South Nottinghamshire Academy

Computer Science

Why Computer Science?

A Level Computer Science develops students' understanding of how computers work, how software is developed and how computational problems can be solved.

The OCR H446 course combines theoretical knowledge with programming and problem-solving. Students need to understand not only *what* something is, but also how and why it works and how to apply their knowledge to unfamiliar problems.

What can I expect?

Computer science consists of three elements, 2 of which are exam based;

• Paper 1 (Computer systems)

• Paper 2 (Algorithms and programming)

• Independent Programming Project

Students therefore need to develop both strong subject knowledge and the ability to apply that knowledge to unfamiliar questions and problems.

What does successful study look like?

A Level Computer Science requires consistent work throughout the course. Students should:

- Regularly recall and revisit previous topics
- Practise writing, reading and tracing programs
- Complete exam-style questions
- Learn and use key Computer Science terminology accurately
- Practise applying knowledge to unfamiliar problems
- Review mistakes and address misconceptions

Programming, in particular, improves through regular practice rather than simply reading or memorising code.

What about the future?

Computer Science opens doors to careers such as: an IT technician, web developer, data analytics assistant, cybersecurity and technical support assistant.

It is also particularly useful for degrees such as computer science, software engineering, games development, data science, and Robotics.