

GCSE COMPUTER SCIENCE

A guide for students and parents

What is computer science?

Computer science is all about problem solving. Analysing and modelling problems, designing solutions and then evaluating them. You'll learn about:

- how and why computers work
- data and how it is transferred
- programming
- designing and developing applications
- project management techniques.

It's using technology to come up with your own creative and practical answers to questions and problems.

The essentials:

- endorsed by the British Computer Society, the Chartered Institute for IT and the Royal Academy of Engineering
- counts towards the English Baccalaureate as a science
- recognised and respected by industry and higher education.

The course content lines up with the Microsoft Technology Associates (MTA) qualification, giving you a straight pathway to achieving a certificate recognised by the IT industry and the reassurance that you're learning the skills that employers want.

In 2012 alone, 36 billion apps were downloaded*. GCSE Computer Science will help you understand apps and create your own. And it gives you the tools to start looking at what the next big innovation could be.

Why watch the digital revolution when you could be leading it?

*ABI Research 2012 'Mobile Applications Market Data'



Why choose GCSE Computer Science?

Simply put, the skills you'll learn. Not just how to program, apply algorithms, use networks and code your own video games and mobile applications – although you'll do plenty of that.

You'll learn skills and techniques that will help you in your career, whatever you go on to do. Basic project management techniques. Product development cycles. Problem solving. Skills that you'll find useful every day in every career, not just the IT industry. And then there is the understanding you'll get of modern technology – not just how to use it but how to create it. How information is stored, transferred, manipulated and controlled.

Computer science also opens a lot of doors. It's part of your 5 A*–C measure, and counts as a science for the English Baccalaureate.



What will I learn?

- **Programming** – you'll be taught at least one programming language, and will use it practically and creatively
- **Algorithms** – and why they are at the heart of how computers work
- **Data** – how it is handled and stored and what it can be used for
- **Hardware** – how computers and networks are made up and how they communicate
- **Basic concepts of software engineering** – the product development lifecycle, prototyping and application testing.

In short, you'll get a solid grounding in the concepts of computer science, and learn a wide range of valuable skills that will help equip you for your working life.

Where will it take me?

- A-level Computing
- Vocational IT qualifications
- Industry-standard IT qualifications
- Degree courses in Computing, Engineering and Science.

As you can see, GCSE Computer Science is not just for people wanting a career in the IT and computing industry – the skills and techniques you learn can be useful in any workplace. The creative and technical skills you learn are relevant to a host of careers in a range of sectors, from arts and graphics-based roles through to engineering, finance and business.