

# KS3



## Computer Science Year 8 Curriculum Overview Goals

NOTE: The curriculum overview is thoughtfully crafted to offer flexibility, enabling smooth transitions between terms. This adaptability is designed to seamlessly accommodate any surplus content from one term's Scheme of Work (SOW) to another, ensuring a comprehensive and uninterrupted learning experience for students. Moreover, this approach considers the possibility of missed lessons due to whole-school events, contributing to a dynamic and responsive educational framework. By embracing this flexible structure, we aim to foster a resilient and agile learning environment that can readily adapt to unforeseen circumstances, providing students with a robust and holistic educational journey.

Autumn Half Term 1	Autumn Half Term 2	Spring Half Term 1	Spring Half Term 2	Summer Half Term 1	Summer Half Term 2
<b>Computer Crime and Cyber Security</b> <ul style="list-style-type: none"> <li>Email scams, phishing and spear phishing</li> <li>Malware, worm, trojan</li> <li>Malware marked piece</li> <li>Hacking, white, black and grey hat hackers</li> <li>Black box and white box testing</li> <li>Copyright and plagiarism</li> </ul>	<ul style="list-style-type: none"> <li>Health and safety</li> <li>Binary/denary</li> <li>Hexadecimal</li> <li><b>Summative Assessment</b></li> <li><b>Feedback and NOW</b></li> </ul> <b>Modelling Data – Spreadsheets</b> <ul style="list-style-type: none"> <li>Formatting cells, adding basic formula</li> <li>Adding and formatting own data and formulas</li> </ul>	<ul style="list-style-type: none"> <li>Using functions MAX MIN IF,</li> <li>Sorting, what if</li> <li>Validation, formatting,, Countif</li> <li>Creating and assigning macros</li> </ul>	<b>Textual Python Programming</b> <ul style="list-style-type: none"> <li>IDE, syntax</li> <li>Sequence, print function</li> <li>Sequence, variable, input function</li> <li>Arithmetic, BIDMAS, comparison variables</li> </ul>	<ul style="list-style-type: none"> <li><b>Summative Assessment</b></li> <li><b>Feedback and NOW</b></li> </ul> <b>Networks</b> <ul style="list-style-type: none"> <li>The internet</li> <li>Connectivity</li> <li>Topologies</li> <li>Client-server networks</li> <li>Encryption</li> </ul>	<b>Using Media - Sound</b> <ul style="list-style-type: none"> <li>Digitising sound links to binary</li> <li>Listening and planning</li> <li>Creating an advertisement</li> <li>Jobs in sound industry</li> <li>Revision</li> </ul>
Key Vocabulary/Concepts/Ideas	Key Vocabulary/Concepts/Ideas	Key Vocabulary/Concepts/Ideas	Key Vocabulary/Concepts/Ideas	Key Vocabulary/Concepts/Ideas	Key Vocabulary/Concepts/Ideas
<b>Vocabulary Tier 2:</b> constitutes, secure, unauthorised, identify, construction,  <b>Vocabulary Tier 3:</b> phishing, hacking, malware, virus, Trojan, logic bomb, geo-tagging, data harvesting, cybercrime, RSI, copyright infringement, e-waste, peer-to-peer, client-server, transmission	<b>Vocabulary Tier 2:</b> memory, adding, computers  <b>Vocabulary Tier 3:</b> binary, denary, hexadecimal, 2 base, bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte, petabyte	<b>Vocabulary Tier 2:</b> formatting data, bold, colour, size  <b>Vocabulary Tier 3:</b> spreadsheet, model, simulation, cell, row, column, format, decimal, integer, currency, formula, relative reference, absolute reference, validation, macro, pie chart.	<b>Vocabulary Tier 2:</b> program, code, BIDMAS  <b>Vocabulary Tier 3:</b> integrated development learning environment, IDLE, interactive mode, script mode, variable, data type, string, integer, float, round, BIDMAS, sequence, syntax error, logic error, debug, syntax, assignment statement	<b>Vocabulary Tier 2:</b> operate, classical, significance, relative  <b>Vocabulary Tier 3:</b> internet, World Wide Web, URL (Uniform Resources Locator), IP address, protocol, wide area network, local area network, data packets, packet switching, domain name, client-server network, peer-to-peer network, cloud computing, encryption, decryption, plaintext, cipher text	<b>Vocabulary Tier 2:</b> noise, audio track, effects  <b>Vocabulary Tier 3:</b> trim, pitch, envelope, ducking, import, export, mono, stereo, time shift, sampling, frequency, amplitude, wavelength, sound wave, sampling frequency, digital, bitrate, diegetic and non-diegetic sound
	<a href="#">GCHQ Christmas competition</a> <a href="#">The GCHQ Christmas Challenge 2024 - GCHQ.GOV.UK</a>	<a href="#">Alan Turing Cryptography Competition</a> <a href="#">The Alan Turing Cryptography Competition edition 2024 (manchester.ac.uk)</a>	<a href="#">Take the Test</a> <a href="#">Learn Python - Free Interactive Python Tutorial</a>		