

# Computer Science

## What is GCSE Computer Science all about?

This course will give you an in-depth understanding of how computer technology works and a look at what goes on “behind the scenes”. To use an analogy, if the study of ICT is equivalent to driving a car, Computer Science is learning how the car works and how to design and build the car. As part of this, you will investigate computer hardware and programming, which many students find challenging and interesting. This course will equip you with skills and knowledge that are an ideal stepping-stone to further study of Computer Science and are in increasing demand by employers in the technology sector and wider science, engineering and creative sectors.

## What topics will I cover?

The course of study is made up of two examined components, each covering a broad range of topic areas. Alongside the practical nature of Computing, comes the science and mathematical theories and content which exist at the foundation of this subject. There is also a substantial practical programming element that underpins the course theory

### COMP1: Computer Systems

This unit covers the body of knowledge about computer systems, including:

- Systems architecture
- Memory and storage
- Computer networks, connections and protocols
- Network security
- Systems software
- Ethical, legal, cultural and environmental impacts of digital technology

### COMP2: Computational Thinking, Algorithms and Programming

This unit applies knowledge and understanding gained in component 01. Students will develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic and translators. Students will develop their skills to design, write, test and refine programs using the Python language.

## How am I assessed?

COMP1 and COMP2 are each worth 50% of the overall qualification and are assessed through a two 1.5 hour examinations. Students will be assessed on programming skills during the written examinations, in particular component 02.

## What examination board will I follow?

OCR

## Is there any additional information about this course?

Home access to a computer and the internet is essential to practise for practical work and home learning. Practising programming and problem solving outside lessons will be essential in being able to access the highest grades in the examinations. You should be comfortable with problem solving in Mathematics as there is a strong overlap with this course.

## Who should I speak to for further information?

Mrs Flynn-Coley, Mr Weier, Ms Quanungo or Mr Allday