



St John's Curriculum Overview – Year 12



Subject title	Computer Science
Setting arrangements	No setting
Time allowance each fortnight	9 hours

Introduction
Students work towards two external exams in Computer Science: <ul style="list-style-type: none"> • Paper 1 - Computer Systems • Paper 2 – Algorithms & Programming <p>Students are also required to complete a Non-Examined Assessment, consisting of a programming project in year 12.</p>

Topics, Skills and Assessment covered during the course

	Topics covered	Skills developed	Assessment
Term 1	1.1 Processors, IO & Storage	Structure & Function of the Processor, Types of Processor, IO & Storage	End of unit tests will be used to monitor progress and understanding
	2.2 Problem Solving & Programming	Programming Techniques & Computational Methods	
Term 2	1.2 Software & Software Development	Systems Software, Applications Generation, Software Development, Types of Programming Languages	End of unit tests will be used to monitor progress and understanding
	2.2 Problem Solving & Programming	Programming Techniques & Computational Methods	
	2.1 Computational Thinking	Thinking abstractly, ahead, procedurally, logically, concurrently	
	1.4 Data Types, Data Structures & Algorithms	Data Types, Data Structures, Boolean Algebra	
Term 3	1.3 Exchanging Data	Networks	End of unit tests will be used to monitor progress and understanding
	2.3 Algorithms	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	

Term 4	2.3 Algorithms	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	End of unit tests will be used to monitor progress and understanding
	NEA Preparation, Problem Analysis & Design	Problem identification, Stakeholders, research & specification	
Term 5	1.5 LMCE	Computing Related Legislation, Moral & Ethical Issues	End of unit tests will be used to monitor progress and understanding
	2.3 Algorithms	Searching, Sorting & Data Structure Algorithms, Algorithm Complexity	
	NEA Problem Analysis & Design	Problem identification, Stakeholders, research & specification	
Term 6	1.3 Exchanging Data	Web Technologies	End of year exams will be used to check retention and improve exam technique
	NEA Problem Analysis & Design	Decompose the problem, describe the solution & approach to testing	

Resources Recommended for Revision and where they are available:

- Hodder Education Computer Science for A Level (OCR) Text Book – available to borrow from the library
- PG Online OCR AS and A Level Computer Science Text Book – limited copies available to borrow from the library
- Craig n Dave Video lessons – available online at <https://www.youtube.com/craigdave>

Homework

- Students will receive weekly homework to introduce/reinforce topics covered in lessons
- Students will also be expected to revise for the various assessments, as well as practise vocabulary & their programming skills

Additional support and help for the course

- After school & lunchtime sessions will be put on, as required in year 13, in the build-up to exams

Extra-Curricular

- N/A