

# YEAR 1

## 1.1 - Basic Skills

|                                    |  |
|------------------------------------|--|
| <b>Computing Area</b>              | Information Communication Technology   |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"> <li>• 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</li> </ul>   |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content;</li> <li>• Recognise common uses of information technology beyond school;</li> <li>• 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.</li> </ul> |
| <b>Hardware</b>                    | Laptops or computers are ideal; iPads can be used if unavailable but keyboard skills cannot be fully developed.  |
| <b>Software/App</b>                | Dino Password, Let's Go Learn Bubble practice, SketchPad, Keyboard Race  |
| <b>Unit Objective</b>              | To develop basic computing skills: logging in and off, using the keyboard and using a password.  |
| <b>Unit Vocabulary</b>             | Click, move, mouse, keyboard, drag, double click, keys, space, backspace, delete, enter  |

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## 1.2 - Using Word & other programs to process and format text & images

|                                    |   |
|------------------------------------|---|
| <b>Computing Area</b>              | Information Technology / Digital Literacy   |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• Recognise common uses of information technology beyond school</li> <li>• 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</li> </ul> |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• Use technology to collect information, including photos, videos and sound.</li> <li>• Use software with support, to create, store and edit digital content.</li> <li>• Use the keyboard or a word bank on a device to enter text into a program.</li> <li>• Save information in a specific place and retrieve it again.</li> </ul>   |
| <b>Hardware</b>                    | Laptops or computers - a keyboard and mouse / mouse pad are essential   |
| <b>Software/App</b>                | Microsoft Word (or other word processing software such as Google Docs)<br><a href="https://www.j2e.com/jit5">https://www.j2e.com/jit5</a>   |
| <b>Unit Objective</b>              | To process and format text and images   |
| <b>Unit Vocabulary</b>             | Keyboard, keys, letters, Caps lock, Shift, Enter, Backspace. Log In, Shut Down  |

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## 1.3 - Unplugged Algorithms:

### Understanding & building a basic algorithm

|                                    |   |
|------------------------------------|---|
| <b>Computing Area</b>              | Computer Science  |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>• Create and debug simple programs</li> <li>• Use logical reasoning to predict the behaviour of simple programs</li> </ul> |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>• Create and debug simple programs</li> <li>• Use logical reasoning to predict the behaviour of simple programs</li> </ul> |
| <b>Hardware</b>                    | iPads or PCs  |
| <b>Software/App</b>                | Crazy characters lesson plan from Barefoot Computing:<br><a href="https://www.barefootcomputing.org/resources/crazy-character-algorithms">https://www.barefootcomputing.org/resources/crazy-character-algorithms</a><br>Daisy Dino app, <a href="https://www.code.org">https://www.code.org</a>   |
| <b>Unit Objective</b>              | To create unplugged algorithms and apply them to an on screen program.  |
| <b>Unit Vocabulary</b>             | Algorithm, program, instruction, code   |

# YEAR 1

## 1.4 - Programming, Coding & Robotics

|                                    |   |
|------------------------------------|---|
| <b>Computing Area</b>              | Computer Science  |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"> <li>• Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>• Create and debug simple programs</li> <li>• Use logical reasoning to predict the behaviour of simple programs</li> </ul>   |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• By the end of unit, pupils should be able to:</li> <li>• Give instructions to a friend and follow their instructions to move around a space.</li> <li>• Describe what happens when buttons are pressed on a robot</li> <li>• Press buttons in the correct order to make a robot follow a sequence</li> <li>• Begin to predict what will happen for a short sequence of instructions</li> <li>• Understand what an algorithm is and be able to create a simple algorithm</li> </ul> |
| <b>Hardware</b>                    | Beebots, iPads  |
| <b>Software/App</b>                | Beebot app, Beebot simulator: <a href="https://www.terrapinlogo.com/emu/beebot.html">https://www.terrapinlogo.com/emu/beebot.html</a>   |
| <b>Unit Objective</b>              | To control both physical and virtual robots with a sequence of commands.  |
| <b>Unit Vocabulary</b>             | Beebot, forward, backwards, right, left, turn, program, algorithm, clear  |

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## 1.5 - Digital Painting

|                                    |   |
|------------------------------------|---|
| <b>Computing Area</b>              | Information Technology  |
| <b>National Curriculum Strands</b> | To use technology purposely to create, store and retrieve digital content   |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• Use software with support to create, store and edit digital content using appropriate file and folder names</li> <li>• To select a range of digital paint tools to achieve specific results</li> <li>• Save information in a specific place and retrieve it again</li> </ul> |
| <b>Hardware</b>                    | PCs or iPads – PCs / Laptops preferable for developing mouse and mousepad control   |
| <b>Software/App</b>                | <a href="https://paintz.app">https://paintz.app</a>   |
| <b>Unit Objective</b>              | To create artwork in the style of various artists using a variety of digital tools and techniques   |
| <b>Unit Vocabulary</b>             | paint program, tool, paintbrush, erase, fill, undo  |

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## 1.6 - Producing Digital Media

|                                    |  |
|------------------------------------|--|
| <b>Computing Area</b>              | Information Technology   |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>• 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</li> </ul> |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"> <li>• Use software to create digital content</li> <li>• Use the keyboard to input text</li> <li>• Understand some of the basic functions of a keyboard (backspace, space etc)</li> </ul>  |
| <b>Hardware</b>                    | iPads  |
| <b>Software/App</b>                | Pic Collage (free app)<br>iPad camera app & camera roll<br>Chatterpix<br>Book Creator  |
| <b>Unit Objective</b>              | To produce a range of digital media including photographs, images, text and sound. Calculations can be made for different purposes.  |
| <b>Unit Vocabulary</b>             | Image, photograph, import, text, font, colour, delete  |