

## KS3 Computer Science: National Curriculum Map (Customised)

Information Technology	Digital Literacy	Computer Science*			
		Computational Thinking	Hardware/Software	Data Representation	Programming
Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users	Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns	Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems	Understand how instructions are stored and executed within a computer system	Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]	Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions
Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability		Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem	Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems	Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits	

\* Computer Science divided into sub-strands to allow mapping to GCSE Computer Science topics of study.

