OCR GCSE (9-1) Computer Science

# Overview of September – October: 1.1 Systems Architecture

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| Week | Statements | | | Teaching activities | Notes |
| 1 | Learning to FAIL, the First Attempt In Learning | | | <http://www.canyoucompute.co.uk/epic-fails.html> |  |
| Week | Statements | | | Teaching activities | Notes |
| 2 | Writing your first program, an introduction to Python | | | <http://www.canyoucompute.co.uk/writing-your-first-program.html> |  |
| Week | Statements | | | Teaching activities | Notes |
| 3 | The purpose of the CPU | | | <http://www.canyoucompute.co.uk/l1-the-cpu.html> |  |
|  | The CPU in Action | | | <http://www.canyoucompute.co.uk/l2-the-cpu-in-action.html> |  |
| Week | Statements | | | Teaching activities | Notes |
| 4 | Von Neumann architecture:   1. MAR (Memory Address Register) 2. MDR (Memory Data Register) 3. Program Counter 4. Accumulator | | | <http://www.canyoucompute.co.uk/l3-cpu-recap.html> |  |
|  | Common CPU components and their function:   1. ALU (Arithmetic Logic Unit) 2. CU (Control Unit) 3. Cache | | |  |  |
|  | The function of the CPU as fetch and execute instructions stored in memory | | |  |  |
|  | How common characteristics of CPUs affect their performance:   1. clock speed 2. cache size   number of cores | | |  |  |
| Week | Statements | | | Teaching activities | Notes |
| 5 | Introduction to LMC | | | <http://www.canyoucompute.co.uk/l4-intro-to-lmc.html> |  |
|  | Problem Solving with LMC | | | <http://www.canyoucompute.co.uk/l5-problem-solving-with-lmc.html> |  |
| Week | Statements | | | Teaching activities | Notes |
| 6 | LMC Subtraction  *Von Neumann architectu re:*  *MAR (Memory Address Register)*  *MDR (Memory Data Register)*  *Program Counter*  *Accumulator* | | | <http://www.canyoucompute.co.uk/l6-lmc-subtraction.html> |  |
|  | LMC Looping  *Von Neumann architecture:*  *MAR (Memory Address Register)*  *MDR (Memory Data Register)*  *Program Counter*  *Accumulator* | | | <http://www.canyoucompute.co.uk/l7-lmc-looping.html> |  |
| Week | | Statements | Teaching activities | | Notes |
| 7 | | LMC Multiplication | <http://www.canyoucompute.co.uk/l8-lmc-multiplication.html> | |  |
| Week | | Statements | Teaching activities | | Notes |
| 8 | | Embedded systems:  purpose of embedded systems  examples of embedded systems | <http://www.canyoucompute.co.uk/l9-embedded-systems.html> | |  |
|  | | End of Unit test | <http://www.canyoucompute.co.uk/l10-end-of-term-exam.html> | |  |