**Aims of the subject:**

* to develop Computational Thinking and Programming Skills;
* to foster an interest in, enjoyment of, and confidence in the use of computing;
* to develop the ability to solve problems using computing techniques;
* to develop an awareness of the place of computer science in society and issues that arise from computing;
* to gain a firm understanding of the basic techniques and knowledge required for computing applications;
* to develop a desire to use computers within other interest areas.

**Course Description:**

The OCR Computer Science syllabus gives students a real, in-depth understanding of how computer technology works. It offers an insight into what goes on ‘behind the scenes’ including computer programming. It’s a great way to develop critical thinking, analysis and problem-solving skills which can be transferred to further learning and to everyday life. OCR Computer Science is an ideal foundation for further study at A Level. Please note that there is a strong programming element to this course.

**Assessment methods:**

This course is based upon two terminal exams (taken in Year 11) and a programming project (conducted in Year 11). The programming project is designed to allow students to learn about a high-level programming language and have the opportunity to show that they can use it to solve problems. It is a requirement of the course but does not contribute directly to the final marks.

**Computer Systems 01:** Theoretical Paper. This written paper contains short-answer and structured questions. 50% of total marks.

**Computational Thinking, Algorithms & Programming 02:** Theoretical Paper involving aspects of algorithm design & interpretation. This written paper contains short-answer and structured questions. 50% of total marks.

**Programming Project 03:** Programming Project. Students will design, develop and test a solution to a problem within the OCR set scenario.

**Homework:**

Regular homework will be set and this will take the form of:

* specific questions to ensure understanding;
* preparation of presentation about specific topics to share in the classroom;
* past paper practice questions;
* reading of appropriate supporting IT and Technology news stories and case studies;
* there will also be regular end of topic tests to test understanding of computing theory.

**How families can help:**

* Encouraging students to take an interest in the news and especially articles about the use of ICT by organisations and emerging technologies. This could be done by regularly reading articles posted on the departmental blog page from trusted and reliable sources such as: BBC Technology, Guardian Technology and the New Scientist and by subscribing to appropriate Youtube channels such as FWThinking, Veritasium & Vsauce.
* Taking an active interest in the subject through discussion about topical issues and related technology.
* Downloading and installing Python and other free programming languages on home computers and encouraging students to create programs to solve real-world problems (e.g. Creating a Christmas-card mailing list or creating a weekly shopping list to see how money could be saved)

**For more information please contact: Mr A. Briggs-Davies, Head of Computing.**