OCR 9-1 J277 GCSE Computer Science - Year 11 - Learning Journey 2024-2025

Week	Date	Key Construct	Topic	Assessment
1 (Thurs)	05.09.24	**20 Hour Practical Programming Project** **Set by OCR Exam Board** 8 weeks 2.5 x 60 min +1 extra week in case of lost lesson time from other school activities e.g. Development Day	Analysis of a given problem to consider what it involves. Listing the requirements and success criteria for new system. Considering data, structures and files that new system will need. Designing the workings of new system using algorithms or flowcharts. Planning how to test the new system, including appropriate test data and anticipating results/outcomes. Implementing the new system – writing code and ongoing testing. Final testing and evaluating the extent to which the new system works.	Project report submitted to teacher as single PDF. **A01** **A02** **A03**
2	09.09.24			
3	16.09.24			
4	23.09.24			
5	30.09.24			
6	07.10.24			
7	14.10.24			
8	21.10.24			
		Half term		
9	04.11.24	**Preparation for Mock Exam**		
10	11.11.24	**Preparation for Mock Exam**		
11	18.11.24	**Mock Exams**		
12	25.11.24	**Mock Exams**		
13	02.12.24	1-5-1 Operating Systems	Need for an O/S, device management and drivers, user interfaces, user management, file management, memory management and multi-tasking.	Unit Test H: System Software **A01** **A02**
14	09.12.24	1-5-2 Utility Software	Encryption, defragmentation and data compression utilities.	
15	16.12.24	**Data Drop / Mock Results / Contingency Lesson**		
		CHRISTMAS		
16	06.01.25	1-4-1 Threats to computer systems and networks	Forms of attack and threats: Malware, social engineering, brute-force attacks, denial of service attacks, data interception, SQL injection.	Unit Test I: Network Security **A01** **A02**, Algorithms **A02** **A03**
17	13.01.25			
18	20.01.25	1-4-2 Identifying and preventing vulnerabilities	Common prevention methods: Pen testing, anti-malware software, firewalls, user access levels, passwords, encryption, physical security.	
19	27.01.25	2-1-3 Searching and Sorting Algorithms	Linear and binary searches Swapping values and bubble-sort. Insertion sort and merge sort. Comparing the efficiency of methods with different sets of data.	
20	03.01.25			
21	10.02.25			
		Half term		
22	24.02.25	2-5-1 Programming Languages 2-5-2 Integrated Development Environments (IDEs)	Characteristics and purpose of high-level and low-level languages. Translators: compilers, interpreters and assemblers. Commons tools and features of Integrated Development Environments: text-editors, error diagnostics, run-time environment, translator.	Unit Test J: Languages **A01** **A02** Robustness and Testing **A01** **A02** **A03** Unit Test K: Issues **A01** **A02**
23	03.03.25	2-3-1 Defensive Design (Producing Robust Programs)	Anticipating the misuse of programs, authentication, input validation Maintainable code: sub-programs, naming, indentation, comments.	
24	10.03.25	2-3-2 Testing	Types of errors. Different kinds of testing.	
25	17.03.25	1-6-1 Ethical, Legal, Cultural and Environmental Impact	Ethical issues. Laws that affect our use of technology, including Computer Misuse Act, Data Protection Act, Copyright Designs and Patents Act, Open-Source and proprietary software licenses. Effect of technology on the environment. Effect on different cultures.	
26	24.03.25			
27	31.03.25	**Data Drop / Contingency Lesson**		
		EASTER		
28 (BH)	21.04.25	**REVISION, PRACTICE QUESTIONS AND EXAM TECHNIQUE** **A01** **A02** **A03**	Recap of key topics. Mixed questions from both exam papers.	
29	28.04.25			
30 (BH)	06.05.25			
31	12.05.25	**FINAL EXAMINATIONS PAPERS 1 AND 2**	Paper 1: Computer Systems – 1.5 hours Paper 2: Computational thinking, algorithms & programming – 1.5 hours	
32	19.05.25			
		Half term		
33	05.06.25	**Exams - Other GCSE Subjects**		
34	12.06.25			
35	19.06.25			

What do the Assessment Objectives mean?

A01 Demonstrate knowledge and understanding of the key concepts and principles of Computer Science.

A02 Apply knowledge and understanding of key concepts and principles.

A03 Analyse problems in computational terms / make reasoned judgments / design, program, evaluate, refine solutions.

OCR 9-1 J277 GCSE Computer Science - Year 11 - Assessment Progress Tracker 2024-25

Name:				Autumn	Spring	Summer
Subject Target		Flightpath				
Annual Exam Grade:		BFL				

Year 11 Programming Project

20 hours at the start of Year 11 – worth 0%

Formal assessments – deciding your final GCSE grade

Exam Paper 1 (J277/01) Computer Systems 1.5 hours – 80 marks End of Year 11 – worth 50%	Exam Paper 2 (J277/02) Computational thinking, algorithms and programming 1.5 hours – 80 marks End of Year 11 – worth 50%

Date	Assessment	Flight-path Grade	Action(s) to make progress
Autumn Term Part 1	Project report submitted to teacher as single PDF. A01 A02 A03		
Autumn Term Part 2	Unit Test H: System Software A01 A02		
	Mock Exam Paper 1		
Spring Term Part 1	Unit Test I: Network security A01 A02 Algorithms A02 A03		
Spring Term Part 2	Unit Test J: Languages A01 A02 Robustness and Testing A01 A02 A03		
	Unit Test K: Issues A01 A02		
	Mock Exam Paper 2		