

A-Level Computer Science



Programming for the real world

Using C++ you will embark upon creating solutions for real world problems.



Hardware skills

You will further develop your practical computing by building PC's and networks



Retro gaming

Atari 2600, NES, MegaDrive, PSX - you name it, we got most retro consoles



Computer Science at Shottery

This exciting qualification is available in a number of settings, what sets us apart and why can't you pass up this opportunity?

The study of Computer Science at A-level is not easy and you are going to have your work cut out wherever you go. Here at Shottery Sixth Form, we believe the fundamental element underpinning the whole qualification is its solid basis as a *practical* subject. Here we do not simply teach you the theory, we put you in the fully immersed VR world and challenge you to apply your knowledge and create 3D games. We ask you to create your own network; *have you the skills to protect your network from an attack?* **Ethical Hacking** and **Cyber Security** are practical topics as well as theoretical. You need

1

CONCRETE TO THE ABSTRACT

You learn REAL WORLD skills and leave with experience

2

WE HAVE VR!!

Yes, that's right. VR HEADSETS that you can learn to develop with and develop for

3

SUCCESS

Consistent and proven teaching ensure you've the best chance of reaching your potential

experience. You will leave here with an exciting and relevant portfolio.

What do we cover in the course?

We will follow the new A-level specification that has been offered by OCR. This is divided into three sections:

Computer Systems is a theory unit. It is assessed by a traditionally marked and structured question paper with a mix of question types. It will cover the characteristics of contemporary systems architecture and other areas including the following; the characteristics of contemporary processors, input, output and storage devices, software and software development, exchanging data, data types, data structures and algorithms, legal, moral, cultural and ethical issues

The **Algorithms and Programming** unit is also a traditionally marked and structured question paper with two sections, both of which will include a mix of question types. You will be given a problem in your exam for which you must design a solution.

The **Programming Project** is a controlled assessment piece. This is typically a game or web based problem; providing some real world complexity. You will be required to complete



design and testing activities and present the final solution to the clients. As with much of the Computing course you will develop and be tested on valuable and transferable skills.

“You will leave here with an exciting and relevant portfolio”

There will be a variety of extra-curricular opportunities during the course. Current plans include visits to top 5 games development universities along with other relevant visits in support of the course content.

Previous study of Computing at GCSE level is required, in which you will have achieved a minimum of a 7. You will obviously need to be interested in, and keep well informed about current Computing-related events and news items as they occur.

FUTURE PATHS

This qualification will provide you with a range of transferable skills that are useful across the curriculum. There will also be an extended programming project which will give you an opportunity to develop your coding skills. Computer Science is a very creative subject and skills such as problem solving and analytical thinking will be refined and explored as you progress through the learning and assessment programme.

