

# Computer Science

KS4 (Year 10 – 11)

## Topics studied:

Students begin by studying **Unit 1 Computer systems** in Year 10 looking at the topics 1.1 Systems architecture, 1.2 Memory and storage, 1.3 Computer networks, connections and protocols, 1.4 Network security, 1.5 Systems software and, finally, 1.6 Ethical, legal, cultural and environmental impacts of digital technology.

In Year 11 students study **Unit 2 Computational thinking, algorithms and programming** looking at the topics 2.1 Algorithms, 2.2 Programming fundamentals, 2.3 Producing robust programs, 2.4 Boolean logic and 2.5 Programming languages and Integrated Development Environments.

## Exam Board:

OCR

## Assessment Structure:

Unit 1: Computer systems	1 hour 30 mins written exam paper 50% of GCSE
Unit 2: Computational thinking, algorithms and programming	1 hour 30 mins written exam paper 50% of GCSE

## Keywords that students must know, and be able to spell, by the end of the course:

Hardware, Logical Operations, Communication, Organisation and structure of data  
 Operating systems, Principles of programming, Software engineering, Security and data management, Ethical, legal and environmental impacts, Algorithms, Variables, identifiers.  
 String handling, Mathematical and logical operations, Sorting and searching, Markup & Object orientated languages, Assembly language, Data structures and Data types, Security and authentication

## Subject specific websites to support revision and independent learning:

[www.teach-ict.com](http://www.teach-ict.com)

[www.bbc.com/education/subjects/z34k7ty](http://www.bbc.com/education/subjects/z34k7ty)

[www.w3schools.com](http://www.w3schools.com)

[www.codecademy.com](http://www.codecademy.com)

## To help your child this year you can:

Encourage them to attend extra provision at lunchtimes and/or after school and to use the revision guides to make notes in preparation for the exams.