

OCR 9-1 J277 GCSE Computer Science Year 11 Learning Journey 2022-2023

| Week | Date | Key Construct | Topic | Assessment |
|------------------|----------|--|---|---|
| 1(1/2) | 05.09.22 | 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 | 12.09.22 | | | |
| 3 | 19.09.22 | | | |
| 4 | 26.09.22 | | | |
| 5 | 03.10.22 | | | |
| 6 | 10.10.22 | | | |
| 7 | 17.10.22 | | | |
| Half term | | | | |
| 8 | 31.10.22 | Finish and hand in project report | As above | As above |
| 9 | 07.11.22 | Preparation for Mock Exam | | |
| 10 | 14.11.22 | Mock Exams | | |
| 11 | 21.11.22 | Mock Exams | | |
| 12 | 28.11.22 | 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 F: System Software A01 A02 |
| 13 | 05.12.22 | | 1-5-2 Utility Software | |
| CHRISTMAS | | | | |
| 15(Wed) | 04.01.23 | 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 G: Network security A01 A02 Algorithms. A02 A03 |
| 16 | 09.01.23 | | 1-4-2 Identifying and preventing vulnerabilities | |
| 17 | 16.01.23 | 2-1-3 Searching and Sorting Algorithms | Linear and binary searches | |
| 18 | 23.01.23 | | Swapping values and: bubble-sort. | |
| 19 | 30.01.23 | | Insertion sort and merge sort. | |
| 20 | 06.02.23 | | Comparing the efficiency of methods with different sets of data. | |
| Half term | | | | |
| 21 | 20.02.23 | 2-5-1 Programming Languages | Characteristics and purpose of high-level and low-level languages. Translators: compilers, interpreters and assemblers. | Unit Test H: Languages A01 A02 Robustness and Testing A01 A02 A03 Issues A01 A02 |
| | | 2-5-2 Integrated Development Environments (IDEs) | Commons tools and features of Integrated Development Environments: text-editors, error diagnostics, run-time environment, translator. | |
| 22 | 27.02.23 | 2-3-1 Defensive Design (Producing Robust Programs) | Anticipating the misuse of programs, authentication, input validation | |
| 23 | 06.03.23 | | Maintainable code: sub-programs, naming, indentation, comments. | |
| 24 | 13.03.23 | 2-3-2 Testing | Types of errors. Different kinds of testing. | |
| 25 | 20.03.23 | 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 | 27.03.23 | | | |
| EASTER | | | | |
| 27 | 17.04.23 | REVISION, PRACTICE QUESTIONS AND EXAM TECHNIQUE A01 A02 A03 | Recap of key topics. Mixed questions from both exam papers. | |
| 28 | 24.04.23 | | | |
| 29 (BH) | 02.05.23 | | | |
| 30 | 08.05.23 | | | |
| 31 | 15.05.23 | FINAL EXAMINATIONS PAPERS 1 AND 2 | Paper 1: Computer Systems – 1.5 hours | |
| 32 | 22.05.23 | | Paper 2: Computational thinking, algorithms & programming – 1.5 hours | |
| Half term | | | | |
| 33 | 05.06.23 | (Other GCSE Exam) Exams Exams | | |
| 34 | 12.06.23 | | | |
| 35 | 19.06.23 | | | |

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 2022-23

| | | | |
|-----------------------|-------------------|--------------------|--|
| Name: | | Tutor: | Formal assessments – deciding your final GCSE grade Year 11 Programming Project 20 hours at the start of Year 11 – worth 0% Computer Systems Exam Paper 1 (J277/01) 1.5 hours at the end of Year 11 – worth 50% Computational thinking, algorithms and programming Exam Paper 2 (J277/02) 1.5 hours at the end of Year 11 – worth 50% |
| Subject Target | | Mock Grade: | |
| | Flightpath | BFL | |
| Autumn 1 | | | |
| Autumn 2 | | | |
| Spring 1 | | | |
| Spring 2 | | | |
| Summer 1 | | | |
| Summer 2 | | | |

| Assessments and Exam Practice Questions | | | |
|--|--|----------------------|----------------------------|
| Date | Assessment End of Unit Test | Flight-path Grade | Action(s) to make progress |
| 17.10.22 | Project report submitted to teacher as single PDF. A01 A02 A03 | | |
| 12.12.22 | Unit Test F: System Software A01 A02 | | |
| 06.02.23 | Unit Test G: Network security A01 A02 , Algorithms A02 A03 | | |
| 27.03.23 | Unit Test H: Languages A01 A02 Robustness and Testing A01 A02 A03 Issues A01 A02 | | |