



## Curriculum Map

**Subject: Computing**

**Year Group: 9**

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Content</b>	<p><b>Topic:</b> Computer Networks (CS)</p> <p><b>Key Areas:</b></p> <ul style="list-style-type: none"> <li>➤ Networks Topologies</li> <li>➤ Network Hardware</li> <li>➤ Types of Network</li> <li>➤ Network Protocols</li> <li>➤ Network Security</li> <li>➤ Data Compression</li> </ul> <p><b>Keywords:</b> LAN, WAN, Node, Switch, Hub, ISP, Router, TCP/IP, IP Address, Cloud Storage and Backups</p> <p><b>NC Strand:</b> CS9</p>	<p><b>Topic:</b> Programming-Python (CS)</p> <p><b>Key Areas:</b></p> <ul style="list-style-type: none"> <li>➤ Data types</li> <li>➤ Variables</li> <li>➤ While loop</li> <li>➤ For loop</li> <li>➤ IF statement</li> </ul> <p><b>Keywords:</b> Coding, program, syntax Error, Iteration, identifier, loop and indentation</p> <p><b>NC Strand:</b> CS4 and 6</p>	<p><b>Topic:</b> Creation of Digital Media – Part 1 (IT)</p> <p><b>Key Areas:</b></p> <ul style="list-style-type: none"> <li>➤ Design and create a logo using Adobe Fireworks</li> <li>➤ Design and create an animation using Adobe Flash</li> </ul> <p><b>Keywords:</b> Digital media, Banner, Logo, Animation</p> <p><b>NC Strand:</b> IT1 and 2</p>	<p><b>Topic:</b> Creation of Digital Media – Part 2 (IT)</p> <p><b>Key Areas:</b></p> <ul style="list-style-type: none"> <li>➤ Create a dynamic website using Adobe Dreamweaver</li> <li>➤ Add images, audio, video and animation in the website</li> </ul> <p><b>Keywords:</b> Digital media, Banner, Logo, Animation</p> <p><b>NC Strand:</b> IT1 and 2</p>	<p><b>Topic:</b> Algorithms and Programming (CS)</p> <p><b>Key areas:</b></p> <ul style="list-style-type: none"> <li>➤ Linear search</li> <li>➤ Binary search</li> <li>➤ Bubble sort</li> <li>➤ Merge sort</li> <li>➤ Data structures</li> <li>➤ Functions and procedures</li> <li>➤ Understand simple Boolean logic</li> </ul> <p><b>Keywords:</b> Linear and binary search, sort, Boolean logic</p> <p><b>NC Strand:</b> CS2 and 7</p>	<p><b>Topic:</b> Computing-Issues and Impact (DL)</p> <p><b>Key areas:</b></p> <ul style="list-style-type: none"> <li>➤ Legal Issues</li> <li>➤ Ethical Issues</li> <li>➤ Environmental issues</li> <li>➤ Cybersecurity</li> </ul> <p><b>Keywords:</b> Cybersecurity, legal, ethical and environmental issues</p> <p><b>NC Strand:</b> DL1</p>
<b>Skills</b>	<ul style="list-style-type: none"> <li>➤ Reading/Research skills</li> <li>➤ Thinking skills</li> <li>➤ Communication skills</li> <li>➤ Problem-solving skills</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computational thinking skills</li> <li>➤ Critical thinking</li> <li>➤ Analysis</li> <li>➤ Initiative</li> <li>➤ Problem-solving</li> </ul>	<ul style="list-style-type: none"> <li>➤ Creativity skills</li> <li>➤ Design skills</li> <li>➤ Critical-thinking skills.</li> <li>➤ Problem-solving skills.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Creativity skills</li> <li>➤ Design skills</li> <li>➤ Initiative</li> <li>➤ Problem-solving</li> </ul>	<ul style="list-style-type: none"> <li>➤ Computational Skills</li> <li>➤ Critical thinking</li> <li>➤ Analysis</li> <li>➤ Problem-solving</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reading/Research skills</li> <li>➤ Initiative</li> <li>➤ Analysis</li> <li>➤ Problem-solving</li> </ul>

	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Key questions</b>	<ul style="list-style-type: none"> <li>➤ Name some common network topology.</li> <li>➤ Describe the common communication protocol.</li> <li>➤ Explain network topology.</li> <li>➤ Distinguish between various features of GUI.</li> <li>➤ Evaluate cloud storage system.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Name some relational operator.</li> <li>➤ Describe a variable</li> <li>➤ Distinguish between syntax, run-time and logic error.</li> <li>➤ Evaluate data type</li> </ul>	<ul style="list-style-type: none"> <li>➤ Describe what digital media are.</li> <li>➤ Explain what constitute a website</li> <li>➤ Distinguish between loge and banner</li> <li>➤ Evaluate the use of a banner in a website.</li> <li>➤ Design a logo and an animation banner.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Describe the tools in creating banner.</li> <li>➤ Explain the use of a website</li> <li>➤ Evaluate the use of logo in website.</li> <li>➤ Design a website to include a logo, banner and links.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Describe data structure.</li> <li>➤ Explain the use of bubble sort.</li> <li>➤ Distinguish between linear and binary search</li> <li>➤ Evaluate Boolean logic</li> <li>➤ Define linear search.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Describe cybersecurity</li> <li>➤ Distinguish between legal and environmental issues of computer uses</li> <li>➤ Evaluate the impact of computer use and their issues</li> </ul>
<b>Assessment</b>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>	<p><b>Formative Assessment:</b> Starter test, class activities, homework, Quizzes, group work task, target questioning</p> <p><b>Summative Assessment:</b> Unit test, End-of-term test, End-of-year test</p>
<b>Literacy/ Numeracy/ SMSC/ Character</b>	Student are encourage to listening and contributing in a manner, which allow for constructive criticism.	Student learnt to consider the safety of those around them as they move around.	Student learnt to think, create and use what is available to design, promote and care for animals.	Designing, creating and exercise their imaginations to help the way we communicate with each other.	To use knowledge of programming to solve every day problem for the benefit of the society.	Knowledge of this section helps student to take care of themselves health-wise and the environment we live in