KS3 Curriculum Information

In KS3 students will learn computational mathematics and logic, how to control computers and the technology around them. They will learn how to manipulate and think like computers.

Topics Covered:

- School Project, E Safety & Formatting
- Scratch Programming
- Web Design & HTML
- Spreadsheet Modelling
- Graphics & Image Manipulation
- Python Programming
- Logo Programming (Drawing Polygons)
- Binary Data Representation
- Computational Thinking
- Data Representation & Computer Systems, Networks
- Mobile Phone Applications

KS4 Curriculum Information

OCR 9-1 GCSE Computer Science.

Component 1 - Computer Systems
Introduces students to the central processing unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software. It also looks at ethical, legal, cultural and environmental concerns associated with computer science.

This external assessment will take the form of a paper-based examination.

Component 2 - Computational thinking, algorithms and programming
Students apply knowledge and understanding gained in component 01. They develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic, translators and data representation. The skills and knowledge developed within this component will support the learner when completing the Programming Project.

This external assessment will take the form of a paper-based examination.

Programming Project
Students use OCR Programming Project tasks to develop their practical ability in the skills developed in components 01 and 02. They will have the opportunity to define success criteria from a given problem, and then create suitable algorithms to achieve the success criteria. Students then code their solutions in a suitable programming language, and check its functionality using a suitable and documented test plan. Finally they will evaluate the success of their solution and reflect on potential developments for the future.

The Programming Project does not count towards a candidate's final grade, but is a requirement of the course.