GCSE COMPUTER SCIENCE

EXAMINATION BOARD & SPECIFICATION NUMBER:

AQA 8525

COURSE CONTENT

Major topics covered are:

Problem solving – breaking problems down into smaller, solvable sections and developing/altering algorithms to solve these problems

Programming – developing code using programming techniques which will transfer to any programming language

Data Representation – how computers represent numbers, text, sound and images

Databases – Relational Databases and SQL

Computer Systems – hardware, software, logic and function of a processor

Communication and the Internet – networks, the internet and the World Wide Web

Cyber Security – types of attack and method to prevent them including viruses and hacking

Ethical, legal and environmental impacts of digital technology

NOTE: students cannot choose both GCSE Computer Science and OCR Level 1/2 Cambridge National Certificate in Creative iMedia due to overlapping content.

ASSESSMENT

There are two exam papers taken at the end of year 11.

Paper 1 – Computational thinking and programming skills – this paper tests students' knowledge of programming and algorithms

Paper 2 – Computing Theory – this paper tests students' knowledge of computer hardware, data representation, databases, networking and cyber security

PROGRESSION & FUTURE CAREERS

In addition to teaching the fundamentals of Computer Science, the course teaches problem solving and logical thinking which will readily transfer to other courses and vocations.

The digital economy is growing rapidly in the UK with a high demand for programming skills, networking and hardware knowledge to support the growing fields of cyber security, automation and robotics. Students completing the course will be well placed to embark on a career in these sectors.

In sixth form students have the opportunity to take A Level computing to further develop their knowledge and understanding of Computer Science in preparation for under graduate university courses or degree apprenticeships in computing related areas.

WEBSITE

Examination Board: https://www.aqa.org.uk/