

SUBJECT CURRICULUM MAP

Possible space for school emblem

FURTHER STUDY

- BSc Computer Science
- BSc Information Systems Management

CAREER PATHS

- Game Developer
- Software Engineer
- Database Administrator

SKILLS

- Computational and algorithmic thinking
- Problem solving

INTEREST

A continued passion and love of learning about technology and how technology works

Advanced Programming

- Working with files
- Drawing with turtle

Algorithms and Computational Thinking

- Using computational thinking techniques to write programs

REVISION

REVISION & EXAMS

Advanced Programming

- Using iteration
- Data structures
- Sub-routines

YEAR 11

Ethical and Legal Issues

- Ethical issues
- Legal issues
- Cultural issues

Network and Cyber Security

- Forms of attack
- Identifying and preventing vulnerabilities
- Python programming

Network Protocols

- Types of networks
- Network architecture
- Python programming

Data Storage

- Units of data
- Binary addition
- Binary – denary conversions
- Hexadecimal
- Binary –hex conversion
- Python programming

Websites

- How websites work
- Good website design
- Poor website design

HTML

- Creating web pages
- Adding images and links

CSS

- Using cascading style sheets
- Website project

Advanced Python

- Data structures
- Lists
- Iteration
- Subroutines

System Architecture

- Von Neumann architecture
- Architecture of the CPU
- Python programming

YEAR 10

Representing Data

- Binary review
- Images – bitmaps
- Images - vectors
- Text
- Sound

Hardware and Computer Systems

- The CPU
- The FDE cycle
- Primary storage

Python

- Selection
- Iteration
- Boolean logic

Python

- Using Thonny
- Sequence
- Common functions
- Variables
- Data types

Spreadsheets

- Identifying cells, active cells and ranges
- Using formulas
- Using functions
- Graphs

Flowcharts

- Why use flowcharts?
- Flowchart symbols

Putting It Together

- Using flowcharts to describe algorithms

Scratch

- Introduction to programming
- Using sequences
- Using variables
- Using selection

Hardware and Computer Systems

- Peripherals
- Computer hardware
- Memory and storage

YEAR 8

Computational Thinking

- Decomposition
- Pattern recognition
- Abstraction
- Algorithms
- Using MS Word

Online Safety

- Who are you talking to?
- Cyberbullying
- Using MS PowerPoint

Using Computers

- Impact of technology
- Accessing email
- Folder structures
- Browsers and applications

