

Computer Science Key Stage 4 Curriculum Overview

Group	Term 1		Term 2		Term 3
	Module 1	Module 2	Module 3	Module 4	Module 5/6
Year 10	Wired and Wireless networks	System software and security	Ethical, legal, cultural and environmental concerns	Algorithm / Advanced Python programming and JavaScript. Basic SQL	Logic and language / Examination practise
	<p>Students will describe different types of networks and the devices used to create these networks.</p> <p>They will also explain how network devices communicate and how protocols and layers are used to send data across networks.</p>	<p>Students will identify different types of malware attacks and threats to computer systems and networks.</p> <p>They will explain ways of preventing and protecting against these vulnerabilities.</p> <p>They will also describe the purpose and functions of operating systems, utility programs, and different backup techniques.</p>	<p>Students will investigate ethical, legal, cultural, environmental and privacy issues related to Computer Science technologies.</p> <p>They will discuss key stakeholders are affected by technology and explore the impact of Computer Science developments.</p> <p>They will look at different types of software licensing</p>	<p>Algorithm Students will learn about computational thinking by designing algorithms in pseudocode, flowchart, searching and sorting.</p> <p>They will then apply the knowledge learned to design these algorithms in word document and develop them in python</p>	<p>Students will draw and complete simple logic diagrams using the operations AND, OR, NOT in word document and complete the accompanying truth tables using Word document.</p> <p>Examination practise Students will prepare for their GCSE Computer Science examination by</p>

methods and explore specific legislation relevant to Computer Science

programming language.

Advanced Python programming and JavaScript.

Basic SQL

Students will produce robust programs using python programming language and advanced interactive web pages and JavaScript programming language.

Students will create basic program using SQL programming language.

Students will use Integrated Development Environment (IDE) such as PyCharm to develop their python programs, they use Visual Studio

practising past exam questions.

Students will be given revision planner to plan their revision strategies and a revision diary to record their revision time log.

Students will be encouraged to use their revision strategies and time log to better improve their grades.

			to create their web pages and use DB Browser for SQLite to develop SQL programs.	
Year 11	NEA (Non examination Assessment)	Examination practise	GCSE exam	
	Students will use skills and knowledge learned from Year 7 through to Year 10 to create a solution to a set program by coding their solution using python programming language and write accompanying documentation explains their design, testing, evaluation of their solution.	Students will prepare for their GCSE Computer Science examination by practising past exam questions. Students will be given revision planner to plan their revision strategies and a revision diary to record their revision time log. Students will be encouraged to use their revision strategies and time log to better improve their grades.	Students will be taking their GCSE Computer Science examination.	