Guiseley School Revision Support

Subject: GCSE Computer Science

Component 1:			Exercise books/notes	☺	😐	☹	CGP workbook completed?	Videos
1.1 Systems architecture	1.1.1 Architecture of the CPU	The purpose of the CPU						1. GCSE OCR 1.1 The purpose of the CPU - The fetch-execute cycle.mp4
		Common CPU components and their features						2. GCSE OCR 1.1 Common CPU components and their function.mp4
		Von Neumann architecture						3. GCSE OCR 1.1 Von Neumann architecture.mp4
	1.1.2 CPU performance	How common characteristics of CPUs affect their performance						4. GCSE OCR 1.1 The common characteristics of CPUs.mp4
	1.1.3 Embedded systems	The purpose and characteristics of embedded systems						5. GCSE OCR 1.1 Embedded systems.mp4
		Examples of embedded systems						5. GCSE OCR 1.1 Embedded systems.mp4
1.2 Memory and storage	1.2.1 Primary storage (Memory)	The need for primary storage						6. GCSE OCR 1.2 The need for primary storage.mp4
		The difference between RAM and ROM						7. GCSE OCR 1.2 RAM and ROM.mp4
		The purpose of ROM in a computer system						7. GCSE OCR 1.2 RAM and ROM.mp4
		The purpose of RAM in a computer system						7. GCSE OCR 1.2 RAM and ROM.mp4
		Virtual memory						8. GCSE OCR 1.2 Virtual memory.mp4
	1.2.2 Secondary storage	The need for secondary storage						9. OCR GCSE 1.2 The need for secondary storage.mp4
		Common types of storage						10. GCSE OCR 1.2 Common types of storage.mp4
		Suitable storage devices and storage media for a given application						11. GCSE OCR 1.2 Suitable storage devices and storage media.mp4
		The advantages and disadvantages of different storage devices and storage media relating to these characteristics						11. GCSE OCR 1.2 Suitable storage devices and storage media.mp4
	1.2.3 Units	The units of data storage						12. GCSE OCR 1.2 The units of data storage.mp4
		How data needs to be converted into a binary format to be processed by a computer						13. GCSE OCR 1.2 How data needs to be converted into binary to be processed by a computer.mp4
		Data capacity and calculation of data capacity req						14. GCSE OCR 1.2 Data capacity and calculation of data capacity requirements.mp4
	1.2.4 Data Storage	Convert positive denary whole numbers to binary numbers and vice versa						15. GCSE OCR 1.2 Converting between denary and 8-bit binary.mp4
		Add two binary integers together and explain overflow errors which may occur						16. GCSE OCR 1.2 Adding two 8-bit binary integers.mp4
		Convert positive denary whole numbers into 2-digit hexadecimal numbers and vice versa						17. GCSE OCR 1.2 Converting between denary and 2-digit hexadecimal.mp4
		Convert binary integers to their hexadecimal equivalents and vice versa						17. GCSE OCR 1.2 Converting between denary and 2-digit hexadecimal.mp4
		Binary shift						18. GCSE OCR 1.2 Binary shifts.mp4
		Characters						19. GCSE OCR 1.2 Representing characters and character sets.mp4
		Images						20. GCSE OCR 1.2 Representing images.mp4
		Sound						21. GCSE OCR 1.2 Representing sound.mp4
	1.2.5 Compression	The need for compression						22. GCSE OCR 1.2 Compression.mp4
		Types of compression						22. GCSE OCR 1.2 Compression.mp4
1.3 Computer networks, connections and protocols	1.3.1 Networks and topologies	Types of network						23. GCSE OCR 1.3 Types of networks.mp4
		Factors that affect the performance of networks						24. GCSE OCR 1.3 Factors that affect the performance of networks.mp4
		The different roles of computers in a client-server and a peer-to peer network						25. GCSE OCR 1.3 Client-server and peer-to-peer networks.mp4
		The hardware needed to connect stand-alone computers into a Local Area Network						26. GCSE OCR 1.3 Hardware to connect a LAN.mp4
		The Internet as a worldwide collection of computer networks						27. GCSE OCR 1.3 The internet.mp4
		Star and Mesh network topologies						28. GCSE OCR 1.3 Star and mesh network topologies.mp4
	1.3.2 Wired and wireless networks, protocols and layers	Modes of connection						29. GCSE OCR 1.3 Modes of connection, wired and wireless.mp4
		Encryption						30. GCSE OCR 1.3 Wireless encryption.mp4
		IP addressing and MAC addressing						31. GCSE OCR 1.3 The use of IP and MAC addressing.mp4
		Standards						32. GCSE OCR 1.3 Standards.mp4
		Common protocols						33. GCSE OCR 1.3 Common protocols.mp4
		The concept of layers						34. GCSE OCR 1.3 The concept of layers.mp4
1.4 Network security	1.4.1 Threats to computer systems and networks	Forms of attack						35. GCSE OCR 1.4 Forms of attack.mp4
	1.4.2 Identifying and preventing vulnerabilities	Common prevention methods						36. GCSE OCR 1.4 Threats posed to networks.mp4
								37. GCSE OCR 1.4 Identifying and preventing vulnerabilities.mp4
1.5. Systems Security	1.5.1 Operating Systems	The purpose and functionality of operating systems						38. GCSE 1.5 The purpose and functionality of operating systems.mp4
								39. GCSE OCR 1.5 Operating systems part 1.mp4
								40. GCSE OCR 1.5 Operating systems part 2.mp4
	1.5.2 Utility Software	The purpose and functionality of utility software						41. GCSE OCR 1.5 Utility system software.mp4
		Utility system software						
		Impacts of digital technology on wider society						42. GCSE OCR 1.6 How to investigate and discuss Computer Science technologies.mp4

	A	B	C	D	E	F	G	H	I
59	**1.6 Ethical, legal, cultural and environmental impacts of digital technology**	1.6.1 Ethical, legal, cultural and environmental impact	Legislation relevant to Computer Science						43. GCSE OCR 1.6 Privacy issues.mp4
60									44. GCSE OCR 1.6 Cultural implications of computer science .mp4
61									45. GCSE OCR 1.6 Environmetal impact of computer science .mp4
62									46. GCSE OCR 1.6 Impacts of digital technology on wider society.mp4
63									47. GCSE OCR 1.6 Legislation relevant to computer science.mp4
64									48. GCSE OCR 1.6 Open source vs proprietary software.mp4
65									
66									
67									
68	**Component 2:**			**Exercise books/notes**	☺	😐	☹	**CGP workbook completed?**	**Videos**
69	**2.1 Algorithms**	2.1.1 Computational thinking	Principles of computational thinking						49. GCSE OCR 2.1 Abstraction.mp4
70									50. GCSE OCR 2.1 Decomposition.mp4
71									51. GCSE OCR 2.1 Algorithmic thinking.mp4
72		2.1.2 Designing, creating and refining algorithms	Identify the inputs, processes, and outputs						52. GCSE OCR 2.1 Inputs, processes and outputs.mp4
73			Structure diagrams						53. GCSE OCR 2.1 Structure diagrams.mp4
74			Create, interpret, correct, complete, and refine algorithms						54. GCSE OCR 2.1 How to produce algorithms using pseudocode and flow diagrams.mp4
75			Identify common errors						55. GCSE OCR 2.1 Identifying errors and suggesting fixes.mp4
76			Trace tables						56. GCSE OCR 2.1 Trace tables.mp4
77		2.1.3 Searching and sorting algorithms	Binary search						57. GCSE OCR 2.1 Binary search.mp4
78			Linear search						58. GCSE OCR 2.1 Linear search.mp4
79			Bubble sort						59. GCSE OCR 2.1 Bubble sort.mp4
80			Merge sort						60. GCSE OCR 2.1 Merge sort.mp4
81			Insertion sort						61. GCSE OCR 2.1 Insertion sort.mp4
82	**2.2 – Programming Fundamentals**	2.2.1 Programming fundamentals	The use of variables, constants, operators, inputs, outputs and assignments						62. GCSE OCR 2.2 The use of variables, constants, inputs, outputs and assignments.mp4
83			Programming constructs						63. GCSE OCR 2.2 The use of the three basic programming constructs.mp4
84			Arithmetic operators						64. GCSE OCR 2.2 The common arithmetic and comparison operators.mp4
85			Boolean operators AND, OR and NOT						65. GCSE OCR 2.2 The common Boolean operators.mp4
86		2.2.2 Data types	Data types						66. GCSE OCR 2.2 The use of data types and casting.mp4
87		2.2.3 Additional programming techniques	String maninpulation						67. GCSE OCR 2.2 The use of basic string manipulation.mp4
88			File handling operations						68. GCSE OCR 2.2 The use of basic file handling operations.mp4
89			Rcords to store data						69. GCSE OCR 2.2 The use of records to store data.mp4
90			SQL to search for data						70. GCSE OCR 2.2 The use of SQL to search for data.mp4
91			Arrays						71. GCSE OCR 2.2 The use of arrays.mp4
92			Sub programs						72. GCSE OCR 2.2 How to use sub programs.mp4
93			Random number generation						73. GCSE OCR 2.2 Random number generation.mp4
94	**2.3 Producing robust programs**	2.3.1 Defensive design	Defensive considerations						75. GCSE OCR 2.3 Defensive design considerations part 2.mp4
95			Input validation						74. GCSE OCR 2.3 Defensive design considerations part 1.mp4
96			Maintainability						76. GCSE OCR 2.3 Maintainability.mp4
97		2.3.2 Testing	Purpose of testing						77. GCSE OCR 2.3 The purpose and types of testing.mp4
98			Types of testing						77. GCSE OCR 2.3 The purpose and types of testing.mp4
99			Syntax and logic errors						78. GCSE OCR 2.3 How to identify syntax and logic errors.mp4
100			Suitable test data						79. GCSE OCR 2.3 Suitable test data.mp4
101			Refining algorithms						80. GCSE OCR 2.3 Refining algorithms to make them more robust.mp4
102	**2.4 Boolean logic**	2.4.1 Boolean logic	Simple logic diagrams						81. GCSE OCR 2.4 Simple logic diagrams.mp4
103			Truth tables						82. GCSE OCR 2.4 Truth tables.mp4
104			Combining boolean operators						83. GCSE OCR 2.4 Combining Boolean operators.mp4
105			Applying logical operators						84. GCSE OCR 2.4 Applying logical operators in truth tables to solve problems.mp4
106	**2.5 – Programming languages and Integrated Development Environments**	2.5.1 Languages	Characteristics and purpose						85. GCSE OCR 2.5 Characteristics and purpose of different levels of programming language.mp4
107			The purpose of translators						86. GCSE OCR 2.5 The purpose of translators.mp4
108			Compiler and interpreter						87. GCSE OCR 2.5 Characteristics of compilers and interpreters.mp4
109		2.5.2 The Integrated Development Environment (IDE)	Common tools in IDEs						88. GCSE OCR 2.5 IDEs.mp4
110									
111	**Resources to support revision:**								
112	1) Lesson presentations on VLE								
113	2) Lesson booklets on VLE								
114	3) Videos on VLE								
115	4) Knowledge organisers on VLE								
116	5) CGP workbook								
117	6) CGP revision guide								
118	7) CGP 10 minutes tests								
119	8) Flash Cards								