexts and cross-curricular learning, we aim to equip pupils with the knowledge, skills and understanding they need to thrive in an increasingly digital society.

	Reception	Y1	Y2	Y3	Y4	Y5	Y6
Essential Skills	I can use my finger to tap, swipe and move things on an iPad. I can use simple software to make something happen. Vocabulary: Software, tap, swipe, move, iPad	I can unlock an iPad and find the app I need. I can type my name using a keyboard. I can log on and off a computer or an app independently. I can open a 2D or I can save a 2D or. I can hand in a 2D or. Vocabulary: Software, tap, swipe, unlock, iPad, app, keyboard, 2D or, open, save, hand in, log in, log out, avatar	I can take clear photos using an iPad. I can type simple words using a keyboard. I can save a file on a device I am using. I can open a saved piece of work and edit it. I can follow instructions to navigate simple programs/apps. Vocabulary: Software, tap, swipe, iPad, camera, keyboard, file, save, device, edit, programs, app	I can edit photos I have taken to improve them. (crop, filters) I can type phrases and short sentences using a keyboard. I can use CAPS lock or shift to create capital letters. I can begin to use an iPad to support my learning, e.g. online dictionaries. I can navigate simple programs/websites/apps. I can edit font size, colour and style of writing. Vocabulary: Edit, crop, filter, photo, image, keyboard, CAPS Lock, Shift, capital letter, iPad, , website, program, navigate, click, select, search, online dictionary, font size, font colour, font style, tool bar, menu, save, open, file, program,	I can take simple videos. I can type sentences with simple punctuation and capital letters in the correct places. I can use an iPad to support my learning in different subjects. E.g. online thesaurus, watching videos. I can confidently navigate simple programs, websites and apps. I can format text using simple text effects (such as bold, italics, underline, font style) to make it clear and interesting. I can adjust settings such as brightness, volume and Wi-Fi. Vocabulary: Video, recording, film, flip, camera, punctuation marks, capital letter, shift, CAPS lock, iPad, online thesaurus, research, program, font, bold, italic, underline, settings, brightness, volume, Wi-Fi	I can type sentences using a range of different punctuation marks. I can use iPads or computers to navigate simple programs, websites and apps by using the menus, buttons and icons. E.g. Websites, online tools, I can use a mouse or touch-screen to copy, paste, drag, drop and resize items on screen. I can format text with size, colour, style, alignment, bullets, and combine with images. I can insert and format a basic table. Vocabulary: Punctuation marks, iPad, menu, button, icon, programs, online tool, mouse, touch-screen, click, drag, drop, copy, paste, resize, text format, font, alignment, bullets, numbering, image, table, page orientation, margins, text wrapping	I can type with greater fluency and accuracy. I can use a variety of apps websites and digital tools to support my learning across the curriculum, including dictionaries and thesauruses to refine writing. . I can use simple keyboard shortcuts such as ctrl c/ ctrl v to copy and paste objects. I can use more than one tab or window and change basic settings. I can format text, images and tables, adapting my style to suit the purpose and audience. Vocabulary: Punctuation marks, keyboard shortcuts, ctrl, shift, alt, copy, paste, digital tools, refine, tab, window, settings, personal preferences, format, text, image, table, style, purpose, audience

Computer Science	I can name a range of technology and talk about how they are used. I can make a floor robot move. Vocabulary: Floor robot, Beebot, technology, instruction, forwards, backwards, steps	I can name the different components of various technology such as mouse, keyboard, and screen. I can understand what an algorithm is. I can make a good guess at what will happen in a simple line of coding. I can create and follow simple algorithms I can begin to find errors within coding and attempt to fix them. Vocabulary: Software, mouse, screen, keyboard, laptop, iPad, home button, microphone, speaker, algorithm, computer, program, action, background, code, command, debug-debugging, event, execute, input, instructions, properties, output, run, scale, sound, scene, when clicked	I can develop my awareness of keyboard layout and hardware buttons such as screen lock, volume control, speakers. I can explain what the internet, a website and a search engine is. I can explain an algorithm is a set of instruction to complete a task. I can use logic and reasoning to predict the behaviour of simple programs I can carefully plan and create algorithms so it will work when it becomes code. I can find and correct error in code to debug simple programs. Vocabulary: keyboard layout, hardware buttons, volume control, internet, website, search engine, search bar, smart device, button, design mode, collision detection, nesting, object, test, predict, text, scene, timer, sequence, when swiped	I can understand that emails are made possible using the internet. I can describe what is meant by an app. I can describe the steps needed in an algorithm to solve a real life problem. I can read programs with several steps of coding and predict what will happen. I can create an algorithm using turns, 'if' and repetition. I can identify and debug errors in my own programs with a growing confidence. Vocabulary: blocks of command, develop, alert, flowchart, repeat, plan, values, procedure, turtle object, communication, password, email, attachment, CC, recipient, compose, address book, formatting, send, trusted contact, simulations,	I can identify and describe different pieces of computer hardware and understand their functions. I can explain what software is. I can carefully structure my algorithms, using precise vocabulary to solve real life problems. I can create algorithms, using loops, timers, and selection. I can talk about what a variable is in coding. I can test and identify errors in more complex coding, using methods such taking it one line at a bugs. Vocabulary: code block, co-ordinates, if, else, objects types, number variable, prompt, prompt for input, selection, repeat until, variable value, Logo BK, FD, RT, LT, REPEAT, SETPC, SETPS, PU, PD, Motherboard, CPU, RAM, graphics card, network card, monitor, speakers, keyboard and mouse	I can talk about how Wi-Fi works and how the internet can be used for different purposes. I can use decomposition to plan and create an algorithm for a program that simulates a physical system. I can create and test algorithms using selection, repetition, strings and variables. I can test and debug my programs as I work and begin to use logical methods to identify errors in specific lines of coding. Vocabulary: Wi-Fi, internet, router, data, abstraction, called, decomposition, physical system, score, simplify/simplified, simulation, tab, animation, computer game, customise, evaluation, interactive, screenshot, texture, perspective, playability,	I can explain how different computer networks work (WAN/LAN), including use of the internet and World Wide Web. I can turn a complex programming task into an algorithm. I can create and test algorithms using selection, repetition, strings, variables, inputs and outputs, nested decisions and loops. I can test and debug my programs as I work on them, and use logical methods to identify and fix bugs within my own or other people's coding. I can compare the differences between block and text based coding. Vocabulary: network, router, internet chat, video call, Wi-Fi, LAN (Local Area Network), WAN (Wide Area Network), world wide web, launch command, selection, repetition, strings, inputs, outputs, variables, nested decisions, loops, developer, string, user input, Digital footprint, PEGI rating, phishing, python, text-based, block-based, python library, sleep
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Information Technology	I can take a photo. I know what sound, pictures and text are. I can use 2paint to create a picture with different colours. Vocabulary: Picture, camera, capture, text, sound, paint, painting tools, colour, brush, screen	I can name my work. I can understand that data can be collected and organised. I can use sound, picture and text to create a file. I can create simple graphs. I can write in my own word processing document. Vocabulary: criteria, data, group, pictogram, sort, digital art, drag and drop, touchscreen gestures, animation, background, copy and paste, beat, compose, digital, musical instrument, tempo, tune, digital book, eraser, font, sound effect, text, undo.	I can organise data e.g. 2calculate. I can include pictures, text and sound within my creations. I can use different digital tools within 2Paint to create my own digital artwork. I can create a spreadsheet e.g. 2calculate. Vocabulary: digital portfolio, fill tool, horizontal, import, outline, palette, repeating pattern, resize, vertical, branching database, open/closed questions, data, grouping, pictogram, primary data, sorting, tally, chart, axis/axes, block diagram, cell, column, controls toolbar, tools, resize, row, spreadsheet, value, wrap text, E-Book, presentation, node,	I can carry out simple searches to retrieve digital content. I can plan, create and use branching databases. I can use and create purposeful, appropriate content and attach this to emails. I can present data and information using different software such as Microsoft and google programs. I can use formulas and combine tools to solve real life problems in spreadsheets. Vocabulary: Emails, attachments, address book, recipient, inbox, search engine, digital content, branching database, binary choice, binary tree, database, debug/debugging, slideshow, slide, animation, design, media, theme, timing, transition, advanced mode, average, data, formula, formula bar, formula wizard, function, operations, range, sheet, sum, total tools	I can understand how and when to use a search engine. I can explain what an animation is and create my own using suitable software or apps. I can compose a piece of electronic music. I can work collaboratively to create content and solutions. I can make informed software and design choices when presenting information. Vocabulary: Search engine, Search Bar, rank, refine, keywords, filter, virtual assistant device (Alexa), animation software, frame, frames per second, onion skinning, sound effect, stop motion, storyboard, audiobook, background music, edit, final mix, playback, recording, sound effects manager, sound technician, timeline, track, bpm, electronic music, patch, rippler, sample, synths	I can search precisely when using a search engine. I can build and solve problems using a database. I can effectively create, edit and share digital content in a variety of ways, such as within games, quizzes, spreadsheets, and word documents. I can comment on how successful a digital solution is that I have created. I can make appropriate improvements to digital work I have created. Vocabulary: Search bar, rank, relevance, content page, features, interactive, layout, multiple choice, quiz, test, database design, condition, edit, field, filter, group, linked tables, operator, query, record, validation, game genre, 2D/3D game, sprite, sprite animation, playability, environment, axis, budget, continuous data, expense, line graph, profit, trend, unit	I can use filters when searching for digital content. I can explore and develop simple models using CAD software. I can independently, select, create, edit, and share digital content using a range of software and tools for a given task or problem. I can make clear connections to the audience when making digital content. I can use criteria to evaluate the quality of my own and others digital solution, suggesting refinements. Vocabulary: Search engine, filter, digital content, sponsored results or ads, comparative bar chart, dataset, dual bar chart, line graph, pie chart, auto-fit, chart, cell reference, conditional formatting, simulation, blog, post, hyperlink, moderation, publish, vlog, 2D, 3D, 3D printing, computer aided design (CAD), design brief, prototype
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Digital Literacy	I can understand that people use the internet to communicate. I can understand that not everybody online is safe. I can recognise the difference between being online and offline. I can check with an adult if I am unsure of anything online. Vocabulary: Internet, communicate, online, offline, safe, adult, unsure, message	I can understand that people use the internet to communicate in different ways e.g. email, instant message, video chat, gaming apps, voice notes etc. I can behave in a kind manner online. I can understand that not everything I see online is true. I can recognise that information shared online can be there for a long time. I can talk about why it is important to keep personal information private. Vocabulary: email, message, video chat, gaming, voice note, online, kind manner, true, information, share, private, personal, long-term	I can identify the dangers of using technology to communicate and know a safe adult who can help. I can explain what online bullying is and understand the impact on others. I know when to check with an adult whether information online is to be trusted. I can recognise that information online can be copied, even if deleted. Vocabulary: Technology, communicate, danger, safe, adult, bullying, impact, trust, check, information, copy, delete,	I can understand the difference between liking someone and trusting someone online. I can describe appropriate ways to behave towards other online I can identify and talk about how to report inappropriate behaviours. I can explain the difference between a belief, opinion or fact and recognise that not all opinions shared online may be accepted as true. I can recognise that once information is online it is difficult to control and may be misused. Vocabulary: Like, trust, behaviour, appropriate, report, inappropriate, belief, opinion, fact, information, control, misuse,	I can identify strategies to stay safe and be respectful online. I can describe the different ways that people can be bullied through media such as images, videos, texts and chats. I can explain how technology can be designed to act like, or impersonate a human such as bots or chat bots. I can identify ways that AI is used. I can recognise that not all information online comes directly from the person it is about and explain that information may not always be accurate or safe to share. Vocabulary: Online, safe, respectful, behaviour, bullied, media, images, videos, texts, chats, technology, bots, chat bots, impersonate, AI, information, accurate, share, reliable, identify	I can understand basic rules when contributing positive digital content collaboratively. I can recognise what might be perceived as playful banter could also be perceived as online bullying. I can recognise the risk in engaging with persuasive content including scams or harmful links. I can identify the risks and benefits of using AI in everyday life. I can be cautious about how information online might be perceived and judged by others. Vocabulary: Digital, content, contribution, positive, collaborate, banter, perception, bullying, risk, persuasive, scams, links, AI, cautious, information, perceived, judged, benefit, engage, rules, behaviour	I can explore how the internet can be used for communication and collaboration and know how to do this safely and respectfully. I can describe how to capture online bullying content as evidence (screengrab, URL and web page). I can recognise that popularity and endorsements by influencers does not make content true or fair. I can recognise when it is appropriate to use AI. (Plagiarism, environmental impact, fake news). I can recognise that online information can affect how people view and trust them in the future. Vocabulary: Internet, communication, collaboration, safe, respectful, capture, bullying, evidence, screengrab, URL, endorsements, webpage, popularity, influencer, content, true, fair, AI, plagiarism, fake news, trust, online reputation, approval, blog, post,
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