KS4 Curriculum Intent for Computer Science at Blessed Robert Sutton Catholic Voluntary Academy

	Overall Aim of Subject **By studying Computer Science at Blessed Robert Sutton, all pupils from Year 7 to Year 11 will gain a coherent knowledge and understanding of the development of how technology works and explore programming solutions to broaden individuals to possible career opportunities that Computer Science can offer, this will be explored using the Robert Sutton Way.**
	Computer Science will teach **spiritual development** by pupils being confronted with moral, ethical and legal dilemmas faced in the context of technology. Teaching will encourage pupils to develop an understanding by researching and exploring a number of key scenarios on the spirituality of how humans should use technology, but discuss how it can be used by certain individuals or organisations.
	Computer Science will teach **social excellence** through a range of teaching strategies that allow opportunities for pupils to work effectively as a community. Class discussions will develop pupils' abilities to work effectively as a team; paired work allows pupils to develop understanding and embed concepts and ideas. Areas of focus are: communicating, respecting, listening and developing each other's ideas.
	Computer Science will teach **academic excellence** by developing an understanding of the academic rigours of studying Computer Science. Pupils will develop an understanding and appreciation of focus into how all technology is designed, focusing on areas such as hardware, software, networking and the core concept of developing pupils' knowledge and competence in programming. Pupils will use the systems development lifecycle to analyse, design, test and evaluate programs they produce. Pupils will also explore methods of answering different types of exam questions to allow them to succeed.
Enrichment opportunities in this subject include: **For example,** • **Curriculum Challenges** • **Programming Projects** • **Computer Science Intervention Sessions**	

Key Stage 4

The Key Stage 4 Curriculum enables students to study different aspects of technology, focusing on areas such as programming, hardware, software and networking.

Course description

Content Overview	Assessment Overview	
Computer systems • Systems Architecture • Memory • Storage • Wired and wireless networks • Network topologies, protocols and layers • System security • System software • Ethical, legal, cultural and environmental concerns	Computer systems (01) 80 marks 1 hour and 30 minutes Written paper (no calculators allowed)	50% of total GCSE
Computational thinking, algorithms and programming • Algorithms * • Programming techniques • Producing robust programs • Computational logic • Translators and facilities of languages • Data representation	Computational thinking, algorithms and programming (02) 80 marks 1 hour and 30 minutes Written paper (no calculators allowed)	50% of total GCSE
* Algorithm questions are not exclusive to Component 02 and can be assessed in either component.		
Programming Project • Programming techniques • Analysis • Design • Development • Testing and evaluation and conclusions	20 timetabled hours	Formal requirement Consolidates the learning across the specification through practical activity.

Exam board

OCR Computer Science (J276)

Past papers

https://ocr.org.uk/qualifications/gcse/computer-science-j276-from-2016/assessment/

Assessments

At KS4, Computer Science pupils will be assessed formatively using a range of peer and self-assessment, as well as through marking and feedback in the form of clear targets and questioning by teachers to ensure consistent progression. Pupils will regularly complete exam questions in lesson and as homework.

Summative assessment practices at KS4 result in:
Year 10:

- Three SPC Assessments – two equating around 45-55 marks and the mock equating to about 80 marks (exploring content from paper 1 and paper 2 and depending on content coverage)
- End of Unit Assessments

Year 11:

- Two SPC Assessments – equating to around 45-55 marks (exploring content from paper 1 and paper 2 and depending on content coverage)
- One Mock – previous cohorts official exam papers, each paper is 80 marks.

Ways to help my child succeed

Encourage your child to complete independent revision at home; revising from knowledge organisers, making flashcards, completing past papers and continually reflecting on their work. Ensure that at home there is a quiet place to revise away from distractions. Ensure students have access to 6 A Day, Axised Revision Guide and CGP Computer Science revision guide and are working through the tasks effectively.

Useful websites

- Craig'n'Dave YouTube Videos
- ComputerScienceUK YouTube Videos
- BBC Bitesize – Computer Science