

## Computing Overview

### EYFS

Computing is not assessed as part of the Development Matters Framework. Although there is not an outcome, the children are exposed to Computing throughout the Early Years beginning with understanding the function of a switch for example the use of a torch or camera. This progresses further by the children exploring how a Bee bot can move and understanding how to code the Bee bot on a journey. (Computer Science.) The children are exposed to technology through the use of the interactive whiteboards and age-appropriate programmes when using the iPads, such as making marks and changing colours, progressing to creating an illustration. (Digital Literacy) The children are taught the importance of e-safety, understanding basic warning signs and to always seek an adult when they are unsure. (Safe Use)

### Year 1

Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b>  <b>Curricular Goal</b>                      To use the JIT programme to add pictures and text on a page.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to insert clipart</li> <li>To be able to find and insert images from the internet (JIT)</li> <li>To be able to re-size images</li> <li>To be able to change font, colour and size</li> <li>To be able to use the shift key for capital letters and space bar for spaces between words</li> <li>To be able to log on, save and load work</li> </ul>	<p><b>Key Concept – Data Handling</b>  <b>Curricular Goal</b>                      Use the JIT programme to display information using pictographs.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to display information in a variety of ways using JIT</li> <li>To be able to understand how computers can measure changes in temperature.</li> <li>To be able to create pictograms to present data.</li> </ul>	<p><b>Key Concept – Algorithms</b>  <b>Curricular Goal</b>                      Create a series of instructions and plan a journey for an on screen turtle/sprite.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able create a series of instructions for an on-screen turtle/sprite.</li> <li>To be able to plan a journey for an on-screen turtle/sprite.</li> <li>To be able to debug a journey to reach a goal.</li> </ul>	<p><b>Key Concept – Story Telling</b>  <b>Curricular Goal</b>                      Make a short animation using a piece of clip art  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use software to make a short animation.</li> <li>To be able to animate using clip art.</li> <li>To be able to use technology to take pictures of videos.</li> <li>To be able to use technology to record.</li> </ul>	<p><b>Key Concept – Privacy</b>  <b>Curricular Goal:</b>                      To understand the term E-Safety and how to keep personal information private  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to understand the importance of using technology safely.</li> <li>To be able to know how to keep personal information private online</li> </ul>

### Year 2

Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b>  <b>Curricular Goal:</b>                      Create an e-book using the JIT programme that incorporates presentation styles.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to add pages to a JIT5 document.</li> <li>To be able to choose from the different modules.</li> <li>To be able to mix the different modules on a page.</li> <li>To be able to add and delete pages.</li> </ul>	<p><b>Key Concept – Data Handling</b>  <b>Curricular Goal:</b>                      Use the JIT programme to input data in a bar chart or pie chart  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to create a variety of graphs using specific software.</li> </ul>	<p><b>Key Concept – Algorithms</b>  <b>Curricular Goal:</b>                      Write an algorithm to accomplish a specific task using block-based software on J2E level 1  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use specific software to write an algorithm.</li> <li>To be able to predict what will happen to a sprite following a given algorithm</li> </ul>	<p><b>Key Concept – Story Telling</b>  <b>Curricular Goal:</b>                      Make an animation using two pieces of clip art and speech bubbles to enhance on screen work using the JIT programme.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to create an animated story using clip art.</li> </ul>	<p><b>Key Concept – Support</b>  <b>Curricular Goal:</b>                      To know how to... identify dangers and where to find help when using technology  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to identify the dangers of using technology.</li> </ul>

### Year 3

Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b>  <b>Curricular Goal:</b>                      Publish a non-narrative piece of writing with an audio commentary using the J2E programme.  <b>Learning objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use a variety of tools to edit and publish a non-narrative piece of writing.</li> </ul>	<p><b>Key Concept – Data Handling / Data Logging</b>  <b>Curricular Goal:</b>                      To record information about light, temperature or sound and producing a graph.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use a variety of data to create a branching database.</li> <li>To be able to create charts using pre-made databases</li> <li>To be able to sort data in a database</li> <li>To be able to search for data in a database</li> </ul>	<p><b>Key Concept – Algorithms</b>  <b>Curricular Goal:</b>                      Use coding to create a simple game using J2E level 2  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to code a game including commands.</li> </ul>	<p><b>Key Concept – Story Telling</b>  <b>Curricular Goal:</b>                      To be able to create an animation.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to create an animation using a variety of tools.</li> </ul>	<p><b>Key Concept – Personal Safety</b>  <b>Curricular Goal:</b>                      To make a presentation to explain how to game online safely.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to identify and explain how to game online safely.</li> </ul>

### Year 4

Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b>  <b>Curricular Goal:</b>                      Make an online presentation on J2E using appropriate and carefully selected complimentary music.  <b>Learning objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use a series of functions to create an online poster.</li> <li>To be able To know how to... type special characters using shift ( ) (+).</li> <li>To know how to... spellcheck a piece of text.</li> <li>To be able To know how to... take a screen shot.</li> <li>To be able to insert pictures, resize, crop and reshape them to enhance text.</li> <li>To be able to select appropriate music.</li> <li>To be able to embed music to a presentation.</li> </ul>	<p><b>Key Concept – Data Handling / Data Logging</b>  <b>Curricular Goal:</b>                      Use different software to construct a graph. Use a data logger to record more than one of light, temperature or sound and produce a graph and interpret the results.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to analyse data from a data logger.</li> <li>To be able to interpret the results on a graph.</li> <li>To be able to use a spreadsheet to draw a graph.</li> <li>To be able to use simple formulae to calculate totals in a spreadsheet.</li> <li>To be able to use pre-made databases to search for information with multiple criteria.</li> </ul>	<p><b>Key Concept – Algorithms</b>  <b>Curricular Goal:</b>                      Create a game to achieve more than one goal on J2E – Level 2  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use the crumble controller to code software.</li> </ul>	<p><b>Key Concept – Story Telling and Virtual Locations</b>  <b>Curricular Goal:</b>                      Explore using green screen technology and create an animation with multiple characters for a purpose.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to create an animation.</li> <li>To be able to successfully use the green screen.</li> </ul>	<p><b>Key Concept – Personal Safety</b>  <b>Curricular Goal:</b>                      Create a set of E-Safety rules that can be followed at home and at school and explain why these are important.  <b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to explain the importance of E-Safety.</li> </ul>

Year 5				
Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b></p> <p><b>Curricular Goal:</b> Create and maintain a personal blog.</p> <p><b>Learning objective:</b></p> <ul style="list-style-type: none"> <li>To be able to understand the purpose of a blog.</li> <li>To be able to create a personal blog.</li> <li>To be able to enhance a blog</li> <li>To be able to maintain a personal blog.</li> </ul>	<p><b>Key Concept – Data Handling / Data Logging</b></p> <p><b>Curricular Goal:</b> Use data loggers to formulate and test a hypothesis. Critique the benefits of using a given spreadsheet to aid financial management.</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to use data loggers to formulate and test a hypothesis.</li> <li>To be able to adapt a premade spreadsheet to investigate a financial task.</li> <li>To be able to contribute information to a collaborative database.</li> <li>To be able to debug errors in databases.</li> </ul>	<p><b>Key Concept – Algorithms</b></p> <p><b>Curricular Goal:</b> Code to create a game where actions incur penalties on J2E – Level 3.</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to create a game.</li> <li>To be able to create a game where actions incur penalties.</li> <li>To be able to code the crumble controller to enhance a product.</li> <li>To be able to code the crumble to respond to an input device. E.g. A switch.</li> </ul>	<p><b>Key Concept – Virtual Locations</b></p> <p><b>Curricular Goal:</b> To be able to use green screen technology to produce a video presentation</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to produce an interactive video presentation.</li> <li>To be able to create or select appropriate video clips.</li> <li>To be able to choose suitable backgrounds when using the green screen technology.</li> <li>To be able to create a video presentation using the green screen technology.</li> <li>To be able to review and evaluate videos or animations.</li> </ul>	<p><b>Key Concept – Personal Responsibility</b></p> <p><b>Curricular Goal:</b> To be able to write a code of conduct for working online</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to explain how to stay safe online.</li> <li>To be able to know how to manage content safely.</li> <li>To be able to know how and when to comment on a blog.</li> <li>To be discerning about information taken from the internet.</li> </ul>
Year 6				
Digital Literacy	Data	Computer Science	Multimedia	Safe Use (Ongoing Throughout Every Unit)
<p><b>Key Concept – Information and Presentation</b></p> <p><b>Curricular Goal:</b> Create a presentation for a purpose incorporating visual, sound and text elements that includes appropriate software using J2Office.</p> <p><b>Learning objective:</b></p> <ul style="list-style-type: none"> <li>To be able to understand and use a keyboard effectively.</li> <li>To be able to create a multi-page presentation.</li> <li>To be able to incorporate visual, sound and text elements to a multi-page presentation.</li> <li>To be able to create an interactive presentation using appropriate software.</li> </ul>	<p><b>Key Concept – Data Handling / Data Logging</b></p> <p><b>Curricular Goal:</b> Make decisions about when to use data loggers to investigate scientifically. Create and design a spreadsheet with a specific purpose in mind.</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to choose a theme and the choice of software to create a multi-page presentation.</li> <li>To be able to create a spreadsheet containing data</li> <li>To be able investigate and evaluate where data bases are used in the wider world and understand their structure.</li> </ul>	<p><b>Key Concept – Algorithms</b></p> <p><b>Curricular Goal:</b> Construct a game to include a timer and a score using J2E – Level 3</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to code a game where actions incur penalties.</li> <li>To be able to add a timer to a coded game</li> <li>To be able to include a score element to a coded game</li> </ul>	<p><b>Key Concept – Film Making</b></p> <p><b>Curricular Goal:</b> To be able to create a video with various green screen locations for a given purpose</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to edit videos for a purpose</li> <li>To be able to embed video into a file</li> <li>Use green screen technology for a given purpose</li> </ul>	<p><b>Key Concept – Personal Protection</b></p> <p><b>Curricular Goal:</b> Construct a code of conduct for working online, messaging and using social media</p> <p><b>Learning Objective:</b></p> <ul style="list-style-type: none"> <li>To be able to produce a code of conduct for staying safe online.</li> </ul>

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