GCSE COMPUTER SCIENCE

Subject Title

GCSE Computer Science

Examination Board and Code

OCR – J277

Form of Assessment\*

Unit 01: Computer systems – External Exam (50%)

Unit 02: Computational thinking, algorithms and programming - External Exam (50%)

Course Content

The subject content for this qualification consists of the following areas of study:

* Understanding of what algorithms are, what they are used for and how they work; ability to
* interpret, amend and create algorithms.
* Understanding of binary representation, data representation, data storage and compression,
* encryption and databases; ability to use SQL to insert, amend and extract data stored in a
* structured database.
* Understanding of components of computer systems; ability to construct truth tables, produce
* logic statements and read and interpret fragments of assembly code.
* Understanding of how computer networks, the internet and the World Wide Web work.
* Awareness of emerging trends in computing technologies, the impact of computing on
* individuals, society and the environment, including ethical, legal and ownership issues.
* Understand the need to decompose problems into sub-problems
* Ability to create original algorithms or work with algorithms produced by others.
* Ability to design, write, test and evaluate programs.

GCSE COMPUTER SCIENCE allows students, not only the opportunity of developing their

knowledge and understanding of programming, but also the underlying principles of logic,

decomposition, algorithms, data representation and communication.

Skills and Qualities Required for Success:

* Keen interest in Computer Science
* Keen to develop computational thinking skills and be able to apply these skills to solve real
* problems and produce robust programs
* Enjoying working independently, finding out your own answers – not just being taught
* Ability to complete work by the deadlines set

Futures

The skills and knowledge covered during this Level 2 qualification will prepare students for A

Level Computing, as well as supporting students who wish to seek employment at entry or

trainee level, within a wide range of different working environments.

Additional Requirements

Throughout the GCSE Computer Science course, you will need to show a keen interest in

keeping up-to-date with emerging technologies and to meet career challenges in the future, it is important that you are self-reliant as well as good communicators and problem solvers.

A minimum of working towards FS Level 5 in Maths and FS Level 4 in English at Key Stage 3 is required for those students opting for the GCSE Computer Science course. Students may be considered if they can show sufficient evidence of programming experience.

Given the content of this course a further consultation with the Head of Department may be

appropriate before a student is accepted onto the course.