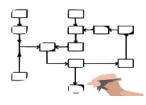# Computing – Computer Science Coding

In this unit, children will learn that computer science is a very large subject with lots of applications. Computer scientists design new software, solve computing problems, and develop different ways to use technology. Whatever they're doing, all computer scientists rely on 'computational thinking' which involves looking at a problem and working out a way a computer might be able to help you solve it. Children will use Purple Mash 2 Simple to aid their progression through this unit.

Key Knowledge

- To understand what a flowchart is and how flowcharts are used in computer programming.
- To understand that there are different types of timers and select the right type for purpose.
- To understand how to use the repeat command.
- To understand the importance of nesting.
- To design and create an interactive scene.

Key Vocabulary

Action – The way that objects change when programmed to do so. For example, move or change a property.

Alert – This is a type of output. It shows a pop-up of text on the screen.

Algorithm – A precise step by step set of instructions used to solve a problem or achieve an objective.

Bug – A problem in a computer program that stops it working the way it was designed.

Button – A type of object that responds to being clicked on.

Code – Writing the code for a computer program.

Command – A single instruction in a computer program.

Debug/Debugging – Fixing code that has errors so that the code will run the way it was designed to.

Event – An occurrence that causes a block of code to be run. In 2Code, the event commands are used to create blocks of code that are run when events happen.

Flowchart – A diagram which represents an algorithm.

Nesting – When coding commands are put inside other commands. These commands only run when the outer command runs.

Interval – In a timer, this is the length of time between the timer code running and the next time it runs e.g. every 1 second.

Repeat – This command can be used to make a block of commands run a set number of times or forever.

Sequence – When a computer program runs commands in order.

Timer – Use this command to run a block of commands after a timed delay or at regular intervals.

Key Questions

What does repeat mean in computer programming?

What is the difference between 'timer after' and 'timer every'?