

CURRICULUM OVERVIEW FOR YEAR 11 – GCSE COMPUTER SCIENCE

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	Data Representation Pseudocode practise	Components of A Computer System High/Low level languages Pseudocode practise	Software Networks and Cybersecurity Pseudocode practise	Impact of Digital Technology Pseudocode practise	Revision	
Knowledge	Binary and Hexadecimal number systems Text Image and Sound representation Compression techniques Logic Gates	Von Neumann Architecture, F-D-E cycle Storage – magnetic, optical, solid state	Systems software, application software, utilities Types of networks Protocols Cyber threats, protection and prevention	Social Legal and Ethical Impacts of modern computer technology	Review of all content for GCSE exam Exam terminology – State, Explain, Evaluate	
Skills	Converting between number systems Compressing simple data Use of truth tables	Comparing systems	Drawing simple network diagrams Evaluating network topologies Identifying and evaluating cyber threats	Evaluating the impact of digital technology Exam techniques	Exam techniques	
Key Marked Piece (Summative Assessments in bold)	Exam questions on data representation Half term assessment on pseudocode, data representation and NEA concepts	November PPE Paper 1 and 2 Do It Again of PPE	Exam questions on content to date Half term assessment – “mini mock” on all topics to date	March PPE Paper 1 and 2	GCSE Exams May Paper 1: Units 1-4 Paper 2: Units 4-7	
Vocabulary	Binary, binary shift, hexadecimal, denary, ASCII, Unicode, colour depth, image resolution, bit rate, sampling rate, sample resolution, Huffman, RLE AND, OR, NOT, logic, truth tables	Boolean, CPU, architecture, ALU, register, cache, bus, primary, secondary, ROM, RAM	WAN, LAN, PAN, star, bus, topology, malware, adware, virus, trojan, shouldering, blagging, pen test, black box, white box, MAC, CAPTCHA, biometric	Cyberbullying, trolling, ethics, surveillance, censorship, copyright, energy, resources, E-waste		

Valid for academic year 2019-20 only