



	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
Reporting Y7		CfCs		BfL & LAL			BfL & LAL				BfL & LAL	
Year 7	Basic IT literacy - use of Moodle, O365, Word and PowerPoint. Digital citizenship including online security, best practise when communicating with other.	Digital Citizenship Assessment	Data Representation: Boolean logic (AND/OR/NOT). Binary numbering system and its use in Computing. Conversion between binary and decimal. Use of numbers to represent characters in computing	Data Representation Assessment and DIT	Programming: Algorithms: basics of decomposition (breaking problems down). Identifying sequences in instructions and potentially programmable parts. Use of flowcharts to represent inputs, outputs, decisions and sub-routines	Algorithm Assessment and DIT in preparation for programming	Computer systems: identify different forms of hardware and categories and input, output, storage and process.	Computer Systems assessment	Programming: identify key programming terminology. Using input, output variables and iteration in code. Identify common mistakes in basic code.	Programming Assessment	End of Year project: Microbit. Using the microbit (an embedded system designed for education) to consolidate the learning on computer systems, programming, algorithms and data representation. Students create programs using either flowchart-style coding interface or python scripted language.	Curriculum Enrichment Week
Reporting Y8		CfCs		BfL & LAL			BfL & LAL				BfL & LAL	
Year 8	Computer systems: identify different forms of hardware and categories and input, output, storage and process. Identify different network types - LAN\ WAN, wireless, personal area (bluetooth). The impact of modern systems (eg AI) on computer design and other technologies	Computer Systems assessment	Data Representation: binary to represent colours and images in computers. Binary mathematics (add, shifts); Use of the hexadecimal numbering system. Conversion between binary-decimal-hexadecimal. Use of hex in computing - image representation, programming	Data Representation Assessment and DIT	Programming: Algorithms: Using flowcharts to solve simple and complex problems. The use of sub-routines to make individually programmable parts. Use of pseudocode as a "fake" programming language which can be applied to multiple programming solutions	Algorithm Assessment and DIT in preparation for programming	Programming: identify key programming terminology. Using programming techniques to solve a variety of problems involving sequence, selection, iteration, sub-routines.	Programming Assessment	Digital citizenship - more focus on social media (as are or will be 13+). Online fraud, money mules, introduce laws around computer use.	Digital Citizenship Assessment	End of Year project: HTML5 game creation. Using aspects of data representation but more closely algorithms and coding to analyse, plan, design, code and test an HTML 5 game using the Construct 2 engine	Curriculum Enrichment Week
Reporting Y9		CfCs		BfL & LAL			BfL & LAL				BfL & LAL	
Year 9	Computer systems: identify different forms of hardware and categories and input, output, storage and process. Identify different network types - LAN\ WAN, wireless, personal area (bluetooth). Ethical aspects of computer systems - how they impact on society and the individual as well as the environment. The impact of modern systems (eg AI) on computer design and other technologies. How AI could impact	Digital Citizenship Assessment	Data representation: review of hexadecimal and binary; use of compression - lossy and lossless; use of encryption in computing and the role of hexadecimal and binary in this	Data Representation Assessment and DIT	Programming: Algorithms: Debugging both flowchart and pseudocode to identify and correct problems. Identifying tasks based on pseudocode - reconstruct scenarios based on flowcharts with sub-routines.	Algorithm Assessment and DIT in preparation for programming	Programming: using decomposition, algorithms and programming techniques to analyse, design, code, test and evaluate a program to meet the requirements of a given scenario	Programming Assessment	Digital citizenship - focus on more mature content as well as covering the laws governing digital technology - Computer Misuse Act, GDPR, Copyright and Patents Act. Critical debate of aspects such as teenage social media use, the impact of AI on society.	Programming Assessment	End of year project: Business with project with strong emphasis on IT skills (presentation, spreadsheet, data collection and analysis)	Curriculum Enrichment Week



	Autumn 1				Autumn 2			Spring 1				Spring 2		Summer 1			Summer 2			
Reporting Y10			CfCs			BfL & Grades				CfCs			BfL & Grades				BfL & Report			
Year 10	Programming - introduce online IDE repl.it. Basic principles of programming (2.2) - input\output, variables\constants, sequence, selection and iteration. Data types - integer, string, Boolean, array, casting between types. Introduction to IDE (2.5)	1.1 - System architecture, Von Neumann sys architecture, fetch-execute cycle	1.2.1 - Memory - RAM, ROM, Flash 1.2.2 - secondary storage magnetic, optical and solid state	Assessment on 1.1 and memory\storage aspect of 1.2	1.2 - sizes, binary, hexadecimal. 1.2 image, sound and character data representation	Data rep Assessment (bin, hex, sound, image, character)	Review of topics covered and DIT on assessments	2.1 - algorithms, pseudocode\flowcharts and their relationship to actual code	2.1 - Common algorithms - bubble sort, merge sort, linear search, insertion sort, binary search 2.2 - programming techniques that link to search and sort (arrays - 1D and introduce 2 D)	Algorithm Assessment - search and sorting	2.2 and 2.4 - Boolean operators in programming - AND\OR\NOT. Truth tables	Additional programming techniques (2.2) - working with files - open, read, write, close. Use of SQL to interrogate data	Defensive design in programming (2.3) - main ability of code, commenting, documentation, system lifecycle, testing - dry runs and other methods of testing code	2.5 - features of programming languages - low-level high level languages ; features of IDE		1.6 - ethical, legal, cultural and environmental impact of computer science	1.5 - system software including operating systems, common utility software and different operating systems			
Reporting Y11			CfCs & Grades			Rep & Grades				CfCs & Grades			BfL & Grades							
Year 11	1.3 - networks: topologies, wired and wireless networks, protocols, network addressing, LAN and WAN, cloud, client-server\peer-to-peer networks.	Topic assessment	1.4 threats to networks - attack methods, network security, the role of the "human" as a weak link. Methods of prevention - software, hardware, policies and methods.	1.4 Assessment	Revision lessons (PPE1 prep)	PPEs	Programming project with Paper 2 revision elements	Paper 1 recap with mixed assessments - short programming tasks and "dry runs".	Revision activities - short assessments, recaps, topic based activities, examination practise (walking talking mocks)	Public Examination										