OCR GCSE Computer Science (J277)

Curriculum content

Half term	Year 10	Year 11
Summer 2	Introduction to Computational Thinking Introduction to Computer Systems Algorithms Part 1 - Computational Thinking	End of year revision End of year exam Data Storage (Numbers) Boolean Logic Programming Project (to complete over the summer)
Autumn 1	Algorithms Part 1 - Designing, Creating, Refining Computer Memory Programming Techniques Part 1 Embedded Systems	Data Storage (Characters, Images & Sound) File Compression Algorithms Part 2 (Searching and Sorting Algorithms)
Autumn 2	Computer Storage, Storage Units (incorporate Legal issues) Programming Techniques Part 1 (continued) Robust Programming Part 1	Programming Techniques Part 3 Networks (incorporate Legal & Ethical issues) Mock Exam Revision
Spring 1	Systems Architecture (incorporate Environmental issues) Programming Techniques Part 2	Mock Exam Networks (continued) Facilities of Languages
Spring 2	Systems Architecture (continued) Programming Techniques Part 2 (continued)	System Security (incorporate Legal & Ethical issues) Revision of Legal, Ethical & Cultural issues
Summer 1	Software (incorporate Legal issues) Robust Programming Part 2	Paper 1 Revision Paper 2 Revision Paper 1 Exam

		Paper 2 Exam

Skills

The GCSE in Computer Science will equip students with a range of computational thinking and programming skills and provide opportunities to develop, in context, desirable, transferable skills such as analysis, planning, problem solving, review and working with others.

The qualification will enable students to develop:
- valuable thinking and programming skills that are extremely attractive in the modern workplace;
- computational thinking skills and how to apply them;
- the ability to analyse problems in computational terms through practical experience of solving such problems, including designing, writing and debugging programs;
- creative thinking skills by creatively, innovatively, analytically, logically and critically solving problems to develop a solution;
- mathematical skills relevant to Computer Science;
- memory recall skills regarding knowledge of topics on the specification;
- research, analytical and evaluative skills;
- skills that interpret and present information to effectively communicate;
- independent working skills;
- efficient time management skills;
- digital literacy skills to be able to successfully find, evaluate, create and communicate information.

Assessment

This is a linear assessed course with external assessment taking place at the end of Year 11. Students must also be given the opportunity to undertake a programming task during their course of study which allows them to develop their skills to design, write, test and refine programs using a high-level programming language.

There are two externally assessed papers, each equally weighted:

Paper 1 – Computer Systems

Paper 2 – Computational thinking, algorithms and programming

Further details about the course can be found at: https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/