OCR GCSE (9-1) Computer Science

# Overview of Overview January to February: 2.6, 2.4, 2.1, Data Representation, Computational Logic and Algorithms

**2.6 Data Representation (continued)**

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| Week | Statements | Teaching activities | Notes |
| 1 | Need for compression | <http://www.canyoucompute.co.uk/l11-compression-part-1.html> |  |
|  | Types of compression:   1. lossy 2. lossless | <http://www.canyoucompute.co.uk/l12-compression-part-2.html> |  |

# 2.4 Computational Logic

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| Week | Statements | Teaching activities | Notes |
| 2 | Why data is represented in computer systems in binary form | <http://www.canyoucompute.co.uk/l1-comp-logic-1.html> |  |
|  | Simple logic diagrams using the operations AND, OR and NOT | <http://www.canyoucompute.co.uk/l2-comp-logic-2.html> |  |
|  | Truth tables |  |  |
|  | Combining Boolean operators using AND, OR and NOT to two levels |  |  |
|  | Applying logical operators in appropriate truth tables to solve problems |  |  |
|  | Applying computing-related mathematics:   1. + 2. – 3. / 4. \* Exponentiation (^) 5. MOD 6. DIV | <http://www.canyoucompute.co.uk/l3-operators-python.html> |  |

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| Week | Statements | Teaching activities | Notes |
| 3 | Building a VENDING MACHINE WITH PYTHON | <http://www.canyoucompute.co.uk/vending-machine.html> |  |
| 4 | TEST |  |  |

# 2.1 Algorithms

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| Week | Statements | Teaching activities | Notes |
| 5 | Computational thinking:   1. abstraction 2. decomposition 3. algorithmic thinking | <http://www.canyoucompute.co.uk/l1-intro-to-algorithms.html> |  |
| 6 | 1. The Knights Tour   Computational thinking:   1. abstraction 2. decomposition 3. algorithmic thinking | <http://www.canyoucompute.co.uk/l2-the-knights-tour.html> |  |
| 7 | The Bresenham Line-Drawing Algorithm  Computational thinking:   1. abstraction 2. decomposition   algorithmic thinking | <http://www.canyoucompute.co.uk/l3-bresenham.html> |  |