

## Summer 2 Year 4 – Repetition in Games

### Computing Concepts



Presentation

**Presentation**  
Expressing ideas



Systems

**Systems**  
Knowing how to create and use programmes



Digital world

**Digital World**  
Knowing how to use a range of technology

### Curriculum Objectives

- Design, write, and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- Use logical reasoning to explain how some simple algorithms work, and to detect and correct errors in algorithms and programs
- Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

### Learning Overview

Learners will explore the concept of repetition in programming using the Scratch environment. The unit begins with a Scratch activity similar to that carried out in Logo in Programming unit A, where learners can discover similarities between two environments. Learners look at the difference between count-controlled and infinite loops, and use their knowledge to modify existing animations and games using repetition. Their final project is to design and create a game which uses repetition, applying stages of programming design throughout.

Lessons will cover:

- Using loops to create shapes
- Different loops
- Animate your name
- Modifying a game
- Designing a game
- Creating your game