AQA GCSE in Computer Science

Why should I study AQA GCSE Computer Science?

The AQA GCSE in Computer Science combines well-established areas of computing with ongoing advances in an ever-changing technological world.

What will I study?

The AQA GCSE in Computer Science (8525) is comprised of the following eight subject content areas:

1. Fundamentals of algorithms
2. Programming (theoretical & practical)
3. Fundamentals of data representation
4. Computer systems
5. Fundamentals of computer networks
6. Cyber security
7. Relational databases and structured query language (SQL)
8. Ethical, legal and environmental impacts of digital technology on wider society, including issues of privacy

How will I be assessed?

At the end of this linear two-year course, there are 2 written theory examinations:

Paper 1: Computational Thinking & Programming Skills (Written examination: 2 hours; 50% of GCSE)

This paper covers computational thinking, code tracing, problem-solving, programming concepts including the design of effective algorithms and the designing, writing, testing and refining of code.

Paper 2: **Computing Concepts** (Written examination: 1 hour 45 minutes; 50% of GCSE)
The content of this paper will be drawn from subject content 3 to 8 above.

Both examinations carry 90 marks and will contain a mix of multiple choice, short answer and longer answer questions assessing programming, practical problem-solving and computational thinking skills, SQL programming skills and theoretical knowledge.

Which skills will I develop and use?

The AQA GCSE in Computer Science will provide opportunities to develop useful transferable skills such as practical ICT skills, research, planning and review, collaborating with others and communicating logical & computational concepts effectively. A key part this course is the development of students' programming skills. Students will be given the opportunity to design, write, test and refine, using one or more text-based programming language(s). At Pembroke, we focus on Python as a programming language.

How will I be able to use this subject in my future career?

The qualification places learners in a sound position for progression to Further or Higher Education study, equipping students with the logical and computational skills to succeed at A-level, the workplace or beyond. Learners will also achieve a qualification that is relevant to the current needs of industry, equipping them with relevant employment skills in an ever-changing technological workplace.

There are many different careers that this qualification could help learners move towards, particularly in the ICT design field, notably game, website or app design and development, as well as the world of programming or Cyber security.