

# Year 4—Programming A

## Repetition in shapes

### Previous learning

Year 1 Programming A - Moving a robot:

- I know how to write short algorithms.
- I know how to predict algorithm outcomes.

Programming B - Programming animations:

- I know how to design and program movements of a character.

Year 2 Programming A – Robot algorithms:

- I know how to create and debug programs.
- I know how to use logical reasoning to make predictions.

Programming B – Programming quizzes:

- I know how to design algorithms and programs that use events to trigger sequences of code.
- I know how to make an interactive quiz.

Year 3 Programming A – Sequencing sounds:

- I know how to create a sequence in a block-based sequence.
  - I know how to use programming language to make music.
- purpose.

Programming B – Events and actions in programs:

- I know how to write algorithms and programs that use a range of events.
- I know how to use a range of events to trigger sequences of actions.

**Know** that a procedure is a set of instructions that can be repeated in a program.

**Know** that variables can be changed in a simulation to test and achieve a desired outcome.

### Key information

Programming is used all of the time in our lives! Phones are programmed, so are televisions and lots of other pieces of technology.

When technology uses programming it is to make sure that it does exactly what it is meant to when you try to manipulate it.

For example when you use the remote for the television, it is programmed to follow exactly what the remote tells it to do!

### Why is programming useful?

### Curriculum links

NC links

- Design, write and debug programs that accomplish specific goals, including controlling or simulating systems.
- Use sequence, selection and repetition in programs.

Wonder

Enjoyment

Love of Language

Belonging

Empathy

Courage

Kindness

### Key Vocabulary

Programming	The process or activity of writing computer programs.
Algorithm	A set of rules to be followed in calculations by a computer.
Repeat	Looping or repeating sections of a computer program.
Debug	Identify and remove errors from computer hardware or software.
Loop	A sequence of instructions that are continually repeated until a certain condition is reached.
Motion	The action or process of moving or being moved.
Command	An instruction to a computer program to perform a specific task.
Sequence	A particular order in which related things follow each other.

