

Computer Science

To code or not to code

Course Description

The GCSE qualifications in Computer Science prepares students for real-world computer challenges and builds students ability to think computationally. The qualification is specifically focussed for learners which is related to an aspect of employment that they might wish to move into; or for those who wish to extend their programme of study and provide an initial experience of Computer Science. This will also enable learners to progress to a higher level qualification relevant to Computer Science or Information and Creative Technologies.



Examination Information

Exams and Controlled assignment brief from September 2016 – May 2018

Assessment

- **Principles Exam: 40%** - External
- **Application Exam: 40%** - External
- **Programming controlled assessment: 20%** - Internal

This course leads to an **Edexcel GCE in Computer Science.**



Skills

You will develop the following skills

- think creatively, logically and critically
- computational thinking
- select, use and integrate ICT tools and techniques to meet needs
- find, select and evaluate information for its relevance, value,
- testing and refining solutions for accuracy and plausibility
- manipulate and process data and other information, sequence instructions, model situations and explore ideas
- communicate data and information in a form fit for purpose and audience
- design, develop and implement appropriate and effective ICT-based solutions in a range of contexts
- evaluate their own and others' use of ICT.

Teaching & Learning

The students will be encouraged to develop a broad range of skills, knowledge and understanding of current and emerging technologies and their impact of individuals, organisations and society. This is particularly important for job roles in the ICT sector where they will be expected to use programming skills and application software. This would form the basis for progression into further learning in Computer Science related fields in either education or the world of work.

Edexcel GCSE Computer Science is designed to inspire and enthuse learners to become technology savvy— creators of technology solutions and systems and not just consumers.

The course will provide learners with:

- an understanding of what algorithms are, what they are used for and how they work, including the requirements for writing program code.
- an understanding of binary representation, data representation, data storage and compression, encryption and databases.
- an awareness of emerging trends in computing technologies, the impact of computing on individuals, society and the environment, including ethical, legal and ownership issues.
- knowledge of components of computer systems and the ability to construct truth tables, produce logic statements and read and interpret pseudo-code.

Topics will comprise of.... Problem solving, Programming, Data, Computers, Communication and the internet, The bigger picture.

Progression to Further Education

A-Level ICT / Computer Science BTEC National in ICT Level 3 in the Sixth Form.

Students may then follow an ICT / Computing based Degree courses at University.



For further information please see

Mr P Williams

Teacher of Computer Science

Careers

ICT Technician

Graphic Design

Games Design

Software Developer

Web Developer

Computer Programmer

Business Analyst

Computer Hardware Engineer

Network Manager

Systems Analyst

Database administrator

Teaching