

# iProgram: iFunction Level 2

## Course Evaluation Criteria

**Y4: We would expect all children in Y4 to attain statements 1-7. If any of statements 8-10 are attained, those pupils are exceeding expectations.**

1. Pupils know that an algorithm is a set of instructions.
2. Pupils know that Blockly is a programming language.
3. Pupils can create basic shapes using Blockly on Hopscotch.
4. Pupils understand what the random function is and can use it in their algorithms.
5. Pupils can use Blockly to control an external component such as the Sphero robot.
6. Pupils understand that using repeats can make algorithms quicker and easier to write and understand.
7. Pupils understand what Swift is.
8. Pupils know that computational thinking is used to solve problems.
9. Pupils know that a variable allows a number to change while a program is running.
10. Pupils can use a variable to create expanding patterns.

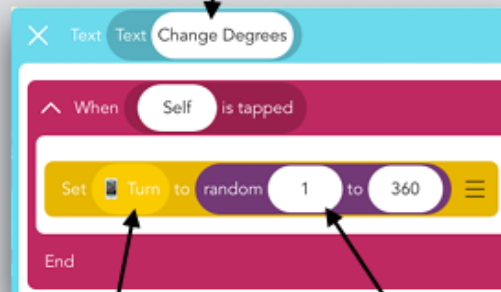
## Course Overview

**Course overview:** iFunction looks at understanding different programming languages and what each part of a code does to the program. Time will be spent looking at what every function does in detail by focusing on each one through the learning session and then consolidating those functions and the knowledge that pupils will gain to create a piece of artwork.

**Learning Outcome for the course:** Pupils will learn how to understand each function and if they combine many of the functions, they can create a bigger, more powerful algorithm for many uses. They will learn about different types of functions and their role in an algorithm.

## Coding Language

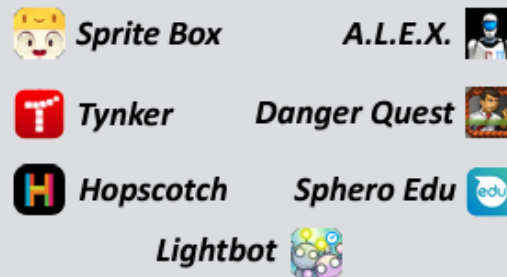
Text characters can be used to add more code into a project



Create variables in the code to alter the program as it runs

Add a random element into the values of functions to create unpredictability

## Apps Used



## Vocabulary Bank

### Algorithm

*A set of instructions or functions for a computer.*

### Repeat

*Instructions that happen more than once.*

### Conditional

*An 'If' or 'When' statement in our code.*

### Variable

*A number that can change as the program runs.*

### Swift

*Swift is a written coding language.*

### Programming

*When we give instructions to a computer or program.*

### Blockly

*A visual coding language.*

### Function

*The name for an instruction in programming.*

### Random

*Information that isn't chosen beforehand*

### Computational Thinking

*Breaking a problem into steps to solve it more easily.*