

Term		Year 7	Year 8	Year 9	Year 10	Year 11
Autumn	September-October	An introduction to what computing is, some computing ideas using computing terminologies	Understand several key algorithms that reflect computational thinking. Use logical reasoning to compare the utility of alternative algorithms for the same problem.	Computational Thinking and algorithms	CT, Binary logic, data and searching and sorting algorithms Unit 2.4; 1.2, 2.1	Network security, Operating System and legal issues Unit 1.4; 1.5; 1.6, 2.4
		e-safety - Computer viruses / Career	e-safety - Account security / Career	e-safety - Cybercrime / Career	e-safety - Non-automated Cybercrime	e-safety - Ethical hacking
	November-December	Introduction to computational thinking and algorithms	Problem solving and logical reasoning; debugging problems	Programming fundamentals using sequence, selection and iteration	Algorithms, data types and programming fundamentals Unit 2.1; .2.2	Ethical-legal; defensive design, Testing and IDE Unit 1.6; 2.3; 2.5
		e-safety - Password / Career	e-safety - Respectful communication /	e-safety - Impact of technology / Career	e-safety - Automated Cybercrime	e-safety - Privacy and surveillance
Spring	January-February	Using algorithm to design programs i. e. Python	Use textual programming language to solve a variety of computational problems	Use textual programming language to solve a variety of computational problems	Additional programming techniques Unit 2.2	Programming skills and algorithms Unit 2.1 - 2.3
		e-safety - Cyberbullying / Career	e-safety - Cyberbullying / Career	e-safety - Cyberbullying / Career	e-safety - Network defence	e-safety - Environmental impact
	March-April	Data representation - How to use two different methods to convert denary numbers to binary	Data Representation - Binary bits and bobs & Boolean logic	Data representation - ASCII, text and Images & Boolean algebra	Data storage and computer architecture Unit 1.2; 1.1	Mocks and Programminfg skills Unit 2.1 - 2.3
		e-safety - Digital footprint / Career	e-safety - Sextings / Career	e-safety - Social media / Career	e-safety - The law, data protection	e-safety -Ethical impact
Summer	May-June	Text based programming using sequence, selection and iteration	Cryptography - use and purpose of cryptography and encryption of data and Boolean algebra	Cyber security - Malware; social engineering	Embedded system, storage and Network topologies Unit 1.1; 1.2; 1.3	Theory Revision and Practical Programming Skills Revision
		e-safety - Grooming / Career	e-safety - Selfies / Career	e-safety - Recognise and report / Career	e-safety - Cultural impact	e-safety - Legal issues
	June-July	Retrieval - Programming project involving prior learning	Retrieval - Programming project involving prior learning	Retrieval - Programming project involving prior learning	Network layers and programming skills Unit 1.3; 2.2	Exams
		e-safety - Create a presentation / Career	e-safety - Create a presentation / Career	e-safety - Create a presentation / Career	e-safety - Network security	
Additional reading		Lift-the-flap Computers and Coding Computer Coding Made Easy	Adventure in Minecrafts Computational fairy tales	How Super Cool Tech Works Coding as a playground	Real world Algorithms Python for kids	Computational Thinking I, Robot
Useful websites/Links		Teach-ict.com BBC Bitesize	Teach-ict.com BBC Bitesize	Teach-ict.com BBC Bitesize	Teach-ict.com BBC Bitsize	Teach-ict.com BBC Bitsize