



A-Level Computer Science

At King Charles I Sixth Form

Subject Overview

- We deliver an academically rich curriculum which is complemented by a range of skills which are practiced throughout the course.
- Our intention is to educate well rounded computer scientists who understand how to use technology in a safe, responsible and respectful manner. Our students will be equipped with knowledge and understanding that will benefit them in any workplace environment, as they develop their problem solving, programming and communication skills naturally throughout their progression with us.



Meet the Department



**Data Manager
Head of Computing**



**Deputy Head of Computing,
Head of House System**



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Typical Lesson

- Our lessons are very involved and typically involve a high focus on completing deliberate practice tasks.
 - Quiz
 - Teacher explanation and modelling
 - Testing
 - Review
 - Deliberate practice
 - Feedback
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- A blue arrow originates from the word 'Feedback' in the list, extends horizontally to the right, and then turns vertically upwards to point at the word 'modelling' in 'Teacher explanation and modelling'.

What you will Study?

- Two year A-Level qualification
- [OCR A-Level Computer Science \(H446\)](#)
- Prior study is essential at GCSE level

- **Component 1 – Computer Systems** (2 hours 30 min exam, 140 marks) 40%
 - Components of a computer, Systems Software, Software Development, Databases, Networking, Web Technologies, Data Types, Data Structures, Boolean Algebra, Legal, Moral, Cultural, Ethical issues
- **Component 2 – Algorithms & Programming** (2 hours 30 min exam, 140 marks) 40%
 - Data Structures, Computational Thinking, Programming techniques, Algorithms
- **Component 3 – Programming Project** (Coursework, 80 marks) 20%
 - Students create their own game/application/software to solve a problem which they have defined themselves from scratch.

- Value added 2025 was +1.25, meaning that students achieved over a grade higher than they were benchmarked to achieve.

Careers/Subject Combinations

- Computer Science aligns with a range of other subjects. There is notable crossover with Mathematics, Further Mathematics and Physics A-Level.
- Computer Science is implemented within all industry areas, and so we recommend pairing with subjects which you enjoy the most.
- Possible Career destinations
 - Software Developer
 - Applications Programmer
 - Systems Programmer
 - Multimedia Programmer
 - Systems Analyst
 - Computer Sales Support
 - Database Administrator
 - IT Technical Support Officer
 - Computer Security Consultant
 - Games Developer
 - IT Consultant
 - Web Designer

What do our current students think?

- A number of students cite the department as a reason for choosing to study at King Charles, we are a small department with the capacity to support our students to a high level – we know them really well!
- “A-Level computer science is an experience. You develop new knowledge in areas that you have already learnt about at GCSE level. A-Levels are a challenge but in computer science it is always engaging and exciting learning about new topics and going more in depth into the course. Overall Computer Science at King Charles is amazing. The approachable teachers and fun you have in the lessons are a bonus.”
- “When choosing my A-Level options there was not question of whether I would choose computer science. Both Mr Mander and Mr Yarwood-Smith have been teaching me since I started secondary school and have consistently made me feel both comfortable and confident in this subject. Their teaching heavily influenced my decision to stay on for sixth form at King Charles and I am glad that I did.”

Where next?



All of the King Charles I Open Evening resources can be found by visiting the [school website](#)



We look forward to welcoming you to our classrooms in September 2026



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