

# COMPUTER SCIENCE

If you are intrigued by what happens behind the scenes when you use a computer, then this is for you. Comprising theory and programming, this is a challenging and rewarding option to choose.



Computer Science GCSE develops useful skills such as the ability to think logically and critically; skills for analysis and problem solving. These skills relate to many other subjects and careers in the engineering, financial, medical, scientific and business management sectors.

Being able to code to express yourself is one of the most powerful tools available to today's specialists. The increasing importance of information and computing technologies means there will be a growing demand for professionals with this specialism.

The skills you will develop, and the knowledge you will gain, in Computer Science will support and strengthen your prospects in other fields, too. Being able to write a small program is ultimately a tool to maximise the power of your brain.

## COURSE CONTENT

There are two examined units, Unit 1, Computer Systems, and Unit 2, Computational thinking, algorithms and programming. Computer Systems covers the theoretical knowledge and will give you a real, in-depth understanding of how computer technology works. Topics will investigate hardware and software and how computers communicate in a network. We will look at cyber security and how computers store and process different kinds of data such as instructions, text, numbers, images and sound.

Computational thinking will help you develop your ability to decompose a problem logically into smaller problems that are easier to analyse, design a robust algorithm for and, ultimately, code and test. There is a practical element to support you in this unit – you will develop your programming techniques and constructs in Python. You will learn how to test and de-bug your code, take risks and learn from your errors. This is computational thinking, analysis and creative design all in one!

Studying the OCR J277 GCSE (9-1) in Computer Science will also provide a strong platform if you wish to continue to study Computer Science at A Level.

## ASSESSMENT: OCR J277

Computer Systems (J277/01) is worth 50% of the final qualification and is assessed in one final examination of 1.5 hours.

Computational thinking, algorithms and programming (J277/02) is also worth 50% of the final qualification and is assessed in one final examination of 1.5 hours.

There will be opportunities over the course for you to develop your practical programming skills by solving a series of challenges. The knowledge and experience gained is directly applicable to the examined components.

## TEXTBOOK

Our main textbook is OCR GCSE J277 Computer Science, Robson and Heathcote, ISBN: 9781910523216

## CONTACT FOR FURTHER INFORMATION

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