

# KS4 Computer Science Learning Journey

*Pupils come to understand and apply the fundamental principles and concepts of Computer Science. They analyse, solve, design & develop algorithms with a focus on programming skills.*

Year  
10

**Unit 1: System Architecture**  
(CPU & Embedded systems)



**Unit 2: Algorithms** (Computational thinking, understanding and writing algorithms, searching & sorting algorithms)



**Unit 1: Memory & Storage**  
(Primary storage, Secondary storage, units, data storage, characters, images & sound, compression)



**Unit 2: Programming fundamentals, techniques and data types**  
(Practical programming)

**Unit 2: Programming Languages & IDEs**



**Unit 2: Producing Robust Programmes**  
(Practical programming - Defensive Design & Testing)

Year  
11



**Unit 1: Networks**  
(Physical setup, threats and preventing attacks)



**Unit 1: Ethical, legal, cultural and environmental impact**



**Unit 1 & 2: Topic recap & exam practice**

**Unit 1: System Software**  
(Operating Systems & Utility Software)



A level  
Ready!

**Unit 2: Algorithms & Programming Recap**  
(Practical programming)

**UNIT 1:** Computer Systems  
**UNIT 2:** Computational thinking, algorithms and programming

