

Computer Science Big Picture YEAR 10



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| <p>Reading through the curriculum: Students are encouraged to read case studies, particularly around 1.6 and emerging technologies. They will have access to the e-library within lessons, but will be taught how to research real case studies and understand the implications of technology.</p> | |
| <p>Autumn 01 7 Weeks (weeks 2-8)</p> | <p>Autumn 02 7 Weeks (weeks 9-15)</p> |
| <p>Subject content -knowledge and skills J277/01: Computer Systems: 1.1 Systems architecture 1.1.1 Architecture of the CPU 1.1.2 CPU performance 1.1.3 Embedded systems 1.2 Memory and storage 1.2.1 Primary storage (Memory) 1.2.2 Secondary storage 1.2.3 Units 1.2.4 Data storage 1.2.5 Compression</p> | <p>Subject content -knowledge and skills J277/01: Computer Systems: 1.3 Computer networks, connections and protocols 1.3.1 Networks and topologies 1.3.2 Wired and wireless networks, protocols and layers 1.4 Network security 1.4.1 Threats to computer systems and networks 1.4.2 Identifying and preventing vulnerabilities</p> |
| <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: Computer Systems: 1.1/1.2</p> | <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: Computer Systems: 1.1/1.2/1.3/1.4</p> |
| <p>Independent study format: Weekly exam questions completed. No Big test in HT1/HT2 for Y10</p> | |
| <p>Spring 01 7 Weeks (weeks 16-22)</p> | <p>Spring 02 5 Weeks (weeks 23-27)</p> |
| <p>Subject content -knowledge and skills J277/01: Computer Systems: 1.5 Systems software 1.5.1 Operating systems 1.5.2 Utility software 1.6 Ethical, legal, cultural and environmental impacts of digital technology</p> | <p>Subject content -knowledge and skills J277/02: Computational thinking, algorithms and Programming: 2.1 Algorithms 2.1.1 Computational thinking 2.1.2 Designing, creating and refining algorithms 2.1.3 Searching and sorting algorithms 2.2 Programming fundamentals 2.2.1 Programming fundamentals</p> |
| <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: Computer Systems: 1.1/1.2/1.3/1.4/1.5/1.6</p> | <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: 1.1/1.2/1.3/1.4/1.5/1.6 J277/02: 2.1</p> |
| <p>Independent study format: Weekly exam questions completed. Big Test is week wb 10th and 17th January</p> | |
| <p>Summer 01 6 Weeks (28-33)</p> | <p>Summer 02 7 Weeks (34-40)</p> |
| <p>Subject content -knowledge and skills J277/02: Computational thinking, algorithms and Programming: 2.2.1 Programming fundamentals 2.2.2 Data types 2.2.3 Additional programming techniques 2.3 Producing robust programs 2.3.1 Defensive design 2.3.2 Testing 2.4 Boolean logic 2.4.1 Boolean Logic</p> | <p>Subject content -knowledge and skills J277/02: Computational thinking, algorithms and Programming: 2.5 Programming languages and Integrated Development Environments 2.5.1 Languages 2.5.2 The Integrated Development Environment</p> |
| <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: 1.1/1.2/1.3/1.4/1.5/1.6 J277/02: 2.1/2.2/2.3/2.4</p> | <p>Assessment Objectives Knowledge, application and skills assessed by the Big Test: J277/01: Full Paper J277/02: Full Paper</p> |
| <p>Independent study format: Weekly exam questions completed. Big Test is week wb 20th and 27th June</p> | |