

# Y11 Computer Science Final Revision Topics

1 hour 30 min Paper based Exam

2 hours Practical Programming Assessment in Computer Suite

- Each lesson has an assignment on Teams which includes a PowerPoint and video to use as revision material.
- You can assign yourself revision Topics on your weaker subjects via your **Educake** login.
- I also encourage you to purchase your **revision workbook and revision guide** to work through during your revision time. These can be purchased for 5 pounds via parentmail.
- **Videos** can be found here: <https://student.craigndave.org/1CP2>
- **Exam Questions and Quizzes** here: <https://www.bbc.co.uk/bitesize/examspecs/zdqy7nb>

**Remember it's the Pearson Edexcel GCSE (1CP2) Qualification NOT OCR!**

	1	2	3	4	5
Y10-1	Introduction to programming	Decomposition, algorithms	Data types, variables	Input and integer functions, debugging tools	Flowcharts
	Course introduction	Binary	Unsigned integers	Binary arithmetic	Two's complement 1
Y10-2	String manipulation, string methods	if, if else, relational operators	if elif else, readability	Boolean operators	Repetition (while)
	Two's complement 2	Logical binary shifts	Arithmetic binary shifts	Hexadecimal	ASCII
Y10-3	One-dimensional lists	for loops, range function	Procedures	Functions	Subprograms
	Stored program concept	Fetch-decode-execute 1	Fetch-decode-execute 2	Secondary storage 1	Secondary storage 2
Y10-4	string.format()	Two-dimensional lists	Validation	Linear search (one-dimensional)	Linear search (two-dimensional)
	Operating system	OS: File management	OS: Process management	OS: Peripheral & user management	Utility software
Y10-5	Merge sort	Reading files	String processing	Writing files	Authentication

	1	2	3	4	5
	Malware & anti-malware	Hackers	Social engineering	Data level protection	Robust software
Y10-6	Turtle introduction, pens, and lines	Turtle movement, coordinates, polygons, subprograms	Turtle pens, colours, filling, and circle	Turtle combining subprograms, layers	Turtle big problem
	LANs & WANs	Networks speed	Connectivity	Wired v. wireless	Network topologies
Y11-01	Intro to programming	Subprograms	Local, global	Maths, time	Problem solving
	Embedded systems	The Internet of Things	Packet switching	TCP/IP 1	TCP/IP 2
Y11-02	Trace tables	Errors	Bubble sort	Binary search	Problem solving
	Environmental impact: manufacture & use	Environmental impact: e-waste	Low-level & high-level languages	Translators	Intellectual Property
Y11-03	Data types, string manipulation, validation	Data structures (one-dimensional)	Trace tables	Errors	Problem solving
	Bitmaps	Bitmaps	Sound	Sound	Compression
Y11-04	Data structures (two-dimensional)	Subprograms (local, global, procedures, functions)	Problem solving	Trace tables, errors	Problem solving, testing with data
	AI, machine learning & robotics 1	AI, machine learning & robotics 2	Personal data	Privacy & ownership	Data protection legislation