



GCSE studies

Year 9 prepares students for GCSE should they decide to choose it as an option. We begin the year looking at Python programming in more depth than last year, followed by application development.

Legends of Computing

- Who came before us?
- What did they do?
- Where can we go from here?

Y9

Python

- Introduction to Python and IDLE
- Simple programs
- Variables and inputs
- Loops and subroutines
- Using what we know

Application Development

- What is a smartphone?
- Hardware and Software recap
- What is an app?
- How to develop and application and proposal

Cyber Security & e-Safety

- Online dangers as we grow
- Cyberbullying, sexual content & grooming
- Harmful/dangerous sites & content
- What to do if we're unsure

Photoshop

- e-safety – body image and not believing what we see
- Photoshop basics
- Photoshop advanced techniques
- Using what we know

HTML & Javascript

- HTML recap
- Introduction to Javascript
- Advanced programming
- Designing and algorithm
- Using what we know

MINI OPTIONS

Kodu & Algorithms

- Flowchart recap with FLOWOL
- What is KODU?
- Creating simple worlds and algorithms
- Advanced algorithms
- Using what we know

BBC micro:bit

- What is a sequence or program?
- Flowcharts and pseudocode
- Algorithm development
- micro:bit introduction
- Using what we know

HTML & CSS

- What is HTML?
- How to write HTML in Notepad
- How to link pages
- How to add images
- CSS and how to use it
- e-Safety – data security

Edublocks Turtle

- Accessing and using Python in Edublocks
- Turtle introduction
- Repetition and loops
- Variables
- Subroutines

Binary and Logic

- Logic gates and the CPU
- Counting in binary
- Binary conversion
- Character sets and how they work
- Bitmaps and how they work

Office Skills & e-safety

- Keyboard shortcuts
- Setting up a professional document
- Cyber bullying
- WWW safety
- General e-safety
- Grooming

Y8

Year 8 Computer Science builds on the foundations of Year 7. We look at the impact of e-safety topics and develop key digital literacy skills that are required. From here we start to study the programming skills such as Python and algorithmic thinking needed for Year 9.

Y7

Year 7 Computer Science is all about settling students into the school, ensuring that they can access our network and that they can work safely both in and out of school. We then start to look at the National Curriculum and elements of programming and Digital Literacy that can be built on.

Scratch Programming

- Scratch basics
- Data types, variables and inputs
- Creating algorithms
- Refining and re-using algorithms

Induction & e-Safety

- How to log in
- How to organise folders
- How to access email and teams
- E-safety → email and online
- Basic Office skills

About Me

- How to use PowerPoint
- How to set up Master Slides
- How to create professional documents
- E-safety → sharing personal information

Types of Computer

- What is a computer?
- What are the different types of computer?
- What is computation?
- How to set up a leaflet
- Layout and style of Professional documents

Excel & Modelling

- What is a spreadsheet?
- How do we use them?
- Setting up basic spreadsheets
- Formatting, formulae & functions
- Modelling a scenario

Communication & Networks

- How do computers share data?
- Hardware and software of networks
- The internet and how it works

Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

Can analyse problems in computational terms, and have repeated and practical experience of writing computer programs in order to solve such problems

Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

Are responsible, competent, confidence and creative users of information and communication technology