
COMPUTING

Year 9

Topics studied:

Students will study the theory elements of Computing to prepare them for their examinations and the controlled assessment. Students will be developing a broad range of skills in the areas of programming, system development, computer architecture, data, communication and applications. In addition, students will learn how to think creatively, innovatively, analytically, logically and critically and apply mathematical skills relevant to Computer Science.

In the autumn term, students will look at hardware and operating systems. In the spring term, students will study the organisation and structure of data, software engineering, security and data management. In the summer term, students will be introduced to the principles of programming.

Examination Board:

WJEC

Year 9 students follow the new WJEC GCSE in Computer Science specification. This course uses the 9-1 grading structure.

Assessment Structure:

Unit 1 – Understanding Computer Science (50%) 1 hr 30 mins examination
Unit 2 – Solving Problems Using Computers (30%) 2 hr on-screen examination
Unit 3 – Developing Computing Solutions (20%) controlled assessment

Keywords that students should know, and be able to spell, by the end of Year 9:

Algorithms, Array, ASCII, UNICODE, Binary, Bits, Boolean, Bytes, Cache memory
Cache size, Capacity, Character, Clock speed, Colour depth, Compression, CPU, DBMS,
Denary, Durability, Environmental, Ethical, Flash memory, Hexadecimal, IP addressing,
Iteration, Logic, Logic diagrams, Lossy and lossless compression, Memory, Multi-tasking,
Networks, NOT, AND and OR, Data Packet, Peripheral, Pixels, Portability, Protocols,
Queries, RAM, ROM, Relational databases, Reliability, Reports, Resolution, Sampling,
Secondary storage, Security, Selection, Sequence
Speed, Topology, Truth table, Validation, Verification, Virtual memory

Subject specific websites to support revision and independent learning:

<http://www.teach-ict.com/>

<http://www.bbc.co.uk/education/subjects/z34k7ty>



www.advanced-ict.info/programming/tasks.html (Learn to code)
www.codecademy.com/ (Learn to code)
<http://www.greenfoot.org/door> (Greenfoot Java Programming)

Recommended subject guides:

- TBC

To help your child in GCSE Computing this year you can:

- support them in learning how to spell the keywords above
- ask them to explain the keywords above by reflecting on their lessons
- encourage them to access the above subject specific websites and to undertake further reading on the topics covered and complete the tests/quizzes
- encourage them to produce cue cards on each topic area and use them to revise and test their key knowledge

Additional Information:

Students will be set homework tasks each half-term and will complete a milestone assessment after each topic area.

