

iProgram

What I should already know

- I understand that an algorithm is a process that consists of a series of steps that achieves a specific goal.
- I understand algorithms can describe everyday activities and can be followed by humans and computers.
- I understand that algorithms are made up of steps.
- I know that steps can be repeated.
- I understand that computers need more precise instructions than humans do.
- I can use Scratch to create images.
- I can program a simple animation.
- I can write a simple program that produces an output.

Digital Literacy

- I know what an algorithm is and I can express simple algorithms using symbols
- I know that programs can work with different types of data.
- I can use arithmetic operators, if statements, and loops, within programs.
- I can find and correct simple semantic errors i.e. debugging, in programs.
- I can design solutions (algorithms) that use repetition and two-way selection i.e. if, then and else.
- I can use diagrams to express solutions.

Key Vocabulary

Co-ordinates	Position of point on the screen.
Debug	Finding and fixing problems with an algorithm or a program.
Import	Add something (e.g. a picture or sound) from a file or online.
Program	An algorithm that has been written in a language (coded) that a computer can understand.
Repeat	The action of doing something over and over again.
Selection	A programming statement that executes a block of code 'if' something is true.
Sequence	A particular order to follow.
Test	Run a program to see if it does what you expect it to do.
X-Y Axis	Lines for co-ordinates.

What I will learn (Sticky knowledge)

- To program an animation that executes a sequence of statements.
- To understand that computer programs containing graphics use x y coordinates and turns are measured in degrees.
- To program a sequence of instructions that create visual effects.
- To import, create and record sounds.
- To understand that algorithms and programs can involve repetition.
- To predict the outcome of a simple algorithm.
- To combine images, sounds sounds and movement to create a personal animation.

What I will learn next

- To understand that a program is a sequence of statements written in a programming language.
- To program a sequence of statements.
- To program an object to move and draw.
- To understand that commands and actions can be programmed to be executed depending upon whether a condition is true or not.
- To combine repetition and conditional statements in a program.

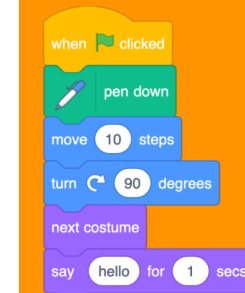
Selection



Coordinates



Sequence



Repetition

