



CoderDojo Athenry



Code and notes by Martha Fahy, 2016

CoderDojo Athenry

"Above all, be cool"



Every week:

- ✓ Sign in at the door

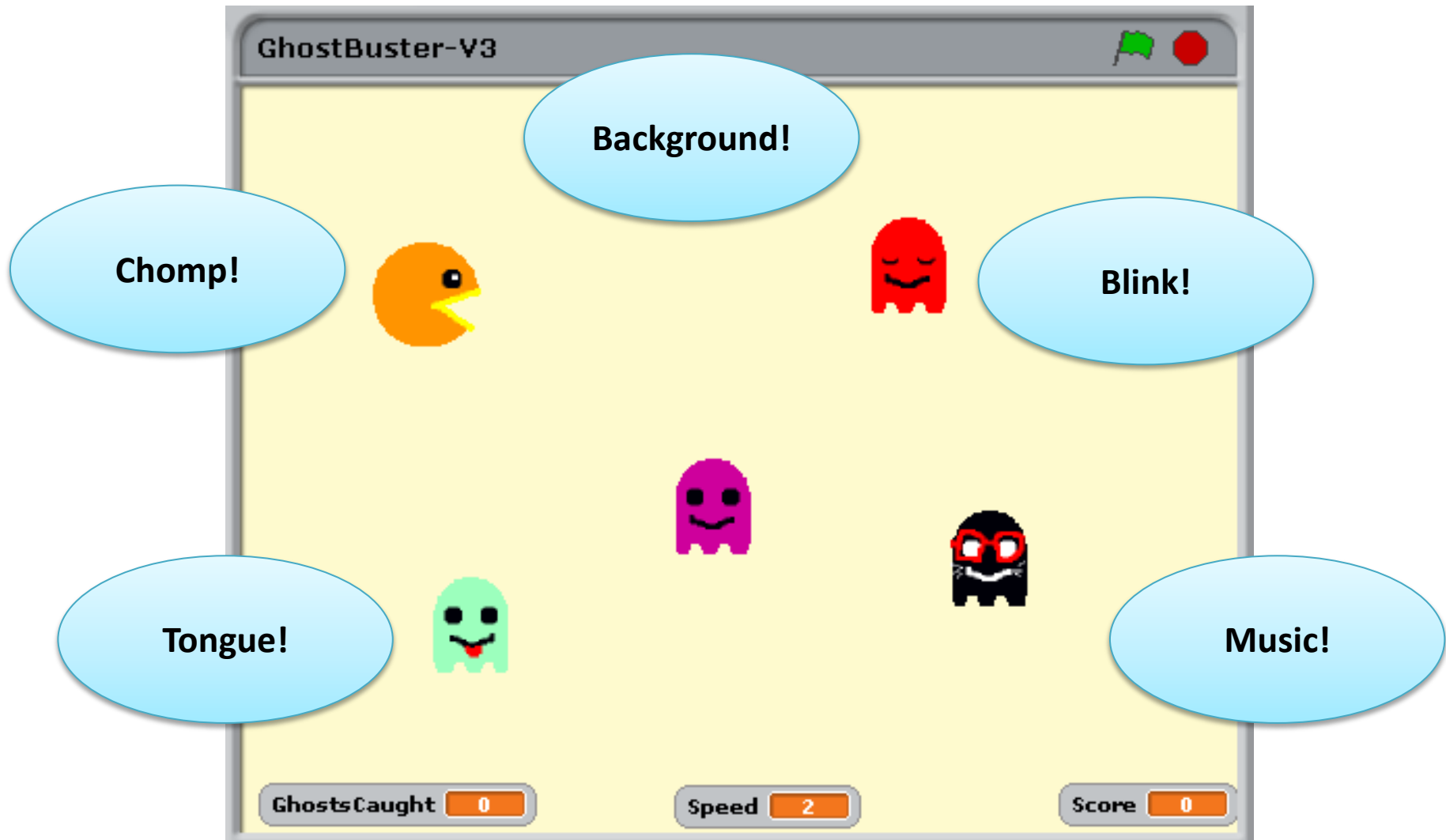
If you are new:

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

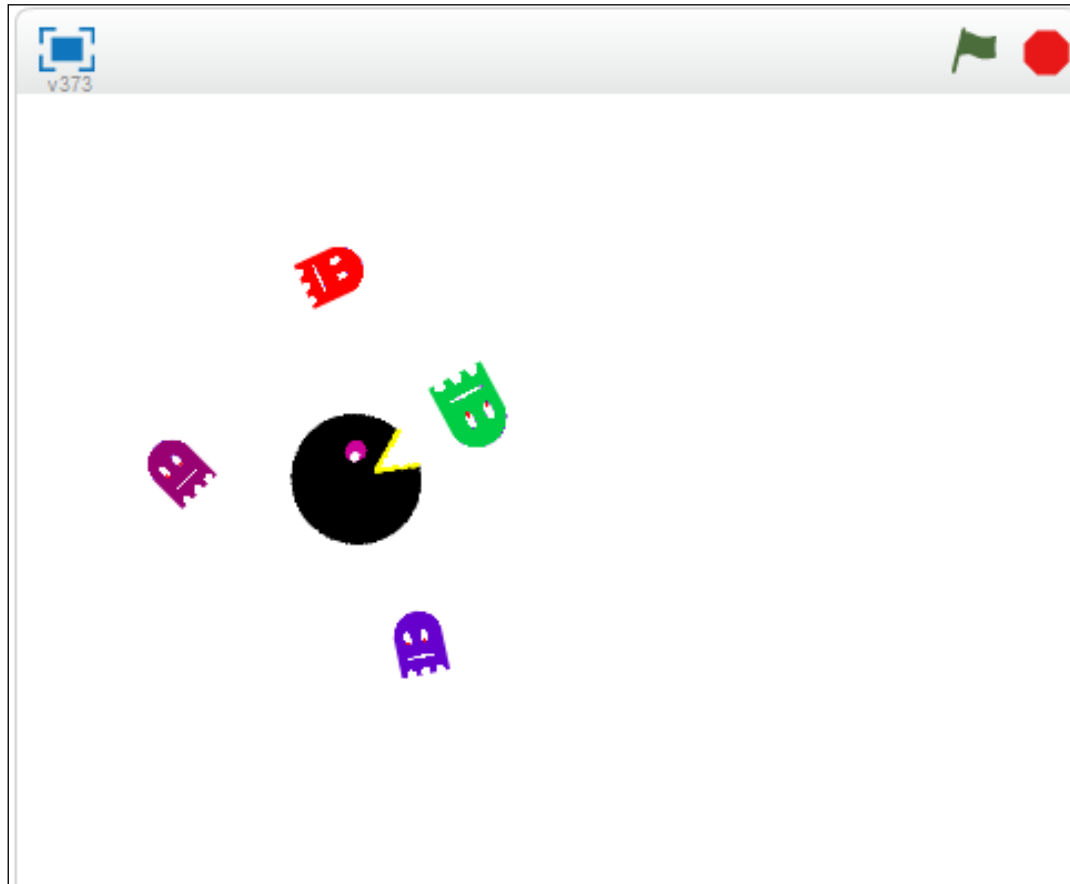
**Make sure you are on the Athenry
Parents/Kids Google Group:** email
coderdojoathenry@gmail.com

Today's Ninja Challenge:

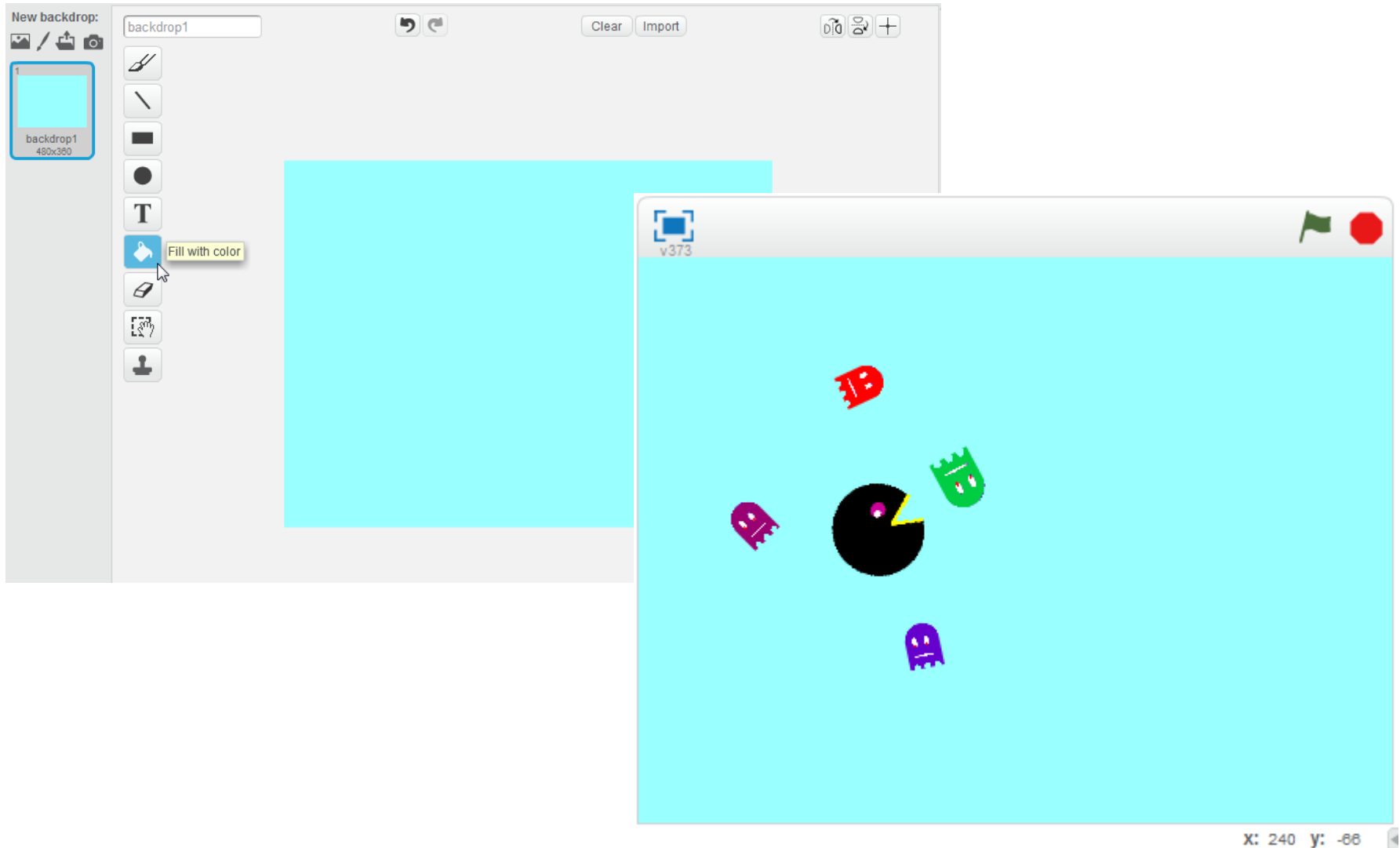
Make Better GhostBuster Game



Duplicate Ghost, Make Each One Look Different



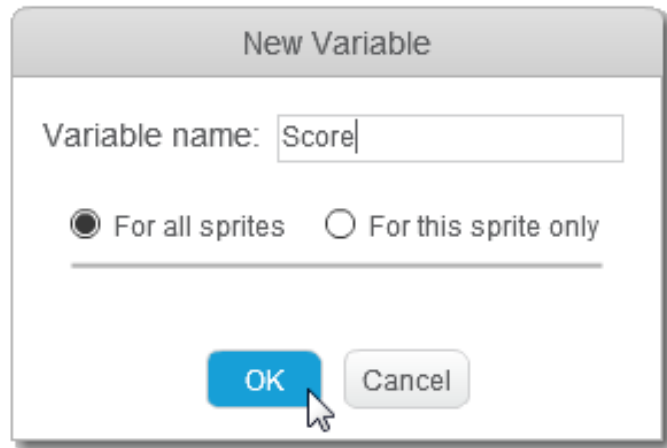
Add a Colour Background,



Variables

To keep score, need a **Variable**:

- A key programming concept
- Stores a **Value** (number/text data):
this can vary
- Has a **Name** – this is fixed:
use this in the code to compare/change values

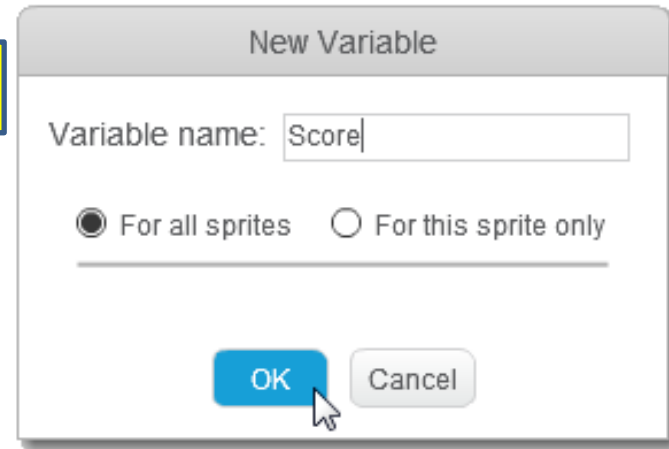


Variable to Keep Score

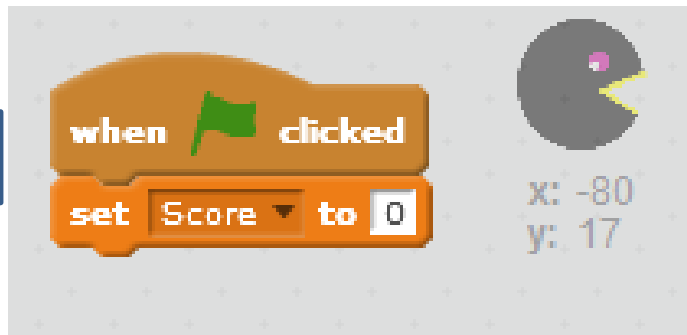
To do:

1. Make variable
2. Set it to 0 at start
3. Add 1 each time a ghost is killed

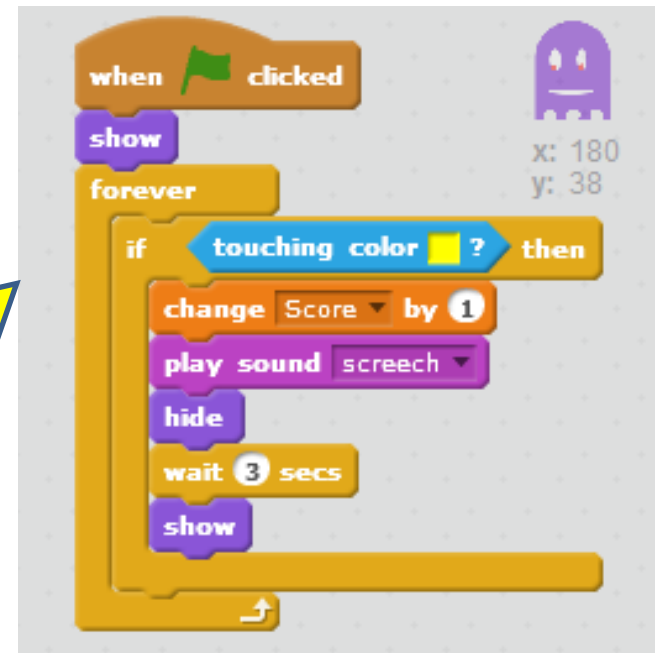
1



2



Add this to
every ghost



If You Want to Do More ...

Add Levels:

When you have caught 6 ghosts,
make the ghosts go faster

You will need:

Variable for **Speed**, initially 2

Variable for **GhostsCaught**

Code: when **GhostsCaught** = 6,
set it back to 0 and increase **Speed** by 2

If You Want to Do More ...

Make a variable **Speed**

Set it to 2 at start

Change ghosts to move at that speed

Make variable **GhostsCaught**

When ghost is caught,

Change by **GhostsCaught** by 1

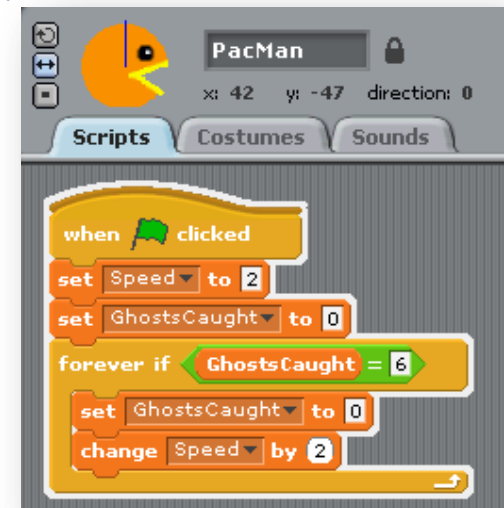
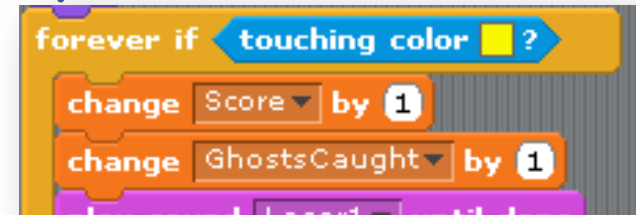
(beside where you change Score by 1)

Add code to PacMan:

Set **GhostsCaught** to 0 at start

If **GhostsCaught** is 6

- Change back to 0
- Increase **Speed** by 2



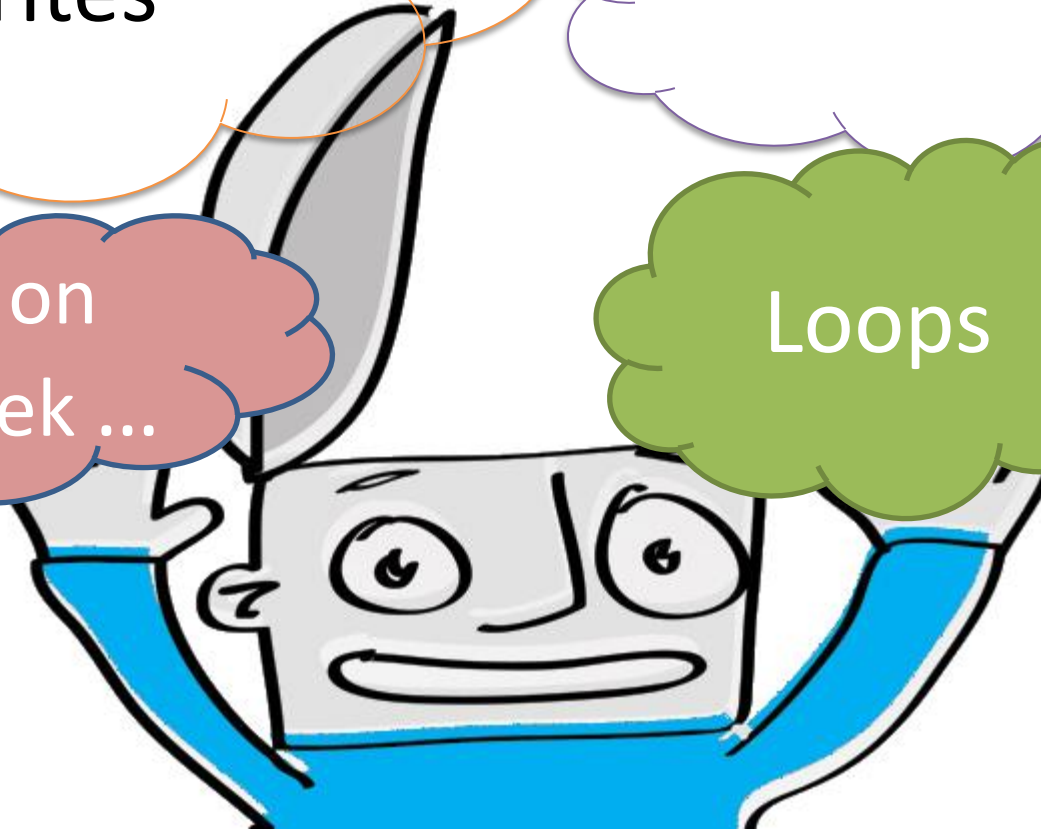
Today's **Big** Ideas

Communicating
Sprites

Animation

Build on
last week ...

Loops



Steps To Make Your Improved Game

Add an **eyes-shut costume** for each ghost,
Code to make it animate between costumes




Select a **music track** for the **Stage**,
Add code to make it play forever



Make ghosts **broadcast a message**
when they're eaten

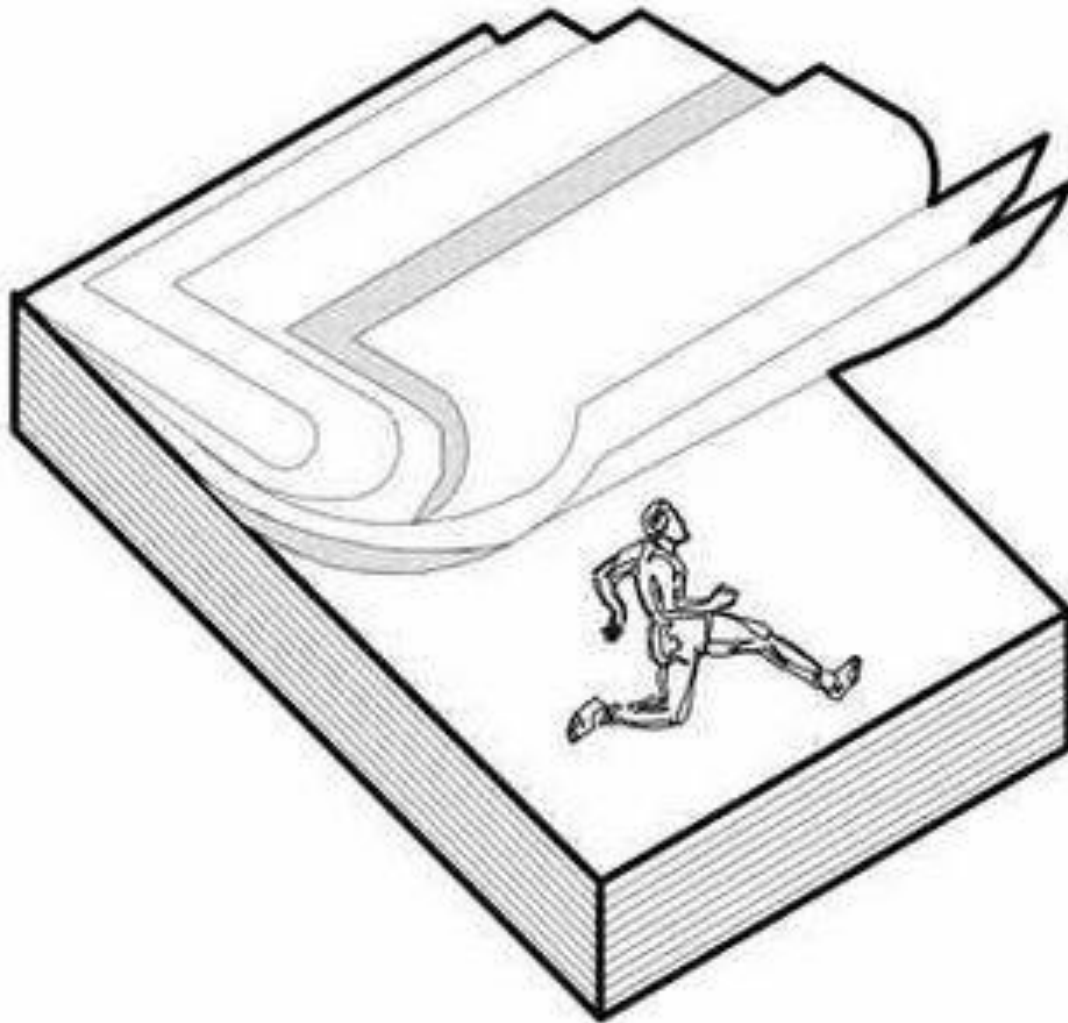


Animate Ghostcatcher to **chomp** when it
receives a broadcast that a Ghost is eaten

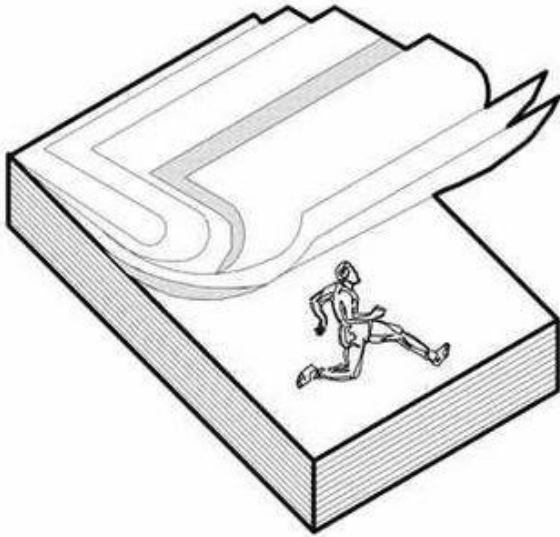


Make Ghostcatcher broadcast each new level,
Make the stage change colour for them

How Animation Works

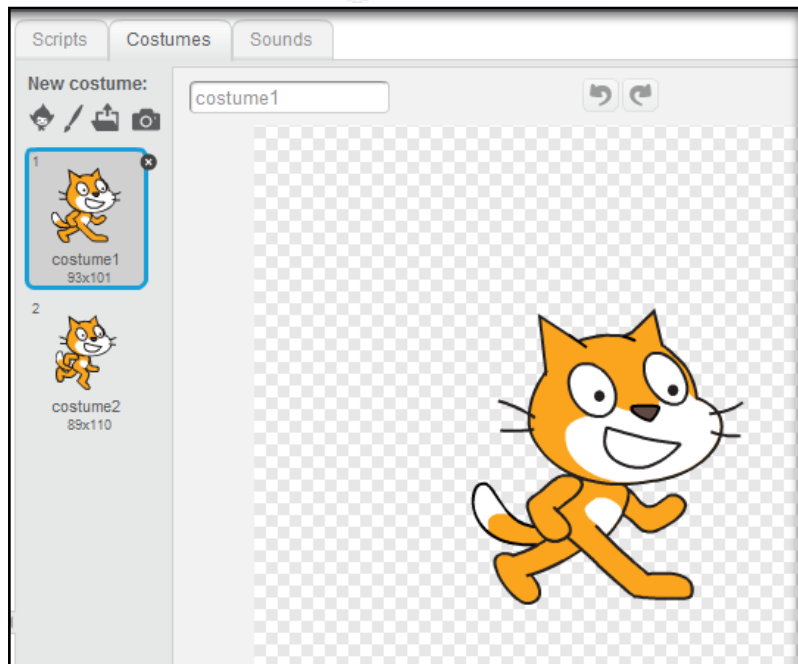


How Animation Works



switch to costume costume1 ▾

next costume

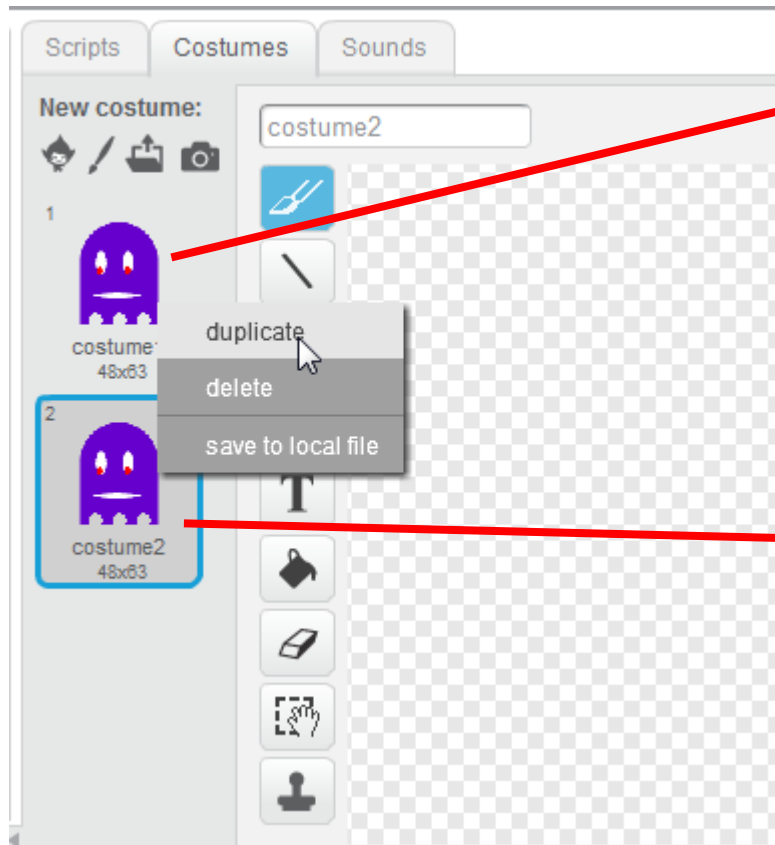


wait 1 secs

forever

repeat 10

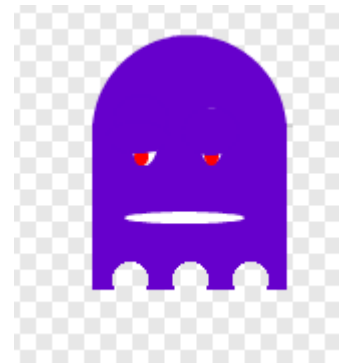
Animate Your Ghosts: Costume



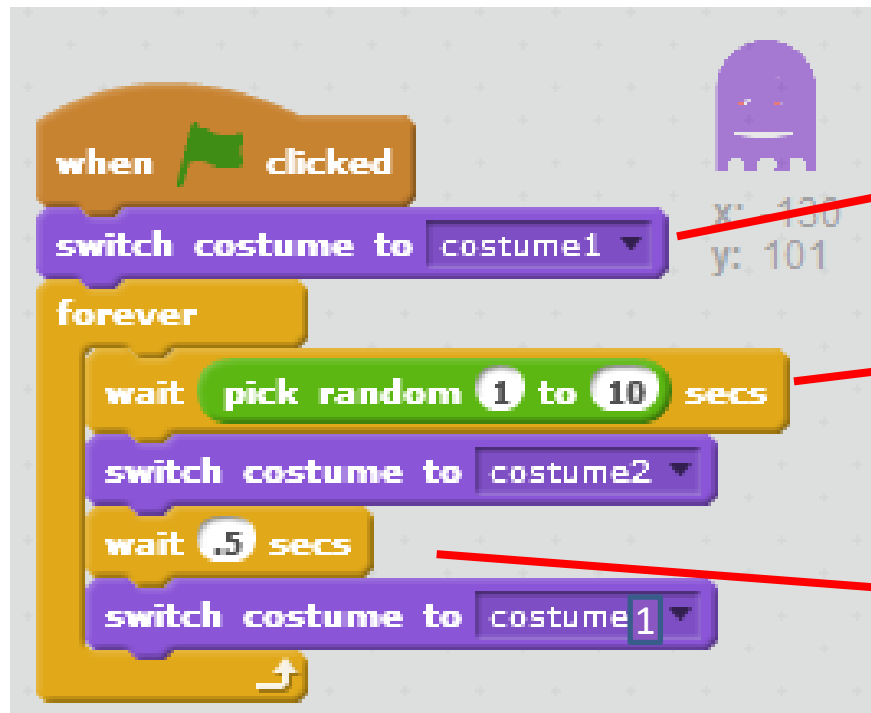
duplicate the
original

Edit the copy

Make
costume2
different



Animate Your Ghosts: Code

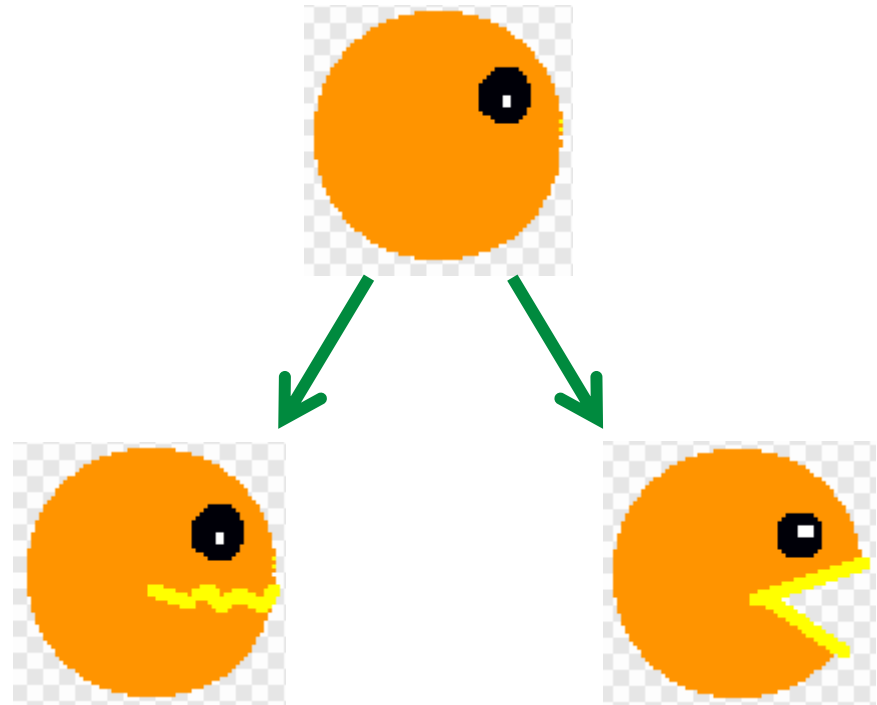
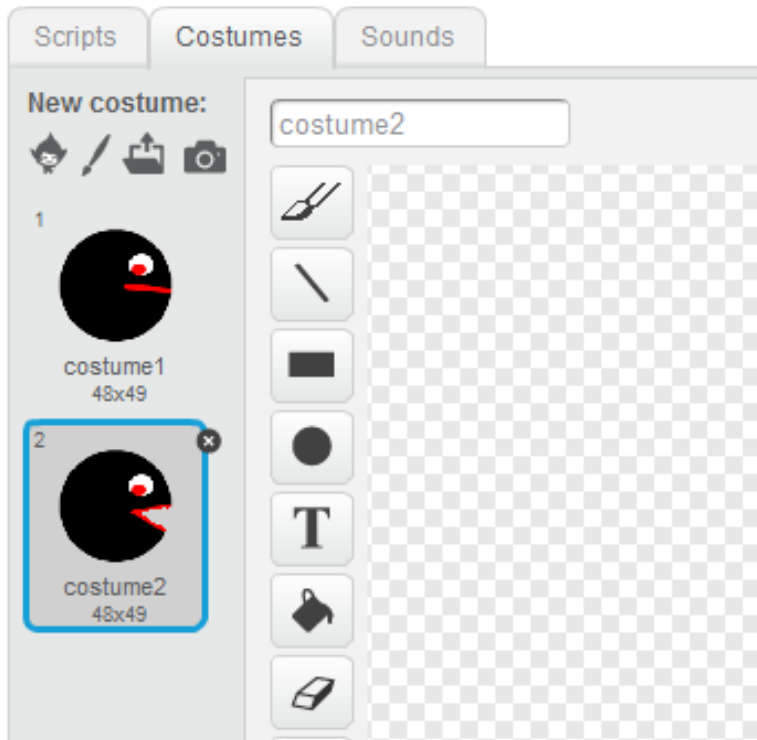


At the start, not blinking

Every now and again...

Close eyes for ½ second,
then open them again

Making PacMan Chomp: Costumes



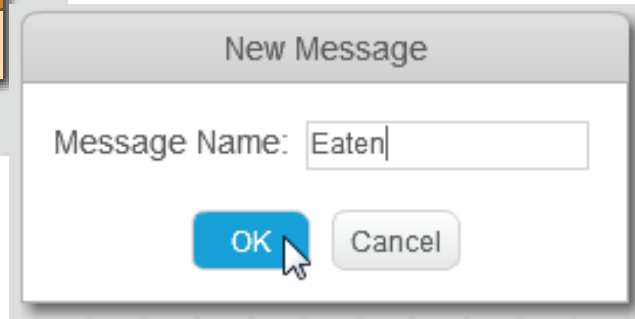
TIP: to make sure only difference is mouth, re-draw with no mouth, copy, then add different mouths in each costume.

Broadcasts:

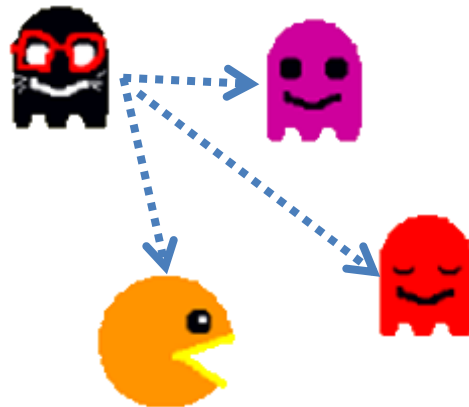
How Sprites Communicate



1: Make new message



2: A sprite broadcasts it



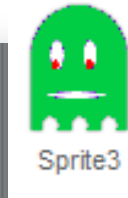
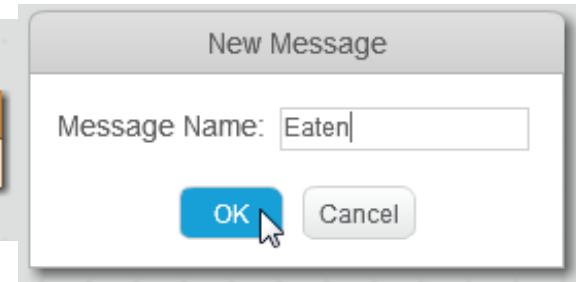
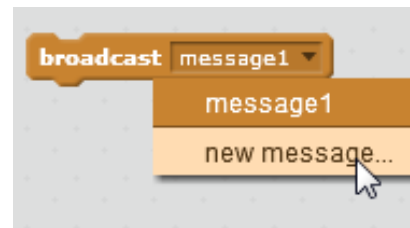
3: Others can react to it



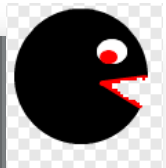
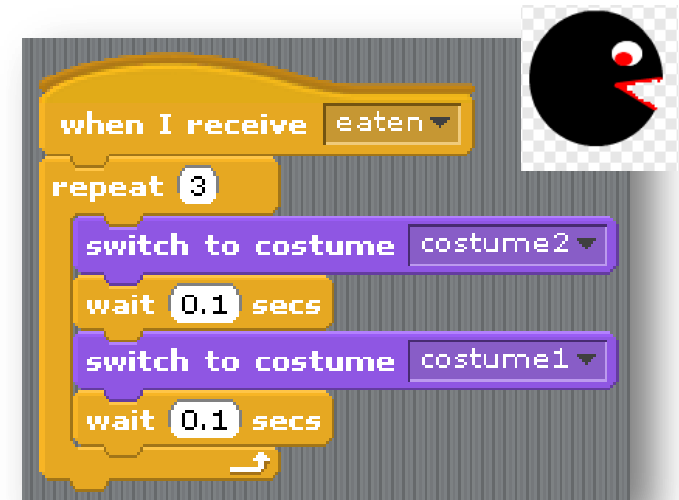
All computer languages have ways of exchanging data/messages between different parts of code

Making Ghostcatcher Chomp: Code

Make new message



All ghosts: Add 1 line

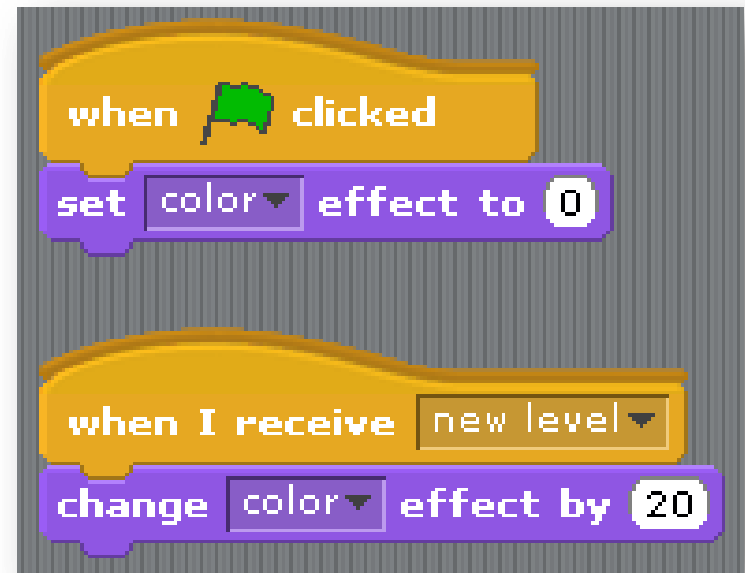


PacMan:
Add block of code

Change Background Colour at Each Level

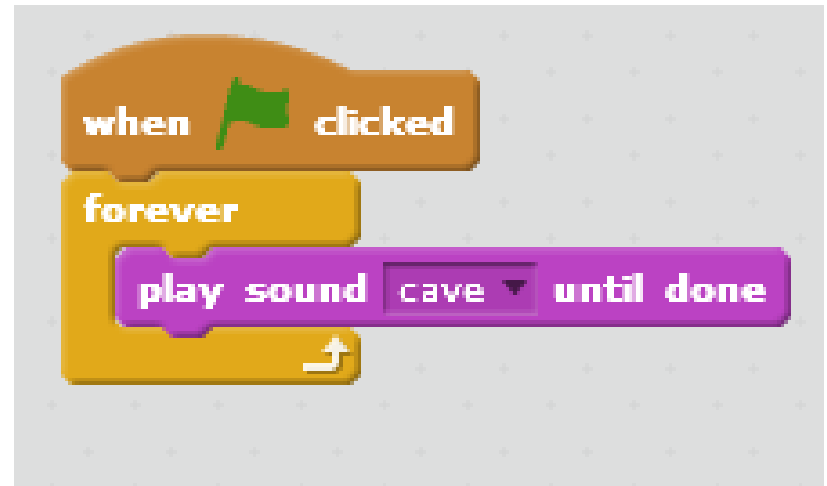
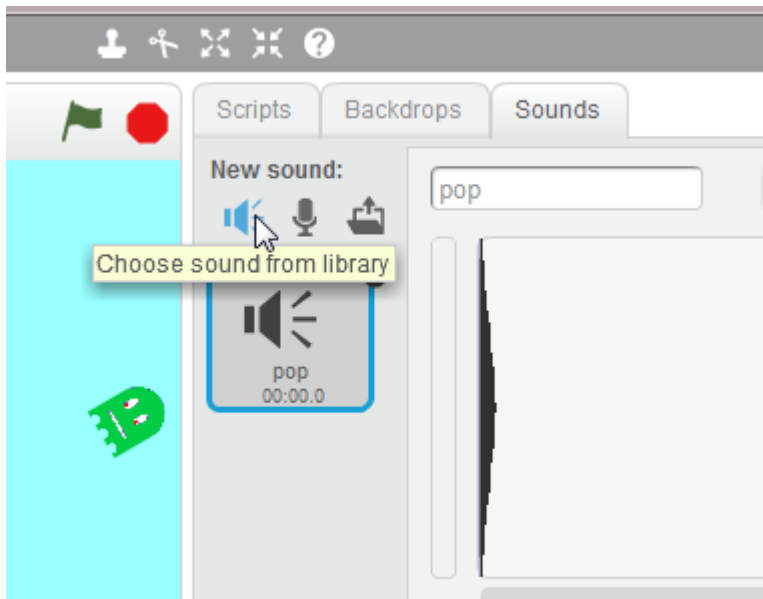


Ghostcatcher: Add 1 line



Stage:
Add 2 blocks of code

A Music Loop



At the End ...

Upload your project to the Scratch Website

user: **cdathenry1617** password: **athenry1617**

Access it
from home

Improve it

Show your
friends!

