GCSE Computer Science
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Why study GCSE Computer Science?
Computing is of enormous importance to the economy, and the role of Computer Science as a discipline itself and as an 'underpinning' subject across science and engineering is growing rapidly. Businesses today require an ever-increasing number of technologically-aware individuals.

What does the course involve?
An exciting, practical focus on real-life programming, developing skills relevant to the future.
Edexcel GCSE Computer Science 2020 is an engaging qualification that equips students with the knowledge and practical skills to thrive in the fast-changing world of computer science. The qualification provides a practical approach to developing computational skills. This includes innovative, practical onscreen assessment to ensure all students develop the computational skills they need for an exciting digital future beyond the classroom.

How will I be assessed? Two exam papers. One written and the other a practical onscreen exam on Python programming to solve problems.
Paper 1 – Principles of Computer Science (Written examination. 1 hour 30 minutes. 50% of qualification)
- Computational thinking: understanding of what algorithms are, what they are used for and how they work; ability to follow, amend and write algorithms; ability to construct truth tables.
- Data: understanding of binary, data representation, data storage and compression.
- Computers: understanding of hardware and software components of computer systems and characteristics of programming languages.
- Networks: understanding of computer networks and network security.
- Issues and impact: awareness of emerging trends in computing technologies, and the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues

Paper 2 – Application of Computational Thinking (Practical onscreen examination. 2 hours. 50% of qualification)
This paper will assess problem solving with programming.
The main focus of this paper is: understanding what algorithms are, what they are used for and how they work in relation to creating programs; understanding how to decompose and analyse problems; ability to read, write, refine and evaluate programs.
This paper is practical in nature and requires students to design, write, test and refine programs in order to solve problems

For more information, see Edexcel (examination board) website:
https://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2020.html

What are my progression routes?
The specification provides progression from Key Stage 3 studies and year 9 option to take Computing Science by building on the knowledge and skills taught and provide excellent progression to A Level Computer Science or IT, vocational courses and to degree level courses in the areas of computing, engineering and science. In addition, provide the knowledge, skills and understanding that a growing number of employers are demanding.