Computer Science

Computer Science at Key Stage 3 aims to ensure that all pupils understand and apply fundamental principles and concepts of computing, including abstraction, logic, algorithms and data representation. Pupils will be able to analyse and problem solve in computational terms; creating computer programs using Python. They will also understand and apply information technology using new or unfamiliar technologies providing suitable skills for future workplace or further education. All pupils' work will be completed via Google classroom and saved on their individual Google drives which are available online at all times.

Year 7

In Year 7, pupils will learn digital literacy so they can apply successfully proficient use of Microsoft products.

Pupils will understand how to stay safe online, including what is personal data, online bullying and how to report issues.

They will begin to investigate Game design, understanding sequencing, problem solving and processes of development such as flowcharts and pseudo code using Game Maker. Moreover, they will begin simple programing in Python, structuring simple instructions to perform tasks.

Pupils will investigate how computers work and what components are inside a computer.

Year 8

In Year 8, pupils will learn about the world of digital gaming. This is a practical based unit, which will enhance their coding abilities and problem solving skills for the application of computer game design.

Pupils will then plan, develop, build and test a website, which will include some HTML code and use of a multipage website development software, Serif WebPlus

Pupils will also begin to develop further in programming using Python language, which will build on their existing skills, learned during year 7.

Year 9

In Year 9, pupils will build on their prior learning in year 7 and 8 by developing a more complex digital game. This will allow the skills to develop to a standard that will prepare the pupils for GCSE level work

Pupils will then continue to build on their Python programming skills and further develop their software development skills. This will include learning about such terms as syntax, variables, while loops, 'if' and 'else-if' statements and how to test and improve code that has been written.

Finally, pupils will develop their knowledge of digital graphics, from investigating why and when they are used to planning their appearance and use of time through to creation of a digital graphic and creating a full evaluation of their own work.

This year will allow pupils to solidify their knowledge and understanding of Computer Science and allow them to develop their competencies in one of the range of subjects that are on offer at GCSE level.

Extra-Curricular

The Dean Trust has a strong partnership with UKFAST and uses this partnership to organise trips and workshops to enhance pupils' understanding and skills, and to expose them to potential careers within the computer science industry. In addition to this there are opportunities for pupils to attend coding club to develop their knowledge in this area.