



Archbishop Tenison's

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CHURCH OF ENGLAND HIGH SCHOOL

COMPUTER SCIENCE



# Computer Science

## A Level Course Overview

- 2 year A Level course; OCR syllabus
- Suited to pupils who like solving problems and are mathematically / logically adept (entry requirement of Maths grade 6 or higher)
- There is a heavy emphasis on learning computer programming and the mathematical / logical skills used to express computational laws and processes.
- A Level Computer Science is key to further study and career opportunities in AI, Machine Learning, Web centric design, programming, networking.



# How do we teach the subject?

- Pupils acquire knowledge mostly by applying that knowledge in some way
- By applying the knowledge pupils acquire programming, development and software use skills, and gain working knowledge of industry standard development frameworks. Previous frameworks and languages used include:-

- PHP /CodeIgniter / mySQL
- Flask – with Python and MySQL
- Django with SQLite
- Python and Pygame
- HTML / CSS / Java Script
- Java / VB.net





# Assessment at a glance

Component	Assessment	Weighting
01 – Computer Systems	Written Exam – 2 hours 30 mins	40%
02 – Algorithms and Programming	Written Exam – 2 hours 30 mins	40%
03 – Programming Project	-	20%

- All exams are hand written on an exam paper – there are no digital exams
- All students gain substantial amounts of practice at writing answers to examination questions during the two years – we start about 3 weeks into the course
- Programming Projects are developed through the final year and are submitted 6 weeks before the final exams – we expect a *top* grade from all students



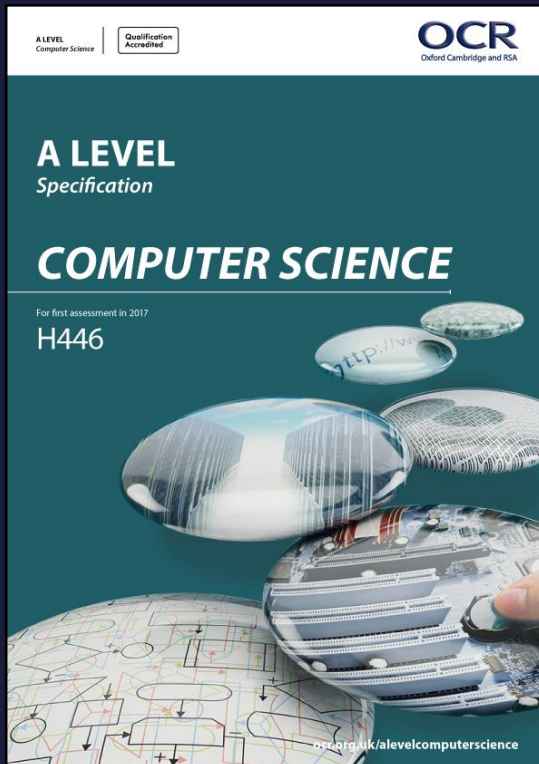
# Successes and Opportunities

- Significant numbers of high grades and pass rates (50% A\*, 66% A\*-A, 100% A\*-B in 2020 – all students are studying Computer Science at University)
- Mostly grade A projects created in industry standard frameworks (Flask, Django, Pygame with Python)
- Our students consistently achieve much higher grades than in other GCSEs. We hugely outperform the national & exam board averages in both exams and coursework (average grade 6.63% in 2020)
- high grades are attained when students have not taken GCSE Computer Science or IT; the core requirement is mathematical / logical ability
- Very high acceptance rate for top-rated universities



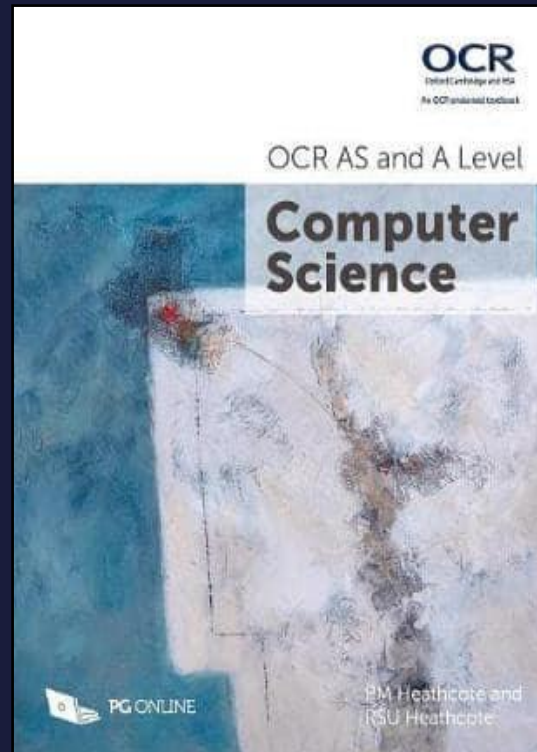
# Course Resources at a glance

OCR Syllabus code H446



Text book

ISBN13:- 9781910523056



Key resource:- [www.testandtrack.io](http://www.testandtrack.io)

Level

Advanced (A Level)

<< All Levels

1/47

1 - Advanced Level Aptitude / Entry Tests

4 Units

2/47

2 - Computer Systems

7 Units