	Code	This concept involves developing an understanding of instructions, logic and sequence.
	Connect	This concept involves developing an understanding of how to safely connect with others.
	Communicate	This concept involves using apps to communicate one's ideas.
	Collect	This concept involves developing an understanding of databases and their uses.

KS1 **Cycle A for 22- 23**	Autumn		Spring		Summer	
Breadth	<u>**Computing Systems and networks**</u>	<u>Creating media – Digital painting</u>	<u>**Programming 1 - Animation**</u>	<u>**Data and information - pictograms**</u>	<u>**Digital Writing**</u>	<u>**Programming 2 - Quizzes**</u>
Knowledge Categories						
Overview	Learners will look at information technology at school and beyond, in settings such as shops, hospitals, and libraries. Learners will investigate how information technology improves our world, and they will learn about using information technology responsibly.	Learners develop their understanding of a range of tools used for digital painting. Use these tools to create their own digital paintings.	ScratchJr. - Learners will explore the way a project looks by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs.	Learners will begin to understand what the term data means and how data can be collected in the form of a tally chart. They will learn the term 'attribute' and use this to help them organise data. Present data in the form of pictograms and block diagrams. Learners will use the data presented to answer question.	Learners will develop their understanding of the various aspects of using a computer to create and manipulate Become more familiar with using a keyboard and mouse to enter and remove text. Consider how to change the look of their text, and will be able to justify their reasoning in making these changes..	Learners begin to understand that sequences of commands have an outcome, and make predictions based on their learning. They use and modify designs to create their own quiz questions in ScratchJr, and realise these designs in ScratchJr using blocks of code. Evaluate work and make improvements to programming projects.
NC Links	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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Understand what algorithms are; and that programs execute by following precise and ambiguous 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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

Milestone 1	Understand online risks and the age rules for sites.	Use a range of applications and devices in order to communicate ideas, work and messages.	**Motion:** Control motion by specifying the number of steps to travel, direction and turn. **Draw:** Control when drawings appear and set the pen colour, size and shape. **Events:** Specify user inputs (such as clicks) to control events. **Control:** Specify the nature of events	Use a range of applications and devices in order to communicate ideas, work and messages.	Use a range of applications and devices in order to communicate ideas, work and messages.	**Motion:** Control motion by specifying the number of steps to travel, direction and turn. **Looks:** Add a text strings, show and hide objects and change features of an object. **Sound:** Select sounds and control when they are heard, their duration and volume. **Draw:** Control when drawings appear and set the pen colour, size and shape. **Events:** Specify user inputs (such as clicks) to control events. **Control:** Specify the nature of events **Sensing:** Create conditions for actions by waiting for a user input
Vocab	Information technology (IT), computer, barcode, scanner/scan	paint program, tool, paintbrush, erase, fill, undo, primary colours, shape tools, brush size	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, block, run, program, programming area, background, delete, reset, algorithm, predict, effect, change, value, instructions, , delete,	More than, less than, most, least, organise, data, object, tally chart, votes, total , pictogram, explain, more, less, more common, least common, attribute, group, same, different, most popular, least popular, conclusion	Word processor, keyboard, keys, letters, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, cursor, select, font Open, save as, save, text, font, undo, delete , folder	Sequence, command, program, run, start, outcome, predict, program, blocks, Sprite, algorithm, actions, project, design, sequence, change, match, debug, evaluate

Key Stage 1 Cycle B 23 - 24	Autumn		Spring		Summer	
Breadth	**Computing Systems and Networks – Technology around us**	**Programming 1 – Moving a robot**	**Creating media – Digital photography**	**Data and information – Grouping data**	**Programming 2 – Robot algorithms**	**Creating media – Making music**
Knowledge Categories						
Overview	Develop their understanding of technology and how it can help us. Become familiar with the different components of a computer by developing keyboard and mouse skills. Consider how to use technology responsibly.	Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each floor robot command does and use that knowledge to start predicting the outcome of programs. Learners are also introduced to the early stages of program design through the introduction of algorithms.	Recognise that different devices can be used to capture photographs and will gain experience capturing, editing, and improving photos. Finally, they will use this knowledge to recognise that images they see may not be real.	Pupils will develop understanding of the concept of labelling and grouping objects based on their properties. Pupils will develop their understanding that objects can be given labels, which is fundamental to their future learning concerning databases and spreadsheets. In addition, pupils will begin to improve their ability to use dragging and dropping skills on a device.	Develop pupils' understanding of instructions in sequences and the use of logical reasoning to predict outcomes. Investigate how the order of commands affects the outcome. Learn about design in programming. Develop artwork and test it for use in a program. Design algorithms and then test those algorithms as programs and debug them.	Make patterns and use those patterns to make music with both percussion instruments and digital tools. Create different rhythms and tunes, using the movement of animals for inspiration. Share their creations and compare creating music digitally and non-digitally.
NC Links	Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 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.	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Use technology purposefully to create, organise, store, manipulate, and retrieve digital content 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	Use technology purposefully to create, organise, store, manipulate and retrieve digital content	Understand 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

Milestone 1	Understand online risks and the age rules for sites. Use a range of applications and devices in order to communicate ideas, work and messages.	**Motion:** Control motion by specifying the number of steps to travel, direction and turn. **Events:** Specify user inputs (such as clicks) to control events. **Control:** Specify the nature of events.	Use a range of applications and devices in order to communicate ideas, work and messages	Use a range of applications and devices in order to communicate ideas, work and messages. Use simple databases to record information in areas across the curriculum	**Motion:** Control motion by specifying the number of steps to travel, direction and turn. **Looks:** Add a text strings, show and hide objects **Sound:** Select sounds and control when they are heard. **Draw:** Control when drawings appear. **Events:** Specify user inputs to control events. **Control:** Specify the nature of events **Sensing:** Create conditions for actions.	Use a range of applications and devices in order to communicate ideas, work and messages.
Vocab	Input device, computer, keyboard, computer mouse/trackpad, draw, click, double-click, click and drag, shift, space bar, capital letter, full stop, Safely, responsibly, computer, technology Safely, responsibly, computer, technology	Forwards, backwards, left, right, turn, clear, go, commands, route, plan, algorithm, program	Format, editing, landscape, portrait, framing, crop lighting, focus, filter	Attribute, table, information, data, graph, objects, collected, group, cunt, label	Instruction, sequence, clear, unambiguous, algorithm, program, order, commands, artwork, design, route, mat, debugging	Create, open, edit emotion, pitch, pulse/beat, tempo, instrument, rhythm, notes