

Computer Science GCSE (9-1) J277 (From 2020)

Mr Hughes, Head of Subject

GCSE Computer Science - OCR / J276

**Results
2019**

40% 7-9

86% 4+

**History of
success**

Computer Science GCSE

- is engaging and practical, encouraging creativity and problem solving
- encourages students to develop their understanding and application of the core concepts in computer science
- allows students also analyse problems in computational terms and devise creative solutions by designing, writing, testing and evaluating programs.

Course structure

- 2 components:
 - Computer Systems (01)
 - Computational Thinking, Algorithms, and programming (02)

Component 01: Computer systems

- Introduces students to:
 - central processing unit (CPU)
 - computer memory and storage
 - data representation
 - wired and wireless networks
 - network topologies
 - system security and system software
 - looks at ethical, legal, cultural and environmental concerns associated with computer science.

Component 02: Computational thinking, algorithms and programming

- Students apply knowledge and understanding gained in component 01
- Develop skills and understanding in computational thinking:
 - Algorithms
 - programming techniques
 - producing robust programs
 - computational logic and translators

* Algorithm questions are not exclusive to component (paper) 02 and can be assessed in all components.

Practical programming

- Students are to be given the opportunity to undertake a programming task(s) during their course of study which allows them to develop:
 - their skills to design and write computer programs
 - test and refine programs using a high-level programming language
- Students will be assessed on these skills during the written examinations, in particular component 02 (section B).

Assessment Units

Component	Marks	Duration	Weighting
Computer Systems (J277/01)	80	1 hr 30 mins	50%

Calculators **not** allowed

Computational Thinking, Algorithms, and programming (J277/02)	80	1 hr 30 mins	50%
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Calculators **not** allowed

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A typical lesson

- On arrival, login...
 - Starter activity: Logic task, computational task, research task, “Mr Hughes’s horrible questions from the homework” (YEUCH)
 - Main activity: Programming (Yippee!), review theory, Mr Hughes’s special Kahoot, watch movie clips (with links to Computer Science), complete worksheets, more programming 😊
 - Review: Activities, Find out about homework! 😊

Post GCSE Computer Science at Fullbrook

- Pupils often go on to study Computer Science A Level (min. grade 6 in Maths is also required), or
- Level 3 Cambridge Technical Extended Certificate in IT

Why Choose Computer Science?



{click on picture}

Some career fields that use Computer Science

Developer, Designer, Engineer, Manager, Team Leader, Head of Dept. CEO!

Science	Fashion	Politics	Computer Gaming	Media
Sales	Marketing	Retail	Sport	Environmental
Advertising	Engineer	Medical	Aviation	Law
Safety	Army	Navy	Air force	Education

Thank you for listening....

Questions?