Curriculum Overview

SUBJECT:	COMPUTING	YEAR:	11
INTENT:	The AQA GCSE Computer Science curriculum equips students with the knowledge, skills and understanding required to become competent users and creators of digital technology. Students develop computational thinking, problem-solving abilities and programming expertise while exploring the ethical, legal and environmental implications of technology. The course prepares learners for further study in Computer Science, digital technologies and a wide range of future careers.		

UNITS OF WORK

Network topologies and protocols	Authentication and validation in programming	CPU architecture
Fetch – decode – execute cycle	Legal, ethical and environmental implications of technology	

Key Knowledge/Development	Key Skills Development	Assessment
• Understand network topologies, protocols and architecture. • Learn about wired and wireless networks. • Explore ethical, environmental and cultural impacts of computing. • Understand legislation including the Data Protection Act and Copyright Law. • Examine legal and ethical issues surrounding online activity. • Understand the purpose and functionality of computer systems. • Learn how CPU architecture and performance affect computing. • Explore memory, storage and data representation. • Understand embedded systems and emerging technologies. • Investigate system software, operating systems and utility software.	• Pattern recognition • Abstraction of problems (identifying the essential details in a problem) • Decomposition of problems (breaking down problems into smaller tasks)	• Quiz testing problem solving ability and understanding of key terms
EDI/SMSC/British Values/Careers	**Literacy/Numeracy**	**Curriculum Enrichment**
Explore the contribution of diverse individuals from different backgrounds to computing and technological innovation. • Understand responsible use of technology. • Examine issues such as hacking, privacy, copyright and cybercrime. • Evaluate ethical implications of emerging technologies. • Recognise contributions of individuals from diverse cultural backgrounds to computing.	• Use of mathematical operators, order of operations, number base conversions, unit conversions. Learning subject specific key vocabulary, reading and interpreting exam questions.	Coding competitions, opportunities to enter Mission Space lab.