



# GCSE Computer Science: Years 10 & 11

Exam Board: OCR  
Assessment Overview: <http://www.ocr.org.uk/qualifications/gcse-computer-science-j276-from-2016/specification-at-a-glance/>

Specification: <http://www.ocr.org.uk/Images/225975-specification-accredited-gcse-computer-science-j276.pdf>

## Year 10 Autumn 1

1. Algorithms  
Sequence, selection and iteration  
Flow diagrams  
Writing pseudocode  
Variables and constants  
Arithmetic, relational and Boolean operators

## Autumn 2

2. Iteration  
Definite and indefinite iteration  
Nested structures  
Trace tables

3. Computational Logic  
Boolean logic  
Logic gates and logic circuits

## Spring 1

4. Data Types  
Integer, real, character, string and Boolean  
Traversing and slicing strings  
Creating and navigating arrays  
Managing arrays  
Multidimensional arrays  
Writing SQL

## Spring 1

5. Searching and Sorting Algorithms  
Linear and Binary search  
Bubble sort  
Insertion sort  
Merge sort

## Spring 2

6. Input and Output  
I/O Loop and data validation  
Modulus check digit  
Authentication

7. Problem Solving  
Computational thinking  
Procedures and functions  
Software development  
Testing methods

## Summer 1

8. Binary and Hexadecimal  
Storage units  
Binary to denary conversion  
Binary arithmetic  
Hexadecimal

## Summer 2

Controlled Assessment Preparation  
Students will focus on practicing and developing the software development and programming skills required to successfully complete the controlled assessment.





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<b>Year 11</b>	
<b>Autumn 1</b>	Controlled Assessment  Students will spend 20 hours in class completing a controlled assessment programming project.
<b>Autumn 2</b>	Controlled Assessment  9. Binary Representations Character sets Image and sound representation Compression
<b>Spring 1</b>	10. Programming Languages Types of programming language Translators Assembly language programming  11. Computer Systems: Hardware Computer systems CPU components Secondary storage  12. Computer Systems: Systems Software Operating systems User interfaces

<b>Spring 2</b>	13. Networks Types of network Network operation Transmission media Topologies The Internet Protocols  14. System Security Threats posed to networks Malware Methods of attack Securing Networks
<b>Summer 1</b>	15. Ethical, legal, cultural and environmental concerns  <b>GCSE Exam Preparation</b> Students will revise all topics covered in year 10 and 11 and spend time completing mock exams before going on study leave.





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## Year 11

Year 11 will be studying OCR Computer Science (9-1) GCSE

Links to helpful web-based resources:

<http://moodle2.leventhorpe.herts.sch.uk>

<https://www.bbc.co.uk/education/subjects/z34k7ty>

[http://www.teach-ict.com/2016/GCSE\\_Computing/OCR\\_J276/OCR\\_J276\\_home.html](http://www.teach-ict.com/2016/GCSE_Computing/OCR_J276/OCR_J276_home.html)

<https://www.codecademy.com/>

Suggested reading or revision guides for GCSE:

PG Online OCR GCSE (9-1) Computer Science (ISBN 1910523089)

CGP GCSE Computer Science OCR Revision Guide (ISBN 1782946020)

CGP GCSE Computer Science OCR Exam Practice Workbook (ISBN 1782946039)

CGP GCSE Computer Science OCR Practice Papers (ISBN 1782948228)

