

Option – GCSE Computer Science

Further information: Mr Endacott

Email: cendacott@davidnieper.academy

GCSE Computer Science is one of the most fascinating subjects to study. The subject focuses on digging below just using applications, and into how the computer itself functions. How does a computer store information? how does it turn a signal from a wire into a picture on a screen? how can we communicate with computers and create programs? These are the questions we aim to answer.

Anyone who is doing well in Maths and enjoys solving logical puzzles will really enjoy this course with around 40% being programming, and a further 30% using Maths and logic to solve problems in other areas.

GCSE Computer Science is a highly respected qualification and a very useful one. Anyone looking to go into stem subjects (Science, Technology, Engineering and Maths) at university will no doubt be using programming on a daily basis. Anyone wanting to go into areas like game development, web design, or any other technical job will also find the knowledge gained indispensable.

Below is a more in-depth course breakdown.

Programming – 40% Writing programs to solve all sorts of problems. (solving puzzles, calculating the answers to Maths problems, creating real life solutions like automatically calculating much a shop has made in the past week).

Algorithms – 10% Study algorithms to quickly solve fundamental problems like sorting a list or searching through a database.

Binary representation – 10% Understand how computers store things like videos, pictures, music, and words. Plus, the Maths that makes it work.

Hardware – 10% Find out how computers physically work, where information is stored, processed and what effects its speed.

Boolean logic – 10% Learn how the circuits inside a computer work by studying Maths with binary numbers.

Cyber security – 10% Discover how hackers and criminals can steal your data and how you can protect against this.

Ethical, legal and environmental issues – 10% Examine the consequences of our continued use of computing technology on social and environmental factors.

Examination Board – AQA – The course is assessed via 2 x 1:30 hour exam papers and is 100% exam based.