

COURSE TITLE: COMPUTER SCIENCE**EXAMINATION BOARD: OCR**

Most of the core ideas in GCSE Computer Science have been around since the 1950s and 1960s, but the application of these core ideas has led to the explosion of technology that parents have witnessed in their lifetimes. We cannot know what will develop in 20 years' time, just as the students and teachers of the 1970s did not anticipate the Internet. What we **can** do, is to understand the foundations on which all this technology works. This is why the subject teaches basic principles instead of how to use a particular brand of software or put together a particular piece of hardware – those skills will be out of date in 5 years, but the material in this course will be relevant for a lifetime.

This course will follow the OCR Computer Science specification. This involves learning about:

- Fundamentals of Computer Science
- Practical work, writing programs (mostly using VB.net code)
- Thinking skills and the application of mathematics
- How hardware works and the effects of modern technology

The Lakes School has entered candidates for this course ever since the first pilot group started in 2010, with less than 1000 students across the UK. As a 'Lead School for Computing' and with strong links to Lancaster University, we are in a strong position, as schools across the UK increasingly move from ICT to Computer Science.

How is the course assessed?

The assessment is in three parts'.

- 40% written examination – mostly based on the practical experience of programming and how computers deal with numbers, text, sound and audio.
- 40% written examination – mostly based on hardware, networks and the effects of technology
- 20% practical programming – non exam. Practical programming in class to solve a multi-part problem set by the exam board.

Who is the course suitable for and where does it lead?

In Key Stage 3 the focus moves from using Office Applications to Computer Science especially in Year 9. If you have been able to do the Binary Numbers, Scratch and Small Basic work you will be able to do the GCSE. Obviously it leads to higher level computing courses, but is also, for some students, interesting just for itself, even if their next steps are in other directions. Perhaps most importantly, it is a great subject to develop problem solving skills.

Students with a variety of abilities have taken Computing, with an overall A*-C pass rate of 71%. It should be noted that high grades in Mathematics and Science are good indicators of likely success in Computing

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