Key Stage 3

Year 7

- Introduction to system security, how to stay safe online, viruses, malware and social engineering.
- Introduction to Data Representation - Using binary, storage units, introduction to character sets and graphics.
- Introduction to System Architecture - Hardware and Software, Input and output devices, CPU including clock speed and cores.
- Introduction to Memory and storage - RAM and ROM, Secondary Storage devices and Technologies.
- Introduction to Algorithms - Computational thinking and programming constructs using block based coding.
- Multimedia Project - sourcing and creating assets, research techniques and creation of an interactive product.

Year 8

- System Security - threats to networks and methods of avoiding and preventing them.
- Data Representation - binary addition, character sets and graphic creation.
- System Architecture - Von Neumann Architecture, FDE Cycle, Components of a CPU.
- Memory and Storage - Different tyupes of computer memory and the need for Virtual Memory.
- Algorithms - Creating algorithms using flowcharts and exploring different programming constructs.
- Multimedia Project - sourcing and creating assets, research techniques and creation of an interactive product.

Year 9

- Introduction to Networks - Different types and toplogies of networks, Advantages of networks, different network hardware.
- Data Representation - Binary Shifts and how sound is represented and stored.
- System Architecture - Use of CPU registers and Embedded Systems.
- Programming Techiques - Using Python to create a range of programs which use Sequence, Selection and Iteration.
- Multimedia Project - sourcing and creating assets, research techniques and creation of an interactive product.

Key Stage 4

OCR J277 - GCSE Computer Science

- This course consists of 2 exam papers taken at the end of year 11.
- The following topics are covered: System Architecture, Memory and Storage, Computer Networks, Connections and Protocols, Network Security, Systems Software, Ethical, legal, cultural, and environmental impacts of digital technology, Algorithms, Programming Fundamentals, Producing Robust Programs, Boolean Logic, Programming languages and Integrated Development Environments.

OCR Nationals Level 2 Creative iMedia

- This course is consists of 1 examined unit and additional controlled assessments.
- The following units are studied:
  - Creative iMedia in the media industry
  - Visual identity and digital graphics
  - Characters and comics

Year 10 - Digital Literacy Rotation (NCCE KS4 Resoures)

- IT Skills for business
  - Email
- Spreadsheets
  - Functions and formula
  - Formatting
  - Graphs and charts