

Year 5	Overview	Knowledge	Vocabulary	Cross-curricular links
<p><b>Online safety</b> (5 lessons)</p> <p>Considering online communication and the effects on mental health and wellbeing.</p> <p><a href="#">Go to unit</a></p>	<p><b>Computers and Hardware</b></p> <p>Understanding permissions required by apps to access personal information.</p> <p><b>Digital Literacy and Online Safety</b></p> <p>Considering online judgements that people make and how they treat others online.</p>	<p>Forms of online communication- memes, gifs, emojis</p> <p>The importance of creating strong passwords</p> <p>Online bullying- what it is and what to do about it.</p>	<ul style="list-style-type: none"> <li>● application 'app'</li> <li>● anonymity</li> <li>● bullying</li> <li>● emoji</li> <li>● gif</li> <li>● hacked</li> <li>● interpreted</li> <li>● judgement</li> <li>● meme</li> <li>● mental health</li> <li>● misinterpreted</li> <li>● permissions</li> <li>● reliable</li> <li>● reputation</li> </ul>	<p>RSE</p>
<p><b>Micro:bit</b> (5 lessons)</p> <p>Programming a small device called a micro:bit to display animations or messages on its simple LED display using block coding</p> <p><a href="#">Go to unit</a></p>	<p><b>Computational Thinking</b></p> <p>Using block coding to program a device. To explore variables and different forms of input.</p> <p><b>Computers and Hardware</b></p> <p>Understand how external devices can be programmed by a separate computer.</p>	<p>BBC Micro:bit – front and back features that can be included as part of an algorithm</p> <p>Code blocks key – basic, input, music, LED, radio, loops, logic, variables, math(s)</p>	<ul style="list-style-type: none"> <li>● .hex file</li> <li>● .zip file</li> <li>● bluetooth</li> <li>● code blocks</li> <li>● decompose</li> <li>● emulator</li> <li>● feature</li> <li>● loop</li> <li>● pedometer</li> <li>● predict</li> <li>● systematic</li> <li>● tinker</li> <li>● variable</li> </ul>	
<p><b>Search engines</b> (5 lessons)</p> <p>To enable children to quickly and accurately find information and become independent learners, they need to develop their searching skills and learn how to identify trustworthy sources</p> <p><a href="#">Go to unit</a></p>	<p><b>Digital Literacy and Online Safety</b></p> <p>Recognising that information on the internet might not be true or correct.</p> <p>Know how to use keywords to quickly find accurate information.</p>	<p>Search Engines – search bar, company logo, hyperlink, keywords, fake news</p>	<ul style="list-style-type: none"> <li>● algorithm</li> <li>● company logo</li> <li>● data leak</li> <li>● data privacy</li> <li>● inaccurate information</li> <li>● index</li> <li>● keywords</li> <li>● network</li> <li>● online</li> <li>● page rank</li> <li>● TASK</li> <li>● web crawler</li> <li>● website</li> <li>● WWW</li> </ul>	

Year 5 <i>continued.</i>	Overview	Knowledge	Vocabulary	Cross-curricular links
<p><b>Programming Music</b> (5 lessons) Composing music using code through Sonic Pi or Scratch pupils can compose simple tunes culminating in a 'battle of the bands' using loops of music</p> <p>Go to unit:</p> <ul style="list-style-type: none"> <li>• <a href="#">Option 1</a></li> <li>• <a href="#">Option 2</a></li> </ul>	<p><b>Digital Literacy and Online Safety</b> Selecting using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals.</p> <p><b>Computational Thinking</b> Using programming language to create music, including use of loops.</p>	<p>Sonic Pi interface – play controls, editor controls, information and help controls, code editor, scope, log viewer Live loop, simple melody, selecting sounds</p>	<ul style="list-style-type: none"> <li>• basic commands</li> <li>• bug/debug</li> <li>• code (computer and verb)</li> <li>• error</li> <li>• live loop</li> <li>• loop</li> <li>• pitch</li> <li>• program language</li> <li>• rhythm</li> <li>• soundtrack</li> <li>• tempo</li> <li>• timbre</li> <li>• tinker</li> </ul>	<p>Music</p>
<p><b>Mars Rover 1</b> (5 lessons) Pupils explore inputs and outputs as well as Binary numbers to understand how the Mars Rover transmits and receives data and how scientists are able to control it to explore another planet!</p> <p>Go to unit</p>	<p><b>Digital Literacy and Online Safety</b> Understanding 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><b>Computers and Hardware</b> Using search technologies effectively, appreciating how results are selected and ranked, and be discerning in evaluating digital content. Recognising that computers transfer data in binary and understand simple binary addition.</p>	<p>Mars Rover – distance and time travelled</p> <p>Binary numbers and equivalent decimal values</p>	<ul style="list-style-type: none"> <li>• binary code</li> <li>• data</li> <li>• data transmission</li> <li>• discovery</li> <li>• distance</li> <li>• input</li> <li>• moon</li> <li>• numerical data</li> <li>• output</li> <li>• planet</li> <li>• radio signal</li> <li>• scientist</li> <li>• sequence</li> <li>• signal</li> <li>• computer simulation</li> <li>• space (astronomy)</li> </ul>	
<p><b>Mars Rover 2</b> (5 lessons) Children learn how the Mars Rover is able to send images all the way back to Earth and experiment with online CAD software to design new tyres for it</p> <p>Go to unit</p>	<p><b>Digital Literacy and Online Safety</b> Developing their CAD skills.</p> <p><b>Computers and Hardware</b> Understanding how image data is transferred.</p>	<p>Digital Images – a series of programmed pixels</p> <p>RGB colour mode – produces a spectrum of colours</p>	<ul style="list-style-type: none"> <li>• algorithm</li> <li>• binary image</li> <li>• bit</li> <li>• bit pattern</li> <li>• CAD</li> <li>• data</li> <li>• encode</li> <li>• image</li> <li>• JPEG</li> <li>• memory computer</li> <li>• operating system</li> <li>• pixels</li> </ul>	

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<p><b>Stop motion animation</b> (5 lessons)</p> <p>Collaboratively creating a stop-motion animation by sharing and then decomposing their ideas. Pupils will develop their ability to edit and improve their creations.</p> <p>Go to unit:</p> <ul style="list-style-type: none"> <li>• <a href="#">Option 1</a></li> <li>• <a href="#">Option 2</a></li> </ul>	<p><b>Digital Literacy and Online Safety</b> Using technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p><b>Computers and Hardware</b> Understanding how to use tablets or computers to take photos.</p> <p><b>Computational Thinking</b> Consider sequence and selection of frames when editing work.</p>	<p>How animations developed over time. How still images become animations.</p> <p>Option 1: Use of animation software.</p> <p>Option 2: Use of editing software.</p> <p>How to take a good photo.</p>	<ul style="list-style-type: none"> <li>• animation</li> <li>• animator</li> <li>• background</li> <li>• decompose</li> <li>• design</li> <li>• digital device</li> <li>• duplicate</li> <li>• editing</li> <li>• frame</li> <li>• illusion</li> <li>• onion skinning</li> <li>• stop-motion</li> <li>• storyboard</li> <li>• upload</li> </ul>	<p>Art</p>