**IT Scheme of Work 2022-2023: YEAR 9**

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| **AUTUMN TERM 1: SEPT - OCT** | **AUTUMN TERM 2: OCT - DEC**  | **SPRING TERM 1: JAN - FEB**  |
| **Staying Safe Online** | **Scratch** |   **Introduction to The Project Life Cycle** |
| **AO: to evaluate the online world and their own internet activity for safety concerns and equip themselves with tools for protecting their online identities.** As most learners will already have some form of online presence and familiarity with online spaces, the purpose of this unit is for them to start thinking more critically about how they, and others, conduct themselves online. Learners will also be asked to discuss key debates around the online world, such as the extent of their right to privacy, and which powers should be granted to organisations and states. As much as possible, learners should be encouraged to develop their own ideas and opinions in order to become engaged citizens when it comes to online rights.**Topics:*** Define online reputation and discuss what it is made up of.
* Learn techniques on how to build a positive online reputation.
* Define the terms ‘big data’ and ‘data analytics’.
* Find out about the stakeholders who use big data and why.
* Understand what data is collected on me and how it is used.
* Discuss the ethics of big data use.
* Investigate the legal rights to privacy within the UK.

**Teach computing – Online safety** | **AO: to create a game using Scratch programming language.**Pupils will explore Scratch programming language and learn the basic skills to design and make a game.**Topics:*** I can develop a game proposal.
* I can use planning tools to set goals for my project.
* I can explain any legal legislation connected with game development.
* Create a background using scratch for my game.
* I can add code to Sprites in my game.
* I can add a variable/s to their game.
* I can review and evaluate my work and make improvements.

**Teach computing – Scratch** | **AO: to identify the purpose of a project manager and the phases of the project life cycle.**Pupils will consider the purpose of a project manager and the phases of the project life cycle.**Topics:*** What is a project manager and what do they do?
* Project planning tools
* Computer legislation

**Zigzag Education – Unit 1** |
| **SPRING TERM 2: FEB - MAR** | **SUMMER TERM 1: APR - MAY** | **SUMMER TERM 2: JUN - JUL** |
| **Creating a GUI**  | **Spreadsheets** | **Cyber Security** |
| **AO: to design and create an app using MIT App Inventor**Pupils will examine how to use MIT App Inventor platform to create a solution to a problem. To consider project planning tools and computer legislation.**Topics:*** Designing an app considering user constraints and legislation.
* Using project planning tools to manage a project.
* Create an app using MIT App Inventor.
* Test and analyse the usability to an app.

**MIT App Inventor Website** | **AO: to use formulas and functions in a spreadsheet and consider how to integrate software for a purpose.** Pupils will explore modelling data using spreadsheet software. **Topics:*** Use the autofill tool to replicate cell data.
* Analyse data.
* Create appropriate charts in a spreadsheet.
* Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet.
* Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet.
* Use conditional formatting in a spreadsheet.
* Use absolute referencing in a spreadsheet.
* Create a Macro in a spreadsheet.
* Integrate software with Google sheets.

**Teach computing** | **AO: to examine the need for computer legislation and research Ddos attacks.**Pupils will examine how computer legislation is linked to various types of cyber security attacks. **Topics:** * Identify what happens to data entered online.
* Explain the need for the General Data Protection Regulations.
* Define hacking in the context of cyber security.
* Explain how a DDoS attack can impact users of online services.
* Identify strategies to reduce the chance of a brute force attack being successful.
* Explain the need for the Computer Misuse Act.

**Teach computing** |