# GCSE Computer Science: Curriculum Map

#### Computers work in Binary

**How Computers Run Apps** 

Operating Systems

2. Utility Applications

System Software:

- 1. Binary & Hexadecimal numbers
- 2. Representing Data in Binary:
  - Text
  - Images
  - Sound

#### **CODING** part 1

- Fundamentals of coding (Sequence, Selection, Iteration)
- 2. Data types

## Year 10

#### How Networks Work

- 1. Hardware and topologies
- 2. Wired & wireless Protocols
- 3. Network Security

#### **How Computers Run Code**

- 1. CPU (Central Processing Unit)
- 2. Memory
  - Main memory (RAM)
  - Secondary Storage

#### Computers think in Binary

Boolean Logic

#### **CODING part 2**

- · Data structures (arrays)
- More iteration

### Year 11

#### **How Computers Solve Problems**

- Algorithms
  - Computational Thinking
  - Sorting Algorithms
  - Searching Algorithms

#### **CODING** part 3

- Advanced data structures
- Using subprograms
- File Input/Output
- SQL

#### How to Make Robust Code

- Defensive Design
- Testing
- Programming languages
- Integrated Development Environments

What is the Impact of this Technology?

Ethical, legal, cultural and environmental issues

#### **EXAM PAPER 1 TOPICS:**

Computer Systems

#### **EXAM PAPER 2 TOPICS:**

Computational Thinking, Algorithms and Programming