Subject: GCSE Computer Science — Year 11 Curriculum Map 2024 - 25

Week Commencing	Topic (including links to additional resources)	Assessment Window
Staff INSET 02/09 Students Return 03/09	**1.3.1 Wired and wireless networks** • types of networks: (LAN, WAN) • factors that affect the performance of networks • the different roles of computers in a client-server and a peer-to-peer network • the hardware needed to connect stand-alone computers into a Local Area Network: (wireless access points, routers/switches, NIC (Network Interface Controller/Card), transmission media) • the internet as a worldwide collection of computer networks: (DNS (Domain Name Server), hosting / the cloud, the concept of virtual networks).	
09/09/2024		
16/09/2024	**Python programming** – revision of basic programming	
23/09/2024		Knowledge check
30/09/2024	**1.3.2. Protocols and layers** • star and mesh network topologies • Wifi (frequency and channels / encryption / Ethernet) • the uses of IP addressing and MAC addressing • protocols including: TCP/IP, HTTP, HTTPS, FTP, POP, IMAP, SMTP • the concept of layers	
07/10/2024		
14/10/2024		
21/10/2024	**Python programming** – focus on arrays and subroutines	Knowledge check
October Half Term		
04/11/2024	**1.4 Network security** • Forms of attack: (Malware, Social engineering, e.g. phishing, people as the 'weak point', Brute-force attacks, Denial of service attacks, Data interception and theft, the concept of SQL injection) • Identifying and preventing vulnerabilities (Penetration testing, Anti-malware software, Firewalls, User access level, Passwords, Encryption. Physical security)	
11/11/2024		OAT Eng / Maths / Sci
18/11/2024	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Achievement Round 1

25/11/2024	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Achievement Round 1
02/12/2024	**SQL and database records** • the use of records to store data • SQL (SELECT, FROM, WHERE)	
09/12/2024	**2.3 Producing robust programs** • defensive design considerations (input sanitisation/validation, planning for contingencies, anticipating misuse, authentication) • maintainability (comments, indentation) • the purpose of testing • types of testing: (iterative, final/terminal) • how to identify syntax and logic errors • selecting and using suitable test data (normal, erroneous and borderline.	
16/12/2024	**2.4 Boolean logic** • AND / OR / NOT • Logic gates • Truth tables	Knowledge check
Christmas Break		
06/01/2025		
13/01/2025	**Python programming** Adaptively taught delivery of programming skills and practical programming challenges using IDLE environment.	
20/01/2025		
27/01/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Achievement Round 2
03/02/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Achievement Round 2
10/02/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Achievement Round 2
February Half Term		
24/02/2025	**2.5 Programming languages and IDEs** • characteristics and purpose of different levels of programming language, including low level languages • the purpose of translators • the characteristics of an assembler, a compiler and an interpreter • common tools and facilities available in an integrated development environment (IDE): (editors, error diagnostics, run-time environment, translators).	
03/03/2025		
10/03/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	Knowledge check
17/03/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	

24/03/2023	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	
31/03/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	
07/04/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	
Easter Break		
28/04/2025	Exam Preparation and revision, exam technique practice including application / past paper questions / programming questions	
05/05/25		GCSE
12/05/2025		GCSE
19/05/2025		GCSE
May Half Term		
02/06/2025		GCSE
09/06/2025		GCSE
16/06/2025		GCSE
23/06/2025		
30/06/2025		
07/07/2025		
14/07/2025		
21/07/2025		