

**Curriculum Map - KS3 Computing**

**Subject: Computing**

**Year Group: Year 7**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p><b>Content</b> <i>Descriptive/propositional knowledge</i></p> <p><i>'knowing that'</i></p>	<p><b>E-Safety</b></p> <p>know that we have a responsibility to protect ourselves and others when using online environments.</p>	<p><b>Understanding Computers</b></p> <p>know that computers are made up of digital and many physical components</p>	<p><b>Graphics</b></p> <p>know different forms that digital graphics can take, and that different graphics can be used for different purposes.</p>	<p><b>Sound Manipulation</b></p> <p>Knowing that sound waves can be digitized and edited using digital tools</p>	<p><b>Computational Thinking</b></p> <p>know what binary is and how it is used in computing</p> <p>knowing how to break problems down</p>	<p><b>Simple coding and more complex algorithms (Code.org)</b></p> <p>know that algorithms are instructions that can be followed to solve a problem or to complete a task</p>
<p><b>Skills</b> <i>Ability knowledge</i></p> <p><i>'knowing how'</i></p>	<p>Understand the specific issues relating to :</p> <ul style="list-style-type: none"> <li>• Cyberbullying</li> <li>• Online Predators</li> <li>• Inappropriate Content</li> <li>• Damaged Reputations</li> <li>• Publicising Personal Information</li> </ul>	<p>Knowing how:</p> <ul style="list-style-type: none"> <li>* Software differs from hardware</li> <li>* How different hardware components of a PC work</li> <li>* Input and Output devices differ</li> <li>* Data is stored</li> </ul>	<p>Knowing how:</p> <ul style="list-style-type: none"> <li>* Bitmap and Vector images are structured</li> <li>* To combine different images to make a logo</li> <li>* To combine images, graphics and text</li> <li>* To use a graphics editor to a fundamental degree</li> </ul>	<p>Knowing how:</p> <ul style="list-style-type: none"> <li>* Sound is digitized</li> <li>* Input and Output devices record and play sound</li> <li>* To edit digitized sound at a basic level</li> <li>* Collaborate, feedback and respond to feedback on work.</li> </ul>	<p>Knowing how:</p> <ul style="list-style-type: none"> <li>* Computers can use binary input in complex ways</li> <li>* Logic gates work</li> <li>* Problems can be broken down into smaller, simpler pieces</li> <li>* Algorithms can be developed to solve problems or perform tasks.</li> </ul>	<p>Developing an understanding of the sequence and selection constructs using block coding</p>

<p>Key Questions</p>	<p>What is cyberbullying and what can be done about it?</p> <p>How can I protect myself when using the internet?</p> <p>How can I take advantage of digital tools safely?</p>	<p>What are the hardware and software components that make up computer systems, and how do they communicate with one another and with other systems?</p> <p>How is data stored and used within a computer system?</p>	<p>How are various types of data(including text, sounds and pictures) represented and manipulated digitally?</p> <p>How can different types and styles of graphics appeal to different audiences?</p>	<p>How are various types of data (including sounds) represented digitally?</p> <p>How can these types of data be manipulated digitally?</p> <p>How can I use editing tools to achieve specific goals?</p>	<p>What is binary and why do computers use it?</p> <p>How do computers 'think'?</p> <p>How can we manage complex problems by breaking them down into simpler ones?</p>	<p>What is the meaning of an algorithm?</p> <p>How can we use algorithms to solve problems?</p> <p>What is an efficient algorithm and why is this important?</p>
<p>Assessment</p>	<p>End of topic test</p> <p>E-safety online test</p>	<p>End of topic test</p> <p>Understanding Computers online test</p>	<p>End of topic test</p> <p>Poster project</p>	<p>End of topic test</p> <p>Sound editing project</p>	<p>End of topic test</p> <p>Computational Thinking online test</p>	<p>End of topic test</p> <p>End of topic assessment - Written paper</p>
<p>Literacy/ Numeracy/ SMSC/ Character</p>	<p>Development of resilience, kindness &amp; respect and peer support.</p>	<p>Development in communication/literacy skills</p> <p>Numeracy skills through calculating/convertng Binary.</p>	<p>Development in communication/literacy skills - Persuasive language.</p>	<p>Development in numeracy - timiings</p>	<p>Development in communication/ literacy skills</p> <p>Developing logical problem solving/calculatio n skills.</p>	<p>Development in using logic for everyday problem solving.</p>