



Curriculum Intent Plan



Subject: Computer Science

Overview

In Computer Science students will explore real-world applications of computing, many of the concepts of which students are already familiar. The aim of this approach is to encourage engagement and enjoyment in Computer Science is challenging, but accessible for all. Classes will have practical and creative approaches to investigating core concepts in Computing. Students will develop problem solving and analytical skills, logic and resiliency, all skills required in the 21st Century. The topics of study will provide students with a strong foundation for their progression to GCSE and beyond and will be enhanced by a strong extra-curricular program. The intention of Computer Science is to promote a love of the subject and encourage a career in the industry.

Year 7

The Year 7 curriculum is designed to provide a solid foundation in computer function and design. There is a strong emphasis on programming in Python, a powerful real-world programming language used in areas such as: Robotics, Driverless Cars, Gaming, Artificial Intelligence, Mobile Apps and Data Analytics. Students will learn the foundations of the language and develop games and applications.

Year 8

The Year 8 curriculum builds and expands upon the successes of the previous year. The structural and functional aspects of the computer will be explored in greater detail. Students will be shown how this deeper knowledge is relevant to computer users and developers. Students will explore computational thinking and how this skill can be applied as a problem-solving method in all areas of life, not just computing.

Year 9

The Year 9 curriculum prepares students for their GCSE by ensuring that students not only explain and apply their knowledge of computing concepts. Students will also be able to evaluate and fluently use relevant technical terminology. Topics in Year 9 include: Von Neumann Architecture, Network Topologies, Ethics in Computing and Advanced Programming and Database concepts. Students will then continue onto OCR GCSE 9-1 Computer Science curriculum. The knowledge and understanding gained at KS3 will help students transition into the GCSE curriculum.