Year 5 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 5		
Computer Science	• Attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. • Test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code. • Translate algorithms that include sequence, selection and repetition into code with increasing ease and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. Combining sequence, selection and repetition with other coding structures to achieve their algorithm design. Consider their code structure in terms of the ability to debug and interpret the code later • Understand the value of computer networks but are also aware of the main dangers. • Recognise what personal information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content, e.g. 2Blog, 2Email, Display Boards.	Purple Mash Unit 5.1: Coding - 2Code Purple Mash Unit 5.2: Online Safety 2Publish Plus Writing Templates Display boards 2Connect Purple Mash Unit 5.5: Game Creator - 2DIY 3D, Writing Templates, 2Blog

Information Technology	• Search with greater complexity for digital content when using a **search engine**. • Explain in some detail how credible a webpage is and the information it contains. • Make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution and review solutions from others. • Collaboratively create content and solutions using digital features within **software** such as collaborative mode. Use several ways of **sharing digital content**.	Purple Mash Unit 5.1: Coding - 2Code Purple Mash Unit 5.3: Spreadsheets – 2Calculate Purple Mash Unit 5.5: Game Creator - 2DIY 3D, Writing Templates, 2Blog Purple Mash Unit: 5.6: 3D Modelling - 2Design and Make Writing Templates Purple Mash Unit: 5.7: Concept Maps – 2Connect
Digital Literacy	• Have a secure knowledge of common online safety rules and can apply this by demonstrating the **safe** and **respectful** use of a few different technologies and **online services**. • Relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.	Purple Mash Unit 5.2: Online Safety 2Publish Plus Writing Templates Display boards 2Connect

Assessment End Points Year 5	
Knowledge	**Skills**
• I know that **manipulation** of shape online has an application to 3D models and packaging in real-life contexts. • I know that **design** is important to video games. • I know how to keep my personal information safe.	• I can **test** and **debug** my programs as I go using logical methods to identify the approximate cause of any bug. • I can **use** a variety of coding techniques to create **variables**. • I can attempt to turn more complex real-life situations into **algorithms** for a program by **deconstructing** them into manageable parts.