

KS4 Curriculum Plan

TOPIC	LP1	LP2	LP3	LP4	LP5
	1.1	1.2	1.3 & 1.4	1.5	Programming Project
Knowledge	1.1.1 Architecture of the CPU 1.1.2 CPU Performance 1.1.3 Embedded Systems 1.2.1 Primary Storage 1.2.2 Secondary Storage 1.2.3 Units	1.2.4 Data Storage 1.2.5 Compression 1.3.1 Network storage and topologies 1.3.2 Wired and wireless networks, protocols and layers	1.3.2 Wired and wireless networks, protocols and layers 1.4.1 threats to computer systems and networks 1.4.2 Identifying and preventing vulnerabilities	1.5.1 Operating systems 1.5.2 Utility software 1.6.1 Ethical, legal, cultural and environmental impacts 2.1.1 Computational thinking	
Procedural Knowledge	All students must be given the opportunity to undertake a programming task, either to a specification or to solve a problem (or problems), during their course of study. Students may draw on some of the content from KS3 and the exam content when engaged in Practical Programming.				
Key Vocab	The fetch-execute cycle, CPU, ALU (Arithmetic Logic Unit), CU (Control Unit), Cache, Registers, Von Neumann architecture, MAR (Memory Address Register), MDR (Memory Data Register), Program Counter, Accumulator, Clock speed, Cache size, Cores, Embedded, RAM, ROM, Virtual memory, Capacity, Durability, Bit, Nibble, Byte, Kiliobyte, Megabyte, Gigabyte, Terabyte, Petabyte	Denary, integer, hexadecimal, binary, Unicode, metadata, pixels, lossy, lossless, compression, LAN, WAN, router, switch, transmission media, NIC, hosting, DNS, server, topology, star, mesh, ethernet, encryption, IP, MAC,	TCP/IP (Transmission Control Protocol/Internet Protocol), HTTP (Hyper Text Transfer Protocol), HTTPS (Hyper Text Transfer Protocol Secure), FTP (File Transfer Protocol), POP (Post Office Protocol), IMAP (Internet Message Access Protocol), SMTP (Simple Mail Transfer Protocol), layers, Penetration testing, Anti-malware software, Firewalls, User access levels, Passwords, Encryption, Physical security	User interface, peripheral management, drivers, defragmentation, data compression, ethical, legal, The Data Protection Act 2018, Computer Misuse Act 1990, Copyright Designs and Patents Act 1988, Software licences (i.e. open source and proprietary), Abstraction, Decomposition, Algorithmic thinking	

Year 10 Comp Sci