KS3 ICT & Computing

What the curriculum is designed to do:

Our Key Stage 3 curriculum aims to develop our student's skill in information technology, computer science and digital literacy to help them engage positively with the digital and global world. Through a range of different projects students learn to use digital technology safely, enhance their logical and problem-solving skills and create a wide range of digital resources. This subject embeds a high-level numeracy and literacy, along with all the ICT skills needed to ensure our students have the best start to their future learning careers in a world with an ever-changing technological landscape.

How do we deliver the curriculum:

In years 7, 8 & 9 students study computer science for 1 hour each week. We aim to give students a broad range of skills making them confident and safe users of ICT and begin developing their knowledge and curiosity of computer science. Students have access to specialist teachers which gives them a fuller experience of the National Curriculum. We aim for an inclusive curriculum which is accessible to all through a range of opportunities and challenges for students of diverse abilities, talents, and background. Students are encouraged to become confident and motivated learners allowing them to learn successfully - both independently and in groups.

	Year 7	Year 8	Year 9
Term 1	Using ICT Safely	Data Representation	Functional ICT Skills
	Publishing Software	Building a Business	Digital Citizens
Term 2	Computational Thinking	Computer Systems	Mobile App Development
	Producing Spreadsheets	Python Programming	Mobile App Development
Term 3	Block Programming	Online Safety	Careers & the wider world
	Developing Digital Artifacts	Computer Networks	Careers & the wider world

How we assess students:

Students are assessed at the end of each unit through a range of different summative assessments depending on the unit, including peer and self-assessments, written evaluations, and online tests. Once assessments are complete and marked student then have a lesson of response time which allows them time to identify how they can improve on their final grade.

How the curriculum aids personal development:

Studying Key Stage 3 ICT significantly enhances personal development by equipping students with essential digital literacy and problem-solving skills. It fosters creativity through digital projects and promotes effective communication and collaboration using modern tools. By understanding online safety and ethical technology use, students become responsible digital citizens. Additionally, ICT education prepares students for future careers by providing foundational tech knowledge and improving personal efficiency through organizational tools. Overall, Key Stage 3 ICT prepares students to navigate and succeed in an increasingly digital world.

GCSE Computer Science

What the curriculum is designed to do:

The GCSE Computer Science curriculum is designed to equip students with a foundational understanding of computational thinking, problem-solving, and programming skills. It aims embed the key principles of computer science, including abstraction, logic, algorithms, and data representation. Students are taught to apply these principles to design, write, and debug programs for a range of algorithms. The curriculum also covers the practical aspects of computer systems, networks, cybersecurity, and the ethical and societal implications of technology. By the end of the course, students should be able to think critically and creatively about how computers are used in the real world, preparing them for further education and careers in technology-related fields.

How do we deliver the curriculum:

The curriculum is delivered through a mixture of theory lessons for Paper 1 (J277/01) & more practical programming-based lessons for Paper 2 (J277/02).

Paper 1 – Computer Systems	**Paper 2 – Computational thinking, Algorithms & Programming**
1.1 Systems architecture	2.1 Algorithms
1.2 Memory & Storage	2.2 Programming Fundamentals
1.3 Computer networks, connections, and protocols	2.3 Producing robust programs
1.4 Network Security	2.4 Boolean logic
1.5 Systems Software	2.5 Programming languages and Integrated Development Environments.
1.6 Ethical, legal, cultural and environmental impacts of digital technology	

How we assess students:

Each unit of the specification is assessed in a written assessment once all the content has been taught. Students then have time to respond to the feedback gained from their marked assessments to make improvements to their learning. For their final examination, in the summer of Year 11 students will complete 2 written exams. Each exam will be 50% of their final grade made up of 80 marks lasting 1hour and 30 mins.

How the curriculum aids personal development:

Studying for a Computer Science qualification allows students to strongly develop their critical thinking and problem-solving skills which will aim the greatly not only in the subject but in further education and their working life. This curriculum gives students a high level of understanding when it comes to technology which will be a great bonus when it comes to working with new and upcoming technologies of the future, and they will have developed greater understanding of how that will impact different areas of our society, environment, and law.