



The British School

KS3 Computer Science Curriculum Map

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
TERM 1				
1-2	Google Classroom & Drive	<ul style="list-style-type: none">• Account setup and navigation• File organization and sharing• Digital submission processes	<i>Practical task completion checklist</i>	Foundation

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		<ul style="list-style-type: none"> • Collaboration tools 		
3-4	Document Creation & Typing	<ul style="list-style-type: none"> • Word processing fundamentals • Text formatting and styles • Touch typing skills development • Document structure and layout 	<i>Document creation project + typing speed test</i>	Digital literacy
5-6	Computational Thinking - Bebras	<ul style="list-style-type: none"> • Pattern recognition basics • Simple abstraction concepts • Logical reasoning practice • Problem decomposition introduction 	<i>Bebras-style problem solving tasks</i>	Competition prep
7-8	Online Safety & Social Media	<ul style="list-style-type: none"> • Digital footprint awareness 	<i>Digital citizenship poster/presentation</i>	E-safety focus

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
		<ul style="list-style-type: none"> ● Privacy settings and personal data ● Cyberbullying prevention ● Responsible social media use 		
9-11	Spreadsheets	<ul style="list-style-type: none"> ● Spreadsheet navigation and data entry ● Basic formulas and functions (SUM, AVERAGE) ● Data formatting and presentation ● Creating charts and graphs 	<i>Data analysis project with charts</i>	Math links
12	Assessment & Review	End of term consolidation and assessment	<i>Summative assessment</i>	Term 1 end

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
TERM 2				
13-15	Computer Hardware & Presentations	<ul style="list-style-type: none"> ● CPU, RAM, storage devices identification ● Input and output devices ● Presentation design principles ● Effective communication skills 	<i>Hardware identification + presentation skills assessment</i>	Technical knowledge
16-18	Binary & Simple Electronics	<ul style="list-style-type: none"> ● Binary number system introduction ● Binary to decimal conversion ● Basic electronic components (LED, resistor, switch) ● Simple circuit construction 	<i>Binary conversion test + electronics practical</i>	Math/Science links

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19-22	Animation Using Scratch	<ul style="list-style-type: none"> ● Scratch interface and navigation ● Sprites, backgrounds, and motion blocks ● Loops and conditional statements ● Creating animated stories and games 	<i>Scratch animation project portfolio</i>	Creative project
23-24	AI - Usage & School Rules	<ul style="list-style-type: none"> ● What is artificial intelligence? ● AI tools in education context ● School AI policy understanding ● Responsible AI usage principles 	<i>AI ethics discussion + practical demonstration</i>	Current tech
TERM 3				

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
25-30	Extended Projects & Skills Integration	<ul style="list-style-type: none"> ● Cross-curricular project work ● Independent learning development ● Peer collaboration activities ● Portfolio completion 	<i>Portfolio assessment + peer evaluation</i>	Integration focus
31-37	Review & Year 8 Preparation	<ul style="list-style-type: none"> ● Year 7 knowledge consolidation ● Skills gap identification ● Introduction to Year 8 concepts ● Summer project briefing 	<i>End of year comprehensive assessment</i>	Transition prep

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TERM 1				
1-3	Simple Algorithms	<ul style="list-style-type: none"> ● Algorithm definition and characteristics ● Flowchart creation and interpretation ● Pseudocode writing techniques ● Simple sorting and searching algorithms 	<i>Algorithm design challenge + flowchart creation</i>	Foundation programming
4-6	Introduction to Python	<ul style="list-style-type: none"> ● Python installation and IDLE setup ● Variables and data types (string, int, float) ● Input and output commands ● Basic arithmetic operations 	<i>Basic Python programming tasks</i>	Text-based programming

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
7-8	Computational Thinking - Bebras	<ul style="list-style-type: none"> • Advanced pattern recognition • Problem decomposition strategies • Algorithm optimization concepts • Competition-level problem solving 	<i>Mock Bebras competition</i>	Competition prep
9-11	HTML/CSS & Internet Basics	<ul style="list-style-type: none"> • HTML structure and essential tags • CSS styling fundamentals • How the internet works (servers, clients, HTTP) • Website planning and design 	<i>Personal webpage creation project</i>	Web development intro
12	Assessment & Review	Term 1 consolidation and assessment	<i>Summative assessment</i>	Term 1 end

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
TERM 2				
13-15	Binary Review & Conversion Algorithms	<ul style="list-style-type: none"> • Binary arithmetic operations (addition, subtraction) • Binary to decimal conversion methods • Hexadecimal number system introduction • Creating conversion algorithms 	<i>Conversion algorithm implementation in Python</i>	Math integration
16-18	Transistors & Electronics	<ul style="list-style-type: none"> • Transistor function and types (NPN, PNP) • Logic gates (AND, OR, NOT) and truth tables • Boolean algebra basics • Circuit construction and testing 	<i>Logic gate circuit project + truth table completion</i>	Electronics practical

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
19-2 1	Simple Expert System Programming	<ul style="list-style-type: none"> • Expert system concepts and applications • Decision trees in programming • Python conditional statements (if, elif, else) • Creating diagnostic/advisory systems 	<i>Medical/diagnostic expert system project</i>	Applied programming
22-2 4	AI - Social Effects & Ethics	<ul style="list-style-type: none"> • AI impact on employment and society • Job displacement and creation discussion • Ethical considerations in AI development • Bias in AI systems 	<i>AI impact research project + presentation</i>	Ethics focus
TERM 3				

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
25-30	Integration Projects	<ul style="list-style-type: none"> ● Combining programming with web design ● Complex problem-solving scenarios ● Portfolio development ● Cross-curricular applications 	<i>Integrated skills portfolio</i>	Skills synthesis
31-37	Assessment & Year 9 Preparation	<ul style="list-style-type: none"> ● Comprehensive skill assessment ● Year 8 knowledge consolidation ● Introduction to Year 9 advanced concepts ● GCSE pathway discussion 	<i>End of year comprehensive assessment</i>	Transition prep

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TERM 1				
1-2	Abstraction & Decomposition	<ul style="list-style-type: none"> Advanced computational thinking concepts Complex problem breakdown strategies Abstraction layers in computing Real-world problem analysis 	<i>Complex problem analysis project</i>	GCSE prep
3-5	Python Turtle Graphics	<ul style="list-style-type: none"> Turtle graphics library and functions Coordinate systems and mathematical concepts Creating complex geometric patterns Loops and functions in visual programming 	<i>Geometric art project + code documentation</i>	Creative coding

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6-7	Computational Thinking - Bebras	<ul style="list-style-type: none"> • Competition-level problem solving • Advanced algorithmic thinking • Optimization and efficiency concepts • Strategy development for complex problems 	<i>Mock competition + strategy analysis</i>	Competition prep
8-10	Advanced Web Design	<ul style="list-style-type: none"> • Advanced HTML5 and CSS3 features • Responsive design principles and media queries • JavaScript introduction and DOM manipulation • User experience (UX) design concepts 	<i>Multi-page responsive website project</i>	Advanced web dev

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11-12	Binary Review & Hexadecimal	<ul style="list-style-type: none"> Advanced number system conversions Hexadecimal arithmetic and applications Binary representation of images and colors Data representation concepts 	<i>Multi-base conversion mastery test</i>	GCSE prep
TERM 2				
13-15	Inside the CPU	<ul style="list-style-type: none"> CPU architecture and key components Fetch-decode-execute cycle detailed analysis Assembly language concepts and examples Performance factors and optimization 	<i>CPU simulation activity + technical report</i>	Computer architecture

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
16-18	Microprocessor Controlled Systems	<ul style="list-style-type: none"> ● Embedded systems in everyday devices ● Input/output interfacing and sensors ● Microcontroller programming concepts ● Real-world applications and case studies 	<i>System design project + technical specification</i>	Applied computing
19-21	Python Story Program	<ul style="list-style-type: none"> ● Advanced Python programming techniques ● File handling and data persistence ● Data structures (lists, dictionaries) ● User interface design and user experience 	<i>Interactive story program + code review</i>	Advanced programming
22-2	AI - Prompt Engineering &	<ul style="list-style-type: none"> ● Effective AI prompt design 	<i>AI project with comprehensive</i>	Current AI

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
4	Training	techniques <ul style="list-style-type: none"> ● Understanding machine learning basics ● AI training data and model concepts ● Practical AI tool usage and evaluation 	<i>documentation</i>	tech
TERM 3				
25-32	GCSE Preparation & Advanced Projects	<ul style="list-style-type: none"> ● Portfolio development and presentation ● Independent research projects ● Advanced programming challenges ● Real-world problem solving applications 	<i>Portfolio presentation + independent project</i>	GCSE readiness

Week(s)	Main Topic	Sub-topics & Learning Objectives	Assessment	Notes
33-37	Final Assessment & Transition	<ul style="list-style-type: none"> • Comprehensive end-of-KS3 assessment • GCSE Computer Science course introduction • Career pathway exploration in computing • Summer preparation for GCSE studies 	<i>Final comprehensive assessment + GCSE readiness evaluation</i>	KS4 transition