

Subject:	GCSE Computer Science
Examination Board:	AQA
Syllabus:	Computer Science (8520)

Topics covered:

- Fundamentals of algorithms
 - Representing algorithms
 - Efficiency of algorithms
 - Searching algorithms
 - Sorting algorithms
- Computer systems, hardware and software
- Boolean logic
- Software classification
- Systems architecture
- Fundamentals of computer networks
- Fundamentals of cyber security
 - Cyber security threats
 - Social engineering
 - Malicious code
 - Methods to detect and prevent cyber security threats
- Ethical, legal and environmental impacts
- Aspects of software development

Skills Developed:

Students will demonstrate their ability to code a solutions to the Non Exam Assessment (NEA), in the Autumn term. Skills required:

- Data types
- Programming concepts
- Arithmetic operations in a programming language
- Relational operations in a programming language
- Boolean operations in a programming language
- Data structures
- Input/output and file handling
- String handling operations in a programming language
- Random number generation in a programming language
- Subroutines (procedures and functions)
- Structured programming
- Robust and secure programming

The programming language used will be VB.net.

Support Material:

Text book – ‘AQA GCSE (9-1) Computer Science’ (Robson and Heathcote).

We use a large range of web based support materials, hosted on the school’s Managed Learning Environment:

<https://vle.nonsuchschool.org>

What you could do to support your daughter:

Students will definitely benefit from the opportunity to practice coding at home and will be set some programming tasks to complete on a computer in their own time. The programming environments used are available to install without charge. Internet access is highly desirable. All homework and assessment tasks can be completed in school if necessary.