

# Computer Science Learning Journey

## SIXTH FORM

### A-Level Computer Science:

You will learn in detail about all area of the computer and digital communication. You will develop strong programming skills and produce real-world software applications. You will use a range of hardware and software which is suited to your academic interests.

### System Security:

Develop an understanding of how computers are attacked and defended from attacks.

### Computer Systems:

Exploring the world of computing by studying an overview of all elements of the computer and their uses.

**Networks:** Developing a knowledge of networks and how we can defend them from attacks.

### Programming:

Developing efficient programming skills using external data

## YEAR 11

### Game Programming:

Using your knowledge of programming to create simple games.

### Programming 3.0:

Learn skills to be able to solve real world problems using Python.

### Alternate Route: BTEC Creative Media

#### UI/UX Design:

Designing User Interfaces and Experiences for mobile apps

#### Python 2.0:

Developing advanced programming skills

## YEAR 10

### App Design:

Design simple phone apps and games

### Image Editing:

Using image editing tools to create layered images

### E-Safety 3.0:

Exploring the risks of online relationships

### Alternate Route: BTEC Information Technology

### E-Safety 2.0:

Behaving appropriately in online situations and identifying fake-news.

### Physical Computing:

Programming for real world devices

### Python 1:

Programming using a textual language.

## YEAR 9

## YEAR 8

### Data Representation:

Exploring how data is stored and manipulated to represent the real world.

### Machine Learning & AI:

Train a computer to recognise objects and

### Photoshop:

Design a composite image.

### Scratch Programming:

Creating simple games using block-based programming.

### Hardware + Networks:

What makes up the computer? How do they communicate?

### Data Project:

Design an experiment and collect data to analyse in a spreadsheet

### Computational Thinking:

Learning to think and plan logically and efficiently.

### E-Safety:

How do we use school systems? How do we stay safe online?

## YEAR 7