

Year 12 Computing project

This project will enable you to prepare yourself for the Autumn term. Within Computing we study the following topic areas:

- Computer systems
- Algorithms and programming
- Programming projects

You must complete the following work.

Task 1 – components of a computer.

You should have some understanding of the processor, primary storage and secondary storage.

You need to research the following and make notes in an A4 word document. Please try to include images to support your descriptions.

THIS WORK MUST BE IN YOUR OWN WORDS AND NOT COPIED AND PASTED.

Terms to research

- ALU
- Control unit
- Registers: ACC, MAR, MDR, CIR,
- Buses: data, address and control
- CISC and RISC processors
- GPU's
- Multicore and parallel systems.

Task 2 – Fetch decode-Decode-Execute cycle.

Your task is to fully explain this cycle. Create a diagram to support your answer.

YOU MUST INCLUDE HOW THIS CYCLE EFFECTS THE REGISTERS.

Task 3 Programming.

We will be using python throughout the A level. The major difference between GCSE and A level is the depth that we need to go into. We also explore object orientated programming. Your task is to go to the following website and improve your python skills. It covers the basics and introduces you to object orientated programming.

<https://python.swaroopch.com/>

Python is a free download and can be used on various platforms. If you're unable to download python the use the online emulator found: <https://repl.it/languages/python3>

If you have any question please contact: Teacher: Mr Creed Email address: screed1@the-elmgreen-school.org.uk

Please be aware that staff may not be available to respond to emails after Friday 15 July 2016