## EBacc Pathway

## What is Computer Science?

This subject offers 'traditional pathway' learners a real, in-depth understanding of how computer technology works. The course will develop critical thinking, analysis and problem-solving skills. It offers an insight into what goes on 'behind the scenes', including computer programming, which students find absorbing. Computing is part of the English Baccalaureate. Computer Science is challenging but rewarding. It is suited to those who are more technically, scientifically or mathematically inclined, but is it is also creative and helps with other subjects. Skills are in-demands from employers around the world and Computer Science provides excellent preparation for study in higher education and employment in the field of Computer Science.

## Course Content:

The course is very varied and will introduce to a range of new concepts and skills related to how computers work, and to think about the impact of technology of our lives.

Paper 1: Computational thinking and programming skills
Topics covered include: Computational thinking, code tracing, problem-solving, programming concepts including the design of effective algorithms and the designing, writing, testing and refining of code.

Programming is taught using Python 3.8.
Paper 2: Computing Concepts
Topics include: Data representation (Binary, Hexadecimal, Image and Sound), Computer systems, Computer networks, Cyber security, Relational databases and structured query language (SQL), Ethical, legal and environmental impacts of digital technology on wider society, including issues of privacy.

## Assessment: 100\%

Paper 1:

- Written exam: 2 hours
- 90 marks
- $50 \%$ of GCSE


## Paper 2:

- Written exam: 1 hour 45 minutes
- 90 marks
- $50 \%$ of GCSE


## Subject Leader: Laura Greene

## Exam Board:

