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

Computer science
Information Technology
Media

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

Spreadsheets and data collection
Create a theatre booking system, collect and anaylse survey data

Year 9

Spreadsheets
Confidently use spreadsheets with formulas, functions, plotting

Coding in Python
Coding concepts in Python, using block to text approach

Representing data
Including vector, sound, Boolean logic, communication

Game making
Design and create a computer game

Product launch
Use a range of multimedia (graphics, film, sound to pitch your garme product

iDEA award
Preparation for idea award which will be continued in Years 10 and 11

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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

Databases

Includes structured query language

Year 11

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

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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

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