

Progression of Skills at Whittlefield Primary School



Subject: Computing	By the end of KS1	By the end of LKS2	By the end of UKS2
<p>Multimedia text and images</p>	<ul style="list-style-type: none"> • add text strings, text boxes and show and hide objects and images, manipulating the features; • use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape; • use applications and devices in order to communicate ideas, work, messages and demonstrate control; • save, retrieve and organise work; • use key vocabulary to demonstrate knowledge and understanding in this strand: paint, colour, brush, tools, settings, undo, redo, text, image, size, poster, launch, application, software, window, minimise, restore, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, 	<ul style="list-style-type: none"> • create different effects with different technological tools, demonstrating control; • use appropriate keyboard commands to amend text on a device; • use applications and devices in order to communicate ideas, work, and messages; • save, retrieve and evaluate work, making amendments; • insert a picture/text/graph/hyperlink from the internet or a personal file; • use key vocabulary to demonstrate knowledge and understanding in this strand: draw, object, shape, line, line colour, fill colour, group, ungroup, font, size, text box, format, image, wrap text, plan, link, image, object, link, hyperlink, minimise, restore, size, move, screen, split, 	<ul style="list-style-type: none"> • use the skills already developed to create content using unfamiliar technology; • select, use and combine the appropriate technology tools to create effect; • review and improve their own work and support others to improve their work; • save, retrieve and evaluate their work, making amendments; • insert a picture/text/graph/hyperlink from the internet or personal file; • use key vocabulary to demonstrate knowledge and understanding in this strand: window, layout, text, font, colour, format, heading, hyperlink, 2D shape, 3D shape, orbit, pan, zoom, eraser, dimension, measurement, guide.

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	click, button, double click, drag, present.	create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck.	
Multimedia sound and motion	<ul style="list-style-type: none"> • use software to record sounds; • change sounds recorded; • save, retrieve and organise work; • use key vocabulary to demonstrate knowledge and understanding in this strand: commands, add sound. 	<ul style="list-style-type: none"> • use software to record, create and edit sounds and capture still images; • change recorded sounds, volume, duration and pauses; • use software to capture video for a purpose; • crop and arrange clips to create a short film; • plan an animation and move items within each animation for playback; • use key vocabulary to demonstrate knowledge and understanding in this strand: audio, sound, video, movie, embed, link, file format, animate, animation, still image, thaumatrope, zoetrope, zoopraxiscope, stereoscope, flip book, frame, onion skinning, loop, frame rate, record, stop, play, stop motion, stop frame. 	<ul style="list-style-type: none"> • collect audio from a variety of resources including own recordings and internet clips; • use a digital device to record sounds and present audio; • trim, arrange and edit audio levels to improve quality; • publish their animation and use a movie editing package to edit/refine and add titles; • use key vocabulary to demonstrate knowledge and understanding in this strand: audio, record, edit, play stop, skip, waveform, input, output, record, edit, play podcast, digital content, downloadable, backing track, voiceover, mute, gain, production, post-production, documentary, project, evaluation, screening, ceremony, upload.
Handling data	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • talk about the different ways data can be 	<ul style="list-style-type: none"> • construct data on the most appropriate application;



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		<p>organised;</p> <ul style="list-style-type: none"> • sort and organise information to use in other ways; • search a ready-made database to answer questions; • use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table. 	<ul style="list-style-type: none"> • know how to interpret data, including spotting inaccurate data and comparing data; • use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets; • add data to an existing database; • use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table, spreadsheet, cell, row, column, formula/formulas, calculate, format, edit, insert, ascending, descending.
<p>Technology in our lives</p>	<ul style="list-style-type: none"> • recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping; • use links to websites to find information; • recognise age-appropriate websites; • use safe search filters; • use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, internet, subject, 	<ul style="list-style-type: none"> • explain ways to communicate with others online; • describe the world wide web as the part of the internet that contains websites; • add websites to a favourites list; • use search tools to find and use an appropriate website and content; • use strategies to improve results when searching online; • use key vocabulary to demonstrate knowledge and 	<ul style="list-style-type: none"> • search for information using appropriate websites and advanced search functions within Google; • use strategies to check the reliability of information (cross-check with another source such as books); • talk about the way search results are selected and ranked; • check the reliability of a website, including the photos on site; • tell you about copyright and



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	<p>address, communicate, sender, safe, secure.</p>	<p>understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media.</p>	<p>acknowledge the sources of information;</p> <ul style="list-style-type: none"> use key vocabulary to demonstrate knowledge and understanding in this strand: world wide web, search, search engine, advanced search, results, Google, browser, terms of use, bias, authority, citation, plagiarism, source, website, secure, https, site, domain, website, browser, address bar.
<p>Coding and programming</p>	<ul style="list-style-type: none"> give commands one at a time to control direction and movement, including straight, forwards, backwards, turn; control the nature of events: repeat, loops, single events and add and delete features; give a set of instructions to follow and predict what will happen; improve/change their sequence of commands by debugging; use key vocabulary to demonstrate knowledge and understanding in this strand: algorithm, 	<ul style="list-style-type: none"> use logical thinking to solve an open-ended problem by breaking it up into smaller parts; write a program, putting commands into a sequence to achieve a specific outcome; give a set of instructions to follow and predict what will happen; keep testing a program and recognise when it needs to be debugged; use variables to create an effect, e.g. repetition, if, when, loop; use key vocabulary to demonstrate knowledge and understanding in this strand: decompose, decomposing, logical sequence, flowchart, sprite, block, command, 	<ul style="list-style-type: none"> use external triggers and infinite loops to demonstrate control; follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols; use conditional statements and edit variables; decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program; keep testing a program and recognise when it needs to be debugged; use key vocabulary to demonstrate knowledge and understanding in this strand: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop,

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	<p>instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.</p>	<p>algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable.</p>	<p>backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.</p>
<p><i>Online safety</i></p>	<ul style="list-style-type: none"> • identify what things count as personal information; • identify what is appropriate and inappropriate behaviour on the internet; • agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords; • seek help from an adult when they see something that is unexpected or worrying; • demonstrate how to safely open and close applications and log on and log off from websites; • use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, 	<ul style="list-style-type: none"> • reflect on their own digital footprint and behaviour online; • identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying; • agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords; • seek help from an adult when they see something that is unexpected or worrying; • demonstrate understanding of age-appropriate websites and adverts; • use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, 	<ul style="list-style-type: none"> • protect their password and other personal information; • be a good online citizen and friend; • judge what sort of privacy settings might be relevant to reducing different risks; • seek help from an adult when they see something that is unexpected or worrying; • discuss scenarios involving online risk; • use key vocabulary to demonstrate knowledge and understanding in this strand: spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraud/fraudulent, policy, private/personal.



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	<p>accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.</p>	<p>tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.</p>	
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Key stage 1

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Key stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content

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- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.