



# GCSE Computer Science

## Optional Subject

## OCR Examination board

### Why study computing ?

This course will help you to develop critical thinking, analysis and problem solving skills. These skills can be transferred to other subjects and even applied in day to day life. If you want to go on to a higher study and employment in the field of Computer Science then this course will provide a sound, underpinning knowledge of this subject.

### Course description

This is a course that has a real relevance in our modern world. It will give students an in depth understanding of how computer technology works. They will study how computers work; how they communicate with each other (networking and protocols); logic and languages, how data is represented as well as the ethical and cultural impact of technologies in the modern world. They can develop their understanding of current and emerging technologies and how they work. Students will learn the benefits of computational thinking when applied to problem solving and will look at the use of algorithms in computer programmes. They will also acquire and apply creative and technical skills, knowledge and understanding of programming in a range of contexts. Students will develop computer programs to solve problems, evaluate the effectiveness of their solutions and their impact of computer technology on society.

### Student Criteria

This course is suitable for students that have a keen interest in programming and computational thinking. Students should be academically able, have good skills in English and a minimum predicted GCSE Mathematics grade 6+ is desirable.

### Assessment

Component 01 – Computer Systems. 50% of total marks

The first component is an exam focused on computer systems covering the physical elements of Computer Science and the associated theory

Component 02 – Computational Thinking, Algorithms and Programming. 50% of total marks

Section A: Assesses students' knowledge and understanding of concepts of computational thinking. Students then apply these to problems in computational terms, where they may use an algorithmic approach.

Section B: Assesses students' Practical Programming skills and their ability to design, write, test and refine programs