

Computer Science



Qualification: GCSE

Equivalent to: 1 GCSE (grade 9-1)

This course is focused on “How computers work”. It gets under the skin, and behind the scenes of Computing. This course does not focus on how well students can use applications (that is ICT), instead we study how those programs are made. Students are taught to be “creators” of technology and not simply “consumers” of it.

At the core of the subject is the principle of learning to “code” in order to write computer programs, as such the subject of Computing is very logical and analytical, and students who enjoy and do well in subjects such as **Maths** and **Physics** will take well to it.

Course Content

The course covers the following broad areas:

- Fundamentals of computer systems
- Computer hardware
- Software
- Representation of data in computer systems
- Databases
- Computer communications and networking
- Cyber security
- Programming

Assessment

Unit 01 : Computer systems

50% of the total GCSE – 1 hour 30 mins Written Exam (80 marks)

Question paper includes short answer questions and essay type questions

Unit 02 : Computational thinking, algorithms and programming

50% of the total GCSE – 1 hour 30 mins Written Exam (80 marks)

Question paper includes short answer questions and essay type questions

Unit 03 : Programming project

Non-exam Assessment (NEA), approx. 20 hours

Programming tasks that enable candidates to design, develop and test a solution to a problem.

The exam board sets the tasks. This NEA helps to prepare students for the Programming elements of the exam

Who would enjoy and be successful on the course?

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Progression – Sixth Form / Further Education / Careers

After taking this course you could continue on to the Sixth Form to study Computing A level. We have had a number of very successful students studying Computing at Archway who have gone on to university courses to do Computing Games Design, Computer Science and Programming Apprentices at Renishaw in Stroud.