

# Year 6 Programming

## Prior Learning (Y5):

Learners develop their knowledge of 'selection' by revisiting how 'conditions' can be used in programming, and then learning how the 'if... then... else...' structure can be used to select different outcomes depending on whether a condition is 'true' or 'false'. They represent this understanding in algorithms, and then by constructing programs.

## Current Learning (Y6):

This unit explores the concept of variables in programming through games in Scratch. First, pupils will learn what variables are, and relate them to real-world examples of values that can be set and changed. Learners will then use variables to create a simulation of a scoreboard.

## Future Learning (Y7):

To build learners' confidence and knowledge of the key programming constructs.

The main programming concepts covered in this unit are sequencing, variables, selection, and count-controlled iteration.

## Key Vocabulary

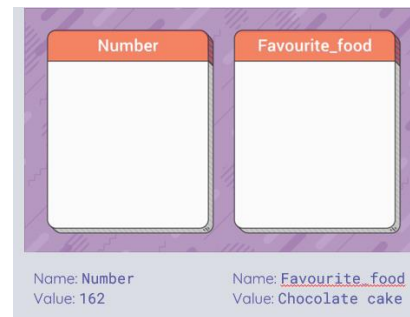
**Vocabulary to use from previous learning:** Algorithm, program, command, debug, logical reasoning, sequence, repetition, decompose, count-controlled loops, infinite loops, selection, conditions

Variables	A variable can be set and changed throughout the running of a program.
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Code	The symbolic arrangement of data or instructions in a computer program or the set of such instructions
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A variable is a placeholder in the memory of a computer and can hold one value at a time.

If the value of a variable is changed, the new value replaces the previous value.



## Variables in Programming

Each variable in a program is named. These names should be short and unique and not contain spaces.



## Scratch- New Blocks

change my variable by Change Block

set score to 0 Set Block

Often these variable blocks would be used alongside repetition and selection blocks, especially when creating a game or a quiz.



## Key Unit Specific Vocabulary:

Scratch; Value; Game; Programming Blocks; Sprite; Score; Project

## Key Questions:

- What are variables?
- Why are variables used in programming?
- How to improve a game by using variables?
- How can I design and create a program that uses variables?
- How can I improve my game?