	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	The safe and effective use of computers How to use Microsoft office	Internal components of a computer Binary and Units Introduction to programming	Programming fundamentals- sequence and selection	Computational thinking	Programming recap – sequence and selection. Programming iteration – condition controlled	Cultural Issues Environmental Issues Legislation
Year 8	The safe and effective use of computers. The safe and effective use of computers. Computer Systems (Input/Output) Computer Systems (CPU)	Software Binary and units Hexadecimal	Introduction to web design Getting started with HTML	Introduction to CSS Advanced CSS	Design and usability Creating a complete website	Considering sustainability when designing products (Modelling a phone case using CAD) Iterative design process (Modelling a table using CAD)
Year 9	The safe and effective use of computers. The safe and effective use of computers.	Software Binary and units Hexadecimal	Introduction to web design Getting started with HTML	Introduction to CSS Advanced CSS	Design and usability Creating a complete website	Considering sustainability when designing products (Modelling a phone case using CAD)

	Computer Systems (Input/Output) Computer Systems (CPU)					Iterative design process (Modelling a table using CAD)
Year 10	Introduction to computer system Introduction to CPU and memory Binary and units Programming fundamentals IDE (Sequence) Print	Binary addition Logic gates Primary memory Secondary storage Data representation – Image Programming – string handling, nested selection, iteration	Data representation – Sound Data representation – Characters Hexadecimal Programming iteration/lists	System software Network topologies Internet Programming- File handling	System software Network topologies Internet Programming- Computational thinking. Trace tables Sub programs	Impact of digital technology Programming- Functions Languages and translators Flowcharts Maintainability
Year 11	Introduction to computer system Introduction to CPU and memory Binary and units Programming Fundamentals recap	Binary addition Logic gates Primary memory Secondary storage Data representation – Image Programming- Arrays, file handling	Data representation – Sound Data representation – Characters Hexadecimal Programming- AND, NOT, OR Debugging Searching and sorting algorithms	System software Internet Network topologies Programming – Defensive design – Validation, Authentication	Network topologies Network threats Network attack prevention Programming- Maintainability	Impact of digital technology Revision/Exam practice

		Functions and computational thinking	Languages and translators Trace tables			
Year 12	Components of a computer and their uses Programming constructs: sequence, iteration, branching	Software and software development Data Types, Data structures and algorithms	How data is exchanged between different systems. Recursion, how it can be used and compares to an iterative approach	Boolean Algebra Programming Techniques	Computing Related Legislation Features that make a problem solvable by computational methods b) Problem Recognition c) Problem Decomposition d) Use of divide and conquer	The use of Algorithms to describe problems and standard algorithms Moral and Ethical Issues
Year 13	Computing related legislation Elements of computational thinking: Thinking Abstractly Thinking ahead Thinking procedurally Thinking ahead Thinking logically	Moral and ethical issues Object oriented languages with understanding of classes, objects, methods, attributes, inheritance, encapsulation and polymorphism	Use of abstraction • backtracking • data mining • heuristics • performance modelling • pipelining • visualisation to solving problem NEA-Develop	Interrupts Scheduling Thinking concurrently NEA- Test and Evaluate	Virtual machines Stages of compilation Liners and Loaders NEA	NEA

	Thinking concurrently NEA - Analysis	Computational methods Problem Recognition Problem Decomposition Use of divide and conquer NEA-Design				