

Quality of Education: Curriculum is planned and sequenced so that new **knowledge** and **skills** build on what has been taught before and towards its clearly defined end points.



SUBJECT: Computer Science		CURRICULUM PROGRESSION PATHWAYS		CL: Miss Youngman	2022-2023				
KS3 (Level 1) Computing	KS4 (Level 2) OCR GCSE Computer Science	KS5 (Level 3) BTEC Level 3 National Extended Certificate in Computing	Further Education and training	Careers					
<p>Year 7 - Basic Skills Knowledge: E-Safety, Internet Searching Skills: PowerPoint Presentation, Word Processing, Desktop Publishing Year 7 - Web Page Creation Knowledge: Internet Searching Skills: HTML Coding Careers: Web Designer Year 7 - Programming Knowledge: Python Programming Theory Skills: Python Programming Careers: Programmer</p> <p>Year 8 - Spreadsheets Knowledge: Spreadsheet Key Terms Skills: Spreadsheet Creation Careers: Data Analyst Year 8 - Databases Knowledge: Database Key Terms Skills: Database Creation Careers: SQL Database Administrator Year 8 - Algorithms Knowledge: Algorithms Skills: Flowcharts, Pseudo-code Careers: Data Scientist Year 8 - Programming Knowledge: Python Programming Theory</p>		<p>Year 10: Unit 01: Computer Systems and Unit 02: Computational Thinking, Algorithms and Programming and Programming Project Knowledge: Systems Architecture, Memory and Storage, Computer Networks, Connections and Protocols, Network Security, Systems Software, Ethical, Legal, Cultural and Environmental Concerns. Algorithms, Boolean Logic Skills: Pseudo-code, Programming Techniques, Python Programming, Exam Technique Careers: Network Engineer, Python Programmer</p> <p>Year 11: Unit 01: Computer Systems and Unit 02: Computational Thinking, Algorithms and Programming Knowledge: Systems Architecture, Memory and Storage, Computer Networks, Connections and Protocols, Network Security, Systems Software, Ethical, Legal,</p>		<p>Year 12: Unit 1: Principles of Computer Science Knowledge: Computational Thinking, Standard Methods and Techniques used to Develop Algorithms, Programming Paradigms and Types of Programming and Mark-up Languages Skills: Exam Technique Careers: Computational Scientist, Software Developer</p> <p>Unit 7: IT Systems Security and Encryption Knowledge: IT Security Threats, Cryptographic Techniques and Processes Skills: Implement Strategies to Protect an IT System Careers: Cyber Security Analyst, Security Engineer</p> <p>Year 13: Unit 2: Fundamentals of Computer Systems Knowledge: Hardware and Software, Computer Architecture, How Data is</p>		<p>Computer Science Degree: Computer Science Information Systems Software Engineering Artificial Intelligence Health Informatics</p> <p>Advanced, Higher and Degree Apprenticeships in: Business Analyst Data Analyst IT Security Analyst Network Engineer Software Engineer Information Security Software Developer</p>		<p>Computer Games Tester Forensic Computer Analyst Information Systems Manager IT Project Manager IT Service Engineer Network Manager Software Developer Systems Analyst Technical Architect Web Designer</p>	

Algorithms

Programming Skills

Computational Thinking

Meeting Requirements

Data Knowledge

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<p>Skills: Python Programming Careers: Python Programmer</p> <p>Year 9 - Animation Knowledge: Interface Layout Skills: Animation Creation Careers: Animator</p> <p>Year 9 - Programming Knowledge: Python Programming Theory Skills: Python Programming Careers: Python Programmer</p> <p>Year 9 - Spreadsheets Knowledge: Spreadsheet Key Terms Skills: Spreadsheet Creation Careers: Data Analyst</p> <p>Year 9 - Ethical, Legal, Cultural and Environmental Concerns Knowledge: Ethical, Legal, Cultural and Environmental Concerns Skills: Word Processing Careers: Data Protection Officer</p> <p>Year 9 - User Interfaces Knowledge: User Interface Design Skills: User Interface Creation Careers: User Interface Developer</p> <p>Year 9 - Computing Basics Knowledge: Inside a Computer, Binary Theory Skills: Binary Careers: IT Technician</p>	<p>Cultural and Environmental Concerns. Algorithms, Boolean Logic Skills: Exam Technique Careers: Cloud Engineer, IT Test Engineer</p>	<p>Represented by Computer Systems, How Data is Organised on Computer Systems, How Data is Transmitted by Computer Systems, The Use of Logic and Data Flow in Computer Systems Skills: Exam Technique Careers: Data Operator, Data Scientist</p> <p>Unit 15: Website Development Knowledge: Website Development Principles, Website Design Principles Skills: Website Development Careers: Website Designer, Website Developer</p>		<p>Web Developer</p>
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