

	What will I learn?	How will I learn it?	Why is it important that I learn this?	Why am I learning this now?
<u>OCR GCSE (9–1) in Computer Science (J277) Year 11</u> J277/01: Computer systems	You will look at how computer use primary and secondary storage and how memory is used by computers. You will learn about network security both physical and software based. You will learn about the modern computer systems architecture. This includes the CPU and its registers, embedded systems and the fetch-decode-execute cycle.	Through Enquiry and simulator-based work using the Little Man Computer. Through practical and theory-based study. Both simulations and hands on builds. Through practical based work using a simulator of the CPU you will explore how registers are used.	To understand the importance of different types of memory. To understand the importance of keeping data secure. To understand how a modern CPU carries out its functions in a consistent way.	You will learn how memory is used by a computer system to store information and how it is retrieved. This unit will build on your knowledge of computer networks from KS2 and introduce you to new concepts. This unit will build on your knowledge of computer components from KS2 and introduce you to new more detailed concepts.
	You will look at systems software currently in use on computers to make operation more user-friendly and robust. You will study Ethical, legal, cultural and environmental impacts of digital technology in the modern world.	Computer systems use system software but many of the functions are hidden from us. Modern systems use the planets resources. You will investigate the impact it is having on the world.	To appreciate the functions of an operating system and how they are carried out. To see the impact even small devices, have on the global environment.	You will learn how programs work together to produce a system. By deconstructing a problem, it is easier to solve it. In order to fix the problem of pollution we need to understand how it has come about in the modern world. Use of rare metals in computers.
Practical Programming Project	You will undertake a programming task, to solve a problem (or problems), during the course of study. You will draw on the content in both components (J277/01 & J277/02) when engaged in the Practical Programming Project.	Using the Python programming language, you will be set a problem to write a program to solve.	You will become an effective and efficient programmer with the skills needed to solve a computational problem.	This is an extended unit over the two years of the course and will be fundamental in your understanding of how computer work and how to use computer systems to solve a real-world problem.

Revision for units J277/01 and J277/02	You will carry out revision tasks to prepare for the two 1 hour 30 min examinations.	Using exam style questions and past papers you will become proficient at answering Computer Science style questions.	By the end of the two years your knowledge of Computer Science topics will be tested to check your understanding of the subject.	By preparing for the examinations using past paper questions, you will be in the best position to achieve your target.
--	--	--	--	--