Year 11 – Computer Science 2023-24
Exam Board – AQA 8525

Structure of the course:

Examination – Paper 1: Computational thinking and problem solving (50%)
Examination – Paper 2: Computing Concepts (50%)
Programming Opportunity - *(Not directly assessed but students must have the opportunity to practice their programming skills in order to pass the course)*

What will students cover in Year 10?

Theory & Practical Skills for Exams
In Year 10 pupils have covered the first four topics. Pupils continue to learn and master algorithms and programming.

What students will cover in Year 11?
Pupils are currently recapping all topics taught in Year 10 to prepare for their mock in November. Pupils will learn the remainder of the course topics, Computer Networks, Cyber Security, Databases and Ethical, Legal and Environmental Impact of Computing on Society and Data Privacy. There will be another mock in February which will include topics from year 11. Preparation will be completed in lesson and set as homework.

Examination Preparation:
From March, the rest of Year 11 will be spent preparing for the exams which are at the end of the year by going back over some areas of the theory and practising exam questions and mock papers.

Home study and revision:
Pupils are expected to complete revision and home study in their own time to consolidate and build on the learning in lessons.

Useful websites and books to help with revision

Python 3.10.7
www.python.org/downloads/
Python is free programming software we use in class and is available from the above link.

Code Club Projects
www.codeclubprojects.org

Seneca Learning
www.senecalearning.com
Please use the Office 365/Microsoft button to log in. The username and password are your school email and the same password used to access computers in school.

Website
BBC Bitesize AQA GCSE Computer Science page.
https://www.bbc.co.uk/bitesize/examspecs/zkwsjhv

Exam/Important Dates (Provisional at time of writing):

Paper 1: Written examination – Date 15th May 2024, duration 2h, 90 marks
Paper 2: Written examination – Date 21st May 2024, duration 1h 45m, 90 marks

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How the Computing Department recommends you revise:

Use this list of topics to help you to organise your revision. These are all the topics that we will cover during year 10 and will revisit in year 11.

Topic	Revision notes	Revision	Question practise.
Computational Thinking			
Flowcharts			
Pseudo-code			
Algorithms			
Algorithms in Mathematics			
Boolean Logic			
Variables and Constants			
Programming in Python			
Iteration (Looping) and Selection			
Comparing Pseudo-code, Flowcharts and Python			
Loops and Mathematical Operations			
Subroutines			
Structuring Programming in a Modular way			
Binary and Hexadecimal Numbers			
The Language Computers Actually use (Binary)			
Computing and Data Representation			
Data Size Storage and Compression			
Data Structures and Types			
Data Validation and User Authentication			
Reading and Writing to Text Files			
Run Length Encoding and interpreting Huffman trees			
Understanding Search and Sort Algorithms			
Algorithm Efficiency			
Testing your Code			
The Computer Systems Architecture			
Embedded Systems			
Memory and Secondary Storage			
Fetch - Execute Cycle			
Translators, Compilers and assemblers			
Encryption			
System Security			
Social Engineering and Cyber Security			
Ethics, the Law and the Environment			
Networks and Network Data Transfer			
Network Protocols & TCP/IP Protocol			
Software and Aspects of Software Development			
Relational Databases			
SQL			