

Computer Science – curriculum statement

At Enfield County School for Girls, we believe studying Computer Science is essential in today's technological world. Studying Computer Science develops a students' ability to analyse, model and solve problems. It enables students to understand how the world is shaped by technology and the impact it has on our lives.

Students have the opportunity to learn about a wide range of topics in Key Stage 3 that focus on developing their understanding of how computers work. The curriculum is divided into six strands:

- Networks
- Algorithms
- Programming
- Hardware and software
- Data
- ICT

Each year students will learn about aspects of Computer Science that cover each of the strands. Throughout Key Stage 3, students will build on their skills, knowledge and understanding to ensure that they are fully prepared for Key Stage 4.

By the end of Key Stage 3 students will be able to identify the main components inside a computer and describe how they work. They will understand that data is stored as binary and used in logic gates to make decisions inside computers. Students will also have the opportunity to create web pages using HTML and understand how information is shared across networks. Throughout Key Stage 3, students will develop their computational thinking skills by designing algorithms and creating programs in a range of languages.

Digital literacy skills are taught throughout Key Stage 3, with an emphasis on e-safety in Year 7. In Year 8, students learn about legislation and cyber security, while in Year 9 students learn about the internet and how information is shared online. ICT skills are developed throughout Key Stage 3 and used to present and share information to a range of audiences. Students are taught how to use ICT appropriately so that they are prepared for further study and the world of work.

Students who take GCSE Computer Science further develop what they have learnt in Key Stage 3 and apply their knowledge, skills and understanding. In both courses, students develop a deeper knowledge of computers and how they work as well as developing solutions to real world problems. The theory and practical element of both courses prepares students for further education in a range of subjects, particularly Computer Science, IT, Maths and Engineering. Students who have studied either course develop analytical and problem solving skills suitable for the workplace.

We are very proud of our results at ECSfG. At GCSE, the Computer Science department achieved excellent results with 43% of students achieving grades 7 – 9, 71% grades 4 – 9 and 100% 1 – 9.

We support learners both inside and outside the classroom with a range of activities and enrichment opportunities. Year 7 students work towards Duke of York Inspiring Digital Enterprise Award (IDEA) while all students participate in the annual Bebras Computational Challenge. In addition, we run a number of competitions and events such as STEM challenges and the Hour of Code.