OVERVIEW

In Year 11 students build upon their knowledge gained in Year 10 in areas such as computer networks. They will also continue to develop their programming skills of key concepts throughout the year with a programming project.

Year 11 will also be taught about the computer systems, threats associated with computer systems and how you can protect yourself from these threats. They will also learn about the ethical, legal, cultural, and environmental impacts of technology including e-waste and the digital divide. Finally, they will undertake extensive revision and exam practice of topics in preparation for their exams in the summer.

Aut

Network Security

- detect and prevent cyber security threats, authentication, encryption, firewall, anti-malware, penetration testing, network forensics, network policy, identifying and preventing threats.

Systems software

- Operating System, Utility programs.

Ethical, legal, cultural, environmental issues

- legislation, environmental, impact of technology, open and proprietary software.

Producing robust programs (Testing)

Programming Project

Assessment:

End of Topic tests on Network security and Ethical, legal cultural and environmental issues.

Mock Exam.

Spr

Ethical, legal, cultural, environmental

- cultural and ethical issues, privacy issues

Languages

- levels of programming language, translators, IDE

Algorithms

- Insertion sort, merge sort, bubble sort, standard searching

Algorithms

- Standard searching algorithms, trace tables

Programming Project

Assessment

End of topic tests on Algorithms as well as marking of programming project.

Mock Exam.

Sum

Revision of and Recap including the following topics from Year 10

- Systems Architecture
- Memory and storage
- Computers networks, connections and protocols
- Network security
- Systems software
- Computational thinking
- Programming fundamentals
- Programming techniques
- Designing, creating and refining algorithms

Assessment:

Mini Exam practice.

GCSE Exam.

Useful resources for supporting your child at home:

GCSE Revision book- PG online

Knowledge Organiser

GCSE Computer Science - OCR - BBC Bitesize

Seneca - Learn 2x Faster (senecalearning.com)

Homework:

Exam questions from past exam papers

In class test revision

Continual work on programming project