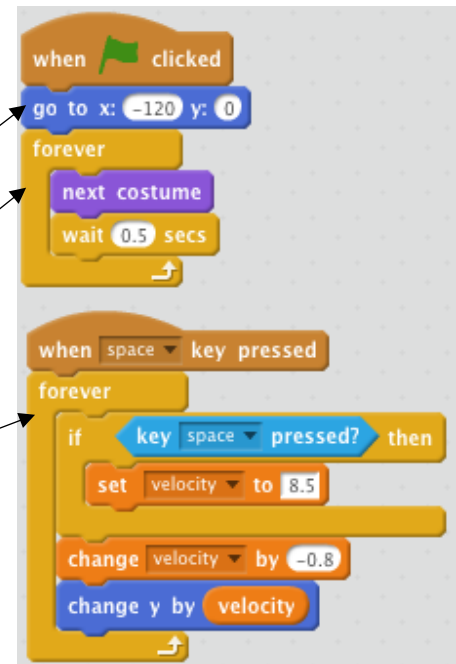# Lesson 1

Flappy bird (beginner)

Bird

1) Upload the flappy bird background. Then upload a flappy bird sprite.

2) Make it always spawn at **x:-120 and y:0**. If sprite has different costumes. **Add this**:

3) Make the bird move up and down by setting a velocity and changing it in a loop.

```
when [flag] clicked
go to x: -120 y: 0
forever
    next costume
    wait 0.5 secs
```

```
when space key pressed
forever
    if < key space pressed? > then
        set velocity to 8.5
    change velocity by -0.8
    change y by velocity
```
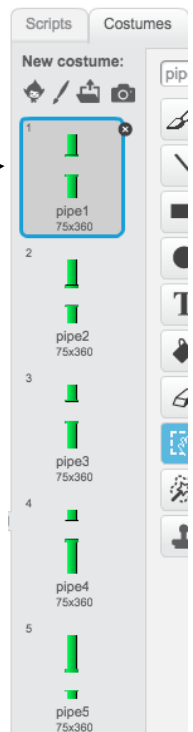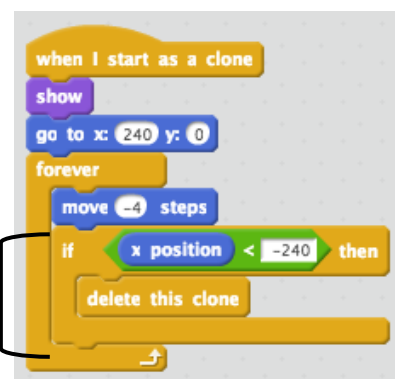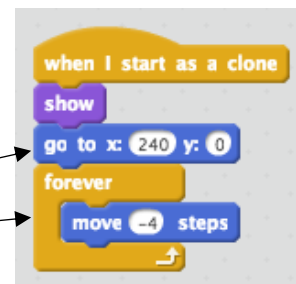
Lesson 2

Pipes

1) Find a pipe sprite or create one and call it pipe 1. Under the pipe costumes tab, duplicate 5 or more pipe costumes and make them different lengths.
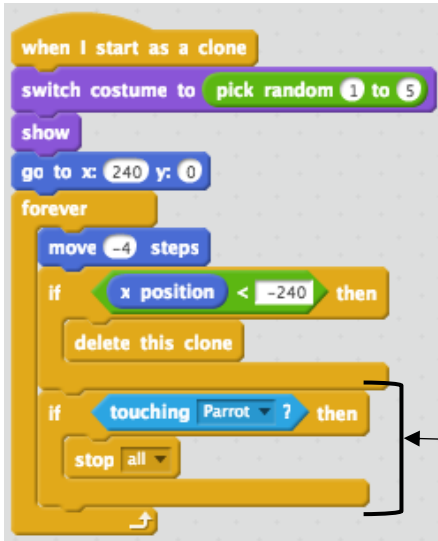
2) Now it's time to make them move. When the flag is clicked we want to **hide the first pipe** then **cone it ever 2 seconds.**

```
when [flag] clicked
hide
forever
    create clone of myself
    wait 2 secs
```

3) Let's simply just make the pipes move across the screen. Set them **to x:240 & y:0**. And in a forever loop make it **move -4 steps**.

```
when I start as a clone
show
go to x: 240 y: 0
forever
    move -4 steps
```

4) Now we must make the pipes disappear when they hit the end of the screen.

```
when I start as a clone
show
go to x: 240 y: 0
forever
    move -4 steps
    if < x position < -240 > then
        delete this clone
```

Scripts | Costumes

New costume:

pipe1
75x360

pipe2
75x360

pipe3
75x360

pipe4
75x360

pipe5
75x360

5)Then to make the pipes switch to random positions, add **switch costume to (pick random number 1 to #OF COSTUMES)**.

```
when I start as a clone
switch costume to pick random 1 to 5
show
go to x: 240 y: 0
forever
    move -4 steps
    if  x position < -240 then
        delete this clone

    if  touching Parrot ? then
        stop all
```

```
when I start as a clone
switch costume to pick random 1 to 5
show
go to x: 240 y: 0
forever
    move -4 steps
    if  x position < -240 then
        delete this clone
```

7)Lastly, if the pipe touches the parrot, stop ALL.

Lesson 3

Scoring & health

1)Every time the bird passes a pipe the score should increase. **Create a variable**. Score = 0.

2) once it is passed the **x positions of the bird, it increases by 1**.

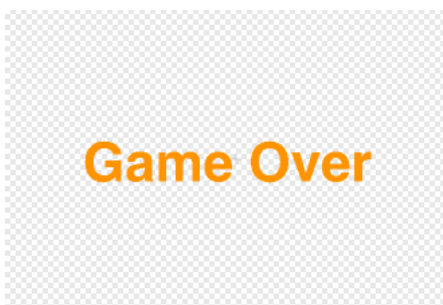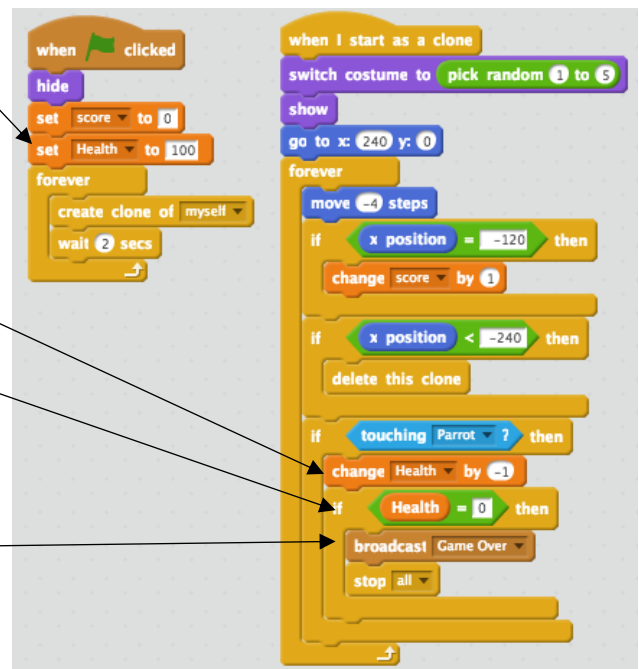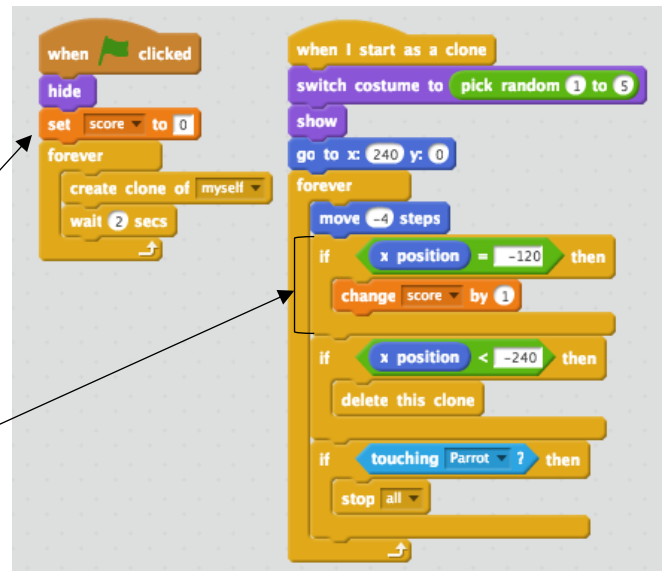3)Create a **health variable** and set it to **100**.

4)If it touches the parrot, change **health by -1. If it equals 0 then stop**.

5)If health = 0 then stop all.

Game Over

6)Create a game over sprite. Broadcast a game over message.

7)The game over sprite should look like this:

Extra Challenges

1) Go to the bird sprite. If the bird hits the bottom of the screen, make the game end.

```
when space key pressed
forever
    if  key space pressed? then
        set velocty to 8

    change velocty by -1
    change y by velocty

    if  y position < -165 then
        set health to 0
```