Computer studies Subject Intent

Dixons Broadgreen computer studies department instilled a love of lifelong language learning whilst promoting diversity and tolerance of other cultures by

- Teaching students to communicate through listening, speaking, reading and writing.
- Exposing students to the culture of French speaking societies.
- Closely defining key knowledge, which is revisited and reinforced over time.

Seven Year Plan

Year 7			
	Cycle 1	Cycle 2	Cycle 3
Content	Computer systems	CPU Fetch-execute cycle	Data and data representation
Skills	Hardware /Software Operating systems Networks WAN/LAN/Internet Routers/Switches / packets	FED Compiler Interpreter	Binary Conversion Calculations Images -Depth and resolution Sound -Analogue to digital HEX ASCII
Progression	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience
Link to GCSE	J277 Paper 1 Computer systems	J277 Paper 1 Computer systems	J277 Paper 2 Computational thinking / Algorithms / programming
Year 8			
	Cycle 1	Cycle 2	Cycle 3
Content	Algorithms, Flowcharts and Pseudocode	Searching and sorting	Boolean logic
Skills	Abstraction Decomposition Pseudocode format Flowchart symbols More than one way to solve a problem	Linear searches Binary searches	Logic gates And Or Not Truth tables
Progression	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience	Due to KS2 students rarely having acquired knowledge to the expected level and of being mixed exposure/experience
Link to GCSE	J277 Paper 2 Computational thinking / Algorithms / programming	J277 Paper 2 Computational thinking / Algorithms / programming	J277 Paper 1 Computer systems

Year 9 – Core carousel			
	Cycle 1	Cycle 2	Cycle 3
Content	Digital literacy/life skills	Digital literacy/life skills	Digital literacy/life skills
Skills	Copyright Plagiarism The Laws Health & Safety CEOP Digital Footprint	Copyright Plagiarism The Laws Health & Safety CEOP Digital Footprint	Copyright Plagiarism The Laws Health & Safety CEOP Digital Footprint
Progression	Skills for school / college / university / workplace	Skills for school / college / university / workplace	Skills for school / college / university / workplace
Link to GCSE / A-Level	N/A	N/A	N/A
Yr 9 GCSE			
	Cycle 1	Cycle 2	Cycle 3
Content	1.2 Memory and Storage 2.4 Boolean Logic	2.5 Programming languages and Integrated Development Environments	2.1 Algorithms 2.2 Programming Fundamentals 2.3 Producing robust programs Programming projects to be delivered during theory units – likely to span 2 terms
Skills	Logic gates Truth tables	Programming Scratch Python HTML My SQL	Programming Scratch Python HTML My SQL
Progression	Yr 8.3 Boolean logic	Hopefully students would have had the opportunity to use Scratch at KS2 (possibly KS3)	Yr 8.1 Algorithms, Flowcharts and Pseudocode
Link to GCSE / A-Level	Link to A Level Computer Science BTEC Ext Cert Unit 1	Link to A Level Computer Science BTEC Ext Cert Unit 2	Link to A Level Computer Science BTEC Ext Cert Unit 2 &7
Year 10			
	Cycle 1	Cycle 2	Cycle 3
Content	Programming to be delivered during theory units – likely to span terms 2 and 3.	1.6 Ethical, legal, cultural and environmental impacts of digital technology	1.3 Computer Networks, connections and protocols 1.4 Network security 1.5 Systems Software
Skills	Finding errors Writing pseudocode	Analysis Debating skills Evaluation	

		Theory into practice	
Progression	Yr 8.1 Algorithms, Flowcharts and Pseudocode	Yr 9 core information Digital literacy	
Link to GCSE / A-Level	Link to A Level Computer Science BTEC Ext Cert Unit 2 &7	Link to A Level Computer Science BTEC Ext Cert Unit 1	Link to A Level Computer Science BTEC Ext Cert Unit 1

Year 11 – Transition to KS5			
	Cycle 1	**Cycle 2**	**Cycle 3**
Content	1.1 Systems architecture	Revision and external exams	
Skills	Storage FED ALU CU Registers Cache Buses Clock Embedded systems		
Progression	7.2 CPU Fetch-execute cycle		
Link to GCSE / A-Level	Link to A Level Computer Science BTEC Ext Cert Unit 1		

Year 12			
	Cycle 1	**Cycle 2**	**Cycle 3**
Content	Unit 1 Information Technology systems	Unit 1 Information Technology Unit 2 Creating systems to manage information	Unit 1 Information Technology Unit 3 Using Social Media in business
Skills	Digital devices, their functions and use Peripheral devices and media Computer software in an IT system Emerging technologies Choosing IT systems Transmitting data Connectivity Networks Issues relating to transmission of data Operating online	Examining the structure of data and its origins, and how an efficient data design follows through to an effective and useful database. Relational database management systems Manipulating data structures and data in relational databases Normalisation Relational database design Design documentation	Social media websites Business uses of social media Risks and issues Social media planning processes Business requirements Content planning and publishing Developing an online community Developing a social media policy Reviewing and refining plans

	Online systems Online communities Threats to data, information and systems Protecting data Impact of IT systems Online services Impact on organisations Using and manipulating data Moral and ethical issues Legal issues	Producing a database solution Testing and refining the database solution Database design evaluation and testing	Creating accounts and profiles Content creation and publication Implementation of online community building Data gathering and analysis Skills, knowledge and behaviours
Progression **The assessment for this unit should draw on knowledge, understanding and skills developed from:**	• Unit 2: Creating Systems to Manage Information • Unit 3: Using Social Media in Business. • Unit 6: Website Development.	Unit 1: Information Technology Systems Unit 3: Using Social Media in Business.	• Unit 1: Information Technology Systems • Unit 2: Creating Systems to Manage Information • Unit 6: Website Development.
Link to A Level / Degree/world of work	This unit will gives a fundamental and synoptic understanding of all areas of IT, supporting progression to an IT-related higher education course.	The skills gained in this unit support progression to IT-related higher education courses and to employment in a role that requires computing-related expertise.	Understanding how to use social media for business purposes is useful for employment in information technology and in a variety of business sectors. Also, social media skills are closely linked with web and mobile applications development. This unit is a starting point for progression to roles such as social media specialist, content developer and web developer.
Year 13			
	Cycle 1	Cycle 2	Cycle 3
Content	Unit 1 Information Technology Unit 3 Using Social Media in business Unit 6 Website development	Unit 1 Information Technology Unit 6 Website development Unit 1 Exam	Unit 1 Information Technology systems - Exam
Skills		Using scripting languages such as Hypertext Markup Language (HTML), Cascading Style Sheets (CSS) and JavaScript® and a simple text editor, or rapid application development tools. Finally, reflecting on the website design and functionality using a testing and review process.	Use of social media for business purposes is useful for employment in information technology and in a variety of business sectors. Also, social media skills are closely linked with web and

		Purpose and principles of website products	mobile applications development.
		Factors affecting website performance	This is a starting point for progression to roles such as social media specialist, content developer and web developer.
		Website design	
		Common tools and techniques used to produce websites	
		Client-side scripting languages	
		Website development	
		Website review	
		Website optimisation	
		Skills, knowledge and behaviours	
Progression **The assessment for this unit should draw on knowledge, understanding and skills developed from:**		**Unit 1: Information Technology Systems** **• Unit 3: Using Social Media in Business**	
Link to A Level / Degree/world of work		**Many software developers, database experts and systems managers need web-client development skills as an integral part of their overall portfolio of expertise. This unit will prepare you for employment as a website developer or as a website development apprenticeship.** **Higher education courses in digital studies.**	