# A Level Computer Science

## Why study A level Computer Science?

Computer science is, above all else, relevant to the modern and changing world of computing. It is a practical subject where students can apply the academic principles to real-world systems. It's also an intensely creative subject that combines invention and excitement and can look at the natural world through a digital prism. Learners will develop an ability to analyse, critically evaluate and make decisions.

## What will I study?

The aims of this qualification are to enable learners to develop:

- An understanding and ability to apply the fundamental principles and concepts of computer science, including abstraction, decomposition, logic, algorithms and data representation;
- The ability to analyse problems in computational terms through practical experience of solving such problems, including writing programs to do so;
- The capacity to think creatively, innovatively, analytically, logically and critically;
- The capacity to see relationships between different aspects of computer science;
- Their mathematical skills.

## Student Perspective

"I chose computer science as it covered a range of areas that I wanted to learn more about. We are studying everything from encryption to software development to artificial intelligence.

Computer Science is a good match for the other subjects I have taken and I like that there are many opportunities for university courses or employment after this course."

Sam, A Level Computer Science student

## Assessment

80% examined, 20% coursework.

**Computer systems**: Written paper - 2 hours and 30 minutes (40% of total A Level).

**Algorithms and programming**: Written paper - 2 hours and 30 minutes (40% of total A Level).

**Programming project**: - non-exam assessment (20% of total A Level).

## Study trips, visits and events

Computing in Industry – students are given the opportunity to spend an afternoon seeing coding and computing in action. Students also have the opportunity to enter the British Informatics Olympiad - a national computing competition, where they can compete to win the Hackathon!

## Subject entry requirements

Grade 5 in Computing if taken, or 5 in Maths and English Literature or Language if not taken.