



A LEVEL

COMPUTER SCIENCE

Why choose Computer Science?

Studying Computer Science will give you the opportunity to think creatively, logically and critically, giving you an understanding of computer systems and the ability to apply your knowledge and skills to solve problems. A large part of Computer Science involves writing computer programs and a good proportion of our lesson time is spent programming. For exam purposes we will use C#, but over the two years other languages are also used.

OCR A-level

The A Level Computer Science course is examined at the end of Year 13 through two written exams worth 40% each; both lasting 2 hours 30 minutes, and a computing project of your choosing (20%).

Paper 1 – Computer Systems

Students are introduced to the internal workings of the CPU, data exchange, software development, data types and legal and ethical issues. The resulting knowledge and understanding will underpin their work in component 03.

It covers:

- The characteristics of contemporary processors, input, output and storage devices
- Types of software and the different methodologies used to develop software
- Data exchange between different systems
- Data types, data structures and algorithms
- Legal, moral, cultural and ethical issues.



Paper 2 – Algorithms and Programming

This builds on component 01 to include computational thinking and problem-solving.

It covers:

- What is meant by computational thinking (thinking abstractly, thinking ahead, thinking procedurally etc.)
- Problem solving and programming – how computers and programs can be used to solve problems
- Algorithms and how they can be used to describe and solve problems

Entry Requirements

There is a **recommendation** to have obtained at least a grade 6 in Mathematics and 6 in Computer Science (if you have taken this for GCSE).

Most students on the course will have completed GCSE Computer Science, and while this is not an entry requirement, if you have not studied Computer Science at GCSE you should possess very good background knowledge and also have some experience of computer programming.