

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 M. Youngman				
KS3 (Level 1) Computing	KS4 (Level 2) OCR GCSE Computer Science	KS5 (Level 3) OCR A Level Computer Science	Further Education and training	Careers
<p>Year 7 - IT Basics Knowledge: Standard ways of Working, E-Safety, Google Classroom, Remote Access and E-Safety Skills: E-mail</p> <p>Year 7 - Basic Skills Knowledge: Internet Searching Skills: PowerPoint Presentation, Word Processing, Desktop Publishing</p> <p>Year 7 - Web Page Creation Knowledge: Internet Searching Skills: HTML Coding</p> <p>Year 7 - Databases Knowledge: Database Key Terms Skills: Database Creation</p> <p>Year 7 - Spreadsheets Knowledge: Spreadsheet Key Terms Skills: Spreadsheet Creation</p> <p>Year 7 - Game Programming Knowledge: Scratch Programming Theory Skills: Scratch Programming</p>	<p>Year 9: Unit 01 and Unit 02 Knowledge: Systems Architecture, Memory, Storage, Wired and Wireless Networks, Network Topologies, Protocols and Layers, Systems Security, System Software, Ethical, Legal, Cultural and Environmental Concerns, Data Representation, Algorithms, Producing Robust Programs Skills: Flowcharts, Pseudo-code, Programming Techniques, Python Programming</p> <p>Year 10: Unit 01 and Programming Project Knowledge: Programming Techniques, Computational Logic, Translators and Facilities of Languages, Programming Project – Analysis, Evaluation and Conclusions Skills: Programming Project - Design, Development</p>	<p>Year 12:</p> <p>Unit 01: Computing Principles Knowledge: The Characteristics of Contemporary Processors, Input, Output and Storage Devices, Software and Software Development, Programming, Exchanging Data, Data Types, Data Structures and Algorithms, Legal, Moral, Ethical and Cultural Issues Skills: Flowcharts, Pseudo-Code, Exam Technique</p> <p>Unit 02: Algorithms and Problem Solving Knowledge: Elements of Computational Thinking, Problem Solving and Programming, Algorithms Skills: Flowcharts, Pseudo-Code, Exam Technique, Python Programming</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</p> <p>Forensic Computer Analyst</p> <p>Information Systems Manager</p> <p>IT Project Manager</p> <p>IT Service Engineer</p> <p>Network Manager</p> <p>Software Developer</p> <p>Systems Analyst</p> <p>Technical Architect</p> <p>Web Designer</p>

Algorithms

Programming Skills

Computational Thinking

Meeting Requirements

Data Knowledge

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<p>Year 7 - Programming Knowledge: Python Programming Theory Skills: Python Programming</p> <p>Year 8 - Computing Basics Knowledge: Inside a Computer, Networks, The Internet Skills: Binary</p> <p>Year 8 - Spreadsheets Knowledge: Spreadsheet Key Terms Skills: Spreadsheet Creation</p> <p>Year 8 - Databases Knowledge: Database Key Terms Skills: Database Creation</p> <p>Year 8 - Algorithms Knowledge: Algorithms Skills: Flowcharts, Pseudo-code</p> <p>Year 8 - Programming Knowledge: Python Programming Theory Skills: Python Programming</p> <p>Year 8 - Mini Programming Projects Knowledge: Python Programming Theory, Following Instructions Skills: Python Programming</p>	<p>Year 11: Unit 01 and Unit 02 Knowledge: Systems Architecture, Memory, Storage, Wired and Wireless Networks, Network Topologies, Protocols and Layers, Systems Security, System Software, Ethical, Legal, Cultural and Environmental Concerns, Algorithms, Programming Techniques, Producing Robust Programs, Computational Logic, Translators and Facilities of Languages, Data Representation Skills: Exam Technique</p>	<p>Year 13:</p> <p>Unit 01: Computer Systems Knowledge: The Characteristics of Contemporary Processors, Input, Output and Storage Devices, Software and Software Development, Exchanging Data, Data Types, Data Structures and Algorithms, Legal, Moral, Cultural and Ethical Issues Skills: Exam Technique</p> <p>Unit 02: Algorithms and Programming Knowledge: Elements of Computational Thinking, Problem Solving and Programming, Algorithms to Solve Problems and Standard Algorithms Skills: Flowcharts, Pseudo-Code, Exam Technique, Python Programming</p> <p>Unit 03: Programming Project Knowledge: Analysis of the Problem, Evaluation, Meeting Requirements Skills: Design of a solution, Developing a solution</p>		<p>Web Developer</p>
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