Subject	Computer Science

"In 15 years' time, we'll be teaching programming just like reading and writing…and wondering why we didn't do it sooner" Mark Zuckerberg

Curriculum Intent

We aim to "*create a generation of young people able to work at the forefront of technological change*." Computer science is becoming more and more significant in this ever-changing technological world. We are constantly seeing technologies evolving to the extent where it is difficult to find any significant aspect of modern life or employment which has not been touched by new technologies. Computing explores how technology has and is evolving, how we communicate differently and how it has affected society around the world.

Powerful knowledge in Computer Science

Students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of other content. In the words of Steve Jobs, *"Everyone should learn to program a computer, because it teaches how to think"*. As technologies are consistently evolving, it is important that all students are equipped with the knowledge and skills in order to allow students to continue to develop and be better prepared to adapt alongside these changes whilst at the same time create students who have the potential to be at the forefront of future developments. We aim to equip pupils to use computational thinking and creativity to understand and change the world.

Curriculum Features

Our aim is to create students that are responsible, competent, confident and creative users of information and communication technology both practically and theoretically.
In the KS3 computing curriculum we focus on giving students the opportunity to understand the importance of technology and how it plays a pivotal part in their lives whilst at the same time educate our pupils on how to use technology positively, responsibly and safely.
The aim of the computing curriculum is to develop an understanding of ideas and principles and allow students to acquire knowledge and skills which are transferrable and relevant to future technological changes. Students are encouraged to think about how computer systems work and how they communicate with one another and with other systems. Students are taught to design, use and evaluate problems that model the state and behaviour of real-world problems and physical systems.
By the end of the KS4 computing curriculum, we aim to provide students with the knowledge to allow them to understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. Students are given the skills to allow them to analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

Curriculum Enrichment

Traditionally computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. With new technologies constantly evolving in areas such app design, ecommerce, cybersecurity and other emerging technologies, computing is at the forefront of career opportunities. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.