

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
9	Topic: Intro into Computer systems Knowledge and skills - Intro – how does a computer work? - Function of the CPU (Von Neumann architecture) - Embedded systems. - RAM, ROM and cache - Fetch execute cycle using the CPU and RAM. - Secondary storage devices - Units of data - Binary to denary conversions and vice versa - Character sets, ASCII and Unicode. - The use of compression	Topic: Python Programming Knowledge and skills - Print - Inputs - Selection – How to use if statements effectively. - Iteration – for and while loops - Lists - File handling. - Python project.	Topic: Networks Knowledge and skills - LAN and WAN - Components that make up a networks - The internet - Identifying the Star and mesh topologies - Modes of connection: Wired and wireless. - Encryption - Introduction into Ethics - Impact of IT on different industries. - Laws that surround ICT	Topic: User interfaces Knowledge and skills - Types of interfaces - Hardware and software influences - Accessibility needs - Skills and demographics - Visual design principles - Creating different interface designs - Developing a user interface for a specific scenario. - Refining the interface - Reviewing the interface	Topic: Introduction into spreadsheets Knowledge and skills - Characteristics of data and information - Validation and verification - Data collection methods - Threats to individuals - Arithmetic calculations - Functions, SUM, MIN, MAX etc - Conditional formatting - Macro's - Sorts and filters - Creating graphs to show different results - Creating a dashboard - Using a spreadsheet to model	Topic: Intro into Business workings Knowledge and skills - Understanding the requirements of business - Maximising the use of digital media. - Advertising strategies. - Producing PowerPoints to encourage investors - Developing presentations to encourage investors - Evaluating the impact of the business model.

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10	P1 Topic: Architecture of the CPU and primary storage Knowledge and skills - The fetch-execute cycle - Functions of the components and registers of the Von Neumann architecture - What affects the performance of the CPU? - Primary storage P2 Topic: Functions and gates Knowledge and skills - Recap of year 9 skills - Functions and procedures - Knowing when to use a function and procedure - Nesting - Binary logic AND, OR, NOT gates	P1 Topic: Secondary storage and Data Knowledge and skills - Common types of secondary storage - Characteristics of secondary storage devices - Data capacity and calculation of data capacity requirements - Hex conversions - Binary additions - Binary shifts. P2 Topic: Knowledge and skills - Built in libraries within Python - If statements and case statements. - For and while loops 2d Arrays	P1 Topic: Binary and Networks Knowledge and skills - Binary in images - Binary in sounds - Types of compression, Lossy and lossless - P 2 P vs client server networks. - Factors affecting network performance. - Understanding the star and mesh topologies. - The internet. - IP addressing and MAC addressing. P2 Topic: Pseudocode Knowledge and skills - How to write in pseudocode (OCR) - Trace tables. - SQL - Searching records with SQL	P1 Topic: Networks and software Knowledge and skills - Standards and layers - TCP/IP protocols. - Forms of network attacks - Preventing network attacks - Functions of the OS - Utility software - Ethics and the laws P2 Topic: Defensive design Knowledge and skills - Intro into defensive design - Authentication - Validation and verification methods - Types of testing - Test data.	P1 Topic: Getting ready for end of year exam Knowledge and skills - Creating revision resources - Understanding the requirements of the exam - Revisiting topic areas P2 Topic: Programming project Knowledge and skills - Creating a programming solution for a given scenario released by the exam board. - Applying all the python skills to this scenario using the SDLC.	P1 Topic: Getting ready for end of year exam Knowledge and skills - Creating revision resources - Understanding the requirements of the exam - Revisiting topic areas P2 Topic: Programming project Knowledge and skills - Creating a programming solution for a given scenario released by the exam board. - Applying all the python skills to this scenario using the SDLC.

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11	P1 Topic: Revisited topics 1 - The fetch-execute cycle - Functions of the components and registers of the Von Neumann architecture - Cache memory Knowledge and skills P2 Topic: Searches and sorts Knowledge and skills - Applying pseudocode to the exam questions. - Sorts and searches - Writing code for the sorts and searches. - High/Low level languages - IDE's	P1 Topic: Revisited topics 2 Knowledge and skills - Data capacity and calculation of data capacity requirements - Hex conversions - Binary additions - Binary shifts. - Standards and layers - TCP/IP protocols. P2 Topic: Exam questions. Knowledge and skills - Applying pseudocode to the exam questions. - Revision for paper 2 Year 11 mocks will be completed in this term.	Revision stage 1 All knowledge and skills will be completed by this stage. Students will complete personalised revision addressing their weaker topic areas. This is to ensure they are completely ready for their GCSE examinations.	Revision stage 2 All knowledge and skills will be completed by this stage. Students will complete personalised revision addressing their weaker topic areas. This is to ensure they are completely ready for their GCSE examinations.	GCSE exams External GCSE exams	GCSE exams External GCSE exams