Learning PLUS+ – COMPUTER SCIENCE Y12 & Y13

Specification code H446 – OCR ALEVEL in Computer Science

Paper 1 and Paper 2 – Things you can do in your study periods Worth 40% each (exams in total are therefore worth 80% of the entire course) Both are taken at the end of Y13

- Revise for tests using templates or https://adacomputerscience.org/
- Use https://senecalearning.com/en-GB/ for the OCR H446 A-LEVEL in Computer Science
- The computer science department have bought everyone in GCSE and ALEVEL a subscription to smart revise all the way up until your final exam https://smartrevise.online/

Coursework (NEA) worth 20% of final grade This is due at Easter, with final tweaks during Easter break. I have to submit all marked work by 15th May in Y13

There are some small projects at https://adacomputerscience.org/projects

However, your actual project which **you have to do all in your own time including study periods is around 100 pages** *and involves choosing a project, analysing the requirements and designing it, then coding the solution and evaluating it.*

Students are usually encouraged to start choosing their projects around February half term and then are encouraged to work on it bit-by-bit until Easter Y13.
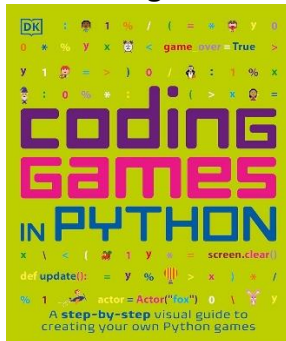
This section on ada comp sci goes through much of what each section entails
https://adacomputerscience.org/topics/ocr_nea_project

Students usually code their project in something like Pygame Zero
https://pygame-zero.readthedocs.io/en/stable/

I have bought all of Y12 this book to borrow for the duration of the course

Example projects include:

- Re-creating an old arcade game such as frogger, space invaders or pacman
- Making a computer based version of a board game such as Quirkle, Splendor, Monopoly
- Making some sort of educational "helper" to help students break down floating point binary normalisation, or to help students test themselves at the process. Games like "flippy bit" would also provide a good challenge

Courses to stretch your knowledge

- Isaac Computer Science hold online learning events for both GCSE and ALEVEL (basically a bit like a tutor – these are free – you just have to register)
  https://isaaccomputerscience.org/events?examBoard=all&stage=all

- https://www.edx.org/learn/computer-programming/raspberry-pi-foundation-object-oriented-programming-in-python-create-your-own-adventure-game?index=product&queryId=25213dd1483f49ecb5c663a648a44b17&position=7
- https://www.edx.org/learn/computer-programming/raspberry-pi-foundation-introduction-to-encryption-and-cryptography?index=product&queryId=25213dd1483f49ecb5c663a648a44b17&position=8
- https://www.edx.org/learn/computer-programming/raspberry-pi-foundation-introduction-to-databases-and-sql?index=product&queryId=25213dd1483f49ecb5c663a648a44b17&position=13
- https://www.edx.org/learn/teacher-training/raspberry-pi-foundation-teach-kids-computing-computing-systems-and-networks?index=product&queryId=25213dd1483f49ecb5c663a648a44b17&position=16