

Year 11 Computer Science

Exam board : OCR

Course page: <https://www.ocr.org.uk/qualifications/gcse/computer-science-j277-from-2020/>

Specification: <https://www.ocr.org.uk/Images/558027-specification-gcse-computer-science-j277.pdf>

Revision recommendations

Regular revision is the best way to stay confident and ready. Spacing out your practice over time is far more effective than last-minute cramming. The earlier you begin, the stronger your knowledge will be – and the better your results.

◆ Top Digital Resource Seneca Learning

- Sign in with your Google account.
- Join our class here:
<https://app.senecallearning.com/dashboard/join-class/vkncdw68zw>
- Includes a Python coding course and an OCR GCSE Computer Science revision course.
- Interactive and engaging – excellent for both theory and programming.

◆ Top Offline Resource CGP Revision Bundle (available to buy on parent pay)

- Revision Guide – all the key content, no waffle.
- Practice Paper Workbook – with answers in the back.
- Flashcards – perfect for testing yourself anytime, anywhere.

◆ Other Good Digital Resources

- BBC Bitesize – Clear, reliable theory revision (less useful for coding).
<https://www.bbc.co.uk/bitesize/examspecs/zmtchbk>
 - Craig & Dave Videos – Comprehensive explanations. Remember: take Cornell notes!
<https://craigndave.org/ocr-gcse-j277-videos/>
 - Snakify – Great for practising Python, though some questions are worded oddly.
<https://snakify.org/en/>
 - OCR Past Paper Finder – Past papers + mark schemes direct from OCR. The more past papers you complete, the better prepared you'll be!
<https://www.ocr.org.uk/qualifications/past-paper-finder/>
 - Sololearn is a phone app that can be used to reinforce coding knowledge. I recommend working through the 'coding foundations' course - Note: it offers a subscription service, just close it when it pops up, the free service is just fine.
- ◆ Wider Reading & Extra Interest (Optional)
- These aren't on the exam but are great if you want to explore computer science further:
- Linus Tech Tips (YouTube) – Fun, engaging tech channel -
<https://www.youtube.com/user/LinusTechTips>
 - BBC Sounds – Scam Secrets (Podcast) – Real scams explained; links to computing & social engineering.
<https://www.bbc.co.uk/sounds/brand/m002h2gt>

Course Content

Our course is interleaved. We cover both unit 1 content and unit 2 content throughout the 2 years. Every 2 weeks students will cover a week of unit 1, and a week of unit 2.

Unit 2 - Algorithms and programming							
Topic covered	Content	Assessment and homework	When delivered	Topic covered	Content	Assessment and homework	When delivered ?
Network security and system software	<p>This term we focus on the different security concerns that can appear on computer systems, along with how to mitigate threats. We also look at system software and how to maintain a computer system.</p> <p>By the end of this unit students will be expected to understand the following:</p> <ul style="list-style-type: none"> • Common threats to computer systems and how to mitigate those threats. • The role of the operating system in a computer • The different forms of system software and how they are used to maintain a computer system. 	<p>Homework: fortnightly Cornell Notes activities based upon the next week's learning.</p> <p>Assessment: Paper based end of topic assessment with a wide variety of exam-style questions</p>	Term 1&2	Logic and languages	<p>In this term students will look at what is meant by boolean logic. They will discover how to write simple logic games and look into solving boolean equations. Students will also finalise their ever expanding knowledge base by looking at how different programming languages interact with each other.</p> <p>By the end of this unit students will be expected to understand the following:</p> <ul style="list-style-type: none"> • How to structure boolean expressions, both written and in the form of a diagram • Describe different levels of programming languages, and the need to translate between them. • Describe how to ensure computer programs are kept 	<p>Homework: fortnightly Cornell Notes activities based upon the next week's learning.</p> <p>Assessment: Paper based end of topic assessment with a wide variety of exam-style questions</p>	Term 3

			Term 4	Ongoing algorithm practise	maintainable.		All year
Impacts of digital technology	<p>This term we focus on the impact that computer systems have on the wider world. This unit allows students to create structured arguments both for and against the use of computers in a given situation.</p> <p>By the end of this unit students will be expected to understand the following:</p> <ul style="list-style-type: none"> • The positive and negative legal impacts of computers on society, and legislation that directly impacts computer users. • The positive and negative cultural impacts of computers worldwide. • The positive and negative ethical impacts of computers worldwide. 	<p>Homework: fortnightly Cornell Notes activities based upon the next week's learning.</p> <p>Assessment: Paper based end of topic assessment with a wide variety of exam-style questions</p>			<p>During year 11, we cover an algorithm based questions every week. These questions allow students to practise the following programming techniques:</p> <ul style="list-style-type: none"> • Using flowcharts, pseudocode, python • Sequence • Selection • Iteration • Functions and procedures • Trace tables 		