Computing—IT/Creative iMedia Curriculum Map

Year 7

Introduction to the network
Business documents
Online safety
Spreadsheets (Priory Papers)
Summative Project (Lincoln Wildlife Park)

Year 8

Graphics
Basic Animation skills
Animation Water Aid Project
Summative Project (Imp PC Services)

Year 9
From summer 2022
Visual identity & digital graphics
Animation with audio
Creative iMedia in the media industry

Until summer 2023
Creating a digital graphic
Creating a multi-page website
Creating a digital animation
Pre-production skills (Examination)

Year 10/11
From summer 2022
Visual identity & digital graphics
Animation with audio
Creative iMedia in the media industry

Until summer 2023
Creating a digital graphic
Creating a multi-page website
Creating a digital animation
Pre-production skills (Examination)

Year 12

Creating systems to manage information
Using social media in business (NEA)

Year 13

Information Technology Systems
Website development (NEA)

Computing—Computer Science Curriculum Map

Year 7

Introduction to Scratch
Scratch game project
Control programming with Flowol

Year 8

Programming with Python
Introduction to Databases
Binary numbers
Turtle Graphics with Python
Databases (Marvel Superheroes)

Year 9

Introduction to programming
Algorithms and flowcharts
Fundamentals of Python
Binary and hexadecimal
Turtle using Python
Computer hardware
Computer ethics project
Pygame coding

Year 10

Python consolidation of key skills
Ethical, legal and environmental—impacts of computing
Computational thinking and specific algorithms (searching and sorting)
Storing data
Introduction to databases
Cyber security
Advanced programing challenges

Year 11

Computer systems
Computer networks
Further Python
Further Databases (SQL)

Revision
Pseudocode & flowcharts
Cyber security
Number bases & data storage
Computer systems
General revision & examination practice

Year 12

NEA project
Computational thinking
Programming languages and translation
Finite state machines
Beginning Visual Basic (from September 2022 C#)
Data representation & encryption
Standard algorithms & problem solving
Object oriented programming
Event driven Visual Basic (from September 2022 C#)
Logic & Boolean algebra
Computer systems
External hardware devices
Computer organisation & architecture
Fundamentals of Databases
Fundamentals of Communication & Networking
Systems analysis

Year 13

Continuation of NEA project
Fundamentals of data structures
Graph traversal / reverse polish notation
Path finding algorithms
Further theory of computation
Big data
Fundamentals of functional programming
Revision

IT and Computing Assessment Guidance

Much of the students' work is completed on screen and focusses on developing skills with either software applications or programming solutions. Short term assessment therefore takes the form of verbal feedback and support. This forms the basis of a coaching model where teachers observe progress and intervene as necessary. This is under-pinned by traditional teaching in relation to the relevant theoretical knowledge associated with each subject.

Key finished products and associated documentation are assessed in detail and feedback given (in line with external examination board guidelines where appropriate). At KS4/5 these will be assessed against examination board criteria, whereas at KS3 the criteria will be defined internally by the Academy. Throughout Years 7 to 11, online testing is used to assess subject knowledge and understanding. Feedback in this case is immediate and specific.

In Years 9-13 written examinations are used at the end of subject units as well as annual mock examinations. Where possible these are based on examination board materials and formally assessed by the teacher in line with the examination board criteria. Coursework units in Years 9-13 are assessed and feedback is given in line with examination board procedures.

The validity and reliability of the techniques described above are supported by their closeness to examination board criteria. This is replicated in ear 7and 8 at a necessarily more basic level. In years 7 and 8 the wide variety of assignments can lead to students scoring unevenly across the year, but this serves to differentiate between the requirements of Computer Science and ICT.

Students derive value from the framework in terms of immediacy of feedback and through their understanding of the way they are being assessed against a series of shared criteria. This serves to identify gaps in their knowledge/evidence. Teachers derive value from the framework in that they can use the assessment data to inform module grades and written report content and through more detailed analysis, identify modifications to the associated Scheme of Learning for delivery to future cohorts.