

# Key Stage 3 Computing Curriculum

**Year 7**

**About the school network**

Login, email, Bromcom, Acceptable use policy, access to cloud, baseline test, esafety

**History of computing**

Research, create, plan and evaluate a presentation on the history of computing

**Hardware and software**

Input processing and output, creating a brochure

**Representing Data**

Binary, denary conversion, character coding, representing bitmap images, Caesar cypher

**Coding in Logo**

Drawing shapes by programming a turtle

**Coding in Scratch**

Coding concepts: assignment, selection, concurrency

**Year 8**

**Multimedia: Advertising campaign**

Plan and shoot a short TV or radio advert

**Websites**

Using HTML to a static 3 page website

**Animation**

Create 2D animation, using layering, shape and motion tweening

**Control**

Sequencing and control systems using flowcharts and Flowol

**AI: Machine learning**

Machine learning, ethics

**Spreadsheets and data collection**

Create a theatre booking system, collect and analyse survey data

**Year 9**

**Spreadsheets**

Confidently use spreadsheets with formulas, functions, plotting

**Coding in Python**

Coding concepts in Python, using block to text approach

**Computer Systems**

Including vector, sound, Boolean logic, communication, hardware, software, fetch decode execute

**Photoediting**

Edit images and photos

**Game making**

Design and create a computer game

**Product launch**

Use a range of multimedia (graphics, film, sound to pitch your game product)

Computer science

Information Technology

Media

# GCSE computing curriculum

**Year 10**

**Python programming**

Pupils learn to program in Python throughout Years 10 and 11 starting with the principal concepts sequencing, assignment, selection, iteration and moving on to subroutines and reading and writing files

**Number systems**

Binary-denary conversion, binary addition, Hexadecimal,

**Representing data**

ASCII, images, sound compression

**Boolean logic**

Logic gates and circuits

**Year 11**

**Databases**

Includes structured query language

**Algorithms**

Sorting and searching algorithms

**Computational thinking**

Abstraction, decomposition, flowcharts, pseudocode

**Cybersecurity**

Methods of attack and how to mitigate against the risks of attack

**Computer systems**

Hardware, software, Fetch-execute cycle

**Networking**

Types of networks, wired, wireless, network topology

# Creative iMedia curriculum

**Year  
10**

**The media  
industry**

Product design, preproduction planning, legal issues, media distribution, formats of media files

**Develop  
visual identity**

Purpose, elements and design of visual identity

**Plan digital  
graphics**

Graphic design and conventions, properties of digital graphics, techniques

**Create digital  
graphics**

Image editing, source, create and prepare assets

**Year  
11**

**Plan  
characters  
and comics**

Conventions, resources and planning comics

**Graphics  
NEA**

**Create  
characters  
and comics**

Technical skills to create, save and publish comics

**Review  
characters  
and comics**

Techniques to review characters and comics, improvements and further developments

**Characters  
and comics  
NEA**