

# OCR GCSE in Computer Science Curriculum Intent

## What the curriculum is designed to do

Relevant to the modern, changing world of computing, the qualification is designed to boost computing skills essential for the 21st century. Computing companies, organisations, academics, and teachers have been involved in shaping and developing this contemporary qualification. The GCSE in Computer Science focuses on computational thinking as its core, helping students to develop the programming skills to solve problems, design systems and understand human and machine intelligence. A breakdown of the units studied in years 10 and 11 is given below.

### Computer Systems

- Systems Architecture
- Memory and Storage
- Data Representation
- Computer Networks, Connections and Protocols
- Network Security
- Systems Software
- Ethical, Legal, Cultural and Environmental Impacts of Digital Technology

### Computational Thinking, Algorithms and Programming

- Algorithms
- Programming Fundamentals
- Producing Robust Programs
- Boolean Logic
- Programming Languages
- Integrated Development Environments
- Focused Programming Challenges

## How we deliver the curriculum

In years 10 and 11 students are given the opportunity to continue their studies in Computer Science. They will build upon their previous learning experiences and study the GCSE in Computer Science for a minimum of 5 hours every two weeks.

## How we assess students

Students will complete at least one formative assessment per half-term to prepare them for the following assessments:

Component	Description of assessment	When does the assessment take place?
Component 01 - Computer Systems	80 Marks 1.5 hours externally assessed examination by OCR	Year 11 - May/June
Component 02 - Computational Thinking, Algorithms and Programming	80 Marks 1.5 hours externally assessed examination by OCR	Year 11 - May/June

## How it benefits students learning and personal development

Students have the opportunity to apply the academic principles they learn in the classroom to real-world systems in an exciting and engaging way. The qualification gives students a clear progression into higher education, as the course was designed after consultation with members of BCS, CAS and top universities.