

Course Outline

The OCR GCSE in Computer Science course teaches students the basics of how computer works. One key aspect is to learn coding, with the following key concepts taught and practiced: sequence, iteration, selection, functions, 2 dimensional lists and file operations. The theory of the following topics is also covered: system architecture, networks, data representation, databases, simple search and sort algorithms, testing and defensive design, ethical and legal considerations.

To succeed, students should have enjoyed the challenge of finding the right combination of instructions to give to the computer to get it to perform the desired task – as practiced during the coding units they did in year 9. The willingness to “get stuck in”, to try different code, to get clues from error message and then to modify the code accordingly and to try again is a contributing factor to students performing well in this subject.

Assessment

There are two units, each worth 50% of the final grade:

Unit 1: Computer systems.

- Systems architecture
- Memory and storage
- Computer networks, connections and protocols
- Network security
- Systems software
- Ethical, legal, cultural and environmental impacts of digital technology

Unit 2: Computational thinking, algorithms and programming

- Algorithms
- Programming fundamentals
- Producing robust programs
- Boolean logic
- Programming languages and Integrated Development Environments

Progression/further study

This course will enable students to proceed to qualifications at Level 3 and potentially Higher Education, including A-Level Computing. Along with many different careers including App development, programmers and network managers / technicians.