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
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|  | 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 systemsexamples 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> |  |