Computer Science KS4 Curriculum Map

	Term 1 (September – December)		Term 2 (January – March)		Term 3 (April – July)	
Year 10 THEMES	• Understanding algorithms and computer data. • Development of text based programming skills.	• Understanding computer data. • Development of text based programming skills.	• Development of text based programming skills.	• Understanding computer networks. • Understanding HLL/LLL programming languages	• Independent practical programming project and consolidation of programming skills	• Understanding computer hardware and networks. • Exam preparation – practical & written
Pupils will be taught the following key themes (Edexcel GCSE (9-1) Computer Science specification 2020): • Understanding algorithms and developing dissemination problem solving skills. • Developing practical programming skills and understanding in Python. • Understanding data in computing • Understanding computer hardware and networks. • Independent practical programming project work.	Students are introduced/re-introduced to basic algorithm theory: flowcharts, pseudocode. Students investigate the aspects of binary data as associated with computing. Students are given the opportunities to develop a comprehensive range of text-based coding skills utilising the Python programming language to develop skills and knowledge to help them solve and disseminate practical problems by producing efficient coding solutions.		Students investigate the aspects of binary data/logic systems as associated with computing. Students investigate the role of the CPU in a computer system as well as a basic understanding of logic gates and HLL/LLL programming languages. Students are given the opportunities to develop a comprehensive range of text-based coding skills utilising the Python programming language to develop skills and knowledge to help them solve and disseminate practical problems by producing efficient coding solutions. Students investigate the key aspects of computer networks and the associated cyber-security.		Independent practical programming project work. Students investigate the role of computer network, the Internet and the associated protocols. Preparation for the mock examinations – both the written exam and the practical on-screen programming exam.	
Assessment	Algorithm assessment Practical project assessment	Computer data assessment Practical project assessment	Practical project assessment	CPU assessment	Project development Networks and cyber-security assessment	End of Year mock examination – theory and practical

Computer Science KS4 Curriculum Map

Year 11 THEMES*	• Independent practical programming project work • Understanding computer data.	• Understanding the Communication and the Internet.	• Understanding computer networks. • Understanding emerging Trends in relation to computing.	• External assessment	• External assessment	
Students will be taught the following key themes (Edexcel GCSE (9-1) Computer Science specification 2020): • Developing practical programming skills and understanding in Python. • Understanding the Communication and the Internet. • Understanding the Bigger Picture in relation to computing.	Independent practical programming project work.	Students investigate aspects of computer networks in relation to data transfer, network protocols and cyber-security.	Students investigate aspects of computer networks in relation to data transfer and network protocols. Students investigate emerging trends in computing that affect day-to-day life: ethical, legal, health	Preparation for external assessment: review of key exam topics/preparation for practical exam	Preparation for external assessment: review of key exam topics/preparation for practical exam	
Assessment	NEA practical project	Full Paper 2 'Mock' paper	Full Paper 1 'Mock' paper	Ongoing GCSE question answer analysis	Ongoing GCSE question answer analysis	