

Below are all things which you can be doing to prepare yourself for the A-Level in Computer Science.

1 – Brush up on your coding!

Work through Python tutorials
(see some YouTube links below)

<https://www.youtube.com/watch?v=rfscVS0vtbw>
<https://www.youtube.com/watch?v=eHxoh9Rrtdk>

3 – Build a skillset

There are many free online courses/lectures out there. See sites such as:

edX
Khan Academy
Stanford Online

2 – Get a head start on key algorithms...

At GCSE you needed to know some searching algorithms and some sorting algorithms. Research and try to understand the following:

1. Linear Search
2. Binary Search
3. Bubble Sort
4. Insertion Sort
5. Merge Sort
6. Quick Sort

Even better if you can code a few of these. Again, YouTube is a fantastic place to search.

4 – Learn the following keywords

Understand and learn the definitions of the following keywords:

- ABSTRACTION
- DECOMPOSITION
- VISUALISATION
- CONCURRENCY
- TRAVERSAL

5 – Can you explain all processor components?

- ALU
- CU
- PC
- ACC
- MAR
- MDR
- CIR

6 – Brainstorm project ideas

You need to carry out a project at A-Level. Similar to your GCSE coursework but more complex. This can be anything. You are not restricted to a type of problem or a specific programming language. You have maximum flexibility.

What will you create?
Which programming language will you use?