

### Curriculum Overview Computer Science

7	System introduction	
	Computational theory	
	Bebras competition	
	BBC micro:bit	
	Race to the line competition	
	Programming	
	Searching and sorting	
8	Bebras competition	
	Computational thinking	
	Data representation	
	Data representation: Images	
	Programming in Python	
	E-safety	
9	How computers work	
	Logic gates	
	Programming Python	
	Greenfoot programming in JavaScript	
	E-safety	
10	Hardware	Logical operations
	Architecture	Boolean Logic
	Input and Output Devices	Communication
	Primary Storage	Networks
	Secondary Storage	Internet
	Storage requirements	Organisation and structure of data
	Additional hardware components	Representation of numbers
	Embedded systems	Representation of graphics and sound
	Operating systems	Storage of characters
	Managing resources	Data types
	Providing an interface	Data structures
	Utility software	File design
	Security and data management	Data validation and verification
	Data Security	Principles of programming
	Data management	Levels of computer language
	Compression	Software Engineering
	Network security	Software tools
	Cybersecurity	Program construction
	Ethical, legal and environmental impacts of digital technology on wider society	Compilers, interpreters and assemblers
	Ethical	
	Legislation	
	Environmental issues	
11	Programming in Python	Programming in Python
	Algorithms	Algorithms and programming constructs
	Programming constructs	Programming constructs
	Variables	Variables
	Identifiers	Identifiers

	String handling	String handling
	Mathematical operations	Mathematical operations
	Logical operations	Logical operations
	Sorting	Sorting
	Searching	Searching
	Testing and evaluation	Testing and evaluation