Note for instructor

- This is the third lesson of the three-lesson workshop. The third lesson will move onto more advanced concepts such as sensing, broadcasting, layers, and variables. In the third lesson, we are going to create a Halloween-themed game.
Intro to

Lesson 3
Sensing & Broadcasting

John Flynn
John Pearsall
Mike Pettiglio
Yiming Wu
Class Objectives

- Have Fun!
- Use variable to store values
- Use broadcast to communicate among sprites
- Create your own sprite
- Learn more on sensing blocks
- Incorporate sound effects
- Understand layer concept
Preparation - Background

- Click on Stage button
- Switch to backgrounds tab and import background woods
- Import > Nature > Wood
Preparations – Add sprite

- Click ![sprite](image) to import ghost2-b
  - fantasy > ghost2-b
  - Name the sprite “hungry ghost”
- Click on **Costumes to edit the sprite**
- Click **Copy to add new costume**
- Name the costumes “Open” and “Closed” respectively
Preparation - Edit sprite

- Make the ghost “Close” its mouth
- Click **Edit** on the “Closed” costume
- Use **Eraser** to erase its mouth
- Use **Line tool** to draw a line
- Click **OK** to complete editing
Preparation – Create Sprite

- Use Paint Editor to draw candies
- Click on 
- Use Paintbrush, Line tool, rectangle/ellipse tool to draw
- Repeat previous steps
Movement of the ghost

- Use this condition to activate the movement:
  - distance to mouse-pointer > 10

- Use point towards mouse-pointer and move 3 steps to move the ghost towards the mouse pointer:
Movement of the candy

- Use the following script to move the candy randomly

- simulate the floating motion
Sensing and Broadcasting

- Use 🟢 to detect collision between ghost and candy
- Use the broadcast got-me and when receive got-me to build a "communication path" between sprites
Sensing and Broadcasting

- Add the following script to the `forever` block of the candy sprite:

```
if color 1 is touching ?
  broadcast got-me
  hide
  wait 3 secs
  go to x: -200 y: pick random -200 to 200
  show
```

- Add the following script to the ghost sprite:

```
when I receive got-me
  repeat 2
    switch to costume Closed
    wait 0.3 secs
    switch to costume Open
```
Sound effects

- Click to import follow-mouse fish
  - Animals > follow-mouse f…
- Click on the **Sounds tab**
  - Drag the “chomp” sound to the ghost sprite
- Delete the fish sprite
- Add `play sound chomp` to the ghost sprite
Scoring

- Use a variable to store the number of candies ate by the ghost
- Click on the variable blocks
  - Make a variable
  - Name it “Score”

- Add **change Score by 1** and **set Score to 0** to the ghost sprite
Layers

Move sprite back or forth a layer so that it can be hidden behind other sprites

- Add **go to front** to the candy Sprite
Challenge

- Import a random sprite by clicking
- Use the following blocks to produce the surprise script