GCSE Option: Computer Science

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Course Structure & Overview

Exam Board: OCR
Syllabus: J276
Unit 1: Computer Systems 40%
Unit 2: Computational thinking, algorithms and programming 40%
Unit 3: Programming Project 20%

Computing Science – Inspiring and Challenging! Technology is advancing, Computer Science is constantly changing and Computer Science qualifications will keep you ahead of the game! Anyone that enjoys programming and working with the "nuts and bolts" of a computer will enjoy this course. The Computer Science course is designed to teach concepts and develop techniques that have long-term value and support progression to higher education and beyond, as well as giving students a hugely engaging and stimulating experience of Computer Science.

Course Content

GCSE Computer Science is made up of three sections:

Unit 1: Computer Systems - Written Paper – 1½ hours – 40% of GCSE
This component will introduce learners to the Central Processing Unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software. Students will become familiar with the impact of Computer Science in a global context through the study of the ethical, legal, cultural and environmental issues associated with Computer Science.

Unit 2: Computational Thinking, Algorithms and Programming – Written Paper – 1½ hours - 40% of GCSE
Students will be introduced to algorithms and programming, learning about programming techniques, how to produce robust programs, computational logic, translators and facilities of computing languages and data representation. Students will also become familiar with computing related mathematics.

Unit 3: Programming Project – Controlled Assessment – 20 hours - 20% of GCSE
This is the non-exam assessment where students will be challenged by a range of exciting and engaging tasks to apply the knowledge and skills they learn during the course. Students will develop programming and research skills, and understand how to design, develop, test and evaluate their own software creations.

Skills Developed

Computer Science involves:

- Critical thinking, leadership and teamwork
- Analysis and problem solving
- Programming and coding
- Designing and testing your own programming
- The theory of how computers work
- Critically evaluating, testing and improving code

Progression Routes

Many of the students who enjoyed studying GCSE Computer Science have gone on to study A Level Computing or gone into Web Design. If post-16 courses are not for you, employers will value the discipline of this GCSE qualification as it encourages critical thinking, technical and problem solving skills.

Future Careers

Future careers include, database administrator, games developer, information systems manager, IT consultant, multimedia programmer, systems analyst & developer and web designer & developer.