Curriculum Overview

Curriculum Area: Computing Year: 9

Year 9 Curriculum:

Topic 1: Making Games with GDevelop
This unit gives students practical opportunities to design and program two games. Students begin by creating a firework game that makes use of particle emitters and events. They then spend four lessons developing a platform game that makes use of many key games programming concepts such as sprites, collision detection and variables for use in scoring. Pupils will develop programming skills through the development and iterative testing of their games.

Topic 2: Digital Graphics
This unit focuses on developing and creating a visual identity and digital graphics. Pupils must plan and produce a digital graphic by first developing a unique visual identity (brand) and then creating a digital product that fits this identity. The module assesses skills in graphic design, including planning, asset creation, software use, justification of design choices, and appropriate file format and technical knowledge.

Topic 3: Introduction to Cybersecurity
This unit takes learners on a journey of discovery of techniques that cybercriminals use to steal data, disrupt systems, and infiltrate networks. The learners will start by considering the value their data holds and what organisations might use it for. They will then learn about social engineering and other common cybercrimes, and finally look at methods to protect against these attacks.

Links to National Curriculum

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 practical experience of writing computer programs in order to solve such problems
Create, reuse, revise, and repurpose digital artefacts for a given audience, with attention to trustworthiness, design, and usability
Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users
Understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits
Understand a range of ways to use technology safely, respectfully, responsibly, and securely, including protecting their online identity and privacy; recognise inappropriate content, contact, and conduct, and know how to report concerns.

Knowledge and understanding of this curriculum will be assessed by:

Summative assessment at the end of each unit
Formative assessment throughout lessons

Powerful Knowledge/Cultural Capital Opportunities

In Computing, all pupils will be taught to be courteous, respectful users of technology, who are responsible, competent and confident and creative users of information and communication technology at the highest level suitable for the future world society. All pupils will be equipped to use Computational Thinking and problem-solving skills and take them into the workplace as individuals who are computer literate and active participants in the digital world.