Topic		Key Stage 3	Year 7						Year 8						Year 9		
			Robotics inc Flowol (Project Work)	Internet/e-Safety & Leaflet Design	History of Computers	Introduction to Programming	Superhero Databases (MS Access)	Finances (5-a-day garden)	Game (Project Work)	CAD design (Google Sketchup)	Crocodile Clips (flowcharts & sequencing)	Cryptography (Spreadsheets)	Further Programming (GameMaker)	Computer Architecture	Hardware, Software & Logic	Programming	Trends in Computing
Computer Science	Algorithms	▪ Design, use and evaluate computational abstractions that model the state and behaviour of real world problems and physical systems									■						
		▪ Understand several key algorithms that reflect computational thinking (e.g. searching and sorting)				■					■		■				
		▪ Use logical reasoning to compare the utility of alternative algorithms for the same problem	■			■			■		■		■		■	■	
	g	▪ Use 2 programming languages, at least one of which is textual, to solve a variety of computational problems				■							■			■	
		▪ Make appropriate use of data structures (e.g. lists, tables or arrays)														■	
		▪ Design and develop modular programs that use procedures or functions				■							■			■	
	Hardware / Data representation	▪ Understand some Boolean logic (e.g. AND, OR and NOT)		■			■									■	
		▪ Understand some of Boolean logic's uses in circuits and programming									■					■	
		▪ Understand how numbers can be represented in binary and be able to carry out simple operations on binary numbers (e.g. additional and conversation between binary and decimal)												■	■		
		▪ Understand the hardware and software components that make up computer systems and how they communicate with one another and with other systems			■									■	■		
		▪ Understand how instructions are stored and executed within a computer system														■	
		▪ Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally in the form of binary digits												■	■		
Information Technology		▪ Undertake creative projects that involve selecting, using and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users	■	■	■		■	■		■		■					■
		▪ Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability		■	■		■	■		■		■					■
Digital Literacy		▪ Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy		■	■												
		▪ Recognise inappropriate content, contact and conduct and know how to report concerns		■	■												