“Understand how instructions are stored and executed within a computer system.”

**Tick which ones should be taught at KS3**

The idea of memory as a temporary store

What RAM means (in terms of access to different parts of memory)

All data in RAM can be imagined as 1 or 0 (on/off) (hi/lo)

The processor as the brain of a computer

Processors have inbuilt instruction sets

Instruction sets depend on pre-built circuits that do specific maths jobs

Different brands of processors can have totally different instruction sets

Processors have a small memory space – the accumulator

Processors can do simple maths incredibly quickly with their ALU

Programs run one instruction at a time in order

The processor has a number of registers that it can use

The role of the CIR, MAR and MBR

A bus as a connection between parts

Where a program is ‘up to’ is controlled by the PC

The PC can be re-set if you want to jump to a different part of the program

Memory having lots of spaces, each with an address

A 6 bit addressing system allows for 2n memory addresses

Data and instructions are stored in the same way – there is no difference between them

Machine, assembly and higher level languages

Writing some simple LMC programs

Any more…

Changes/developments to the activity…