Computer Science

Why study Computer Science?

This GCSE gives students an excellent opportunity to investigate how computers work and how they are used to develop computer programming and problem-solving skills. Students will do some in-depth research and practical work.

The course will:

Give learners a real, in-depth understanding of how computer technology works

Provide excellent preparation for higher study and employment in Computer Science

Develop critical thinking, analysis and problem-solving skills

Students will:

Develop their understanding of current and emerging technologies, understanding of how they work and apply this knowledge and understanding in a range of contexts

Acquire and apply a knowledge, some technical skills and an understanding of the use of algorithms in computer programs to solve problems using programming

Use their knowledge and understanding of computer technology to become independent and discerning users of IT, able to make informed decisions about the use and be aware of the implications of different technologies

Acquire and apply creative and technical skills, knowledge and understanding of IT in a range of contexts

Develop computer programs to solve problems

Develop the skills to work collaboratively

Evaluate the effectiveness of computer programs/solutions and the impact of and issues related to the use of computer technology in society

How is the course organised?

The course consists of 3 units of work which are assessed by two written papers and one non-exam assessment.

Component 01 – Computer Systems (Written Paper—50% of total GCSE)

The computer systems unit will teach students about the theory about a wide range of issues such as systems architecture, memory and storage, networking, network security, systems software and ethical, legal, cultural and environmental impacts of digital technology.

Component 02 – Computational Thinking, Algorithms and Programming (Written Paper—50% of total GCSE)

The computational thinking unit will teach students about the theory about algorithms, computational logic, data types, producing robust programs and programming techniques.

Component 03– Programming Project—20 hours— but the marks won’t count which takes the pressure off you as you code.

Computer Science:

Specification: J277

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