

iProgram: iDevelop Level 4

Course Evaluation Criteria

Y6: We would expect all children in Y6 to attain statements 1-6. If any of statements 7-10 are attained, those pupils are exceeding expectations.

1. Pupils know the difference between Blockly and Swift.
2. Pupils can code simple geometric shapes on Hopscotch.
3. Pupils understand how the conditional 'When is Tapped' works.
4. Pupils can include the feature 'Last Touch' into their code.
5. Pupils understand how variables and the function 'Check Once If' are linked.
6. Pupils can write code using at least two functions to control an external object.
7. Pupils can write at least two functions in JavaScript.
8. Pupils can code a melody using various rhythms and notes.
9. Pupils can code a 'Rock, Paper, Scissors' program with two characters.
10. Pupils can code an external robot using JavaScript to successfully complete a physical course.

Course Overview

Course overview: Pupils will learn about multiple coding languages including Blockly, Swift and JavaScript to write their own code. They will be able to use their knowledge of coding to understand how it translates to real world programming, and which different functions and conditionals should be used for specific desired outcomes.

Learning Outcome for the course: Pupils will be able to code their own programs, starting with simple shapes and art pieces to progressing to musical instruments and games. They will be able to code for an external object and feel confident in alternating between Blockly and written coding languages.

Programming Languages

Blockly



Swift

```
var x = 7 + 3;
Print (x);
repeat (5){
  x = x + 9 * 3;
  wait (1000);
  print (x);
}
```

Swift and Blockly provide the same instructions within the code.

Blockly is more user friendly as it uses clearer language, colour categorised functions and is drag-and-drop.

Swift is written code, which makes it more difficult to understand. However because of this it has little to no limitations compared to Blockly.

Apps Used



Sprite Box



Sphero Edu



Hopscotch

Vocabulary Bank

Blockly

A visual programming language that uses drag and drop.

Swift

A written programming language.

Function

An instruction given to a computer.

Algorithm

A group of functions in a sequenced order.

Conditional

A 'When' or 'If' statement that instructs when a program should be run.

Last Touch

A feature that uses the area of an iPad tapped as a value within a function.

Create A Clone

A function that creates a copy of an algorithm.

Variable

Part of a code that varies while a program is run.

Check Once If

A functions used to decide when functions should run depending on a variable.

JavaScript

A written programming language used instead of the limited Blockly language.