

Computer Science (GCSE)



The areas of development are:	Solutions
<u>Computer Science</u>	
<ul style="list-style-type: none"> • Creating and naming variables in Python 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) page 43 • Use Codecademy • Use Snakify • BBC Bitesize: Variables
<ul style="list-style-type: none"> • Showing good understanding of selection in Python 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) page 45 • Use Codecademy • Use Snakify • BBC Bitesize: Selection
<ul style="list-style-type: none"> • Identifying the different data types used in programming 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) page 41 • BBC Bitesize: Data Types
<ul style="list-style-type: none"> • Understanding the syntax used in basic Python 	<ul style="list-style-type: none"> • Use Codecademy • Use Snakify
<ul style="list-style-type: none"> • Understanding the syntax used in more complex Python (e.g. IF statements) 	<ul style="list-style-type: none"> • Use Codecademy • Use Snakify
<ul style="list-style-type: none"> • Understanding the difference between a variable and a constant 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) page 43 • BBC Bitesize: Constants and Variables
<ul style="list-style-type: none"> • Implementing loops in Python 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) pages 46-47 • Use Codecademy • Use Snakify • BBC Bitesize: Iteration

<ul style="list-style-type: none"> • Appropriately using arithmetic operators in Python 	<ul style="list-style-type: none"> • GCSE OCR Computer Science revision guide (blue book) page 42 • Use Codecademy • Use Snakify • BBC Bitesize: Boolean logic
<ul style="list-style-type: none"> • Describing the purpose of the CPU and each stage of the FDE cycle 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Section One - Page 1-5 • BBC Bitesize: Systems Architecture
<ul style="list-style-type: none"> • Identifying the common CPU components and describing their function 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 1-5 • BBC Bitesize: Components of the CPU
<ul style="list-style-type: none"> • Understanding the purpose of each register and what it stores (data or address) 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 1-5 • BBC Bitesize: Registers
<ul style="list-style-type: none"> • How common characteristics affect the CPU's performance 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 1 - 5 • BBC Bitesize: CPU Performance
<ul style="list-style-type: none"> • Understanding the need for primary storage (RAM/ROM) 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 4 • BBC Bitesize: Main Memory
<ul style="list-style-type: none"> • Understanding the need for secondary storage (Magnetic/Solid State/Optical) 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 6 • BBC Bitesize: Secondary Storage
<ul style="list-style-type: none"> • Understanding and explaining why data must be stored in a binary format 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 67-69 • BBC Bitesize: Binary Conversion
<ul style="list-style-type: none"> • How to convert positive denary whole numbers to binary numbers and vice versa 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 67 -69 • BBC Bitesize: Binary Conversion
<ul style="list-style-type: none"> • How to convert binary integers to their hexadecimal equivalents and vice versa 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 70 • BBC Bitesize: Hexadecimal Conversion
<ul style="list-style-type: none"> • Types of Networks LAN/WAN and factors that affect performance 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 13 • BBC Bitesize: LAN/WAN
<ul style="list-style-type: none"> • The different roles of computers in a client-server and a peer-to-peer network 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 15 • BBC Bitesize: Client-Server & Peer-to-Peer
<ul style="list-style-type: none"> • Understand and explain each different hardware component required in networks 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 14 • BBC Bitesize: Networks - Hardware
<ul style="list-style-type: none"> • Describing the concept of the internet as a network of computers 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 20 • BBC Bitesize: The Internet

<ul style="list-style-type: none"> • Describing different network topologies and the difference between MESH and STAR topologies 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 16 • BBC Bitesize: Network Topologies
<ul style="list-style-type: none"> • Identifying the different types of protocols, how they are used and their purposes 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 17 • BBC Bitesize: Protocols
<ul style="list-style-type: none"> • Understanding a range of threats posed to networks, devices, and systems 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 21 • BBC Bitesize: Network Threats
<ul style="list-style-type: none"> • Knowledge/principles of each form of attack including: How the attack is used & the purpose of the attack 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 21 - 23 • BBC Bitesize: Types of Attack
<ul style="list-style-type: none"> • Understanding how to limit threats posed to networks, devices and systems and preventative measures for these types of attack 	<ul style="list-style-type: none"> • GCSE OCR Computer Science Revision Guide, Page 21 - 23 • BBC Bitesize: Preventing Network Attacks

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