

Curriculum map: Computing, ICT, and Business

Key Stage 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	<u>E-Safety</u> • Cyber bullying • Grooming • Trolling • Social engineering techniques	<u>Computer components</u> • The history of computers • Internal hardware • The function of the CPU • Operating systems • Computer of the future	<u>Using media</u> • Software • Licensing appropriate images • Blogs	<u>Game design</u> • Scratch • Pacman project (3 weeks)	<u>Programming Python Turtle</u> • Python Turtle • Drawing shapes • Customising Turtle • Background and shape colours	<u>Internet of Things</u> • Internet of Things • Smart devices • Tinkercad • Circuits in Tinkercad
Year 8	<u>Programming Python loops</u> • While loops • For loops • Python Turtle loops	<u>Website design</u> • World Wide Web • HTML • Website reviewing • Website designing	<u>Computer systems</u> • Input, process and output • CPU • Memory • Operating systems	<u>Networks</u> • Cyber security • Malware • Computer networks • DDoS	<u>Ethics</u> • Internet censorship • Digital divide • Environmental impact • Smarter planet • Internet conduct • Internet of Things	<u>Programming Python</u> • Strings • Variables • Data types • String manipulation • Selection • Boolean expressions
Year 9	<u>Programming Python</u> • Variable names • Data types • Python project	<u>Programming Python</u> • Python project (5 weeks)	<u>Computational thinking</u> • Binary • Binary to denary • Units of storage • Hexadecimal • Binary addition	<u>Spreadsheet software</u> • Spreadsheet modelling • Functions • Formatting and formulas • COUNT & COUNTIF • Graphs	<u>Databases</u> • Data types • Primary keys • Relational databases • Forms • Validation and verification • Queries • Reports	<u>User interface</u> • Types of user interfaces • Hardware and software influences • User accessibility • User skills • Design principles

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Key Stage 4 (AQA Computer Science)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 10	3.1 Fundamentals of algorithms 3.1.1 Representing algorithms	3.1.2 Efficiency of algorithms 3.2.1 Data types 3.3.2 Converting between number bases	3.2.2 Programming concepts 3.2.7 Input/output and file handling 3.2.8 String handling operations in a programming language	3.2.9 Random number generation in a programming language 3.2.10 Subroutines (procedures and functions) 3.3.6 Representing images	3.3.7 Representing sound 3.3.8 Data compression	3.4 Computer systems 3.4.1 Hardware and software
Year 11	3.4.3 Software classification 3.4.4 Systems architecture 3.5 Fundamentals of computer networks	3.6 Fundamentals of cyber security 3.6.1 Cyber security threats 3.6.1.1 Social engineering 3.6.1.2 Malicious code 3.2.2 Programming concepts	3.2.7 Input/output and file handling 3.2.8 String handling operations in a programming language 3.2.9 Random number generation in a programming language	3.6.2 Methods to detect and prevent cyber security threats 3.7 Ethical, legal and environmental impacts of digital technology on wider society, including issues of privacy 3.8 Aspects of software development	Revision Exams	Revision Exams

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Key Stage 5 (BTEC National Information Technology Diploma / BTEC Business Diploma)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 12	<u>BTEC IT</u> Unit 2 Databases Unit 3 Social media <u>BTEC Business</u> Unit 1 Exploring business Unit 8 Recruitment selection	<u>BTEC IT</u> Unit 2 Databases Unit 3 Social media <u>BTEC Business</u> Unit 1 Exploring business Unit 8 Recruitment selection	<u>BTEC IT</u> Unit 2 Exam Unit 1 Information systems Unit 6 Website design <u>BTEC Business</u> Unit 2 Creating a marketing campaign Unit 3 Personal and business finance	<u>BTEC IT</u> Unit 1 Information systems Unit 6 Website design <u>BTEC Business</u> Unit 2 Creating a marketing campaign Unit 3 Personal and business finance	<u>BTEC IT</u> Unit 1 Exam Unit 6 Website design <u>BTEC Business</u> Unit 2 Exam Unit 3 Exam	<u>BTEC IT</u> Unit 8 Game design Unit 6 Website design <u>BTEC Business</u> Unit 27 Work experience
Year 13	<u>BTEC IT</u> Unit 8 Game design Unit 9 Project management <u>BTEC Business</u> Unit 27 Work experience Unit 6 Principles of management	<u>BTEC IT</u> Unit 8 Game design Unit 9 Project management <u>BTEC Business</u> Unit 6 Principles of management	<u>BTEC IT</u> Retakes Unit 4 Programming Unit 11 Cyber security <u>BTEC Business</u> Retakes Unit 6 Exam	<u>BTEC IT</u> Unit 4 Programming Unit 11 Cyber security <u>BTEC Business</u> Unit 4 Managing an event Unit 5 International business	<u>BTEC IT</u> Revision Retakes <u>BTEC Business</u> Unit 4 Managing an event Unit 5 International business	<u>BTEC IT</u> Coursework catch up <u>BTEC Business</u> Coursework catch up