Computing/ICT

Statement of Intent

The economy is changing on a regular basis and almost all jobs in the UK today require employees to have a good level of digital literacy. The modern world expects digital skills to be as important as English and Maths.

Students will develop 'underpinning' concepts which are useful in many subjects, for example mathematics, science and engineering. The rigorous approach of the subject will facilitate a smooth transition to the next level of study.

Key Stage 3 Curriculum

Computer Science covers the importance of computation thinking in the modern world today and how it will do in the future. It is a qualification that enable students to apply themselves and give them
the skills to succeed in their chosen pathway. Students are taught computing 1 hour per week in dedicated Computing Suites.

Key Stage 4 Curriculum

In BTEC Award in IT there are opportunities for students to develop employability skills. It gives students the type of skills, knowledge and behaviours required in modern digital sector. Studying this course allows students to develop technical skills in data interpretation, data presentation and data protection. Other skills acquired by taking this course are outlined below:

- cognitive and problem-solving skills: use critical thinking, approach non-routine problems applying expert and creative solutions, use systems and technology
- intrapersonal skills: communicating, working collaboratively, negotiating and influencing, self-presentation
- interpersonal skills: self-management, adaptability and resilience, self-monitoring and development.

- Also, in Computer Science it gives learners the opportunity to develop sector-specific knowledge and skills in a practical learning environment. The main focus is on six areas of equal importance, which cover the:
- understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation.
- analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs.
- think creatively, innovatively, analytically, logically and critically
- understand the components that make up digital systems, and how they communicate with one another and with other systems
- understand the impacts of digital technology to the individual and to wider society
- apply mathematical skills relevant to Computer Science.

Lessons are taught by specialist teacher in dedicated Computing suites. Students are taught three lessons per week.

Key Stage 5 Curriculum

This pathway focuses on the development of a range of applications across platforms and sectors. We've made sure our students will gain the right combination of knowledge, understanding and skills required for the 21st century, enabling them to demonstrate the skills of writing specifications, and the design, build, testing and implementation of applications.

Apart from learning the theoretical aspects, students are taught various practical around software application, web development and game development.

Extended Learning

What we offer to extend the learning of our students

Sixth form students develop and share their knowledge/skills with the lower school by acting as subject ambassadors in lessons and Computing club.

What can parents do to support extended learning in this subject

Parents can support their children in various ways. This is include purchasing Raspberry Pi for coding, attending exhibitions, making sure homework is completed or use any of the website below to support learning.

https://www.bbc.co.uk/bitesize/subjects/z34k7ty
www.teach-ICT.com
https://www.codecademy.com/
https://www.w3schools.com/
https://code.org/educate/applab
https://www.netacad.com/catalogs/learn/data-science
https://www.childnet.com/help-and-advice/online-reputation/