Digital Curriculum Map

Key = matching colours denote links between topics either in content or skills across year groups and key stages.

	Computer Science		**Programming**
	Digital Literacy/Creative		**ICT**
	E-Safety		**Exams/Assessment**

KEY STAGE 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	E-safety 1.0	Computer Hardware/Networks	Computational Thinking	Scratch Programming	Programming Project	Data Project
8	E-Safety 2.0	Data Representation	Physical Computing	Machine Learning & AI	Python 1.0	Photoshop 1.0
9	E-Safety 3.0	Python 2.0	Photoshop 2.0	UI/UX	App Design	

By the end of KS3 pupils understand and apply the fundamental principles and concepts of computer science, including abstraction, decomposition, algorithms, and data representation. Pupils can analyse problems in computational terms and have repeated practical experience of writing computer programs in order to solve such problems. Pupils can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems. Pupils are responsible, competent, confident, and creative users of information and communication technology.

KEY STAGE 4 (Comp Sci)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10	Data Representation	Boolean Logic	Systems Architecture	Memory and Storage	Operating Systems	Searching and Sorting/Algorithms
	Variables, arithmetic + Selection / Selection	Strings, Random Numbers	Iteration (for loops)	Arrays	Pseudocode/ Flowcharts	Game based projects
11	Networks	Network Security	IDEs/ELCE	GCSE REVISION AND EXAMS		
	Functions/ Procedures	Robust Programs / Iteration (while loops)	Files / SQL			

By the end of KS4 Computer Science, pupils will understand the principles by which modern computer systems work. They will know how data is stored and manipulated, how the physical components work together to form the computer and modern networks and they will understand the hardware and software needed for humans to interact with computers. Pupils will have developed the capability to program solutions to challenging problems by using abstraction, decomposition, and an iterative development model.

KEY STAGE 4 (DIT)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10	Explore User Interface Design	PSA Prep (Component 1)	PSA (Component 1)	Collecting, Presenting & Interpreting Data	PSA Prep (Component 2)	PSA (Component 2)
11	Effective Digital Working Practices					

By the end of KS4 DIT, pupils will understand what makes an effective user interface, and how to effectively manage a project. They will have used these skills to plan, design, and develop a user interface. Pupils will also understand the characteristics of data & information and how they help organisations in decision making. They will have used data manipulation methods to create a dashboard to present and draw conclusions from information. Pupils will also explore how organisations use digital systems and the wider implications associated with their use in order to effectively work in the modern digital world.

KEY STAGE 4 (Creative Media)		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	10	Exploring Media Products		PSA (Component 1) prep	PSA (Component 1)	Developing Digital Media Production Skills	
	11	PSA (Component 2) prep	PSA (Component 2)	Create a media product in response to a brief (Component 3 assessment)			

By the end of KS4 Creative Media, pupils will be able to explore existing media products to ascertain the techniques used in media production. They will build their investigatory skills, researching different stages of production and theorising techniques used in print media, moving images and interactive media products. Pupils will develop their skills in creating a myriad of media products from

KEY STAGE 5 (Comp Sci)		Autumn 1		Autumn 2	Spring 1	Spring 2		Summer 1	Summer 2
	12	Number Systems	Boolean Algebra	Data Structures	The CPU	Systems Software	Compression, Encryption + Hashing	Databases	Object Orientated Programming + Theory
		Procedural Programming		Programming (Data Structures)	Assembly Language	Web Technologies		Practical Databases	CW: Analysis
	13	Software Dev' Methods	CW: Design	CW: Development			Algorithms	ELCE	A LEVEL REVISION AND EXAMS
		GUI Programming		CW: Development			CW: Evaluation	Networks	

By the end of KS5 CS, pupils will have a deep knowledge of the operation of the computer and computer systems/networks. They will be able to use their problem-solving skills to confidently develop solutions to real life problems, relating these to appropriate users. They will be able to choose an appropriate programming paradigm and utilise a range of development styles to create fully functioning software based on the needs of a user.