

GCSE Computer Science (Edexcel)

What is Computer Science?

In Computer Science you will learn how computers represent all types of data within them, how computers can communicate and the threats that this might cause. A lot of Computer science is learning how to solve problems, these are solved using writing flowcharts or by writing programs using Python.

Topics that are covered:

- Problem solving
- Programming using Python
- Data representation – What is binary and how does a computer use it?
- Computer hardware – What are the different parts of a computer and how do they work together?
- Computer communication and the internet – How do they communicate and how can we deal with the threats we may face online?
- The bigger picture – What laws impact computer science? How does the use of computers impact the environment and society?

What computer science isn't?

You will not be playing games; you will not always be on the computer. It isn't easy but if you pay attention in lessons and study then you will cope easily with the content.

How is computer science examined?

Paper 1 – Principles of Computer Science, 1hr 30min, 50% of the qualification

Paper 2 – Application of Computational Thinking, 2hr, 50% of the qualification

Paper 2 is a practical onscreen examination which will assess your ability to solve problems using programming, you will answer these questions using Python.

Why study computer science?

Computers are an undeniable part of our world now; it is unlikely that you will not come across a computer daily if not hourly. Smartphones, tablets, and the internet have changed the way we communicate, work, socialise and innovate. With this being the case, it is increasingly important that you are prepared for this world by having an understanding how these devices have changed our world and how you can utilise them and more importantly so that you can program them so that you can access the emerging jobs that will appear over the next decade and beyond.

No longer are computers confined to dusty basements. Top creative companies are making use of them constantly, medical teams now use computers to perform surgeries or investigate the ways that medication might impact larger numbers of people than ever before. The new film studio, due to be opened in Dagenham, will make use of computers to aid in every step of the development of new releases from editing to animation. With these fields come unfamiliar problems and having a keen sense of problem-solving techniques will help you overcome these challenges and you are taught the fundamentals of problem solving from the first lesson of this GCSE.

For further information please contact Mr Davidson at adavidson@dagenhampark.org.uk