Computer Science

What will be covered during the course?

You will:
- look inside a computer to understand how they are built and how everything works
- get hands on experience of the various components and devices that make up modern computer systems
- learn to become an advanced computer programmer using software such as Python to really get an idea of how software developers create both programs and games
- create games in programs such as Scratch and Construct 3, allowing more time to develop your coding skills and bring your ideas to life
- Use software like Minecraft for education to learn how to code and solve problems in a familiar setting
- understand the logic behind a computer, looking into the concepts of binary and logic gates to really understand how a computer thinks
- gain an understanding of how images are stored inside a computer, looking at pixels and image compression, while also experimenting with image manipulation
- consider how data is transferred in and around a computer system, looking at concepts such as computer networks and the Internet
- discuss the legal and ethical aspects of computer science, and consider if new technology is actually benefiting society and the world we live in.

What skills will be developed over the year?

- problem solving will be a key area to this course as programming will allow you to unravel a problem and figure out a logical way to fix it
- design skills and begin to look at the 'bigger picture' when it comes to planning, developing and testing software/media related products
- understanding how a computer actually works will allow you to see the endless possibilities that computers have in our lives today

Where will this course lead me?

If you are genuinely passionate about computers and have a real interest in understanding how they work then this course will be perfect for you. As well as developing new skills you will strengthen skills that you already have allowing you to become a more competent and independent computer user. If you are thinking of choosing the Computing GCSE then this course is perfect, allowing you to get a flavour of what the subject has to offer and making the decision easier when it comes to making those all-important GCSE choices.

Although this course is not a requirement for taking a Computing GCSE, it will give you an amazing head start!