



# Computer Science

## Key Stage 4 - Curriculum Roadmap

Privacy & ownership, Data protection legislation

AI, machine learning & robotics

Data representation: Bitmaps, sound & compression

Testing, errors, problem solving

Data structures (one & two-dimensional)

Bubble sort & Binary search

Subprograms

Protocols: TCP/IP

Trace tables

Packet switching

Environmental impact of technology

Low-level & high-level languages, Translators

Network topologies

Network performance

LANs & WANs

Turtle graphics module

Authentication

Writing files

11

Two-dimensional lists

Validation

Linear search & Merge sort

Operating systems

Utility software

Network Security

Secondary storage

Fetch-decode-execute

Stored program concept

Subprograms (procedures and functions)

One-dimensional lists, Count-controlled iteration

Boolean operators, Condition-controlled iteration

10

Decomposition, algorithms, flowcharts

IDE, data types, variables, input & output functions

String manipulation, selection

Binary & Binary arithmetic

Two's complement, binary shifts

Hex and ASCII