Why should I study Computer Science?

If you want to look deeply into how computers and networks work, as well as investigating the structure of the internet, in addition to writing code, this is the course for you. This challenging course is ideal for talented pupils looking to follow a technical pathway in the future.

During the course you will learn what happens inside a computer, from low level code to high level languages. You will learn how to program and will become skilled at breaking tasks down into algorithms and flowcharts.

Computer Science is highly relevant in the 21st Century and the skills involved are very much in demand.

Key areas of the course are Computational Thinking, Coding and Digital Literacy.

How will I learn?

The main areas covered in GCSE Computer Science are:

Computer systems

System Architecture

Computer hardware and networks

Data representation

Software and security

Databases and data representation

Programming techniques

A large part of the course will involve programming, which is a key element of the subject. Programming tasks will be undertaken in class and as homework, to develop your skills.

How will I be assessed?

The assessment is divided into 3 units. Computer Systems (01): is a written exam paper which counts towards 40% of the final mark. You will have a mixture of short and long answer questions covering topics related to hardware and software. The exam is 1 hour 30 minutes long. Computational thinking, algorithms and programming (02): is a written exam paper which counts towards 40% of the final mark. You will answer questions that require you to demonstrate programming techniques and logical algorithmic thinking.

Programming Project (03/04): is a controlled assessment which counts towards 20% of the final mark. You will use programming techniques to complete a project. You will create solutions to tasks from various options provided by the exam board.

What pupils say

‘I chose to take Computer Science when I was in Year 9 and have not regretted it. I have really enjoyed studying system security within the course. The subject is widely recognised at college and sixth form. It is a very fun and interesting course which is important to consider when choosing your options.’ Year 10 pupil

Tara said:

‘I love computer science because it is really interesting to learn as it teaches us about things we use every day and how they work. It also gives us skills which help with all other lessons and will help in the future. As well as this it ’s good for everybody no matter what their coding ability is as there is always different levels of difficulty which allows people to challenge themselves but also not feel out of their depth.’

Progression

​​Pupils in this year group have to continue in education or training until they are 18. This means pupils will have to continue at college or sixth form or get a job with training such as an apprenticeship. You will be able to progress to any Level 3 ICT based course at college or sixth form as long as you achieve a Grade 5 or above. To study Computing at a higher level you ought to be aiming for at least a Grade 6. You will be able to take this qualification to a number of different colleges to study further. Different colleges have different entry requirements and it is important that you fully understand each of these.

Through this study of computer programming, the course will help learners develop critical thinking, analysis and problem solving skills. For many, it will be a fun and interesting way to develop these skills, which can be transferred to other subjects and even applied in day -to -day life.