

2.4 Boolean				1.2 Memory								1.1 Systems Architecture				Mid - Year ASSESS.	
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16	Week 17	Week 18
Boolean Functions and Gates	OR, NOT and AND Gates, Problem Solving	Combining Gates and Truth Tables	Assessment and DIRT	Memory	Secondary Storage	Units and Binary Numbers	Binary arithmetic & HEX	Characters	Images & Sounds	Compressions	Assessment and DIRT	Architecture of the CPU	CPU Performance	Embedded Systems	Assessment and DIRT	Mid - Year REVISION	Mid - Year ASSESSMENT
By the end of this task students will: - Be able to apply logic - draw and understand logic gates - Explain AND, OR and NOT - determining logic using truth tables				By the end of this task students will: - Understand RAM, ROM and Virtual Memory - Know what Secondary Storage is - Understand Binary and addition and convertine to HEX - Understand computer Characters - Understand Images and Sound - Understand Compression								By the end of this task students will: -Understand the Fetch-Decode-Execute cycle - The components of the CPU and their functions - Factors effecting CPU performance				<b>IN CLASS:</b> Students to use their revision guides to review content and complete Practice questions: Red&Blue book, pages 95, pages 23-29 / WHITE BOOK: page 77, 14-17 <b>AT HOME:</b> Students to revisit GCSE POD Playlists for Boolean, Memory and System Arcitecture	
Homework: 1. GCSE Pod (4 videos), 2. Homework worksheet, 3. BBC BITESIZE revise and test				Homework: 20 Videos on GCSE Pod, Memory Homework 1 and 2, secondary storage, units and binary, binary to HEX, Characters, Images and Sound, Compression								Homework: 7 GCSE Pod videos, Homework 1 & 2 wrtitten tasks & BBS BITESIZE revice and test					
Key Vocab: Boolean, OR, NOT, AND, Logic, Gates, Logic Gates, Truth Tables				Key Vocab: RAM, ROM, Virtual, MEMORY, volatile, Binary, Hexadecimal, characters, ASCII, Unicode, character, pixel, bit depth, colour depth, sample, resolution, amplitude, digital, analogue, Lossless compression, Lossy compression,								Key Vocab: Central Processing Unit, cache, register, architecture, fetch-decode-execute, embedded system, core, clock, hertz, multitasking, Von Neumann					
Curriculum Links: Paper 1 exam content, A Level CS				Curriculum Links: Paper 1 exam, A Level CS, KS3 Binary, Binary Additional and Binary to Hex conversion, KS3 Understanding Computers								Curriculum Links: Paper 2 exam, A Level Computing, KS3 Understanding Computers					
<b>Literacy:</b> Digital Literacy and understanding new technical terminology and literacy in terms of conversaions between computing values																	
<b>Cultural Capital:</b>																	
<b>Social, Moral, Spiritual and Cultural Deveopment:</b>																	

Fundamental British Values: Employment Law and Discrimination:

2.1 Algorithms								1.3 Computer networks, connections and protocols					
Week 19	Week 20	Week 21	Week 22	Week 23	Week 23	Week 24	Week 25	Week 21	Week 22	Week 23	Week 24	Week 25	Week 26
Computation thinking	Searching Algorithms	Sorting Algorithms	Algorithms using Flowcharts	Algorithms using psuedocode	Interpret and Correct Algorithms, Trace Tables	Revisit and Revise lessons (Tasks available to practice)	Assessment and DIRT	The Internet and wide area networks	Local Area Networks	Wireless networking	Client-server and P2P networks	Standards Protocols and layers	Assessment and DIRT
By the end of this task students will: - be able to explain abstraction. - complete a range of searches. - complete sorting activities. - understand flow charts. - Identify errors and use Truth Tables. - understand Pseudocode								By the end of this task students will: - be able to explain networks and their uses. - explain network types. - explain network performance factors. - outline network topologies. - outline a range of protocols. - discuss network hardware					
Homework: 11 GCSE Pod videos, 6 Written Homework tasks and a BBC BITESIZE resource to support progress.								Homework: 16 GCSE Pod videos, 5 written homework activities and BBC BITESIZE revision resources					
Key Vocab: Flow diagram, Pseudocode, Abstraction, algorithm, Decomposition, Linear search, Binary search, Insertion sort, Bubble sort, merge sort								Key Vocab: Client-server, Hub, LAN, NIC.Packet. Peer-to-peer. Topology, WAN, ftp, multitasking, Analogue signal, Bandwidth, Compression, Digital signal, Domain name, HTML, Internet, IP address, Protocol, Router/IP					
Curriculum Links: Paper 2 exam, A Level Computing, KS3 Python Next Steps								Curriculum Links: Paper 1 exam, A Level Computing, BTEC Level 3 IT Written test					



2.2 Programming fundamentals (Part 1)				2.2 Programming fundamentals (Part 2)					End of Year ASSES		
Week 27	Week 28	Week 29	Week 30	Week 31	Week 32	Week 33	Week 34	Week 35	Week 36	Week 37	
Programming Fundamentals	Sequence and Selection	Iteration	RECAP AND REVISE	Arrays	Procedures and Functions	Records & Files	Introduction to SQL	Assessment and DIRT	End of Year Assessment	Marking	DIRT
<p>By the end of this task students will:</p> <ul style="list-style-type: none"> <li>- Use variables and operators (mathematical and logical) in programs. – Use If-Elif-Else statements to select data and branch programs.</li> <li>– Use For and WHILE loops in programs (Iteration techniques).</li> <li>- complete a range of string manipulation.</li> <li>- build programs that will save into files, use basic sql commands.</li> <li>- use Arrays 1D and 2D and be confident in sub programs.</li> </ul>									<p>Personal Learning Plans will be issued to students to work on over the summer, these will identify areas of weakness for students to improve knowledge. Summer work will also be issued which will be practical coding activities (for example the Edexcel Paper 2 practical tasks/files)</p>		
Homework: 16 GCSE Pod videos, 7 written homework activities and BBC BITESIZE revision resources											
Key Vocab: Algorithm, IF, ELSE, WHILE, IMAP/POP, flow diagram, pseudocode, Programming, data types, logic, variables, constant, selection, iteration, Tuples and dictionaries. /arrays											
Curriculum Links: - KS3 Python unit, Python Next Steps Unit. - Paper 2 exam content. A Level Computer Science											