

Year 5 Programming

Prior Learning (Y4):

Learners will explore the concept of repetition in programming using the Scratch environment. 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.

Key Vocabulary

Vocabulary to use from KS1 and LKS2: Algorithm, program, command, debug, logical reasoning, sequence, repetition, decompose, count-controlled loops, infinite loops

Selection	Is when a computer performs instructions if a particular condition is met or not
Conditions	is a statement that can be either true or false. Programmers can use conditions to trigger actions.

Key Unit Specific Vocabulary:

Scratch; Blocks; If...then...else; Loops; Question; Answers; Outcome

Key Questions:

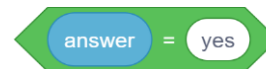
- How is selection used in computer programs?
- How do I create programs with different outcomes using selection?
- How does selection direct the flow of a program?
- How do I design a program that uses selection?
- How can I test my quiz?

Current Learning (Y5):

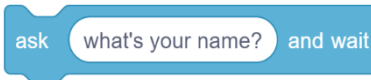
Learners develop their knowledge of 'selection' by revisiting how 'conditions' can be used in programming, and then learning how the 'if... then... else...' structure can be used to select different outcomes depending on whether a condition is 'true' or 'false'. They represent this understanding in algorithms, and then by constructing programs. They learn how to write programs that ask questions and use selection to control the outcomes based on the answers given. They use this knowledge to design a quiz in response to a given task and implement it as a program.

Scratch- New Blocks

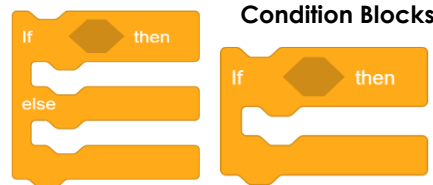
Condition blocks can be used as a condition when writing programs in Scratch. The condition block needs to be used with other blocks to control the flow of actions. These blocks are all the same shape (a hexagon). The blocks they are used with have a hexagonal space in them.



Answer Blocks



Asking Blocks

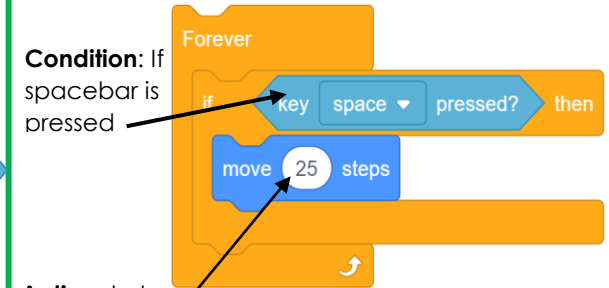


Condition Blocks

Future Learning (Y6):

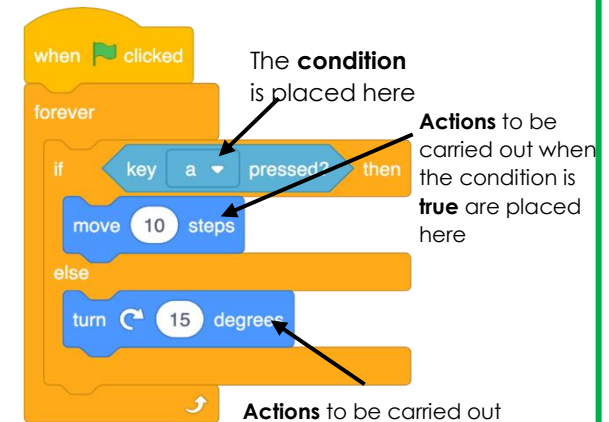
Learners will learn what variables are, and relate them to real-world examples of values that can be set and changed. Learners will then use variables to create a simulation of a scoreboard.

Condition in Programming



Condition: If spacebar is pressed

Action: to be carried out if condition is true



The **condition** is placed here

Actions to be carried out when the condition is **true** are placed here

Actions to be carried out when the condition is **false** are placed here