Y3 Thinking like a Computer Scientist
Scratch Animation

Key Knowledge:

You can make an animation by using a programming languge to create an algorithm that will tell your computer what to do. We will do this using Scratch.

Programming is writing computer code to create a program, in order to solve a problem. Programs consist of a series of instructions to tell a computer exactly what to do and how to do it.

```
when [flag] clicked
say Hello, world!
stop this script
```

Scratch is a visual programming language that allows you to create programs by allowing you to drag pre-built blocks of code / script.

A Sprite is an object or character in the game / animation. In order to give the impression of the sprite moving you can change the costume.

Using blocks to code in Scratch

What do the blocks do?	
Block	**Explanation**
move 10 steps	This piece of code will move the sprite 10 steps in the direction which is facing.
turn 15 degrees	This piece of code will turn the sprite 15 degrees to the right.
turn 15 degrees	This piece of code will turn the sprite 15 degrees to the left.
switch costume to costume2	This piece of code will swap the sprite to "costume2".
when space key pressed	This piece of code will trigger any attached pieces of code to action once the space key is pressed.
wait 1 seconds	When the program reached this piece of code. It will cause the program to pause for 1 second.
repeat 10	This piece of code will loop anything inside of it 10 times.
if then	This piece of code will trigger all of the code inside once the condition has been met.
set my variable to 0	This piece of code will change whatever the current value of the variable is to 0.

What other blocks will you use when you make your animation?

Learning Questions

What is scratch?

How can I plan an animation project in Scratch?

Can I create an animation on Scratch?

How can I make careful changes to my animation?

How effective was my animation?

How can I present my animation any enjoy others?

What else do you know?

abstraction	filtering out the characteristics that we don't need in order to concentrate on those that we do.
sprite	characters or objects that can be instructed to perform tasks by following algorithms.
information	data that has been processed by a computer so it makes sense.
pattern	A series of code that is repeated more than one time.
debug	Taking out mistakes in codes that stop the programme from running.
Computer	A device that can store instructions on its memory.
code	A precise set of ordered steps that can be followed by a human and implemented on a computer to achieve a task
Programming languages	used to teach a computer to carry out a task.
Scratch	the end result or outcome
algorithm	A series of instructions for a computer set out into clear steps