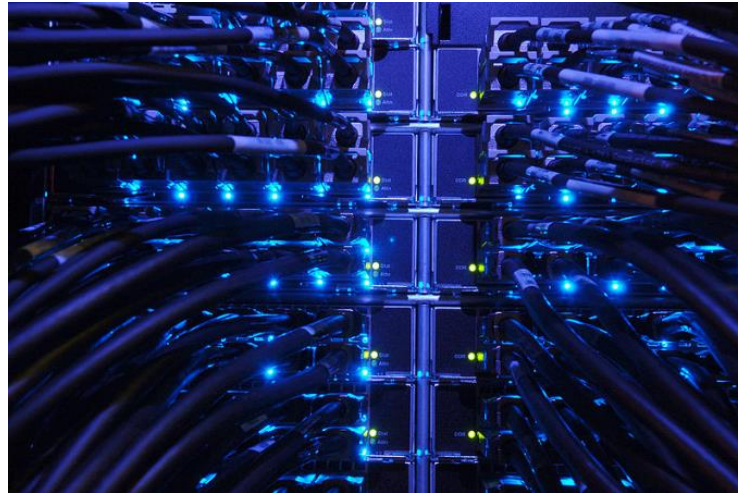




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Education for a changing world



Computer Science





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Welcome

This presentation will explain:

1. Entry requirements
2. The benefits of studying the subject
3. The structure of the course
4. Students' views
5. Where to find more information





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Entry Requirements

At least a grade 6 in the following subjects:

- GCSE Mathematics
- GCSE Computer Science





Entry Requirements



- A strong interest in computers and how they work
 - The ability to think logically
 - Attention to detail
 - A resilient approach to problem-solving
-



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Why choose Computer Science?

- Intellectual challenge and enjoyment
- To solve problems in a creative way
- Develop transferrable skills - computing students use logical reasoning, creativity algorithmic thinking, design and structured problem-solving





Why choose Computer Science?

- Excellent preparation for computing-based degrees and careers
- Links with other subjects – particularly Maths and the sciences but many more as well!
- To understand the computer systems that are responsible for so many aspects of our daily lives





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Structure of the Course

Component 01 (Computer Systems) 40%

Component 02 (Algorithms and programming) 40%

Component 03 (Programming Project) 20%





Structure of the Course

- The characteristics of contemporary processors, input, output and storage devices
 - Software and software development
 - Exchanging data
- Data types, data structures and algorithms
 - Legal, moral, cultural and ethical issues
 - Elements of computational thinking
 - Problem solving and programming
- Algorithms to solve problems and standard algorithms





Programming

Here's how we will build on your existing skills:

- More data structures – 3D arrays, stacks, queues, linked lists, trees, graphs, records and tuples
- Object-oriented programming
- Recursion
- Other languages?





The Project

- Students choose their own project
- Start preparation in Y12, most work done in Y13
- Can choose from a list of programming languages specified by the exam board
- Popular choices include Python, Java, and C# (for creating Unity games)





The Project

Last year's Year 13s worked on the following projects:

- Encrypted messaging system
- Platformer game
- Booking system for a nail salon

And many more!

[Example write-up](#)





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What do the students say?



Computer Science
has given me
challenging tasks that
I've always felt were
reasonable and
worthwhile



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What do the students say?



Although
challenging, it is
taught well with
good support



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What do the students say?



CS is challenging
at times, but also
one of the more
interesting
subjects at A Level



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Results and Destinations

In Summer 2019, six out of seven students met or exceeded their target grade.

A*-B and A*-E attainment figures significantly higher than national average.

Three students took up university places on CS-related courses.





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Results and Destinations

In recent years many of our students have gone on to study one of the following...

Computer Science

Cybersecurity

Games Development

Biocomputing

Mechatronic engineering





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For More Information

The full course specification and past exam papers can be found on the [OCR website](#)

(Google “H446”)





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Questions?

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These slides can be found in:

Student Shared > Computing

and on the school website

