

## OCR A Level Computer Science

### Why study Computer Science at The Sixth Form at Ridgewood?

- A level Computer Science is rapidly becoming one of the most sought after qualifications in the world, and proves hugely popular with the best universities across the globe.
- Studying it at Ridgewood Sixth Form will provide you with the very best foundations for the beginning of your computer science journey, whether that's to progress to university, or jump straight into a career.
- At Ridgewood, we strive to ensure you will enjoy each and every lesson in Computing.
- A particular strength of the course at Ridgewood is the wealth of subject knowledge your teachers possess.
- With a team of highly qualified staff who teach parts of the course matching their speciality areas, you will receive outstanding tuition across all aspects of the course.

### What topics will I study in this subject?

Topic	What this means
Unit 1 Computer Systems	This unit contains the most content and mainly looks at hardware and software. The topic also looks at different data types, data structures and algorithms, and legal, moral, cultural and ethical issues related to computers.
Unit 2 Algorithms and Programming	This unit is mainly about programming. It involves learning the different types of computational thinking and problem-solving methods and gives you an introduction into programming and learning and using algorithms to solve problems.
Unit 3 Programming Project	You will choose a computing problem to work through. You will analyse the possible solutions to the problem, design a solution, develop a solution and then evaluate your work.

### What skills will I need in this subject?

Skill	What this skill involves in this subject
Problem solving	This could involve breaking down a complex problem into smaller problems or working out which algorithm to use to solve a problem.
Programming	You will be encouraged to learn new programming languages as well as engaging with your coding skills to undertake real world challenges to fully prepare you for the exams as well as industry careers.
Evaluation	You will need to see both sides of an argument and be able to suggest reasons why something might not happen the way it should.

## What will my lessons involve?

- Half of lesson time will be focused on the two exam units. You will be tested in mock exams throughout the year to prepare you for these.
- During Year 13, a number of your lessons will be for you to work independently on your programming project.
- Most lessons involve explanation and discussion of a new concept, followed by practice questions on that concept.
- You will have lessons during Year 12 where you will be taught programming languages and more lessons practising these skills.

## What will my independent study involve?

- You will be given regular work to do; this could involve researching an area or a new topic, or practice questions or mini projects
- You will need to spend considerable time checking over your notes to ensure you understand the content.
- During Year 13, you will need to spend most of your time working on your programming project. This will mostly be completed out of lesson, including the writing up of the four sections.
- Finally, you will need to spend time doing exam practice and becoming familiar with the mark schemes and questions.

## How will I be assessed?

Percentage exam assessment: 80%	Percentage coursework assessment: 20%
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Assessment	Details of assessment
Paper 1	2 hour 30 minute exam, 140 marks, 40% of overall mark Computer Systems Mostly short answer questions with some longer 9 and 12 mark questions
Paper 2	2 hour 30 minute exam, 140 marks, 40% of overall mark Algorithms and programming Mostly short answer questions with some longer 9 mark questions
Programming Project	Coursework, 70 marks, 20% of the exam Students will be expected to analyse a problem (10 marks), and design (15 marks), develop and test (25 marks), and evaluate and document (20 marks) a program. The program must be to solve it written in a suitable programming language.

## How do I know this is the right course for me?

- If you have previously studied Computer Science, you will have a good idea of what you can expect at A level.
- The Computer Science A level is streamlined to directly develop what you have covered in Computer Science at GCSE.
- We will start by refreshing your knowledge of the basics of the GCSE content and ensuring you are confident, before delving deeper to cover the A level specification.
- If you are interested in programming or learning how to program, this course will be for you.
- If you enjoyed Computer Science at GCSE, and have an interest in developing your knowledge and understanding further, then A level Computer Science is absolutely for you.

