Blue Coat
Church of England Academy

Year: 8	Subject: ICT/Computer Science

Overview

In an ever changing, technologically advancing society it is imperative that we equip our students with the desired skills needed for their future life and career. With new technological jobs emerging constantly that have not previously existed, it is vital that our students are digitally literate, logical and adaptable thinkers who have the knowledge and skills to meet the ever changing and new demands of the future society. The Royal Society has identified three distinct strands within computing that all complement each other – they are Computer Science, Information Technology and Digital Literacy. Each component is vital when preparing our students for their futures within the digital world.

The new Computer Science curriculum has been developed to equip young people in England with the foundational skills, knowledge and understanding of computing that they will need for the rest of their lives.

Information Technology

Within Year 8 students continue to develop their skills through a range of different projects during the year. They learn how to use the internet effectively, using the information to develop their work using a range of different Microsoft office packages from Word, Excel and Publisher. Students learn how to create a range of different formulas within Excel so that they are able to create and develop a spreadsheet that will solve a problem.

Computer Science

Their Computer Science skills are developed through the introduction to text based programming using Python. Students have to develop a range of different programs, from the most common “Hello World” program to different types of text based games. During this year they use the Turtle aspect of Python to design and develop their own images and visual elements of a code. This is used to develop the students understanding of programming and their problem solving skills as they have to debug their programs, understanding the key elements of a program.

Students also learn how to program the Lego EV3 – they use block based code to develop the robots interface, creating programs to navigate around a maze and avoid obstacles in its path using a range of sensors.

Students learn about how computers have developed throughout time and are encouraged to develop an understanding of how the computer works