



Computer Science

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Exam Board: AQA Specification: Computer Science: (8525)

The most important aspect of Computer Science is problem solving which is an essential skill for life. Along with developing universally useful skills, pupils will also always be in demand as there is a huge Computer Science skills shortage. The other benefit to this shortage is the average pay for Computer Science graduates which has been some of the highest for any profession for the past few years. This area of study will open doors in almost every type of industry. Due to how embedded computers are becoming in our everyday lives this number is growing every year. The opportunities for Computer Scientists in the future are enormous and it will also help pupils understand the technological world in which they will be living.

The GCSE Computer Science syllabus gives an insight into what goes on “behind the scenes” in the computing devices you use every day, whether that is a desktop computer, tablet or smart phone. The ability to program devices to make them do what we want to rather than just the use of software is fundamental to the course and to the study of computing in general. The course is made up of two theory examinations.

Programming

Pupils will begin to learn the programming language Python from their first week. They will learn to program several different constructs in preparation for the programming exam at the end of Year 11. This element of the course will be paced around the individual pupil. We don't assume any prior knowledge before starting the course, however we are aware that several pupils in every cohort begin studying for the GCSE with a huge amount of experience in programming at the same time. We have the resources available to nurture and develop those with no experience in programming, while at the same time having extensive challenges and resources available for those with experience in the subject to push their skills further.

Paper 1 – Programming.

This exam is worth 50% of the GCSE and is a written paper that is based on practical scenarios. There will be a mixture of question types from multiple choice to longer answer style questions. The theory content of this paper is based on Algorithms, Programming, Data and Computer Systems.

Paper 2 – Traditional Written Exam

This exam is worth 50% of the GCSE is a written paper in the traditional sense based on the theory topics below:

- Computing hardware including the operation of the CPU
- Memory and storage
- Software types, categories and uses
- Representation of data in computer systems
- Databases and relations
- Networking and the internet
- Ethical and legal aspects
- Cyber security

