A-level Computer Science

A-level Computer Science

Computing is a subject that increasingly underpins all other subject areas. Universities and employers routinely demand coding skills for seemingly unrelated subject areas. Computing is a fast moving and highly topical subject. Computing promotes logical thinking and problem solving skills.

What are lessons like?

Computing lessons contain a mixture of practical coding and theory based topics. A great deal of Computing involves problem solving and as such discussion is encouraged. Notes are taken digitally using OneNote to make it simple to integrate examples of code into your notes.

What technologies will I use?

Most of our programming will be completed in the Python. It is free to use and easy to install at home. It is also a language which is gaining ever more traction in industry. We will dip into other languages for parts of the course, for example SQL, Prolog, SML and PHP, mainly to exemplify other paradigms.

Each workstation is equipped with a fully networked Raspberry Pi Model 3B. The possibilities are endless with these devices, particularly for the Non Exam Assessment Task.

What topics are covered?

For a full list of topics covered, visit the AQA website and search for course 7517. But here are some of the topics:

- Programming
- Database design and normalisation
- Networks and the internet
- Data representation, including binary
- Systems architecture (how does a processor work)
- The stored program concept
- Systems life cycle and consequences of Computing

What can A-level Computing lead to?

The classic computing route includes roles such as developer, software engineer, electrical engineering, games developer, IT consultant, database administrator, business analyst.

However many other disciplines are now reliant upon the various aspects of computing. Even seemingly unrelated areas like Molecular Biology have become heavily dependent upon Computing.

Exam board: AQA
Contact: Mr G Hamilton, Head of Computing
Email: ghamilton@lrgs.org.uk
Twitter: @LRGScomp

Lancaster Royal Grammar School
State Day and Boarding School for Boys Aged 11 to 18
Coeducational Sixth Form

SIXTH FORM

lrgs.org.uk   @LRGSLancaster   /LancasterRoyalGrammarSchool