Computing Skills Progression

Spring Class - EYFS Expectations

Understanding the World (Technology): Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes. For more detail about linked subject progression within the EYFS Framework, please refer to **these documents**.

Key Stage 1 National Curriculum Expectations	Key Stage 2 National Curriculum Expectations
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.	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; • 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.

SUMMER CLASS COMPUTING SKILLS				
esafety	Programming	Handling Data	Multimedia	Technology in our lives
Identify what things count as personal information.	Give commands one at a time to control direction and movement, including straight, forwards, backwards, turn.	I can talk about the different ways in which information can be shown.	Add text strings, text boxes and show and hide objects and images, manipulating the features.	Recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping;
Identify what is appropriate and inappropriate behaviour on the internet.	Control the nature of events: repeat, loops, single events and add and delete features.	I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder.	Use various tools, such as brushes, pens, eraser, stamps and shapes, and set the size, colour and shape.	Use links to websites to find information;
Agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;	Give a set of instructions to follow and predict what will happen.	I can use technology to collect information, including photos, video and sound.	Use applications and devices in order to communicate ideas, work, messages and demonstrate control.	Recognise age-appropriate websites;
Demonstrate how to safely open and close applications and log on and log off from websites;	Improve/change their sequence of commands by debugging.	I can sort different kinds of information and present it to others. For example, I can make and save a chart or graph using the data I collect.	Save, retrieve and organise work	Use safe search filters;
Seek help from an adult when they see something that is unexpected or worrying;		I can add information to a pictograph and talk to you about what I have found out. I am starting to understand a branching database.	Use software to record and change sounds.	
		I can tell you what kind of information I could use to help me investigate a question.		

AUTUMN CLASS COMPUTING SKILLS					
esafety	Programming	Handling Data	Multimedia	Multimedia Sound and Motion	Technology in our lives
Reflect on their own digital footprint and behaviour online.	Use logical thinking to solve an open-ended problem by breaking it up into smaller parts.	Talk about the different ways data can be organised.	Create different effects with different technological tools, demonstrating control;	Use software to record, create and edit sounds and capture still images.	Explain ways to communicate with others online.
Identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying.	Write a program, putting commands into a sequence to achieve a specific outcome.	Sort and organise information to use in other ways.	Use appropriate keyboard commands to amend text on a device.	Change recorded sounds, volume, duration and pauses.	Describe the world wide web as the part of the internet that contains websites.
Agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords.	Give a set of instructions to follow and predict what will happen.	Search a ready-made database to answer questions;	Use applications and devices in order to communicate ideas, work, and messages.	Use software to capture video for a purpose.	Add websites to a favourites list.
Seek help from an adult when they see something that is unexpected or worrying.	Keep testing a program and recognise when it needs to be debugged.		Save, retrieve and evaluate work, making amendments.	Crop and arrange clips to create a short film.	Use search tools to find and use an appropriate website and content.
Demonstrate understanding of age-appropriate websites and adverts.	Use variables to create an effect, e.g. repetition, if, when, loop.		Insert a picture/text/graph/hyperlink from the internet or a personal file.	Plan an animation and move items within each animation for playback.	Use strategies to improve results when searching online.

WINTER CLASS COMPUTING SKILLS					
esafety	Programming	Handling Data	Multimedia	Multimedia Sound and Motion	Technology in our lives
Protect their password and other personal information. Be a good online citizen and friend.	Use external triggers and infinite loops to demonstrate control.	Construct data on the most appropriate application.	Use the skills already developed to create content using unfamiliar technology.	Collect audio from a variety of resources including own recordings and internet clips.	Search for information using appropriate websites and advanced search functions within Google.
Judge what sort of privacy settings might be relevant to reducing different risks.	Follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols.	Know how to interpret data, including spotting inaccurate data and comparing data;	Select, use and combine the appropriate technology tools to create effect.	Use a digital device to record sounds and present audio;	Use strategies to check the reliability of information (cross-check with another source such as books).
Seek help from an adult when they see something that is unexpected or worrying.	Use conditional statements and edit variables.	Use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets.	Review and improve their own work and support others to improve their work.	Trim, arrange and edit audio levels to improve quality.	Talk about the way search results are selected and ranked.
Discuss scenarios involving online risk;	Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.	Add data to an existing database;	Save, retrieve and evaluate their work, making amendments;	Publish their animation and use a movie editing package to edit/refine and add titles.	Check the reliability of a website, including the photos on site.
	Keep testing a program and recognise when it needs to be debugged.		Insert a picture/text/graph/hyperlink from the internet or personal file.		Tell you about copyright and acknowledge the sources of information.

KEY VOCABULARY

SUMMER CLASS KEY VOCABULARY				
Use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.	Use key vocabulary to demonstrate knowledge and understanding in this strand: algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.	Use key vocabulary to demonstrate knowledge and understanding in this strand:	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, click, button, double click, drag, present.	Use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, internet, subject, address, communicate, sender, safe, secure.

AUTUMN CLASS KEY VOCABULARY					
Use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.	Use key vocabulary to demonstrate knowledge and understanding in this strand: decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable.	Use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table.	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, create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck.	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.	Use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media.

WINTER CLASS KEY VOCABULARY					
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.	Use key vocabulary to demonstrate knowledge and understanding in this strand: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.	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.	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.	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.	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.