

Halloween Prize

Spooky Skeletons and Candy!

(Lesson created by Nate)

Today's Game

Goal: Build a Halloween themed game using what we've learned in Coding Club. This includes physics, 8-direction, events, and shooting.

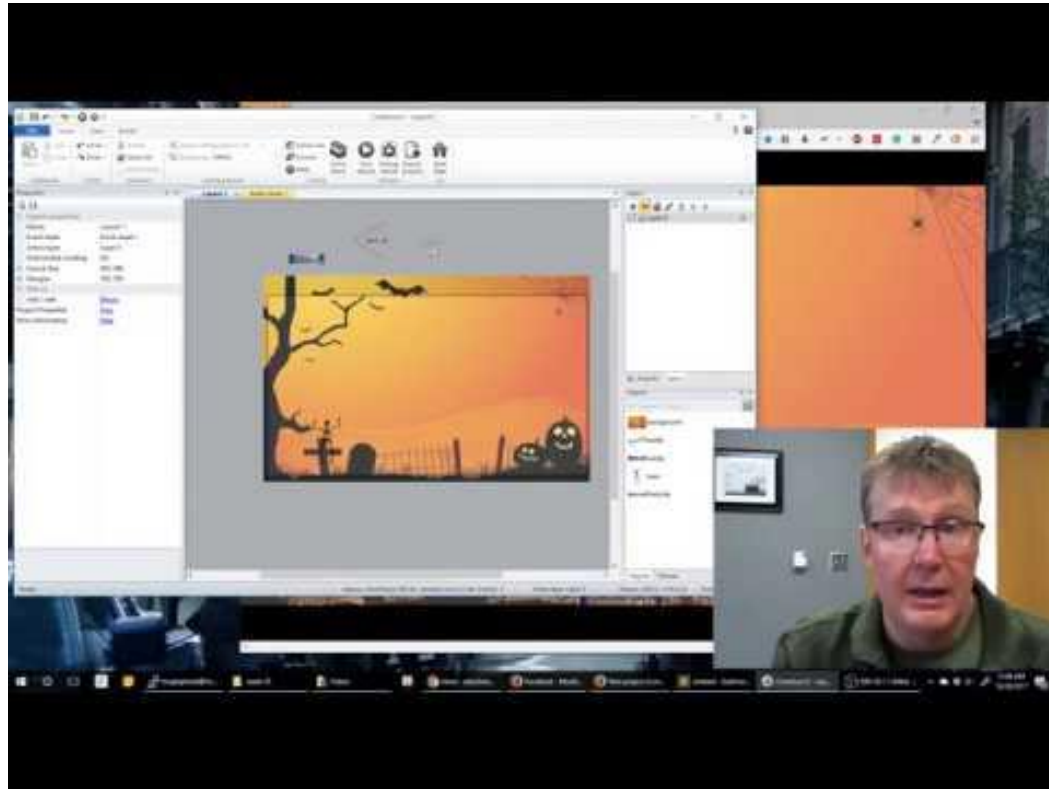
Game Features:

- Candy drops with physics
- Skeleton moves with 8-direction
- Shooting & explosions

Play Nate's Game

[click](#)

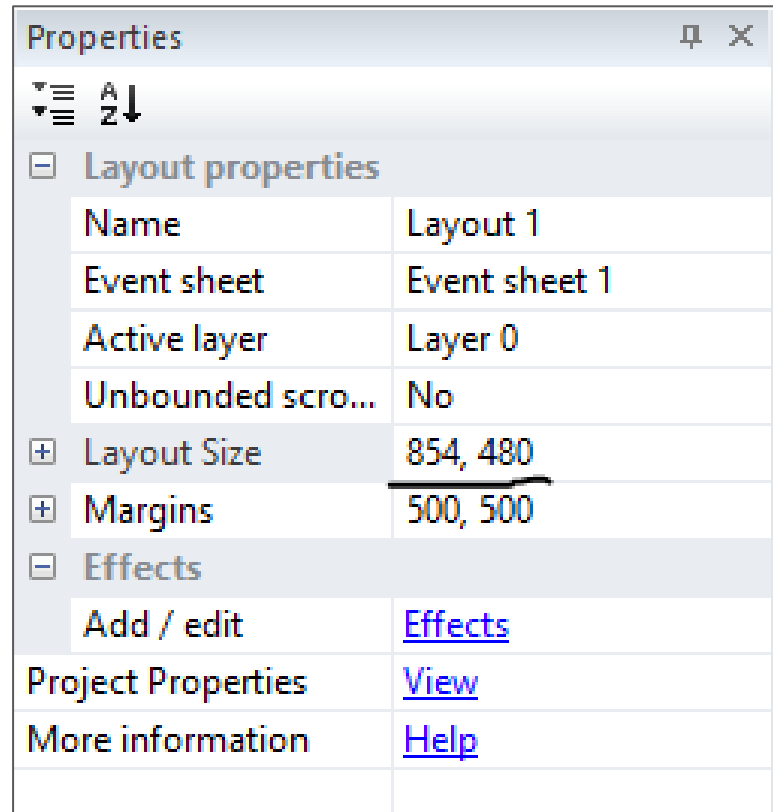
There's even a video!



<https://youtu.be/4NfsH1Rxgcg>

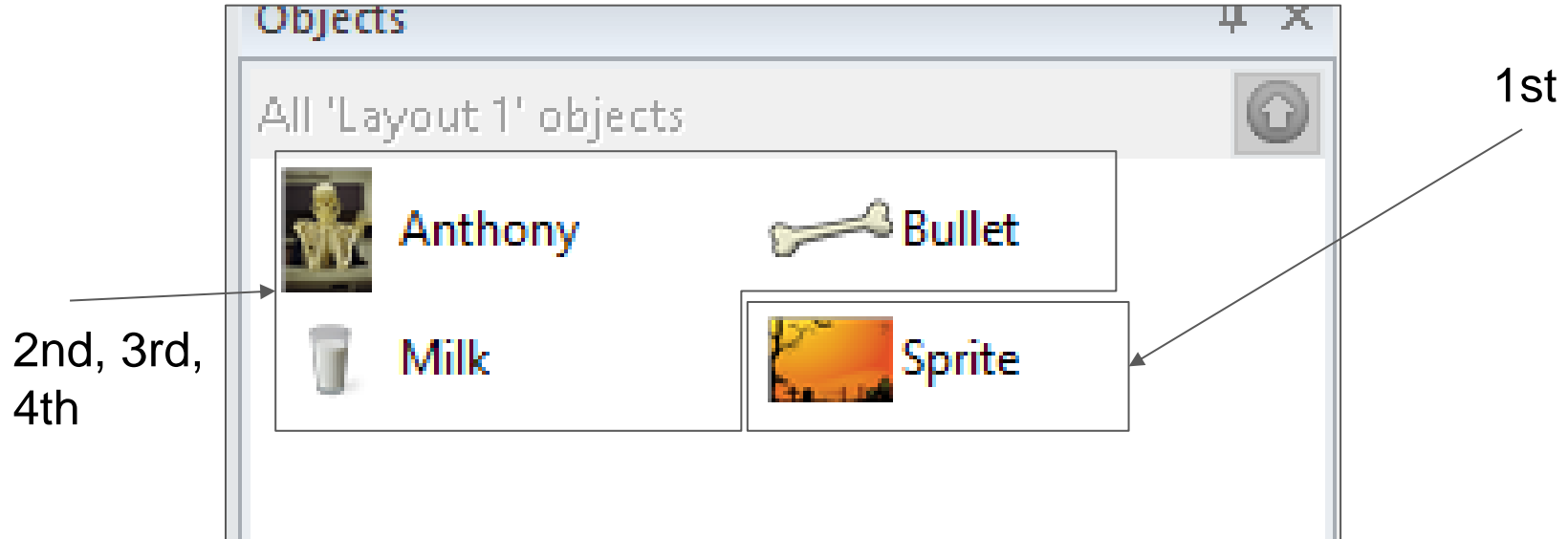
New Project & Layout Size

- Click on Layout
- Set Layout Size:
 - 854, 480



Insert & Name Objects

- Create a background sprite and place that first
- Add a skeleton, bullet, and reward Sprite.



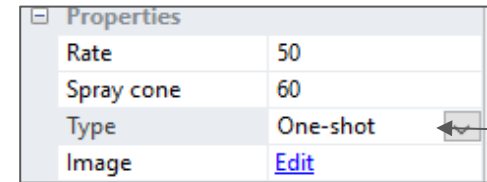
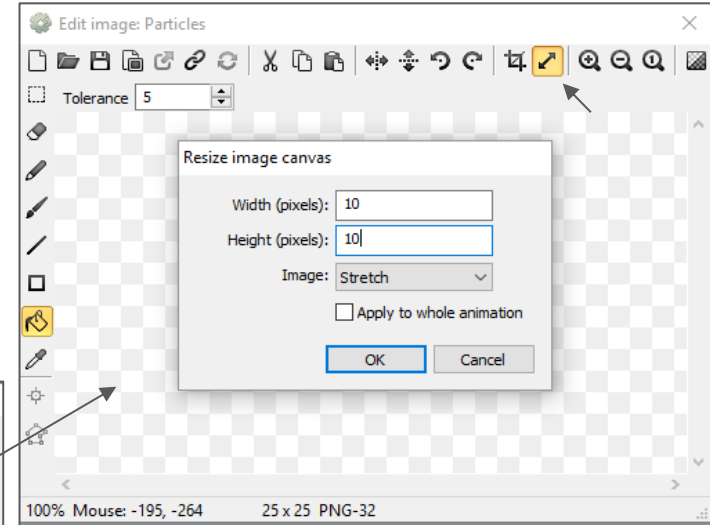
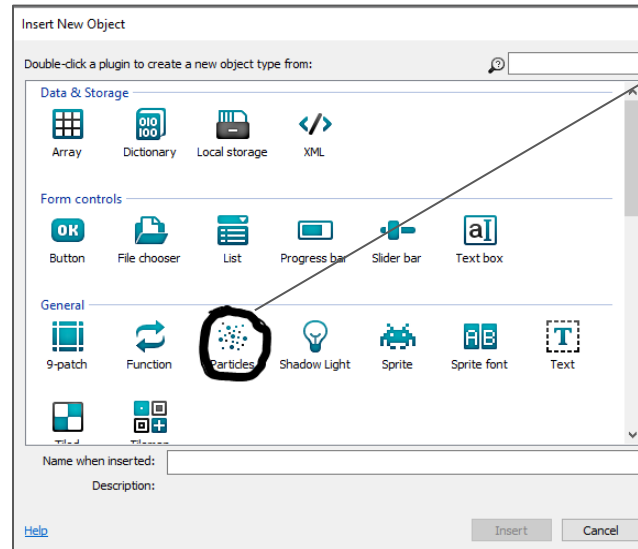
Size Background

- Stretch your background so it fits inside the white space.



Add Particles (Explosion)

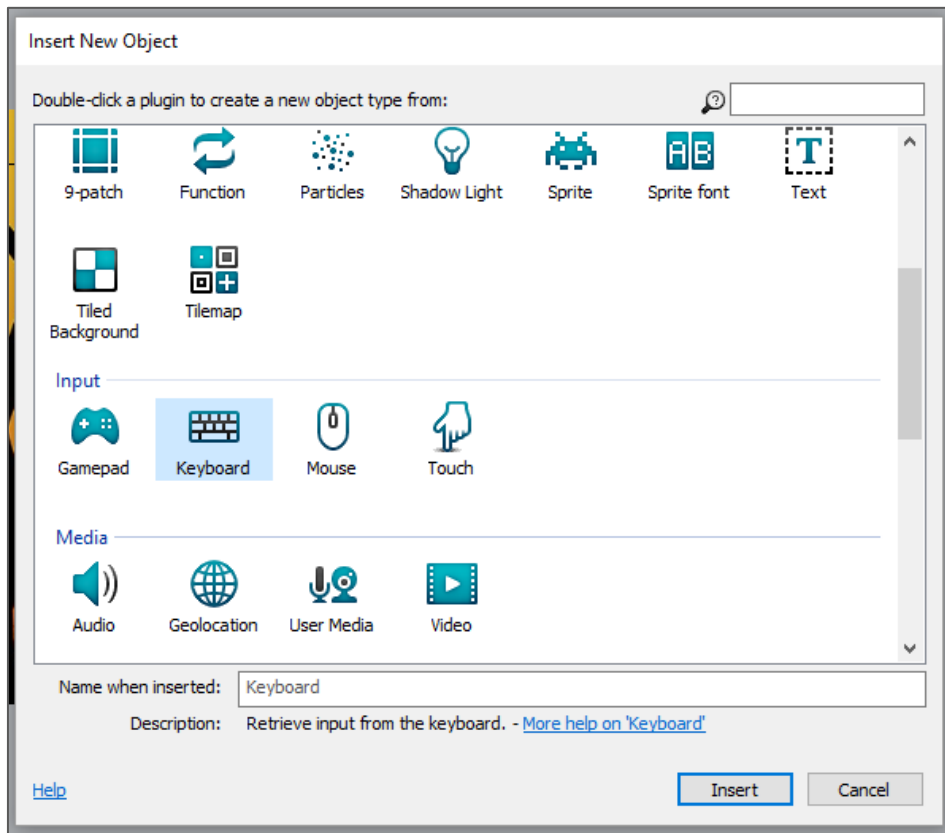
- Create particles and give it a nice colour.
- Resize the image canvas
 - 10 width and 10 height
- Remember to make it **“One-Shot”**!
- Place outside layout



Add Keyboard

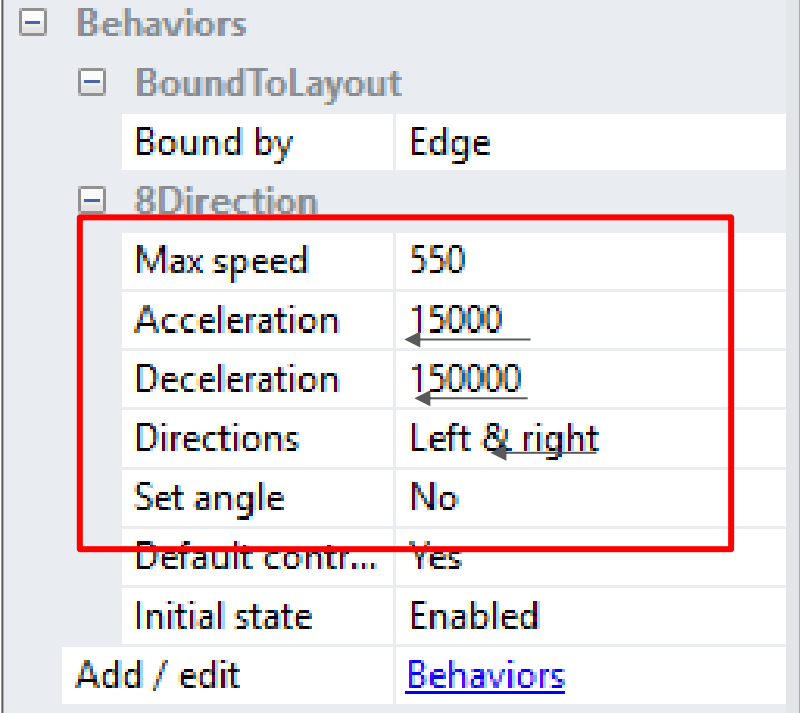
- Add keyboard input for later

hint: “Insert New Object”



Skeleton Behaviors & Properties

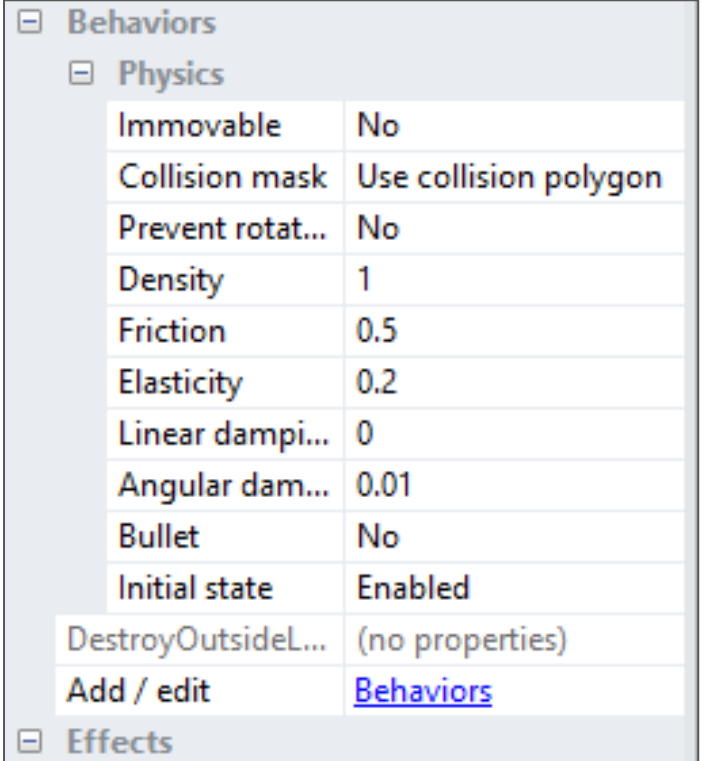
- Behaviors:
 - 8Direction & BoundToLayout
- 8Direction Properties
 - Acceleration: 15000
 - Deceleration: 15000
 - Max speed: 550
 - Directions: Left & Right
 - Set Angle: No



[-] Behaviors	
[-] BoundToLayout	
Bound by	Edge
[-] 8Direction	
Max speed	550
Acceleration	<u>15000</u>
Deceleration	<u>150000</u>
Directions	<u>Left & right</u>
Set angle	No
Default contr...	Yes
Initial state	Enabled
Add / edit	Behaviors

Candy Behaviors & Properties

- Behaviours
 - **Physics** and **DestroyOutsideLayout**
- Do not change anything else!
 - *(unless you want to)*



The screenshot shows the Unity Inspector for a Candy object. The 'Behaviors' component is expanded, showing the 'Physics' sub-component. The 'DestroyOutsideLayout' component is also visible below the Physics component. The 'Effects' component is partially visible at the bottom.

Behaviors	
Physics	
Immovable	No
Collision mask	Use collision polygon
Prevent rotat...	No
Density	1
Friction	0.5
Elasticity	0.2
Linear dampi...	0
Angular dam...	0.01
Bullet	No
Initial state	Enabled
DestroyOutsideL...	(no properties)
Add / edit	Behaviors
Effects	

Check Layout

- Place your skeleton near the bottom
- Place particles, bullet, and candy outside layout
 - *(In grey area)*




The Events

Automatically Spawn Candy!

- Event: “System”, “Every X seconds”
- Action: “System”, “Create Object”
 - “X”: random(50,800)
 - “Y”: 10

Parameters for System: Create object

Choose the object type of the new instance to create.




Object to create  Milk

Layer

X

Y

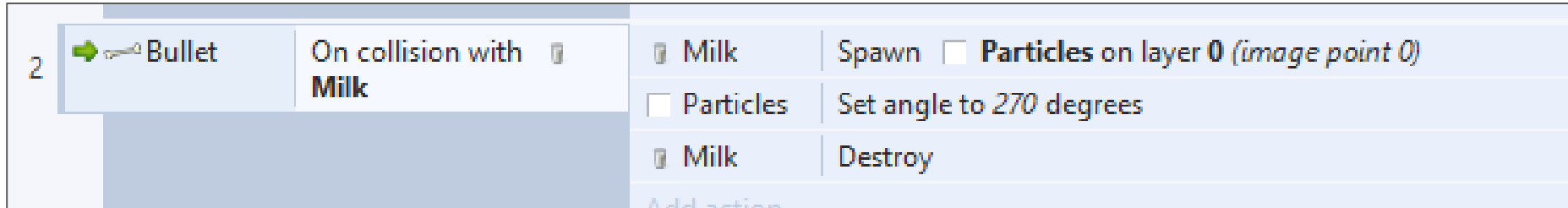
[Help on expressions](#)

1  System | Every 1.5 seconds  System | Create object  Milk on layer 0 at (random(50,800), 10)

Add action

Make Candy Explode!

- Event:
 - **Bullet**, **On collision with**, **Milk** (or candy)
- Actions:
 - **Spawn** explosion
 - **Set explosion** angle (270)
 - **Destroy** Milk (or candy)



Throwing Bones (Shooting!)

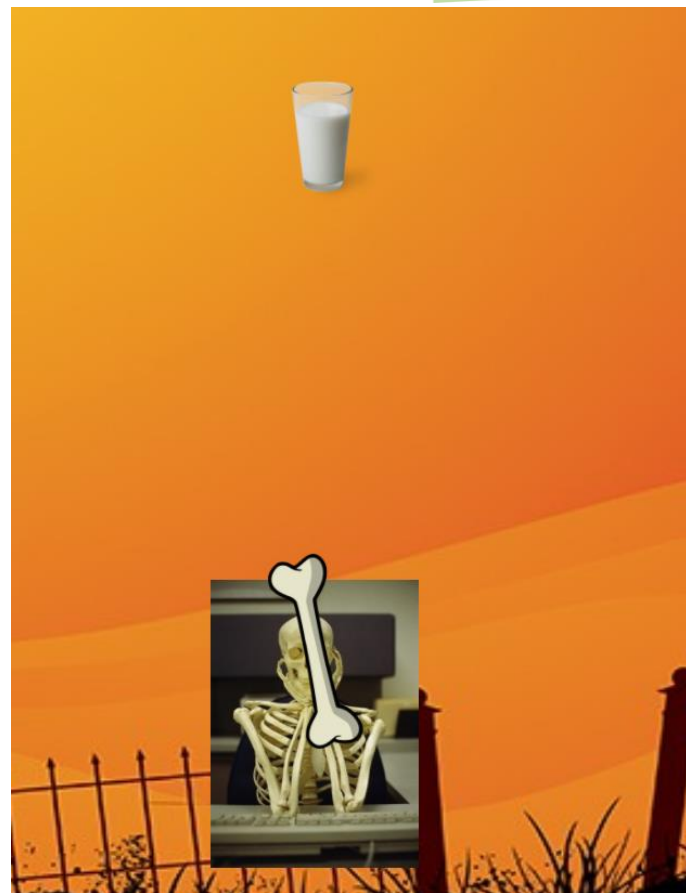
- Event:
 - “Keyboard”, “On Key Pressed”
- Action:
 - “Skeleton”, “Spawn another object” (bullet)
 - “Bullet”, “Set angle of motion”, “270” degrees

The screenshot shows a game engine's event and action system interface. On the left, a blue bar contains the number '3' and a keyboard icon. The main area is divided into two columns: 'Event' and 'Action'. The 'Event' column contains 'Keyboard' and 'On Space pressed'. The 'Action' column contains two actions: 'Spawn Bullet on layer 0 (image point 0)' and 'Set Bullet angle of motion to 270 degrees'. The 'Bullet' object is selected for the second action. The interface is light blue with white text and icons.

Event	Action
Keyboard On Space pressed	Spawn Bullet on layer 0 (<i>image point 0</i>)
	Set Bullet angle of motion to 270 degrees

Test Your Game

- Run a preview of your game to see if it runs A-okay!



Additional Challenges & Next Week

- Add obstacles for the candy to bounce off
- Add multiple candies
- Add a bomb that drops

