

HAPPY NEW YEAR

2018

# CoderDojo Athenry



Code and notes by Martha Fahy, 2018

# CoderDojo Athenry



## Every week:

- ✓ Sign in at the door

## If you are new:

- ✓ Fill in Registration Form
- ✓ Ask a Mentor how to get started

**Make sure you are on the Athenry Parents/Kids Google Group:** email [coderdojoathenry@gmail.com](mailto:coderdojoathenry@gmail.com)



## Weekly Reminders



- Please leave passageways between desk and keep **CLEAR** at all times
- If power cable goes across passageways – must be **TAPED DOWN** ask mentor for tape
- **ONLY NINJAS** need a table - parents, please only use a chair
- If **FIRST AID** is required please alert a Mentor



## Weekly Reminders



- Fire exit doors/main doorways must be kept clear **AT ALL TIMES**
- In the case of an emergency , please proceed in a calm and orderly manner to the nearest **Exit** and go to Assembly **Point 2**

Do **NOT** take anything with you

If you have a child in another room, do **NOT** go to them, a Mentor will look after them

# Weekly Reminders

## **Loaner Laptops:**

- Available for anyone that needs one, ask a Mentor

## **Tea/Coffee:**

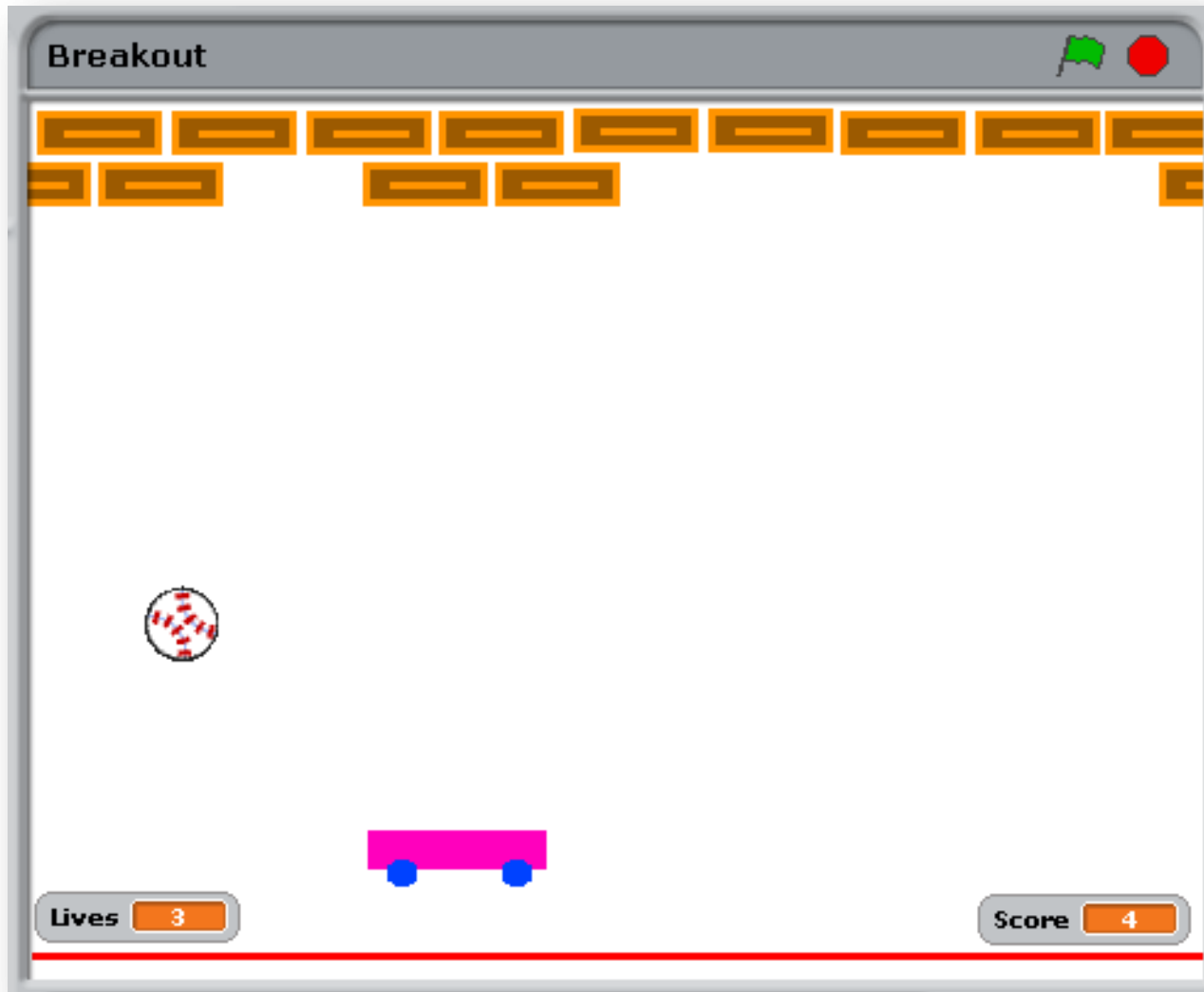
- Available down the corridor on the left.  
€2/€1.50

## **Tables and Chairs:**

- Please help put back chairs and tables in the class rooms, ask Mentors for guidance

# Today's Ninja Challenge:

## Make a Game Like **Breakout**



# Use some of this **Big Ideas** that You Should Understand



Making Sprites  
Move



Loops &  
Decisions



Animation  
& Sound



Variables &  
Broadcasts



# Steps to Make the Game

Make the **Bat** sprite,  
write & test code to control it

Make the **Ball** sprite,  
write code to make it move & animate

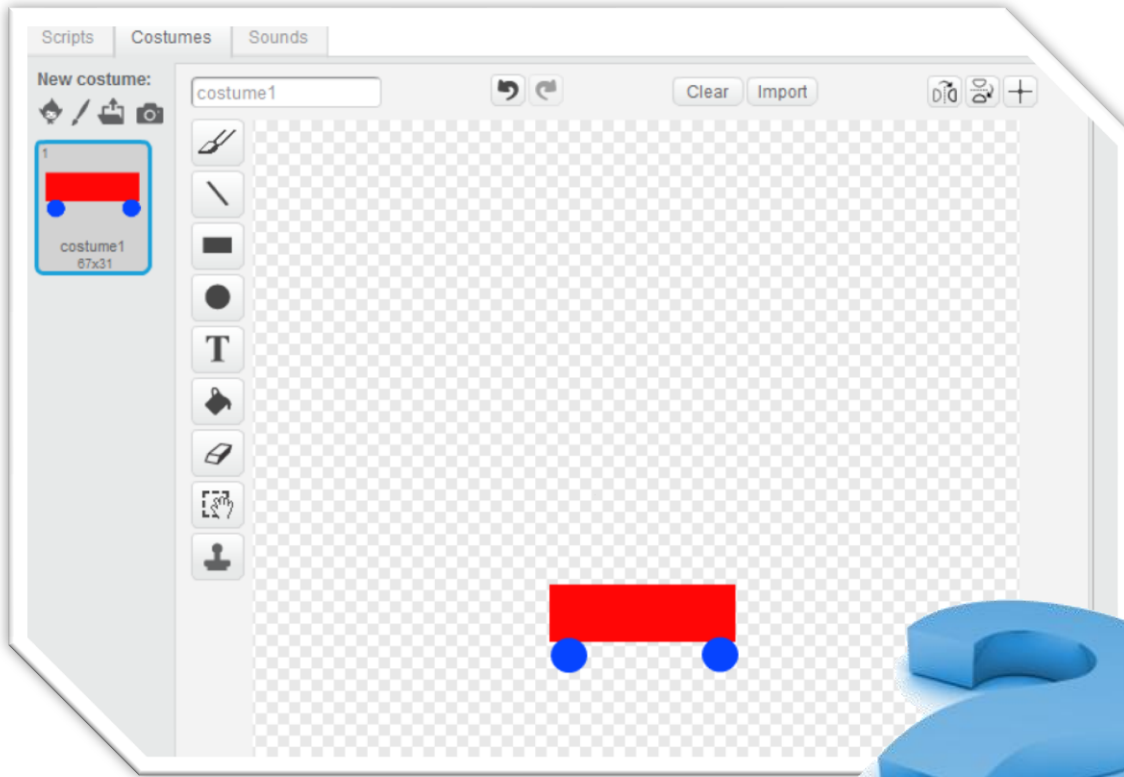
Add an **End Line** and a **Lives** variable;  
Lose a live when ball hits line

Make a **Brick** sprite, write its code;  
Test it works then **duplicate** it

*Your game will  
have slightly  
different steps.*

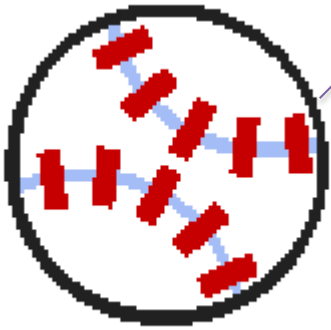
*Get one part  
working before  
moving on!*

# Design the **Bat Sprite** & Code So You Control it



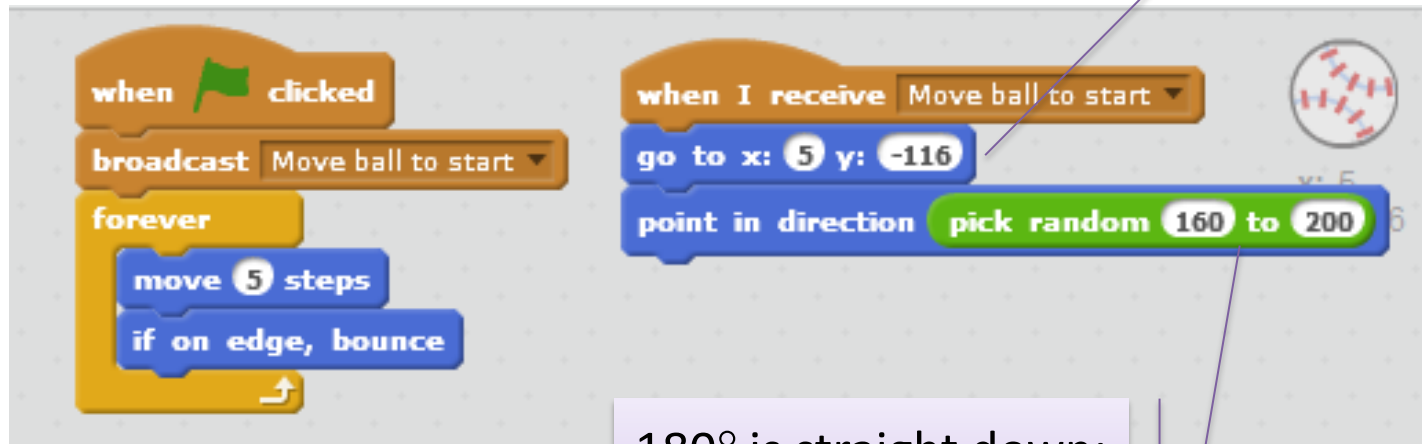
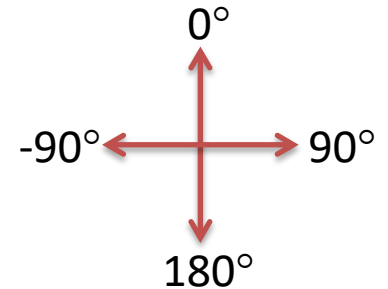
How would you  
control it with  
arrows instead?

# Make the Ball Sprite & Basic Code to Move it



I used a standard image

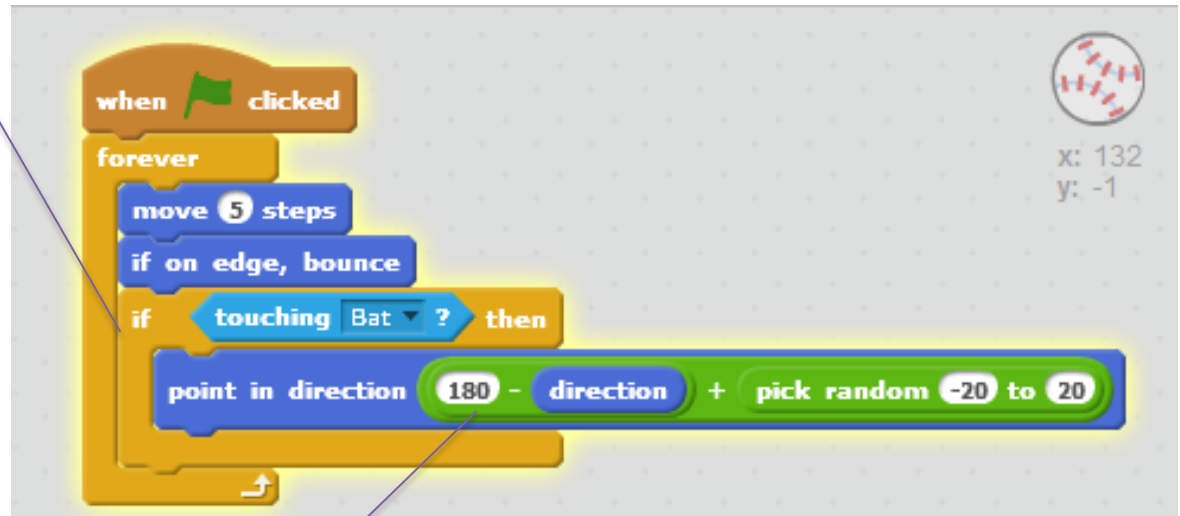
Will use this to reset position after losing a life



180° is straight down:  
pick direction in  
range 180  $\pm$ 20

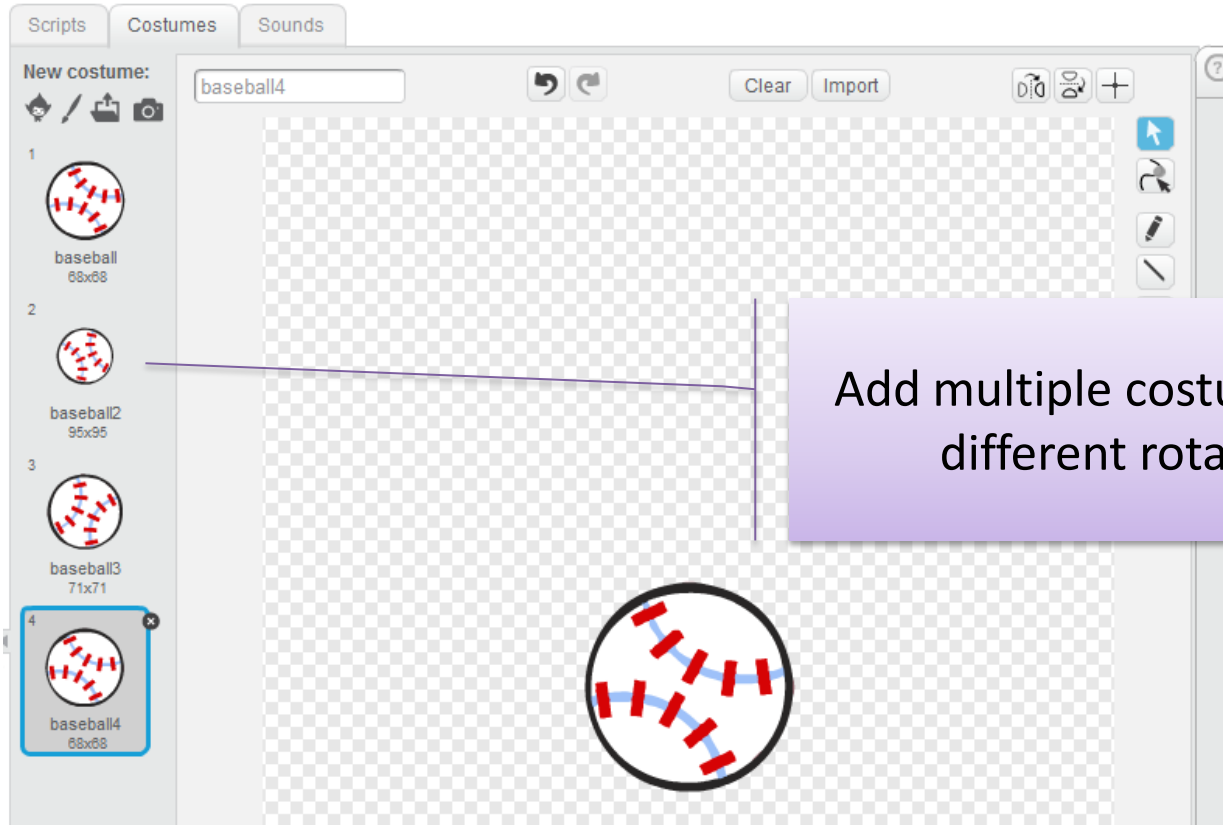
# Code for the Ball Sprite to Bounce off the Bat

New block of code to bounce off bat



180° – Direction is opposite direction; add some randomness

# Animate the Ball



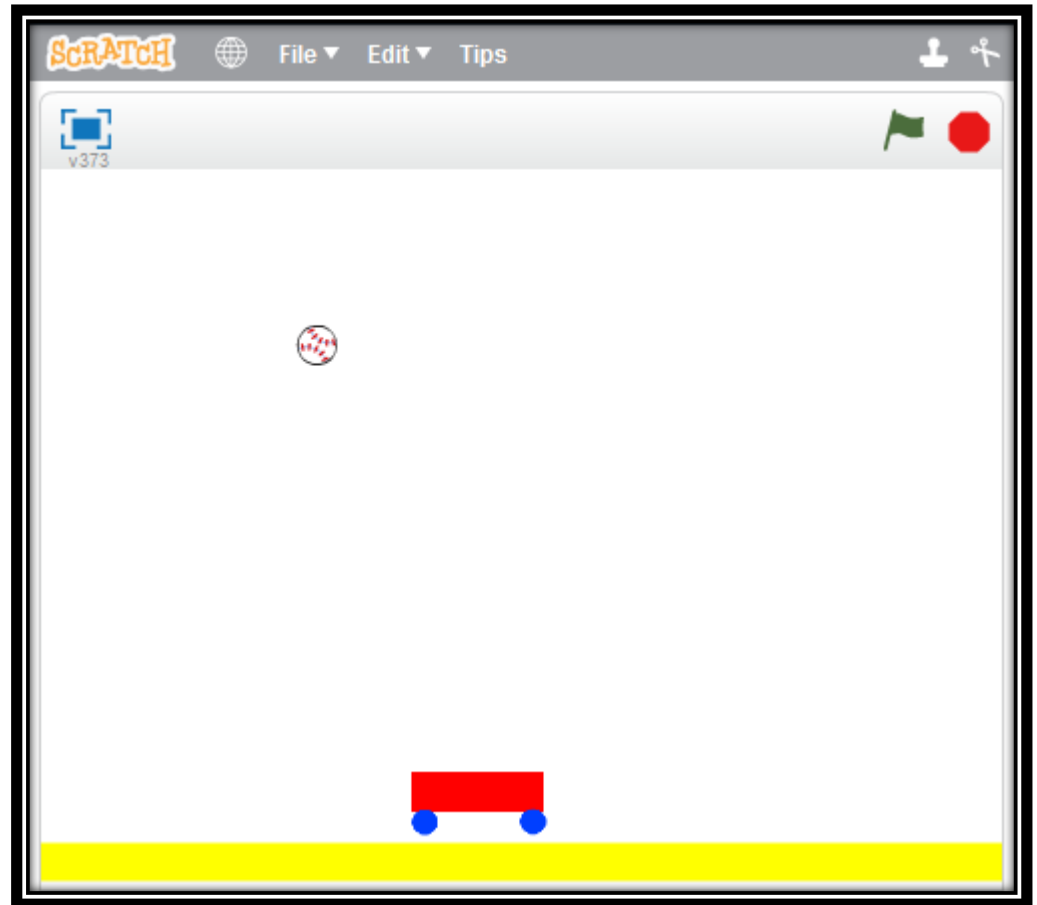
Add multiple costumes with different rotations

Keep switching  
between costumes:  
how can you do this?



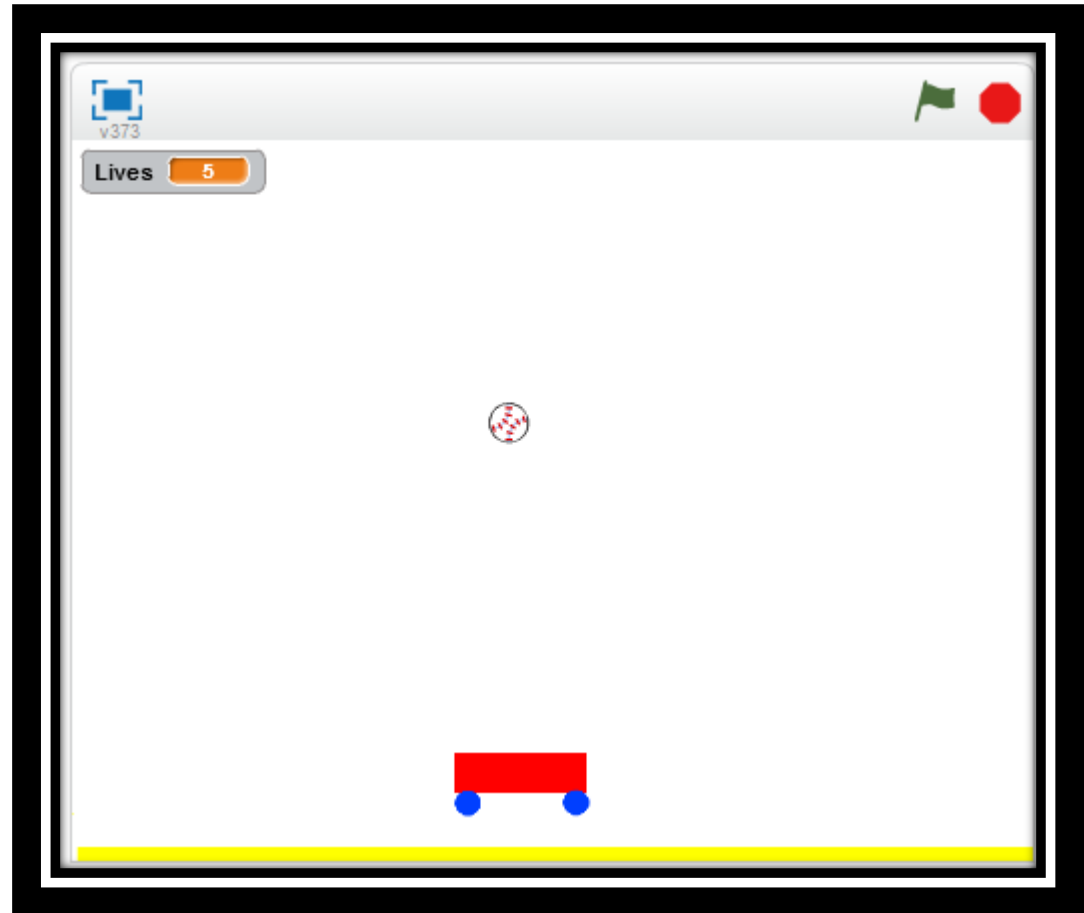
# Add an End Line

End Line:  
Add Sprite  
Or  
Draw on Stage



# Keep Track of Lives

- Variables for Lives
  - Start with Lives = 5
  - Stop if Live = 0
- Reduce Lives by 1
- If Ball touches End Line
- Reset position of ball

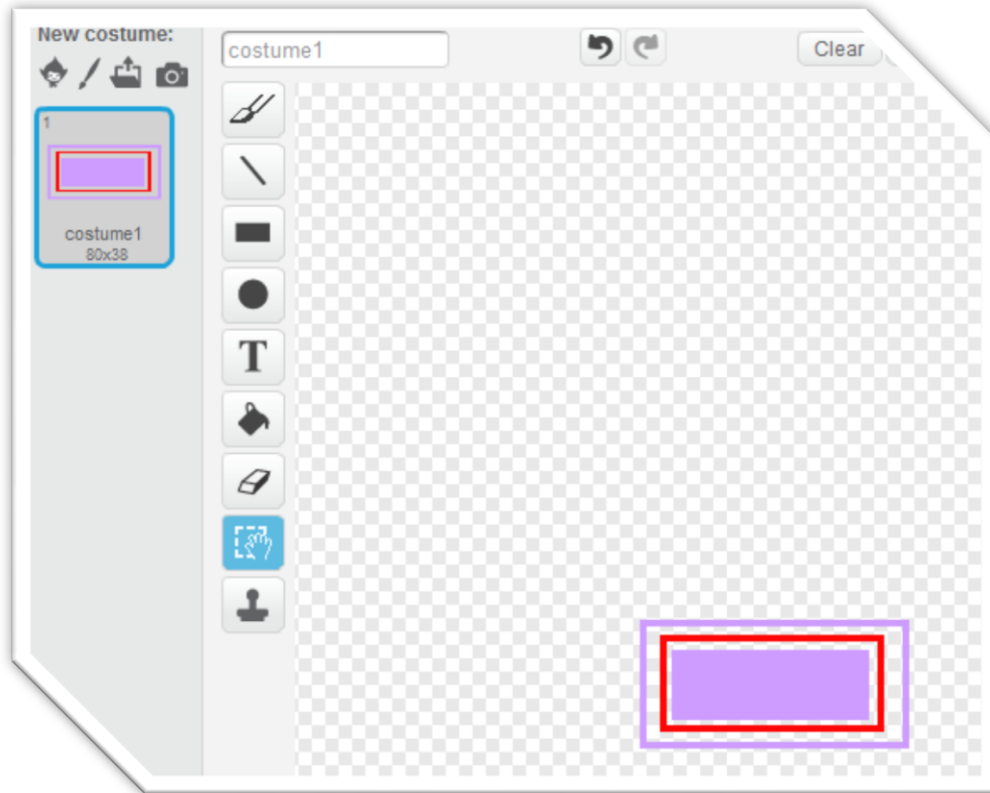


# Add a Music Loop





# Design & Code a **Single Brick**

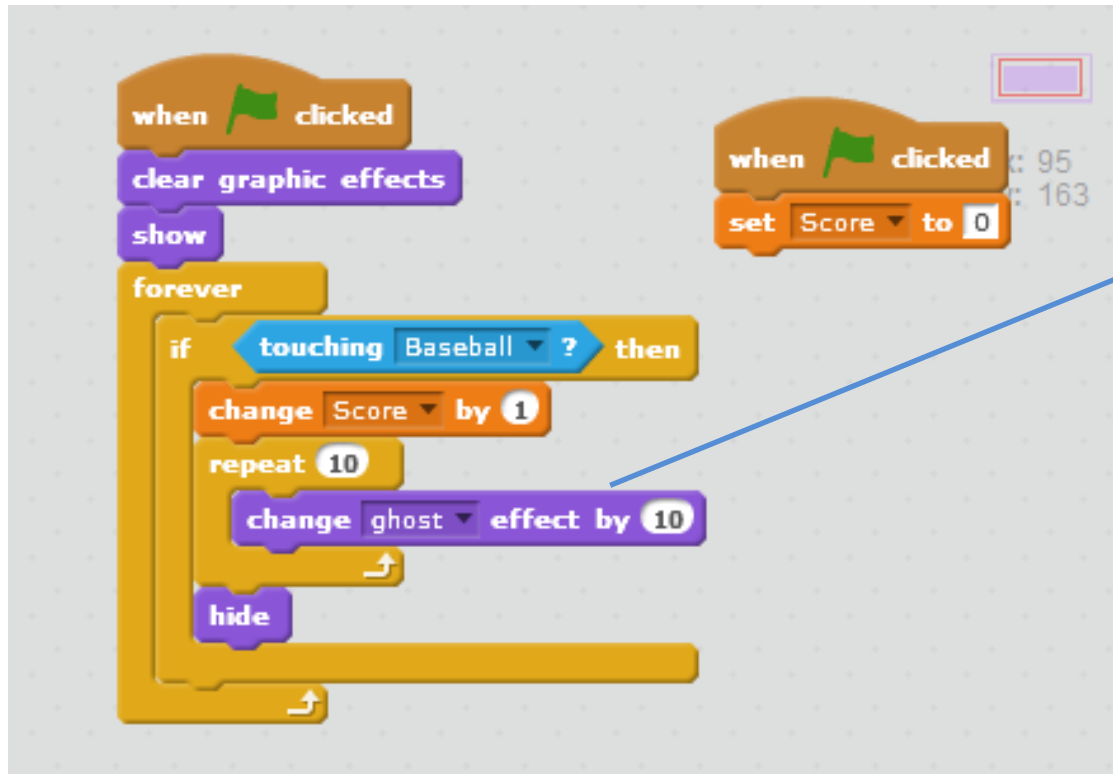


Need a variable for Score

Need code for **Ball** when it receives broadcast:

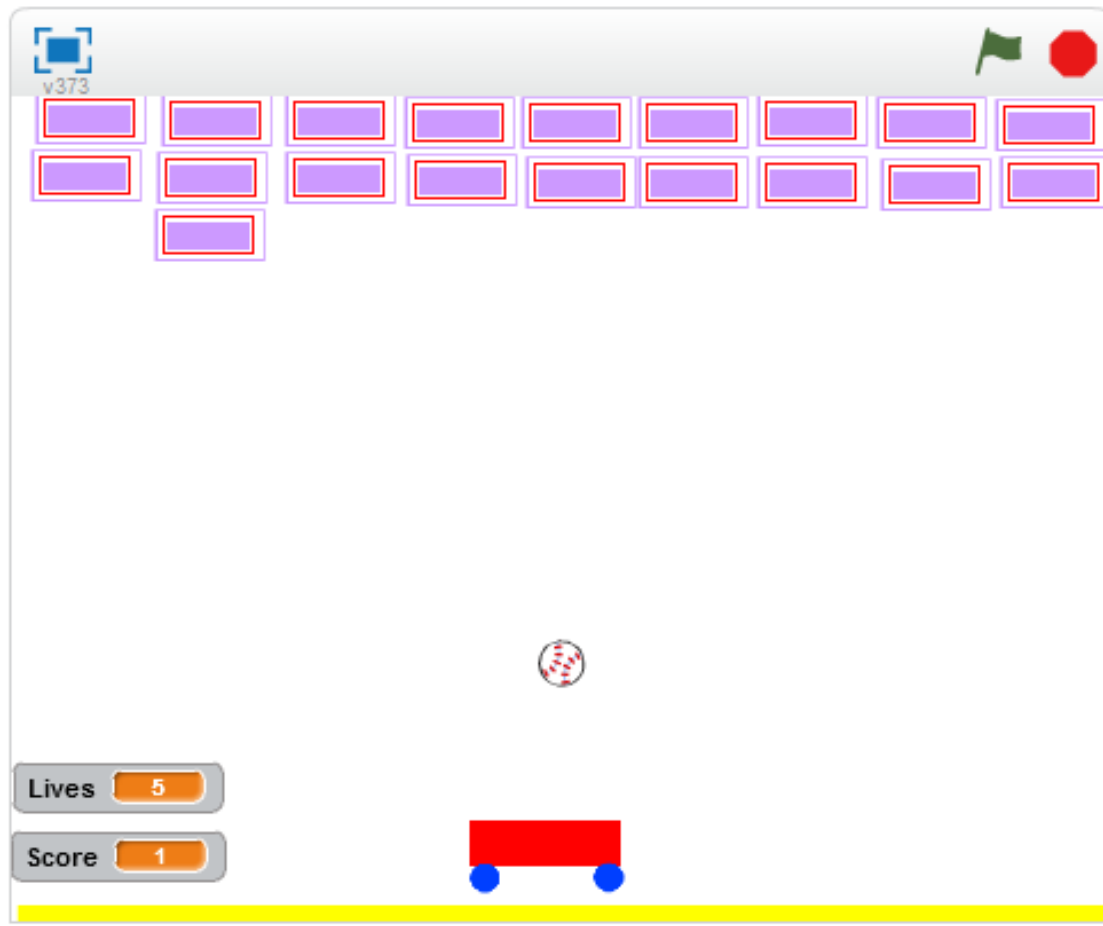
Make a sound effect,  
Bounce off brick (copy code for bouncing off bat)

# Design & Code a **Single Brick**



Make it fade slowly

# Test the **Single Brick** & **Duplicate** it When You're Sure it Works



# At the End ...

Upload your project to the Scratch Website

user: [cdathenry1718](#)

password: [athenry1718](#)

Access it  
from home



Improve it



Show your  
friends!



# Uploading to Scratch Website

