Year 4 Computing Progression of Knowledge & Skills

KS2 National Curriculum

Computer Science

- Design and debug programs, including those that control physical systems, and solve problems by breaking them down.
- Employ sequence, selection, repetition, variables, input, and output in programs.
- Apply logical reasoning to understand simple algorithms and fix errors in algorithms and programs.
- Gain an understanding of computer networks like the internet, its services such as the World Wide Web, and its uses for communication and collaboration.

Information Technology

- Effectively use search tools, understand result selection, and critically evaluate digital content.
- Choose and combine different software and internet services on various devices to create programs, systems, and content for specific purposes.
- Use digital tools to gather, analyse, evaluate, and present data and information.

Digital Literacy

- Utilise technology safely, respectfully, and responsibly.
- Recognize appropriate and inappropriate online behavior.
- Know how to report concerns about online content and contact.

YEAR 4		
Computer Science	• Consider how their design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. • Make intuitive attempts to **debug** their own programs. • Use timers to achieve **repetition** effects that are becoming more **logical** and are integrated into their program designs. • Understand '**if statements**' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. • Understand how variables can be used to store information while a program is executing, they are able to use and manipulate the value of **variables**. • Make use of user inputs and outputs such as '**print to screen**'. • Trace code and use step-through methods to identify errors in code and make logical attempts to correct this. '**Read**' **programs** with several steps and predict the outcome accurately. • Recognise the main component parts of **hardware** which allow computers to join and form a **network**. • Understand the **online safety** implications associated with the ways the internet can be used to provide different methods of communication.	Purple Mash Unit 4.1: Coding – 2Code Purple Mash Unit 4.2: Online Safety – 2Connect / 2Publish Plus / Display Boards Purple Mash Unit 4.5: Logo – 2Logo Purple Mash Unit 4.7: Effective Searchers – Browsers, 2Quiz, 2Connect Purple Mash Unit 4.8: Hardware Investigators – 2Quiz, 2Connect

Information Technology	• Understand the function, features and layout of a **search engine**. • **Appraise** selected **webpages** for credibility and information at a basic level. • Make improvements to digital solutions based on feedback. • Make informed software choices when **presenting information and data**. • Create linked content using a range of software. • Share digital content within their community, i.e. using Virtual Display Boards.	Purple Mash Unit 4.1: Coding – 2Code Purple Mash Unit 4.3: Spreadsheets – 2Calculate Purple Mash Unit 4.4: Writing for Different Audiences – Writing Templates, 2Simulate/2Connect/ 2Publish Plus Purple Mash Unit 4.6: Animation – 2Animate Purple Mash Unit 4.7: Effective Searchers – Browsers, 2Quiz, 2Connect
Digital Literacy	• Children can explore key concepts relating to online safety using concept mapping. • Help others to understand the importance of online safety. • Know a **range of ways of reporting inappropriate content and contact**.	Purple Mash Unit 4.2: Online Safety – 2Connect / 2Publish Plus / Display Boards