

# Bouncy Circle Project

## Overview

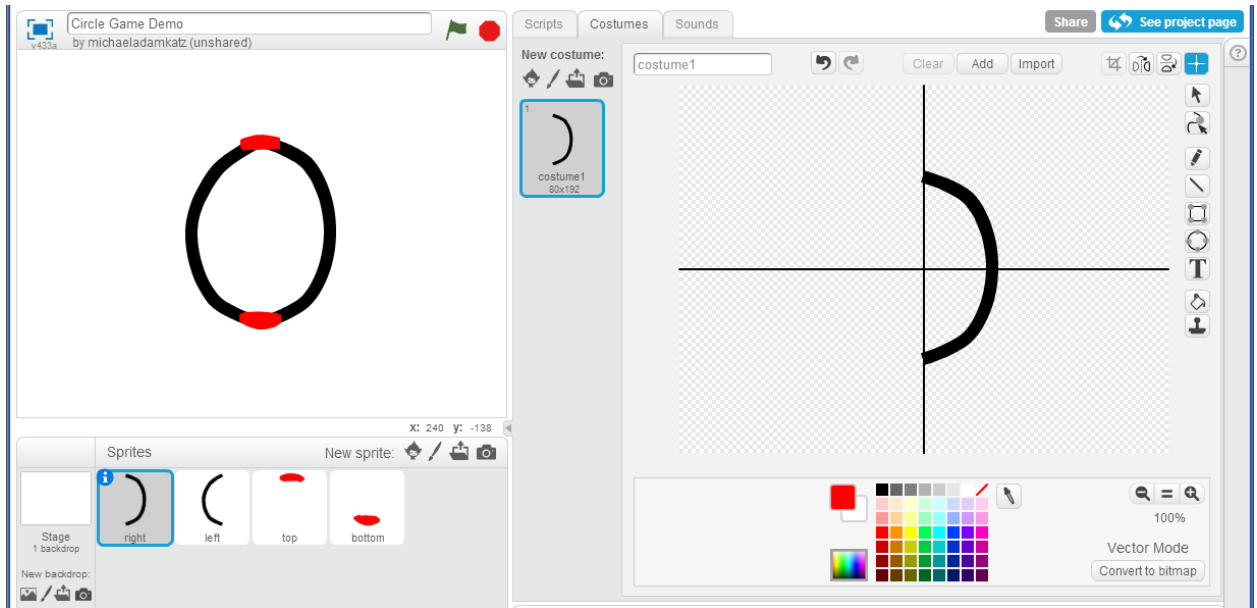
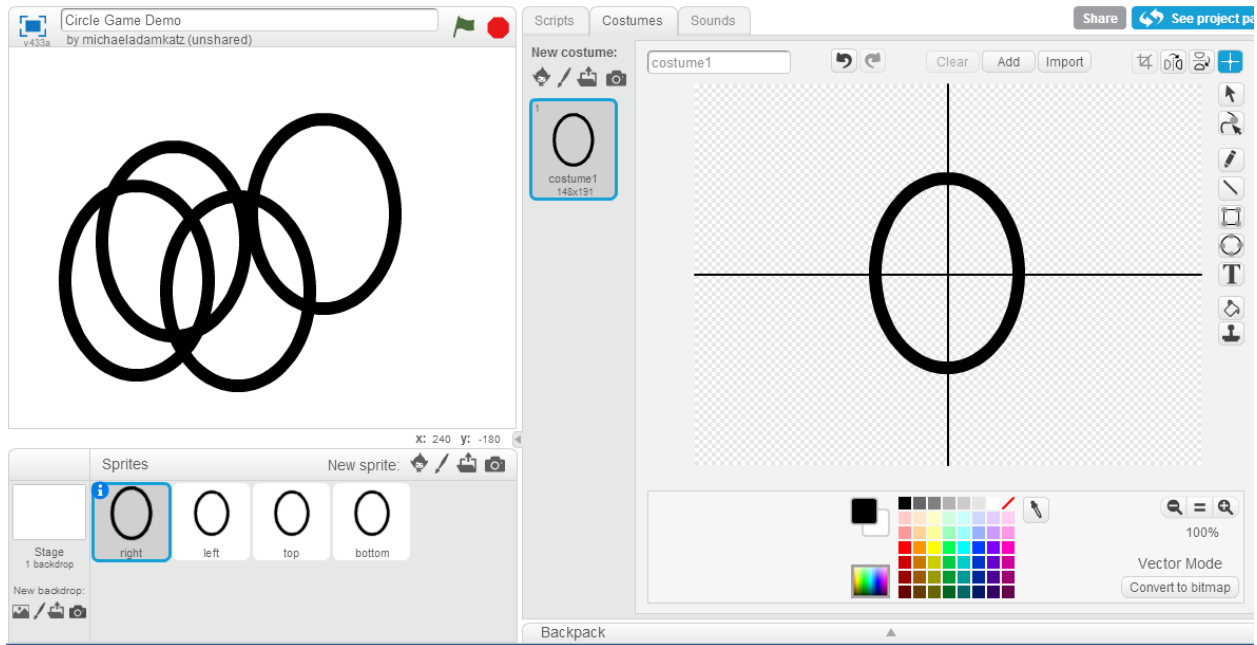
This game uses five sprites, but four of the sprites are just different parts of the circle. The other sprite is the line.

There is one forever loop. All of your games should use just one forever loop!

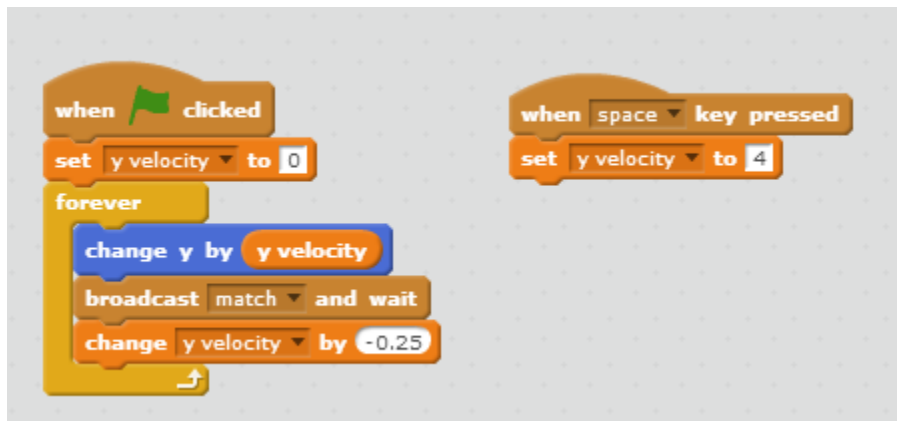
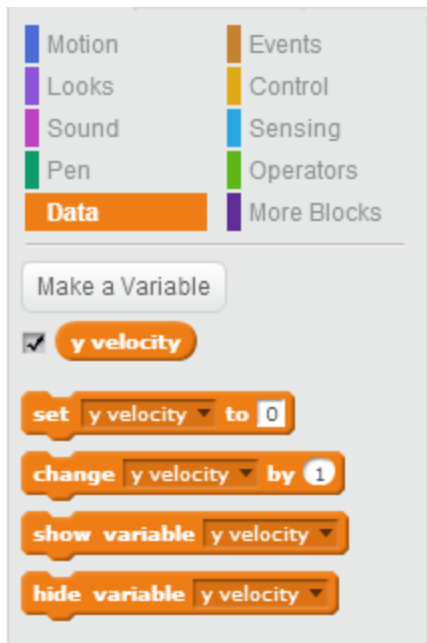
The game uses one main variable, “y velocity” to keep track of how fast the circle is falling (negative “y velocity”) or rising (positive “y velocity”).

## Drawing the circle

- Use vector mode.
- Make sure “cross-hair” center marker is in the center.
- After making it, duplicate the sprite three times.
- Name the original sprite “right”. It will be the main sprite. The three other parts will just follow along.
- Name the three other sprites “left”, “top”, and “bottom”.
- Modify each sprite using the “reshape” vector tool to be just its part. But be careful not to move the sprite as a whole – the center should stay in the same place. That’s the key to making all the pieces “fit together” without having to do any special positioning.
- Use “go to 0, 0” on each of the four pieces to make sure they all line up correctly.

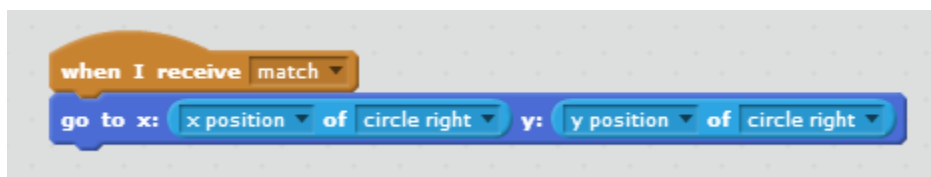


Using “y velocity” to make the (right part of the) circle bounce



Using a “match” message to keep the parts of the circle together

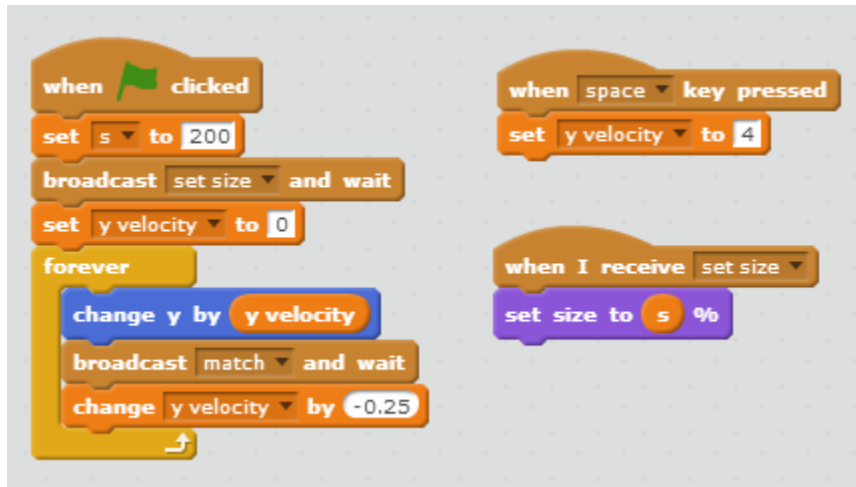
Add this to the three other sprites:



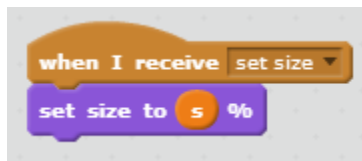
## Using a message to set the circle size

Make the circle larger to make the game easier. Make it smaller to make the game harder.

In the right sprite:



In the three other sprites:



## Create the line sprite

Think about it: why does it have to be a sprite and not part of the background?

You can draw the line however you like, to make the game as challenging as you want.

Circle Game  
by michaeladamkatz (unshared)

X: 240 Y: -139

Sprites

New sprite:

- Stage 1 backdrop
- circle right
- circle left
- circle bott...
- circle top
- line

New backdrop:

Scripts Costumes Sounds

costume1

Clear Add Import

100%

Vector Mode

Convert to bitmap

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X: 240 Y: -190

Sprites

New sprite:

- Stage 1 backdrop
- circle right
- circle left
- circle bott...
- circle top
- line

New backdrop:

Scripts Costumes Sounds

costume2

Clear Add Import

100%

Vector Mode

Convert to bitmap

## Set everything to the right “layer”

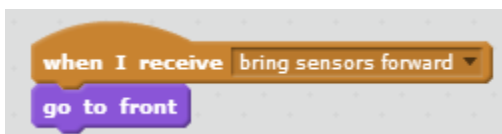
Right:



Left:



Bottom and top:



Line:

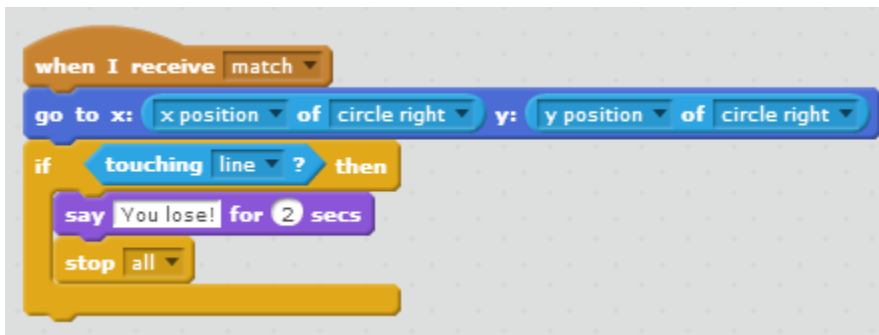


## Making the circle move horizontally, and checking for collision

Right (just one new line):



Top and bottom:



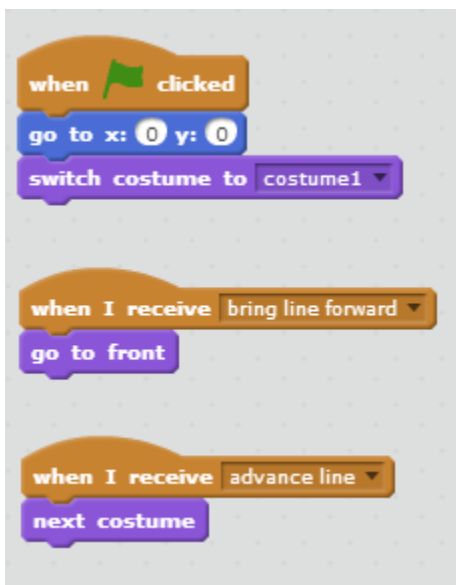
## Changing the line costume when the circle reaches the edge

Right (add "if" at the bottom):



```
when clicked
  set s to 200
  broadcast set size and wait
  broadcast bring line forward and wait
  go to front
  broadcast bring sensors forward and wait
  go to x: -234 y: 9
  set y velocity to 0
  forever
    change y by y velocity
    change x by 1
    broadcast match and wait
    change y velocity by -0,25
    if x position > 224 then
      broadcast advance line and wait
      set x to -234
```

Line:



```
when clicked
  go to x: 0 y: 0
  switch costume to costume1

when I receive bring line forward
  go to front

when I receive advance line
  next costume
```



## **Additional challenges**

- Add more costumes to the line sprite to extend the game
- Keep score
- Have bonus “diamonds” for the circle to collect