# KS4 Computer Science Curriculum

**Fulwood academy**

> Official Paper 1 GCSE

> Official Paper 2 GCSE

> Colleges
> 6th Form
> Apprenticeships

HT3 — HT4 — HT5 — HT6

HT2

**EXAM PREPARATION**

> External Exam Preparation Y11
> Mock paper 1 s– Written
> Mock Paper 2s – Online
> MCQs
> Programming Techniques
> 6 Mark question Techniques

> Understanding: ethical, legal and environmental issues

**ISSUES & IMPACT**

HT1 — **Y11** — HT6

**COMPUTATIONAL THINKING**

> Variables and Constants
> Sequence, Selection, Iteration
> Data Structures
>String Manipulation
> Subprograms Part 1
> File Manipulation
> Validation
> Trace Tables

> The History of the Internet (Origins of the Network)
> Network Types
> Network topologies
> Network Hardware Inc. Hardware for the Internet

> Decomposition and Abstraction
> Input and Outputs
> Subprograms
> Flowcharts
> Computational Math's

HT3 — HT4 — HT5

**COMMUNICATION & NETWORKS**

Software:
> Operating Systems and Memory Management
> Utility Software
> Software Vulnerabilities
> Low vs. High Level Languages
> Interpreters/ Translators/ Compliers

> Network Performance Factors
> Network Speeds and Transmission
> Network Protocols
 > Network Security
> Cybersecurity (Viruses etc.)
> Protecting Digital Systems

HT2

**COMPUTERS**

Hardware:
> Data Compression
> Logic Gates and Truth Tables
> Inputs and Outputs
> General Purpose and Embedded Systems
> CPU Architecture/Von Neumann/CPU Performance
> Memory and Storage

HT1 — **Y10**

> Hexadecimal
> Character Rep
> Image Rep
> Sound Rep

> Binary
> Two's Complement
> Binary Addition
> Binary Subtraction

**DATA REPRESENTATION**