FORSBROOK CE PRIMARY COMPUTING PROGRESSION MAP and VOCABULARY

	Computer Science	Information Technology	Digital Literacy
Relevant ELG	**ELG: Communication and Language** - Participate in small group, class and one-to-one discussions, offering their own ideas , using recently introduced vocabulary **ELG: Literacy** - Use and understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems and during role play **ELG: Numerical Patterns** - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity **(BeeBots)**	**ELG: Understanding the World** - Discussions Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class (roleplay with iPads and old computers, using desktop in action) **ELG: Physical** - Use a range of small tools, including scissors, paint brushes and cutlery - Begin to show accuracy and care when drawing - **(Word processing)** - **ELG: Expressive Arts and Design** - Us Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function - Share their creations, explaining the process they have used **(Brushes art)**	**ELG: PSED** - Self-Regulation. Show an understanding of their own feelings and those of others and begin to regulate their behaviour accordingly. **(Online safety)**
KS1 readiness objectives	• Awareness of the cause and effect of technology • Awareness of digital storage of information- photography, digital writing and research information • Awareness of input and outputs of devices Can use technology to express creatively and constructively	• Awareness of different technologies in and out of school • Awareness of the cause and effect of technology • Awareness of digital storage of information- photography, digital writing and research information • Awareness of input and outputs of devices Can use technology to express creatively and constructively	• Awareness of different technologies in and out of school • Awareness of the cause and effect of technology • Awareness of digital storage of information- photography, digital writing and research information • Awareness of input and outputs of devices Can use technology to express creatively and constructively

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KS 1	KS1 Computing National Curriculum Children understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. They create, debug and use logical reasoning to predict the behaviour of simple programs. Children can: - 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, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink.	KS1 Computing National Curriculum Children use technology purposefully to create, organise, store, manipulate and retrieve digital content. Children can: - 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; e 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	KS1 Computing National Curriculum Children recognise common uses of technology beyond school. They use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Children can: - 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, address, communicate, sender, safe, secure.
		Children can: - 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	KS1 Computing National Curriculum Children can use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Children can:

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			- 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, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet.

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	Computer Science	Information Technology	Digital Literacy
LKS 2	KS2 Computing National Curriculum Children 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. They 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. Children can: - 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, create, organise, file, folder, close, exit, search, print, password, screenshot, snipping tool, shift, undo, redo, menu, dictionary, highlight, cursor, toolbar, spellcheck.	KS2 Computing National Curriculum Children 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. Children can: - 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	KS2 Computing National Curriculum Children use technology safely, respectfully and responsibly. They recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact. Children can: - 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, tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public.
	KS2 Computing National Curriculum Children 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. They use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content. Children can: - explain ways to communicate with others online;	KS2 Computing National Curriculum Children 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. Children can: - talk about the different ways data can be organised;	

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	- 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 understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media.	- 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: Microsoft Office, insert, table.	
	KS2 Computing National Curriculum Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. Children can: - 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, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable.		

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	Computer Science	Information Technology	Digital Literacy
UKS2	KS2 Computing National Curriculum Children 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. They use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content. Children can: - 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 acknowledge the sources of information; - 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.	KS2 Computing National Curriculum Children 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. Children can: - 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.	KS2 Computing National Curriculum Children use technology safely, respectfully and responsibly. They recognise acceptable/unacceptable behaviour and identify a range of ways to report concerns about content and contact. Children can: - 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.
	KS2 Computing National Curriculum Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	KS2 Computing National Curriculum Children 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. Children can: - collect audio from a variety of resources including own recordings and internet clips;	

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	Children can: - 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, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise.	- 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.	
		KS2 Computing National Curriculum Children 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. Children can: - construct data on the most appropriate application; - 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.	

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	Reception	KS1		LKS2		UPKS2	
Online Safety	Choices Internet Website	Rules Online Private information Email	Appropriate/inappropriate sites Cyber-bullying Digital footprint Keyword searching	E-safety rules Secure passwords Report abuse button Gaming Blogs		Responsible online communication Informed choices Virus threats Blogs Messaging	
Coding And Programming	Equipment Buttons Movement	Instructions Buttons Robots Patterns Program	Forward Backward Right-angle turn Algorithm Sequence Debug Predict	Sequence instructions Sequence debugging Test + improve Logo commands Sequence programming	Type + edit logo commands Sensors Open-ended problems Bugs in programs Complex programming	Explore procedures Refine procedures Variable Hardware + software control Change inputs Different outputs Articulate solutions Commands	Predicting outputs Plan, program, test & review a program Program writing Control mimics + devices Sensors Measure input Create variables Link errors
Information Technology	Technology Share Create Internet	Purpose Online tools Communicate	Information sources Communication Purposes Website content	School network Devices Computer parts Collaborate Appropriate online communication Search tools Appropriate websites Owner	Different networks Information collection Reliability Owners	Computing devices Internet parts Collaboration Responsibility Searching strategies Webpages	Information movement Connecting devices Different audiences Research strategies Search result rankings Acknowledge resources