Computer Science Learning Journey

Yr 11

Threats to computer systems

Operating systems

Ethical & cultural impact of computing

Defensive design

Practical programming task

Network Security

Software

Ethical, legal, cultural & environmental impact

Programming

Final GCSE Exams

Identifying & preventing vulnerabilities

Utility software

Legal impact of computing

Environmental impact of computing

High-level & low-level languages HTML

The integrated development environment

Wired & wireless networks

Secondary storage

Embedded systems

Architecture of the CPU

Searching & sorting algorithms

64gb Units of data storage

Boolean logic

Networks

Systems architecture

Algorithms & Programming

Boolean logic & binary

Yr 10

Networks & topologies

Primary storage

CPU performance

Programming fundamentals

Designing, creating & refining algorithms

Data storage (hexadecimal & binary)

Introduction to the software development life cycle

Caesar cipher & hashing

Encryption

Ethical issues of computing

History of computing

Functions & features of an operating system

Command line linterface

Networks

Cyber Security

Ethical

Advance Python

Yr 9

Problem decomposition & algorithm design

Program development

Little man computer

Fetch, decode, execute cycle

Boolean logic

Artificial intelligence

Emerging technologies

Graphical user interface (GUI)

Introduction to Linux

Introduction to Python

Comparing algorithms

Creating a digital graphic

Binary addition & subtraction

How images & sound are represented in binary

Intro to Python

Logic

Data Representation

Computer systems

Sorting & searching algorithms

Copyright

Using graphic design software

Hexadecimal & binary conversion

Logic gates

Yr 8

Locate information using search engines

Internet & web browsers

Types of computer

Inputs, processes & outputs

Computer hardware

Features of Microsoft Excel

Using formulas & functions

Introduction to databases

Computational thinking

Problem decomposition

Yr 7

Using ICT

E-safety

Computational Thinking

Scratch

Staying safe online

Using Microsoft Office

Memory

Computer software

Mobile phone applications

Summarise data using charts

Validation, searching & sorting

Introduction to algorithms

Game development in Scratch