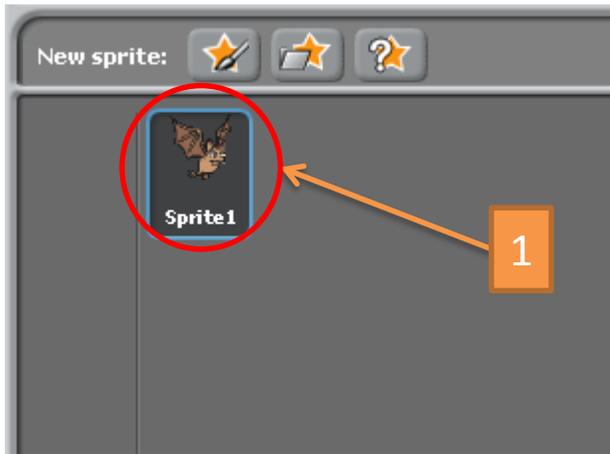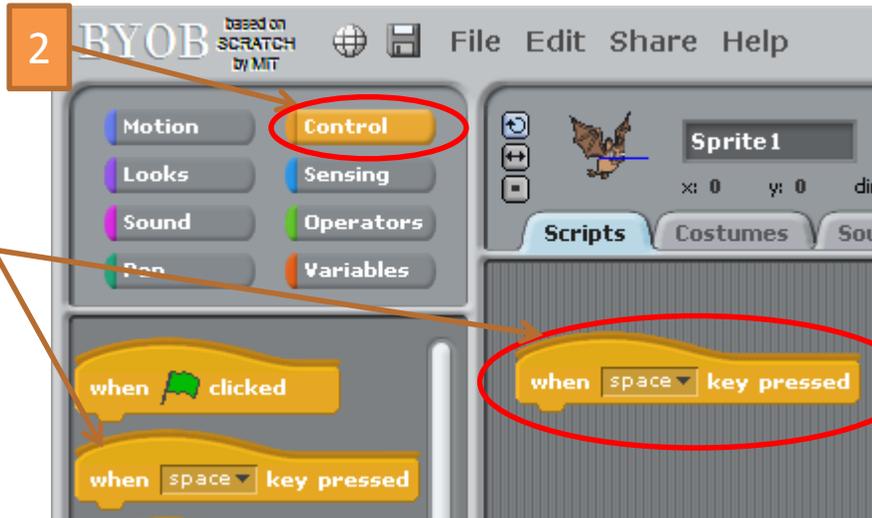# Controlling User Movement

1. Select your Sprite.

2. Click the 'Control' tab.

3. Drag the correct block onto the stage.

When 'Space key' pressed allows you to control what happens when the user presses the space bar on the keyboard.

Your bat needs to fly/jump up. How can you do that?

**X and Y movement**. X will change the position of your character left and right. Y will change the position of your character up and down.

1. Click the 'Motion' tab.

2. Drag the 'Change Y by 10' block onto the stage and connect it to the other block.

Make sure to test your game. Does the bat now move up? Is it enough? If not, change the 10, to a higher number.

# Controlling Other Movement

**As well user movement, you need to control:**
1. The bat automatically falling
2. Starting Position
3. Extension – Costume Changes

**1) Falling down** – your bat needs to always gradually fall towards the ground. How can we do this? Remember a **Positive (+)** Y number moves the bat **UP** and a **Negative (-)** number will move it **DOWN**

**You will need:**
1. When Green Flag Clicked
2. Forever
3. Change y by ……..

1 → when 🏴 clicked

2 → forever

3 → change y by 10
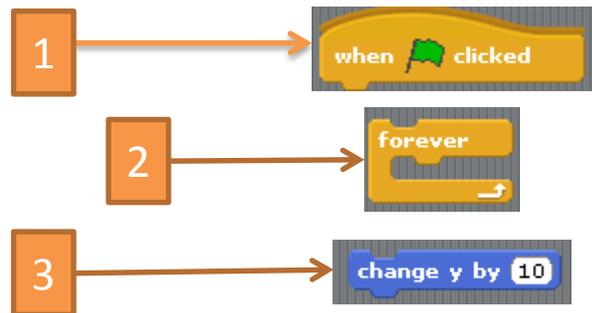
Test your game again. Is the fall rate challenging enough, without making the game too hard? Change the numbers till this works for your game.

## 2) Starting Position

**You may have realised that your bat does not return to the starting position yet. You need to control this.**
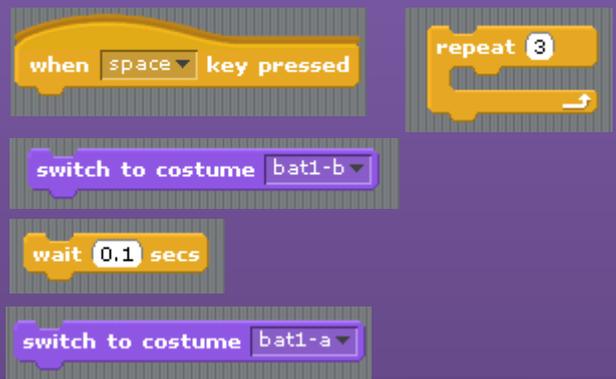
**User a mixture of**
1. When Green Flag Clicked
2. Go to X: 0 Y: 0

1 → when 🏴 clicked

2 → go to x: 0 y: 0
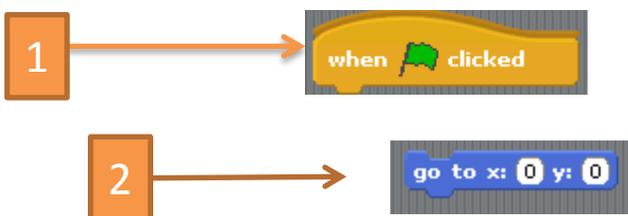
## 3) Extension - Costume Changing

**Remember we had more than one costume for our character. Can you use some control to make it appear as though the bat is flapping its wings?**

**You could use the following blocks:**

when space key pressed

repeat 3

switch to costume bat1-b

wait 0.1 secs

switch to costume bat1-a

# Game Over

Well done, your character now moves at your control and will fall towards the bottom of the screen.
But what happens if you do hit the bottom (or fly into the roof)? We need some control to end the game.

## Advanced Control

**The IF Block**

This is a very powerful block. It is a bit like asking a question. **IF** something happens, **THEN** do something else

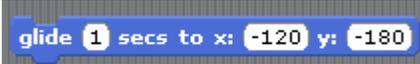**Used to ensure that your code continues while the game is running**

## Other New Blocks

**wait 1 secs** This block causes a delay.

**touching edge ?** A great block if you want to make something happen if your character touches the edge of the screen

**glide 1 secs to x: -120 y: -180** Can automatically move your character somewhere in a nice smooth motion

**stop all** A great block to make everything stop

## Game Over!!!!!!

How can we use the blocks above to create an ending to the game?

Think about the Algorithm:

1. **When Green Flag is Clicked**
2. **Wait 1 second**
3. **Forever**
4. **IF Touching Edge**
5. **Glide 1 secs to x: -120 Y: -180**
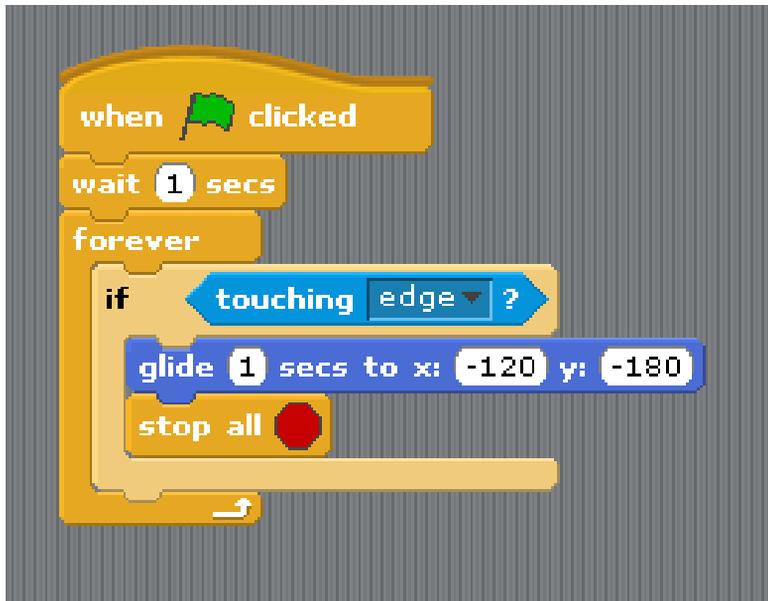6. **Stop all**

7. **Can you put the correct blocks together?**

Hint – If you get really stuck, the solution is on the next page

# Game Over

## Solution

```
when [flag] clicked
wait 1 secs
forever
    if < touching [edge ▼] ? >
        glide 1 secs to x: -120 y: -180
        stop all ⬤
```

## Extension - Test your game

Play your game a few times to test it. Does it work as you expect? If not, try to change you code to make it work.

You may have to test your game lots of times. Make sure you test all possibilities, e.g. flying into the roof, crashing into the ground.

**Super Extension**

Start to think about what other features your game needs. How could this game be improved?

Try and write the algorithm to solve your problems.