COMPUTER SCIENCE

Examination Board: AQA

Why study Computer Science?

Computer Science is an academic and scientifically based course which teaches you how to program and problem solve. It is a continually growing and ever changing subject, influenced by the world we live in. A career in Computer Science is one of the most in demand and highly paid jobs, with a huge variety of job types to choose from. If you are interested in how a computer works, how computer science is influencing society and problem solving, this course is for you.

Where does it lead?

An A Level in Computer Science can support progression to higher education study in a range of Computer Science/ICT qualifications.

There are many career options open to you with an A-level in Computer Science, e.g. software engineer, system analyst, systems designer, project manager, network engineer, IT support , system security, games industry, programmer.

Course Content

The course is split into practical/problem solving and theoretical aspects.

The practical/problem solving aspect covers the follow topics:
• Programming
• Data structures
• Algorithms
• Theory of computation
• Problem Solving

The theoretical side of the course looks at how a computer works, including the following topics:
• Data representation
• Computer systems
• Computer organisation and architecture
• Consequences of uses of computing
• Communication and networking
• Databases
• Big data
• Functional Programming

Course Assessment

The course is assessed by two examination papers and a coursework unit:

• **Paper 1 – focussing on the practical and problem solving aspects (40%)**: onscreen exam

• **Paper 2 – theory (40%):** written paper

• **Coursework – (20%):** The coursework unit allows students to solve a problem using a programming language of their choice. Students analyse, design, create and test their own solution while recording their evidence in a written document. The project is designed to be independent and will allow students to test their programming abilities and problem solving to overcome difficulties along the way

For further information, please contact Mr Phillips