

# Year 5 Scheme of Work – Computing

Unit	Time (Wks)	Activities	Outcomes	Differentiation	Assessment	NC Links	Other Subject Link
<b>Previous learning:</b> Y4 – Message can hurt feelings; how to respond to hurtful message; plagiarism; safe online profile				<b>Next learning:</b> Y6 – PSHCE – Use internet/mobiles responsibly; private information; reporting online abuse; cyberbullying			
5.1 E-Safety (IT, DL)	6	L1 - Identify spam emails and what to do with them. L2 - Write citations for the websites used for research. L3 - Create strong passwords. L4 - Recognise when, why and how photographs we see online may have been edited. L5 - Create a comic strip about the consequences of not following online safety rules.  Software: Paint	<ul style="list-style-type: none"> <li>- Identify a dangerous spam email;</li> <li>- Create multiple strong passwords for use across different platforms;</li> <li>- Spot citations online;</li> <li>- Alter a photograph.</li> <li>- Apply online safety rules to real-life scenarios.</li> </ul>	<ul style="list-style-type: none"> <li>- Templates</li> <li>- Examples of activities</li> </ul>	Continuous throughout.  Produce a comic strip.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content.  Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	PSHE
<b>Previous learning:</b> Y4 – Condition starts action; indefinite loops; say; pick random				<b>Next learning:</b> See Y5 Cheese Crush unit			
5.2 Scratch: (CS)	7-9	<b>Shapes – Nested Loops with Procedures</b> L1 - Understand the concept of nested loops through everyday examples. L2 - Predict the code from a pre-created shapes program using nested loops, count-controlled loops and basic procedures. L3 - Run the code checking if predictions were accurate. L4 - Investigate aspects of the code. L5 - Modify parts of the code. L6 - Plan their own shapes program using nested loops L7 - Code their program. Test and refine their creations.  Software: Scratch 3.0	<ul style="list-style-type: none"> <li>- Understand the concept of nested loops through everyday examples.</li> <li>- Predict the code from a pre-created shapes program using nested loops, count-controlled loops and basic procedures.</li> <li>- Run the code checking if predictions were accurate.</li> <li>- Investigate aspects of the code.</li> <li>- Modify parts of the code.</li> <li>- Plan and create a shapes program using nested loops</li> <li>- Debug and refine the code.</li> </ul>	<ul style="list-style-type: none"> <li>- Example code.</li> <li>- Unplugged activities</li> <li>- Task instructions.</li> <li>- Tinker time</li> <li>- Pair programming</li> <li>- Concept before code.</li> <li>- PRIMM scaffolding.</li> </ul>	Continuous throughout.  Create shapes.	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.  Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.  Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Maths, Art
<b>Previous learning:</b> Y4 – Use search engine accurately; use online blog safely and responsibly; post positive comments and responses on a blog				<b>Next learning:</b> N/A			
5.3 Internet Research & Web	5-8	L1 - Create a webpage layout. L2 - Add text to a webpage.	<ul style="list-style-type: none"> <li>- Create a webpage layout and add text.</li> </ul>	<ul style="list-style-type: none"> <li>- Modelling</li> <li>- Tinker time</li> </ul>	Continuous throughout.  Produce a webpage on	Use search technologies effectively, appreciate how	

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<b>Design: (IT, DL)</b>		<p>L3 - Add images to a webpage. L4 - Add hyperlinks into a webpage L5 - Publish and share webpage on a blog. L6 - Know what computer networking is; understand the advantages and disadvantages of a computer network. L7 - understand what malware is and how this can affect a computer network; identify ways of minimising risks of cybersecurity threats.</p> <p>Online Platform: Google Sites</p>	<ul style="list-style-type: none"> <li>- Insert and format an image in a webpage.</li> <li>- Create a hyperlink.</li> <li>- Learn how to share a webpage so it can be viewed by anyone.</li> <li>- Use the advanced features of Google’s web search</li> <li>- Describe what a computer network is and identify what devices connect to a network.</li> <li>- Identify different types of malware and explain how these can affect a computer network.</li> </ul>	<ul style="list-style-type: none"> <li>- Use-Modify-Create</li> <li>- Pair work.</li> </ul>	<p>chosen topic.</p>	<p>results are selected and ranked, and be discerning in evaluating digital content.</p> <p>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.</p> <p>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.</p>	<p>Can be based on any topic e.g. Geography, History</p>
<b>Previous learning:</b> See Y5 Nested Loops with Procedures unit				<b>Next learning:</b> Y6 – Basic procedures; input; condition starts action; indefinite loop; count-controlled loop; variable; pick random; broadcast			
<b>5.4 Scratch: (CS)</b>	<p>7-9</p>	<p><b>Cheese Crush Game</b> L1 - Understand the concept of conditions that switch between actions through everyday examples. L2 - Predict the code from a pre-created game using the switch background command, indefinite loops, variables and conditions that switch between actions L3 - Run the game code checking if predictions were accurate. L4 - Investigate aspects of the game code. L5 - Modify parts of the code. L6 - Plan their own game using conditions that switch between actions. L7 - Code their game. Test and refine their creations.</p> <p>Software: Scratch 3.0</p>	<ul style="list-style-type: none"> <li>- Understand the concept of conditions that switch between actions through everyday examples.</li> <li>- Predict the code from a pre-created game using the switch background command, indefinite loops, variables and conditions that switch between actions</li> <li>- Run the game code checking if predictions were accurate.</li> <li>- Investigate aspects of the game code.</li> <li>- Modify parts of the code.</li> <li>- Plan and create a game using conditions that switch between actions.</li> <li>- Debug and refine the code.</li> </ul>	<ul style="list-style-type: none"> <li>- Example code.</li> <li>- Unplugged activities</li> <li>- Task instructions.</li> <li>- Tinker time</li> <li>- Pair programming</li> <li>- Concept before code.</li> <li>- PRIMM scaffolding.</li> </ul>	<p>Continuous throughout.</p> <p>Create shapes.</p>	<p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in</p>	<p>Maths</p>

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						algorithms and programs.	
<b>Previous learning:</b> Y2 – Paint – Make/edit shapes to create art piece; change shade of colour for effect				<b>Next learning:</b> Y6 – DT cushion – Computer aided design			
5.5 3D Modelling: SketchUp (IT)	7	<p>L1 - Draw 3D shapes. L2-3 - Add detail to 3D drawings. L4 - Add and manipulate 3D models. L5 – Create a complex 3D model. L6 - Create a complex 3D model using own design.</p> <p>Software: SketchUp</p>	<ul style="list-style-type: none"> <li>- Draw and manipulate 3D models independently.</li> <li>- Use inference points to draw lines and shapes.</li> <li>- Use the dimensions toolbar and guides.</li> <li>- Use the tape measure and zoom extents.</li> <li>- Use the push/pull and offset tools.</li> <li>- Import 3D models from the 3D warehouse.</li> </ul>	<ul style="list-style-type: none"> <li>- Pair work.</li> <li>- Tinker time</li> <li>- Use-Modify-Create</li> <li>- Step-by-step instructions.</li> </ul>	Produce 3D sketches	<p>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.</p>	Maths, DT