Curriculum Map 2022/23

Subject: GCSE Computer Science **Year Group: 11 (22_23)**

Time Period	Autumn Term	Spring Term	Summer Term
Content	**1.5 System software** • Operating systems • Utility software **1.6 Ethical, legal, cultural and environmental** • Impacts of digital technology on wider society • Legislations relevant to Computer Science **2.4 Boolean Logic** • Creating simple logic diagrams and truth tables. • Combining boolean and logical operators to solve problems	**2.3 Producing robust programs** • Defensive design • Testing **2.5 Programming languages and IDE** • levels of programming language • The Integrated Development Environment (IDE) **Revision and final exam preparation**	**Revision and final exam preparation**
Skills	Students will gain the understanding of how different operating systems work and the important part the OS plays in a computer system. Students explore different utility software and how they work to maintain the optimal running of a	Student build on their skills by understanding the importance to thoroughly test a program for bugs, errors and loopholes to ensure they are robust. Students will consolidate their learning	Students will consolidate their learning through a series of practice exams and recall activities.

	computer system. Students learn how to analyse and generate arguments both for and against the use of computer systems in society. They are able to express this in a structured essay style questions. Boolean logic helps students think through different problems in a logical and methodical way, based on the inputs they are given. Students develop pattern recognition skills.	through a series of practice exams and recall activities.	
Key Questions	What are operating systems & interfaces? What is memory, peripheral, user and file management? What is utility software and why do they need encryption, defragmentation and file management & data compression? What are the issues created and addressed by technology? What is the impact on society including; ethical, legal, cultural, environmental and privacy issues. What legislations are required; Data Protection, computer misuse, copyright and licences.	Why use defensive programming? Use of defensive designs. Testing to make sure it works and debugging, is that normal, boundary, invalid or erroneous? Refine it! Create code which is easy to maintain. Know the purpose of testing and types used for validation. What are the characteristics of languages; high and low-level. What is the purpose of translators, compilers, interpreters? What is Little Man Computer? Tools in an IDE; editors, error diagnostics, run-time environments & translators.	

	Why do computers use binary? What are transistors? How do AND, OR and NOT gates work?		
Assessment week and content	**1.5 System software** End of Unit test wb 26/06 **1.6 Ethical, legal, cultural and environmental** End of Unit test wb 17/10 **2.4 Boolean Logic** End of Unit test wb 05/12	**2.3 Producing robust programs** End of Unit test wb 06/02	**Final Exam:** Component 1 – Computer Systems Component 2 – Computational thinking, algorithms and programming