

Inspiring and enabling our school community to live life to the full



YEAR 4

Subject: Computing
Unit: Programming – Repetition in Shape

Characteristics of an Effective Learner

Courage
Commitment
Collaboration
Creativity
Curiosity

Prior Learning:

Key concepts from Education for a connected World:

- Year 1 Introduction to programming
- Year 2 Programming Robot algorithms
- Year 3 Programming sequences in music

Key Vocabulary taught in this unit:

Program, turtle (an arrow or turtle image on screen that draws a line as it is programmed), Commands, Code snippets (this could be the same as a program, it can have several sets of commands in one program), Algorithm (the part of the design of the program that is precise instructions to be implemented as code), Design, Debug. Logo commands, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure,

Intent: What do we want the children to know, be able to do by the time they complete this unit?

- **Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts**
Design and create wrapping paper using a count-controlled loop, debugging and improving code
- **Use sequence, selection, and repetition in programs; work with variables and various forms of input and output**
Using count-controlled loops. Use basic Logo commands to create repeating patterns
- **Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs**
Debug and evaluate algorithms within Logo
- **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**
Using Logo a text based program language to program written algorithms to complete a design

Impact / Outcome:

What will the final product / result be?

Pupils will create programs by planning, modifying, and testing commands to make shapes and patterns. They will apply skills to create a program containing a count-controlled loop. They will design wrapping paper using more than one shape.

P4C Inquiry (where appropriate)

N/A