

THE PRIORY ACADEMY
LSST

Sixth Form Induction Day
Computer Science Taster Session



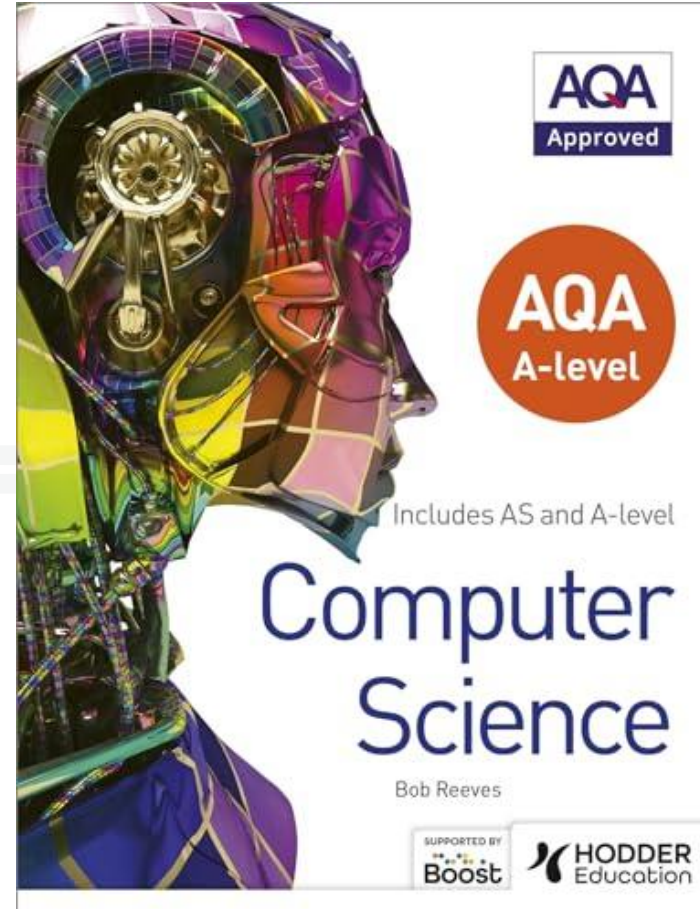
Starter activity

Computer science is about being able to solve problems and break down task (not the ability to complete tasks...)

This reflects in programming and theory. Use the handouts to try and breakdown some of the problems to solve. You have 10 minutes to complete the questions.

The bigger picture!

- Paper 1 – 40% - 2 ½ Hrs – Online examination (Tests ability to program)
- Paper 2 – 40% - 2 ½ Hrs – Written examination (Theory)
- The Project (NEA) - 20% - A solution to a computing problem, which is analyzed, designed, developed and tested.



Topics covered in 6th Form

- Fundamentals of Programming
- Fundamentals of data structures
- Fundamentals of algorithms
- Theory of computation
- Fundamentals of data representation
- Fundamentals of computer systems
- Fundamentals of computer organisation and architecture
- Consequences of uses of computing
- Fundamentals of communication and networking
- Fundamentals of databases
- Big Data
- Fundamentals of functional programming
- Systematic approach to problem solving



Top tips for studying Computer Science at A Level.

1. Understand the Syllabus: Familiarise yourself with the AQA exam specification.
2. Strong Foundation in Mathematics: Focus on algebra, logic, and problem-solving.
3. Master Programming: Be proficient with programming languages C# and practice coding regularly.
4. Learn Theoretical Concepts: Take good notes and constantly recap older theoretical topics such as computer architecture, networking, and databases.
5. Utilise Resources: Use textbooks, online courses, study groups, and forums for supplementary learning.
6. Seek Help When Needed: Ask your teachers for help and engage with online communities.
7. Effective Time Management: Prioritise tasks, avoid procrastination, and stick to a study schedule.

What do I need to do to prepare before September?

- Over the summer make sure you complete the transition work which can be found on the website.
- This can be submitted by paper hand-in on the first day back
- Look at the specification from the examination board: [AQA | AS and A-level | Computer Science | Specification at a glance](#)



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Further Reading

- Computational Fairy Tales - Jeremy Kubica
- The Pattern on the stone - By W. Daniel Hillis
- C# Programming in easy steps, 2nd edition - Mike McGrath
- Brown Dogs and Barbers - Dr Karl Beecher
- A Glossary of computing terms – The British Computer Society
- The Road Ahead – Bill Gates
- Computers Ltd what they really can't do – David Harel