

# Computing – Year 1

## Autumn 1

Learners will develop their understanding of technology and how it can help them in their everyday lives. They will start to become familiar with the different components of a computer by developing their keyboard and mouse skills. Learners will also consider how to use technology responsibly and who to ask for help if they see any content or comments online that make them feel uncomfortable.

	CK/ Vocabulary	Skills
<p><b>Technology Around Us</b> Recognise common uses of information technology beyond school Use technology purposefully to create, organise, store, manipulate, and retrieve digital content Use technology safely and respectfully</p>	<ul style="list-style-type: none"> <li>Technology is something that can help us</li> <li>Technology in school are computers, whiteboards and photocopier.</li> <li>Technology at home are mobile phones, television and washing machine.</li> </ul> <p><b>Vocabulary:</b> technology, computer, mouse, trackpad, keyboard, screen, double-click, typing.</p>	<ul style="list-style-type: none"> <li>To identify the main parts of a computer (Screen, mouse, keyboard)</li> <li>To use the keyboard to edit text</li> <li>To use a keyboard to type</li> <li>To use a mouse in different ways</li> <li>To save work into a file</li> <li>I can explain rules to keep myself safe when using technology both in and beyond the home.</li> </ul>

## Autumn 2

Learners will develop their understanding of a range of tools used for digital painting. They then use these tools to create their own digital paintings, while gaining inspiration from a range of artists' work. The unit concludes with learners considering their preferences when painting with and without the use of digital devices.

	CK/ Vocabulary	Skills
<p><b>Digital Painting</b> Use technology purposefully to create, organise, store, manipulate, and retrieve digital content</p>	<ul style="list-style-type: none"> <li>Technology can be used to change digital content.</li> <li>Digital Content is something that is created on a computer or a digital device (I-pad, computer, Mobile phone).</li> </ul> <p><b>Vocabulary:</b> Information technology (IT), computer, paint program, freehand tools: tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers (Please display a key on your Computing board)</p>	<ul style="list-style-type: none"> <li>To recognise computers can be used to used to create art.</li> <li>To describe what freehand tools do.</li> <li>To use freehand tools effectively</li> <li>To know that a tool can be changed to suit my needs.</li> </ul>

## Spring 1

This unit introduces learners to data and information. Labelling, grouping, and searching are important aspects of data and information. Searching is a common operation in many applications, and requires an understanding that to search data, it must have labels. This unit of work focuses on assigning data (images) with different labels in order to demonstrate how computers are able to group and present data.

	CK/ Vocabulary	Skills
<p><b>Data and Information - Grouping Data</b></p>	<ul style="list-style-type: none"> <li>Technology can be used to sort data.</li> <li>Data is a collection of information.</li> <li>Data can be sorted into groups</li> <li>It can be presented in different ways.</li> </ul> <p><b>Vocabulary:</b> object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same</p>	<ul style="list-style-type: none"> <li>To collect simple data</li> <li>To label objects</li> <li>Describe objects in different ways</li> <li>Compare groups</li> </ul> <p>Answer questions about groups</p>

## Spring 2

Learners will be introduced to early programming concepts. Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each command for the floor robot does and use that knowledge to start predicting the outcome of programs. The unit is paced to ensure time is spent on all aspects of programming and builds knowledge in a structured manner. Learners are also introduced to the early stages of program design through the introduction of algorithms.

	CK/ Vocabulary	Skills
<p><b>Programming -Moving a Robot</b></p>	<ul style="list-style-type: none"> <li>An <b>algorithm</b> is a list of rules or instructions</li> <li>Algorithms need to be written in a special language called code.</li> </ul>	<ul style="list-style-type: none"> <li>To explain what a given command will do</li> <li>To combine four direction commands to make sequences</li> </ul>

	<ul style="list-style-type: none"> <li>• Debug is when you check for mistakes in your code.</li> <li>• <b>Vocabulary:</b> Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program.</li> </ul>	<ul style="list-style-type: none"> <li>• To plan a simple program</li> <li>• To find more than one solution to a problem</li> </ul>
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### Summer 1

Learners will develop their understanding of the various aspects of using a computer to create and manipulate text. They will become more familiar with using a keyboard and mouse to enter and remove text. Learners will also consider how to change the look of their text, and will be able to justify their reasoning in making these changes. Finally, learners will consider the differences between using a computer to create text, and writing text on paper. They will be able to explain which method they prefer and explain their reasoning for choosing this.

<b>Creating Media -Digital Writing</b>	CK/ Vocabulary	Skills
	<ul style="list-style-type: none"> <li>• Computers help you to create and change digital content.</li> <li>• Digital content can be pictures, videos, voice recordings and documents.</li> <li>• The keyboard helps me to make changes on a computer.</li> <li>• Font is the way the text looks.</li> <li>• Bold: makes the letters darker</li> <li>• Italic: makes the text slanted</li> <li>• Underline: Makes a line under my text.</li> <li>• I can Click and drag to select text and move it.</li> </ul> <p><b>Vocabulary:</b> word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing.</p>	<ul style="list-style-type: none"> <li>• To use a computer to write</li> <li>• Add and remove text on a computer using back space</li> <li>• Use the tools such as bold, italic, and underline to change font</li> <li>• To compare typing on a computer to writing on paper</li> </ul>

### Summer 2

Learners will be introduced to on-screen programming through 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 also be introduced to the early stages of program design through the introduction of algorithms.

<b>Programming B - Programming Animations</b>	CK/ Vocabulary	Skills
	<ul style="list-style-type: none"> <li>• An algorithm is a list of rules or instructions</li> <li>• Algorithms need to be written in a special language called code so digital devices, can understand them.</li> <li>• Coding is how we communicate with computers. Code tells a computer what actions to take.</li> <li>• Animation: a picture that moves on screen</li> <li>• Animations can be made with drawings and by coding.</li> </ul> <p><b>Vocabulary:</b> ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design.</p>	<ul style="list-style-type: none"> <li>• Can choose a command for a given purpose</li> <li>• Know that that a series of commands can be joined together</li> <li>• Know the effect of changing a value</li> <li>• Explain that each sprite has its own instructions</li> <li>• Design the parts of a project</li> <li>• Use their own algorithm to create a program and debug it</li> </ul>