Progression of Skills in Computing at RCFS

Below is an overview of the aims and objectives of the Computing curriculum and where it is covered across RCFS.

Strand	EYFS	Key Stage 1		Lower Key Stage 2	
		Year 1	Year 2	Year 3	Year 4
Multimedia Text and Images	Children can: • Draw a picture on the Ipad • To be able to type my name on an Ipad/computer • Use a keyboard to label a picture • Type sentences on the computer • Use a space bar to create a finger space • Use cap lock to create a capital letter • To take a photo on an Ipad or camera • To be able to move the camera to take photos from different angles • To name my work use key vocabulary to demonstrate knowledge and understanding in this strand: paint, colour, brush, text, click, drag, keyboards, keys, mouse, click, button	Children use technology purposefully to create, organise, store, manipulate and retrieve digital content. Children can: • add text and edit the size, font and colour of the text • 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 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, launch, application, software, window, size, move, screen, close, click, drag, log on, log off, keyboards, keys, mouse, click, button, double click, drag, present.		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 from the internet and edit it; 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, minimise, restore, size, move, screen, split, create, organise, file, folder, close, exit, search, print, password, screenshot, shift, undo, redo, menu, highlight, cursor, toolbar.

Progression of Skills in Computing at RCFS

Multimedia Sound and Motion		Children use technology purposefully to create, organise, manipulate and digital content. Children can: • use software to record sounds and motion; • evaluate work and suggest improvements; use key vocabulary to demonstrate knowledge and understanding in this strand: motion, freeze-frame, stop-go animation, movement, small.	Children select and use a variety of software on a range of digital devices to design and create a range of programs and content that accomplish given goals. Children can: • use software to record, create and edit sounds and capture still images; • change recorded sounds, volume • 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, animate, animation, still image, flip book, frame, imotion, record, stop, play, stop motion, stop frame.

Progression of Skills in Computing at RCFS

Handling Data			Children select and use software 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; • 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, spreadsheet, questions, data, chart

Progression of Skills in Computing at RCFS

Technology in Our Lives	Children can: • Navigate technology on the Ipad or computer such as Google Earth • Talk about how to use the internet to find things out • To be able to work a game on an Ipad • Think of key phrases to use in search engines **Early Learning Goal** **Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.**	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, shopping; • recognise examples of information technology • identify devices that connect to the internet • use websites to find information; • recognise age-appropriate websites; use key vocabulary to demonstrate knowledge and understanding in this strand: Google, search engine, image, keyboard, email, internet, information technology, website, connect, internet	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; • confidently log on to software • contribute to school online blogs • describe the world wide web as the part of the internet that contains websites; • use search tools to find and use an appropriate website and content; • use strategies to improve results when searching online; • use Google classroom to access home learning • explain how information can be unreliable use key vocabulary to demonstrate knowledge and understanding in this strand: Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, Google classroom, networks

Progression of Skills in Computing at RCFS

Coding and Programming	Children can: • Make a beebot go in a direction that I chose • To be able to use a Beebot app to control the beebot • Create an algorithm use key vocabulary to demonstrate knowledge and understanding in this strand: program, turn, left, right	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, 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, sequence, project, repeat, grow, shrink.	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: logical sequence, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward, left, right, move, turn, variable, loop.

Progression of Skills in Computing at RCFS

Online Safety	Children can: • Explain why I should be careful who to trust online • Identify rules that help us keep safe online • Give some examples of personal information • Explain what information I can give out • To know when to ask for help and which adults I can ask use key vocabulary to demonstrate knowledge and understanding in this strand: safe, tell, online, trusted, adult, stranger, internet.	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: • 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.	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, avatars, profiles, account, private, public.