COURSE INFORMATION

This course will allow students to understand and apply the fundamental principles and concepts of Computer Science, including algorithmic thinking, and computer systems. In addition to this they will discover the power of Computer Science in modern life, as well as the exciting and evolving career opportunities in our current society. Students will analyse problems in computational terms through practical experience of solving such problems, including a strong use of the Predict Run Investigate Modify Make (PRIMM learning model) to assist in the professional designing, writing and debugging of programs. With this in mind, they will gain a thorough understanding of Python Programming, through the use of innovative programming projects. Finally, they will learn about the wider implications of digital technologies embedded in their everyday lives, including the legal, ethical and environmental impacts.

Components of study - How it is assessed:

Computer systems - 50% externally assessed

Computational thinking, algorithms & programming - 50% externally assessed

Key Stage 4 Assessment

The qualification has two components, within Components 1 and 2 you will carry out tasks or activities to develop your understanding of computational thinking as well as computer systems. This knowledge will underpin your understanding of computer programing. Students will be using the computing software Python as a tool to assist with their practical programming skills and their ability to design, write, test and refine programs.

How I can support my child’s learning?

This level 2 (GCSE) course acts as a stepping stone into the level 3 computer science course (A-level), and therefore children will need to have a high level of mathematical skills in preparation for the course, with a target of a GCSE Maths grade 6 or more. Keeping this in mind, there are a number of websites that students can access at home to help improve their knowledge and understanding of Computer Science. These include: SAM Learning, Codeacademy.com, Bitesize, and using the OCR revision guides. For specific Python Coding knowledge ‘The little book of Algorithms’, W. Lau, and ‘Learning to Program in Pyton’ by PG Online/PM Heathcote, are also excellent resources