



Year 12 & 13 Computer Science

CURRICULUM OVERVIEW

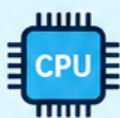
In the sixth form, students develop advanced computer science knowledge, programming skills and independent project expertise. Across Years 12 and 13 they study systems, software, data, networks, algorithms and abstract thinking, preparing for A Level examinations, further study and future careers in technology.



Year 12

1

Term 1 Foundations of Computer Systems



- SLR 1 Structure and function of the processor
- SLR 2 Types of processor
- SLR 3 Input, output and storage
- Dedicated programming lessons
- Assessment: SLR 1–3, exam questions, end-of-unit assessment

2

Term 2 Software and Development



- SLR 4 Systems software
- SLR 5 Application generation
- SLR 6 Software development
- Dedicated programming lessons
- Buffer week before Christmas
- Assessment: SLR 4–6, exam questions, end-of-unit assessment

3

Term 3 Languages, Security and Databases



- SLR 7 Types of programming language
- SLR 9 Compression, encryption and hashing
- SLR 10 Databases
- Dedicated programming lessons
- Assessment: SLR 7, 9 and 10, exam questions, end-of-unit assessment

4

Term 4 Networks and Web Technologies



- SLR 11 Networks
- SLR 12 Web technologies
- Dedicated programming lessons
- Assessment: SLR 11 and 12, exam questions, end-of-unit assessment

5

Term 5 Data Types and Data Structures



- SLR 13 Data types
- SLR 14 Data structures
- Dedicated programming lessons
- Assessment: SLR 13 and 14, exam questions, end-of-unit assessment

6

Term 6 Logic, Legislation and Issues



- SLR 15 Boolean algebra
- SLR 16 Computer related legislation
- SLR 17 Ethical, moral and cultural issues
- Project lessons
- Assessment: SLR 15–17, exam questions, end-of-unit assessment

Year 13

7

Term 1 Advanced Thinking Skills



- SLR 18 Thinking abstractly
- SLR 19 Thinking ahead
- SLR 20 Thinking procedurally
- SLR 21 Thinking logically
- SLR 22 Thinking concurrently
- Dedicated project lessons
- Assessment: SLR 18–22, exam questions, end-of-unit assessment

8

Term 2 Programming Techniques



- SLR 23 Programming techniques
- Dedicated project lessons
- Assessment: SLR 23, exam questions, end-of-unit assessment

9

Term 3 Computational Methods and Algorithms



- SLR 24 Computational methods
- SLR 26 Algorithms
- Dedicated project lessons
- Assessment: SLR 24 and 26, exam questions, end-of-unit assessment

10

Term 4 Independent Project



- Dedicated project lessons
- Developing and refining coursework
- Applying practical programming skills
- Building independent research and project management skills

11

Term 5 Revision and Exam Preparation



- Structured revision
- Retrieval practice and exam technique
- Past paper questions
- Preparing for final examinations



Developing Key Skills

- Computational thinking
- Programming
- Abstraction
- Problem solving
- Independent learning
- Project management



Wider Opportunities

- Independent project work
- University and apprenticeship pathways
- Digital careers
- Enrichment through programming and research



Assessment

- SLR assessments
- Exam question practice
- End-of-unit assessments
- Project work
- Retrieval and revision



Where Next?

- A Level examinations
- Higher education
- Apprenticeships
- Careers in software, data, cyber, AI and digital technology