GCSE Computer Science

**Introduction / Why Study GCSE Computer Science?**

The GCSE is computer science provides pupils with an opportunity to study and investigate the modern and changing world of computer science. Computer Science is a practical subject where learners can apply the knowledge and skills learned in the classroom to real-world problems. Our Computer Science qualification will value computational thinking, helping learners to develop the skills to solve problems and design systems that do so while also studying the theory that makes up underpinning of the subject.

**Exam Board**

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The OCR exam board specification is available at: http://www.ocr.org.uk/qualifications/gcse-computer-science-j276-from-2016/

**What Will I Study / What Skills Will I Develop?**

The GCSE in Computer Science, through practical programming application and theory knowledge development, will encourage learners to:

* Understand and apply the fundamental principles and concepts of Computer Science, including abstraction, decomposition, logic, algorithms, and data representation
* Analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs.
* Think creatively, innovatively, analytically, logically and critically
* Understand the components that make up digital systems, and how they communicate with one another and with other systems
* Understand the impacts of digital technology to the individual and to wider society.
* Apply mathematical skills relevant to Computer Science.

**How Will I Be Assessed?**

The course is assessed in 3modules:

* **Module 1 Exam (40%)** – A written exam at the end of Year 11, testing Computer System knowledge.
* **Module 2 Exam (40%)** – A Written exam at the end of year 11, testing Computational Thinking knowledge.
* **Module 3 Controlled Assessment (20%)** – Programming project completed in lesson.

**Points to Consider When Selecting This Option**

GCSE Computer Science focuses on one of the three strands of computing studied at Key Stage 3, and is focused on the understanding of how systems are constructed and operated through programming and logic. Students will be expected to work in their own time to develop their programming knowledge and skills in preparation for the tasks in lessons and the final assessments. Therefore, candidates will need to have access to a computer in order to achieve their best within this subject.

**What Might GCSE Computer Science Lead To?**

The course will provide excellent progression to 'A' level Computer Science, vocational courses and on to degree level courses in the areas of Computing, Engineering and Science. The course provides the knowledge, skills and understanding that a growing number of employers are demanding.

**Other Information**

It is intended to arrange a visit to a the British Museum of Computing along with any other relevant visits.