



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2					
<b>Reporting Y7</b>	CfCs	BfL & LAL		BfL & LAL		BfL & LAL					
<b>Year 7</b>	Basic IT literacy - use of Moodle, O365, Word and PowerPoint. Digital citizenship including online security, best practise when communicating with other.	<b>Digital Citizenship Assessment</b> 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	<b>Data Representation Assessment and DIT</b>	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	<b>Algorithm Assessment and DIT in preparation for programming</b>	Programming: identify key programming terminology. Using input, output variables and iteration in code. Identify common mistakes in basic code.	<b>Programming Assessment</b>	Computer systems: identify different forms of hardware and categories and input, output, storage and process.	<b>Programming Assessment</b>	End of Year project: Microbat. 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.	<b>Curriculum Enrichment Week</b>
<b>Reporting Y8</b>	CfCs	BfL & LAL		BfL & LAL		BfL & LAL					
<b>Year 8</b>	Digital citizenship - more focus on social media (as are or will be 13+). Online fraud, money mules, introduce laws around computer use.	<b>Digital Citizenship Assessment</b> 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	<b>Data Representation Assessment and DIT</b>	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	<b>Algorithm Assessment and DIT in preparation for programming</b>	Programming: identify key programming terminology. Using programming techniques to solve a variety of problems involving sequence, selection, iteration, sub-routines.	<b>Programming Assessment</b>	Computer systems: identify different forms of hardware and categories and input, output, storage and process.	<b>Programming Assessment</b>	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	<b>Curriculum Enrichment Week</b>
<b>Reporting Y9</b>	CfCs	BfL & LAL		BfL & LAL		BfL & LAL					
<b>Year 9</b>	Digital citizenship - focus on more mature content as well as cover the laws governing online use - Computer Misuse Act, GDPR, Copyright and Patents Act	<b>Digital Citizenship Assessment</b> 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	<b>Data Representation Assessment and DIT</b>	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.	<b>Algorithm Assessment and DIT in preparation for programming</b>	Programming: using decomposition, algorithms and programming techniques to analyse, design, code, test and evaluate a program to meet the requirements of a given scenario	<b>Programming Assessment</b>	Computer systems: identify different forms of hardware and categories and input, output, storage and process.	<b>Programming Assessment</b>	End of year project: Business with project with strong emphasis on IT skills (presentation, spreadsheet, data collection and analysis)	<b>Curriculum Enrichment Week</b>



	Autumn 1			Autumn 2			Spring 1			Spring 2			Summer 1			Summer 2		
<b>Reporting Y10</b>			CfCs			BfL & Grades			CfCs			BfL & Grades			BfL & Report			
<b>Year 10</b>	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 architecture, fetch-execute cycle	1.2.1 - Memory - RAM, ROM, Flash 1.2.2 - secondary storage magnetic, optical and solid state	<b>Assessment on 1.1 and memory\storage aspect of 1.2</b>	1.2 - sizes, binary, hexadecimal. 1.2 image, sound and character data representation	<b>Data rep Assessment (bin, hex, sound, image, character)</b>	Review of topics covered and DIT on assessments	2.1 - algorithms, pseudocode and it's relationship to actual code	2.1 - Common algorithms - bubble sort, merge sort, linear search, insertion sort, binary sort	<b>Algorithm Assessment - search and sorting</b>	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	<b>Programming Assessment (running over HT holiday)</b>	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	<b>Work Experience Week</b>	
<b>Reporting Y11</b>			CfCs & Grades			Rep & Grades			CfCs & Grades			BfL & Grades						
<b>Year 11</b>	1.5 - system software including operating systems, common utility software and different operating systems	<b>1.5 Assessment</b>	1.3 - networks: topologies, wired and wireless networks, protocols, network addressing, LAN and WAN, cloud, client-server\peer-to-peer networks.	<b>1.3 Assessment</b>	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.	<b>1.4 Assessment</b>	Paper 1 recap with mixed, low-impact assessments	Paper 2 recap with mixed assessments - short programming tasks and "dry runs".	Revision activities - short assessments, recaps, topic based activities, examination practise (walking talking mocks)	<b>Public Examination</b>								