

Computer Science	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	<p>Online safety</p> <p>Online Safety introduces our year 7s to knowledge that protects them from harm by the devices, networks and the people using this technology (third parties) through awareness, education, information and technology. Year 7s will be introduced to cyber bullying via messaging, Peer pressure and cyberbullying, Consensual and non-consensual sharing of nude and semi-nude images, Grooming and blackmail and the impact of social media on our self-esteem.</p>	<p>Online safety</p> <p>Year 7s will be introduced to the topics of sexual harassment, Digital footprint & PEGI, be made aware of their "Screen time", County lines and Child criminal exploitation and Radicalisation.</p>	<p>Scratch coding</p> <p>Fundamentals of coding including computational thinking, sequence, selection and iteration and basic movements.</p>	<p>Scratch coding</p> <p>Inputs and variables, creation of small programs</p>	<p>Ethical, legal, and environmental impact</p> <p>Laws governing cyber-attacks, copyright and data protection. the impact of the digital age and privacy. The environmental impact of technology.</p>	<p>Cultural impact</p> <p>Laws governing cyber-attacks, copyright and data protection.</p>
Year 8	<p>Binary and number systems</p> <p>Number systems including binary and hexadecimal.</p>	<p>Binary and number systems</p> <p>ASCII and algorithms.</p>	<p>Networking</p> <p>Networking including, LAN and WANs, Ring and bus</p>	<p>Networking</p> <p>Mesh and star network, wired and wireless networks and server and client networking models.</p>	<p>Computer hardware</p> <p>Computer hardware including the CPU, RAM, secondary storage</p>	<p>Computer hardware</p> <p>Computer hardware including the ROM, Cache and other computer components</p>
Year 9	<p>Protocols</p> <p>Introduction to various networking protocols including HTTP, SMTP, FTP and POP3.</p>	<p>Protocols/Cyber attacks</p> <p>Introduction to various cyber-attacks including a virus, trojan, spyware and eavesdropping.</p>	<p>Logic</p> <p>Introduction to AND, OR NOT, what they look like and how they are used.</p>	<p>Python</p> <p>Introduction to Python coding including Variables, Input and selection.</p>	<p>Advanced Python</p> <p>Flowcharts and sub programs</p>	<p>Software</p> <p>Introduction to operating systems and system software</p>
Year 10	<p>Memory and storage</p> <p>Primary storage (Memory), Secondary storage, Units, Data storage, compression</p>	<p>Systems architecture/Boolean</p> <p>Architecture of the CPU, CPU performance, Embedded systems</p>	<p>Programming fundamentals</p> <p>Variables and constants, Data types, Additional programming techniques</p>	<p>Networks</p> <p>Networks and topologies, Wired and wireless networks, protocols and layers</p>	<p>Network security</p> <p>Threats to computer systems and networks, Identifying and preventing vulnerabilities</p>	<p>Systems software/Algorithms</p> <p>Operating systems, Utility software</p>
Year 11	<p>Programming fundamentals/IDE</p> <p>Defensive design, Testing</p>	<p>Ethical, legal, cultural and environmental impact</p> <p>Legislation relevant to Computer Science, Impacts of digital technology on wider society</p>	<p>Programming fundamentals</p> <p>Project work/revision</p>	<p>Revision</p> <p>Revision topics based on student feedback and testing during the course</p>	<p>Revision</p> <p>Revision topics based on student feedback and testing during the course</p>	<p>Revision</p> <p>Revision topics based on student feedback and testing during the course</p>