

**CoderDojo Athenry**



**EXPLORERS**

**Code and Notes by Martha Fahy, 2022**

# 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](mailto:coderdojoathenry@gmail.com)

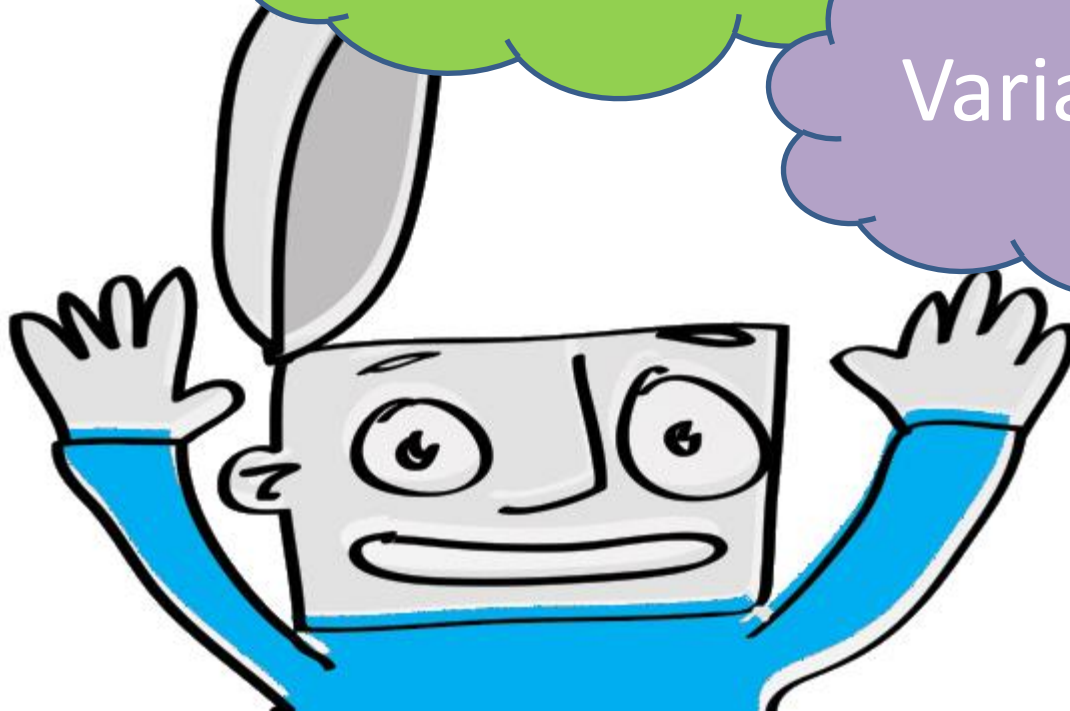
**Wifi: coderdojowireless**

# Today's **Big** Ideas

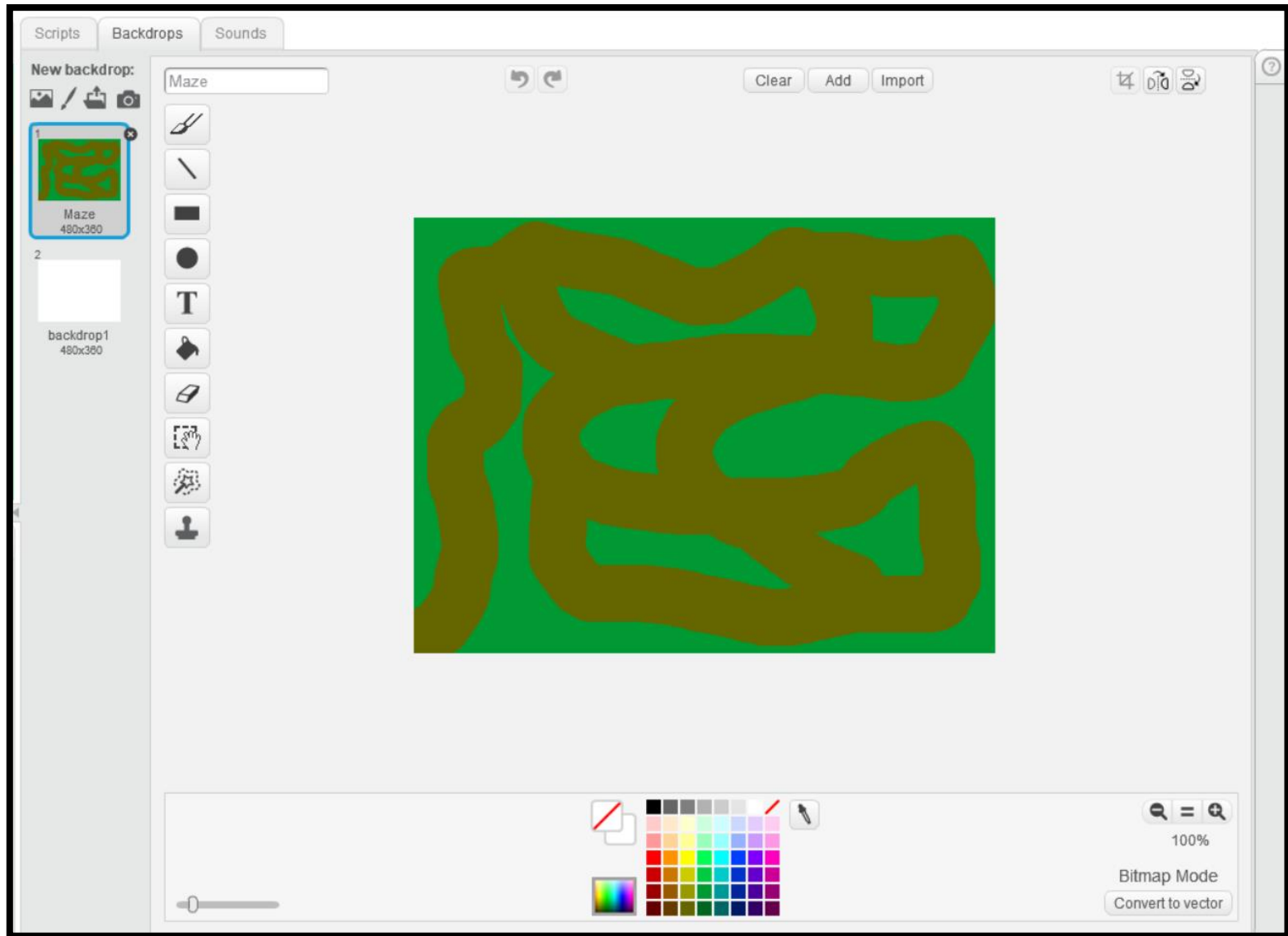
Designing  
your game

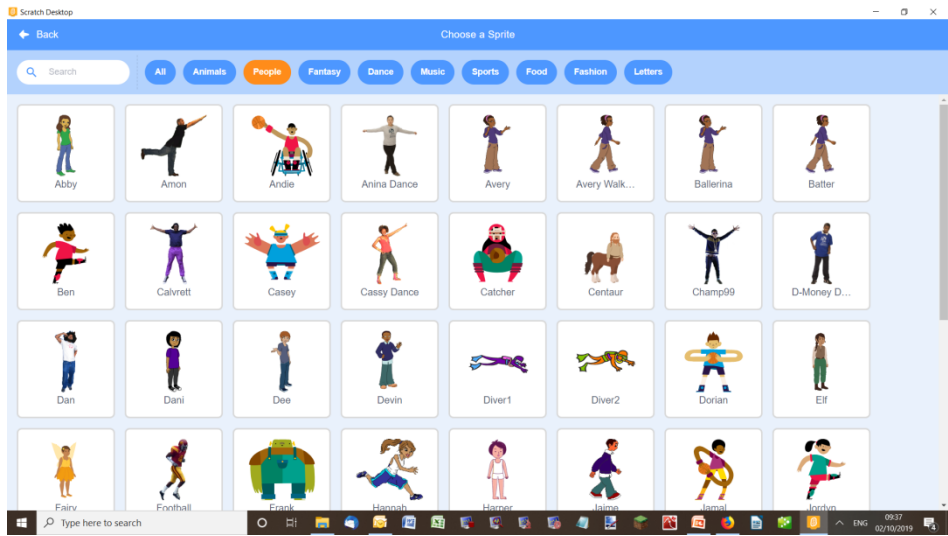
Loops &  
Decisions

Variables



# Create our Background in Scratch





Get Polly and the Dinosaur!



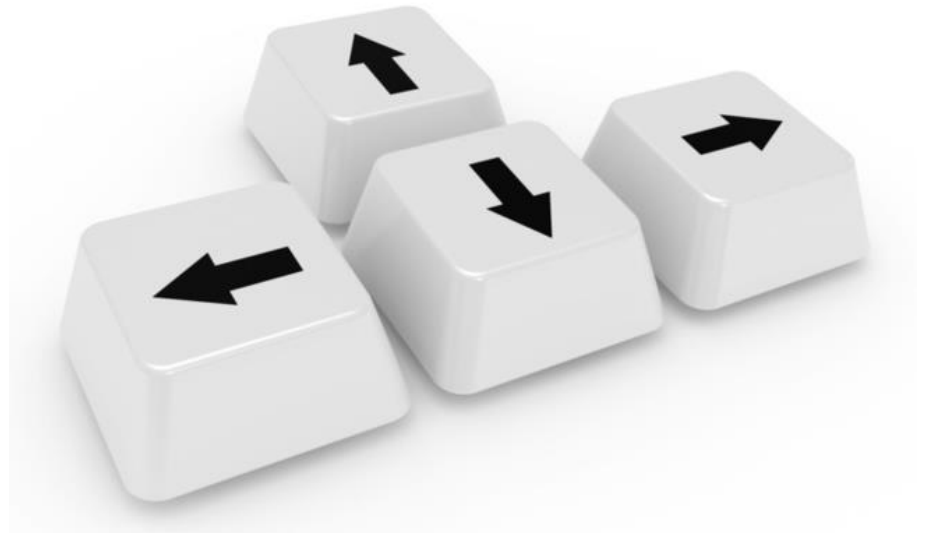
...and a Dragon



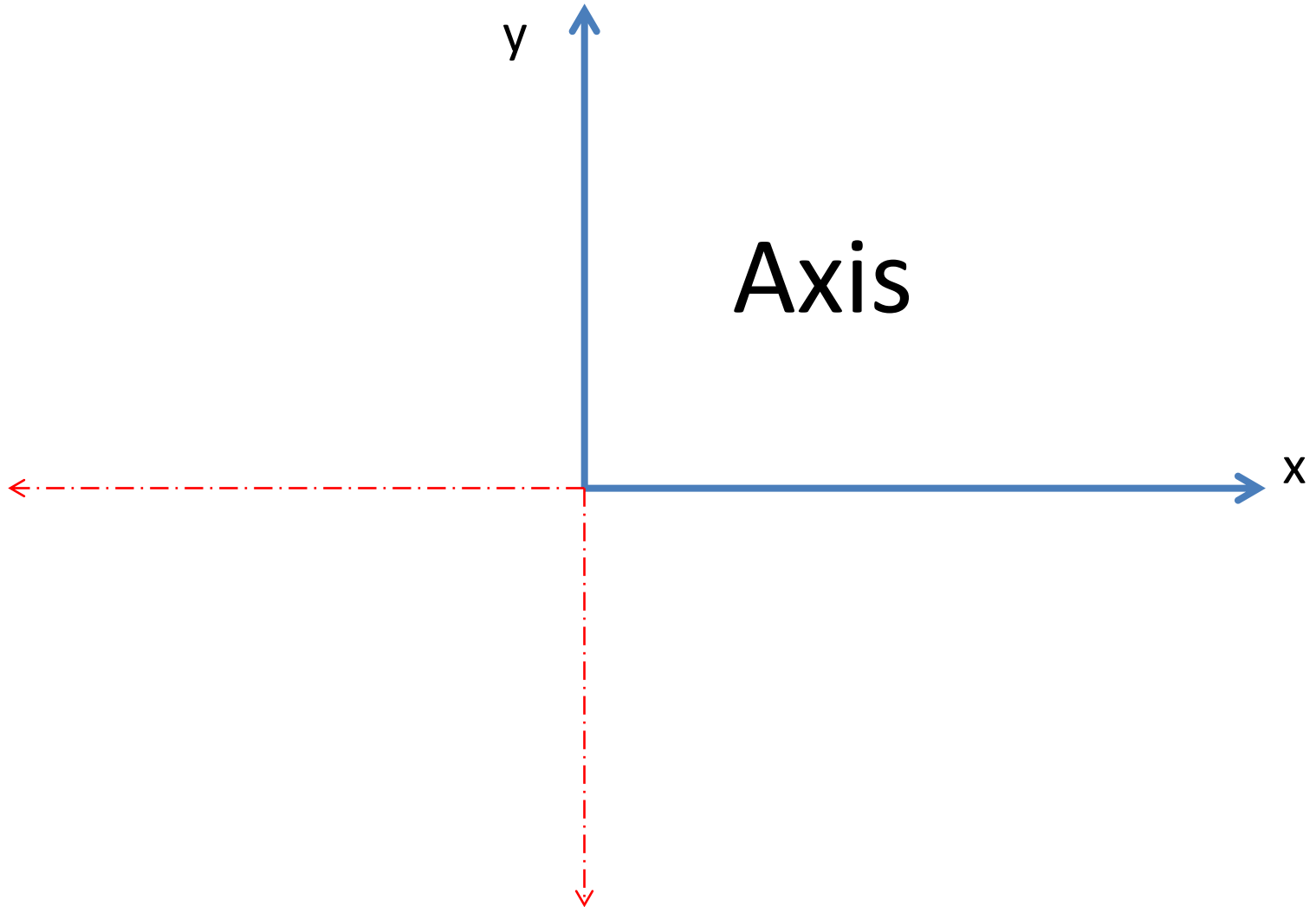
Dragon

# Moving Polly

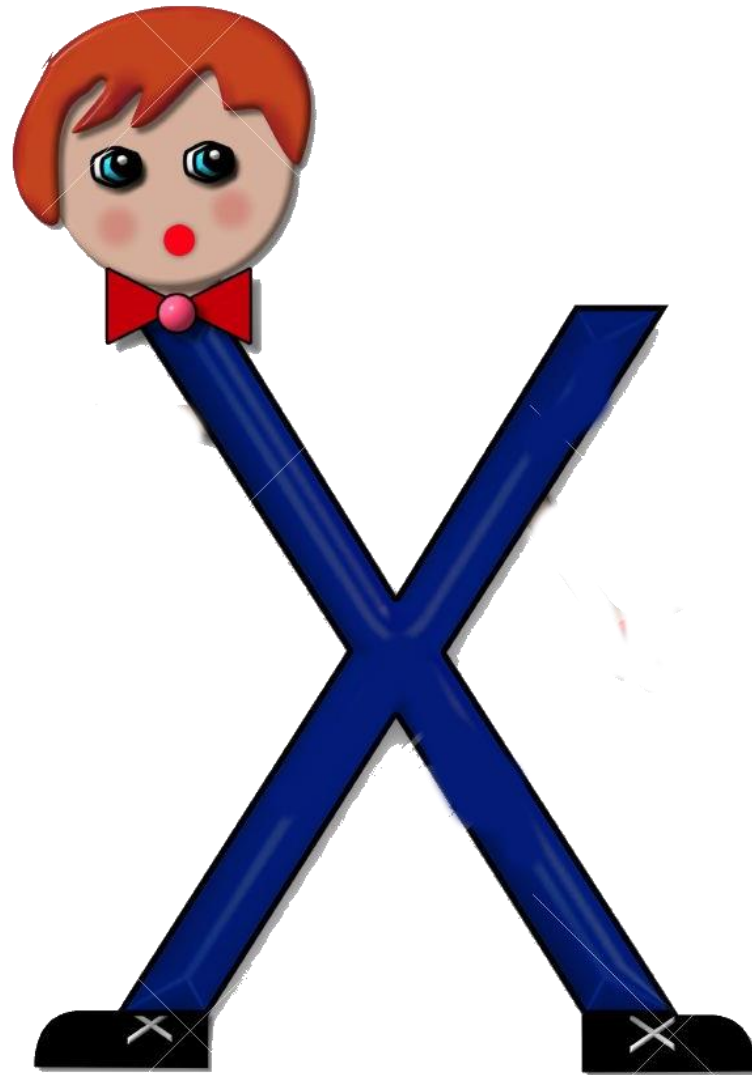
With our Arrow Keys



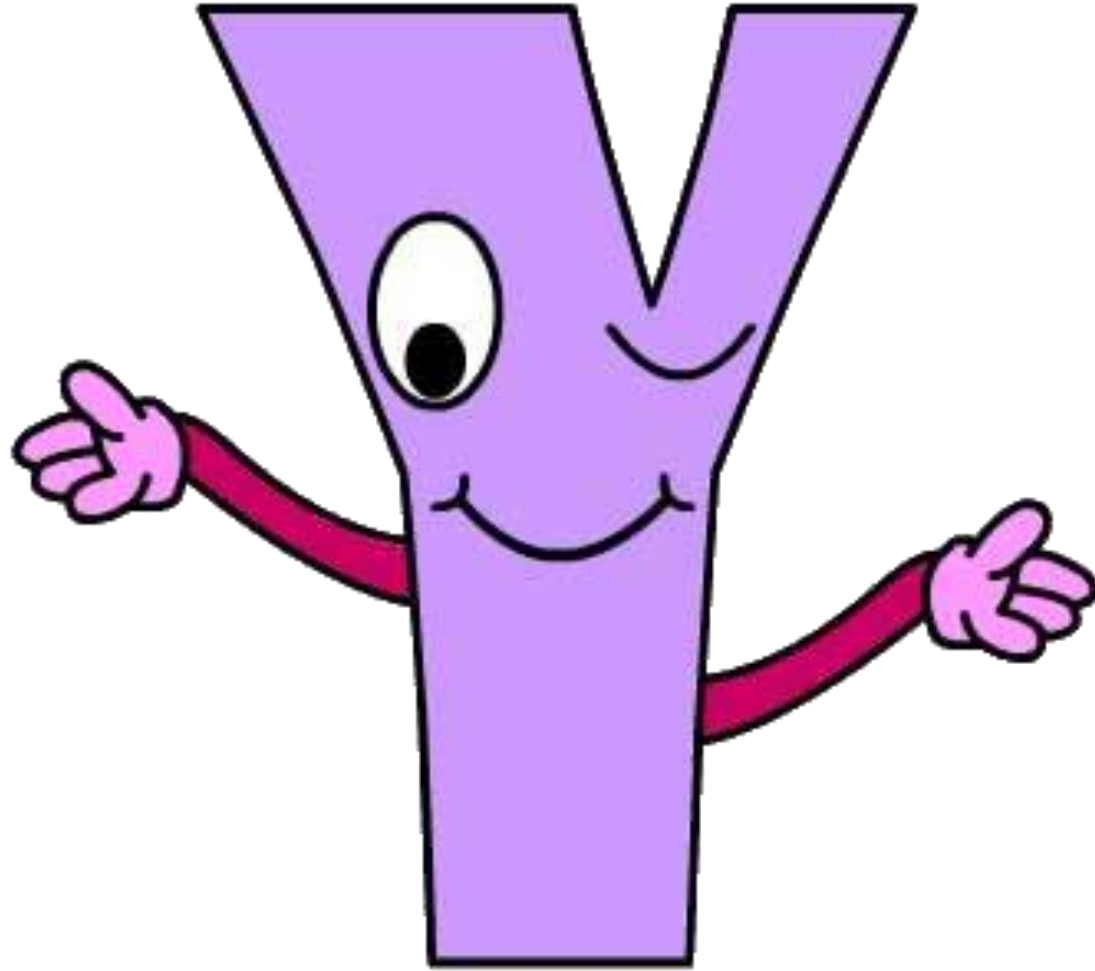
# Make it Move Under Your Control







**X Axis**



*© 2000 by The McGraw-Hill Companies*

**Y Axis**



# Make it Move Under Your Control



# Make it Move Under Your Control

```
when left arrow key pressed  
change x by -10
```

Moves 10 Steps to the Left

```
when right arrow key pressed  
change x by 10
```

Moves 10 Steps to the Right

```
when up arrow key pressed  
change y by 10
```

Moves 10 Steps Up

Moves 10 Steps down

```
when down arrow key pressed  
change y by -10
```

# Keep Little Bo Peep on the Path



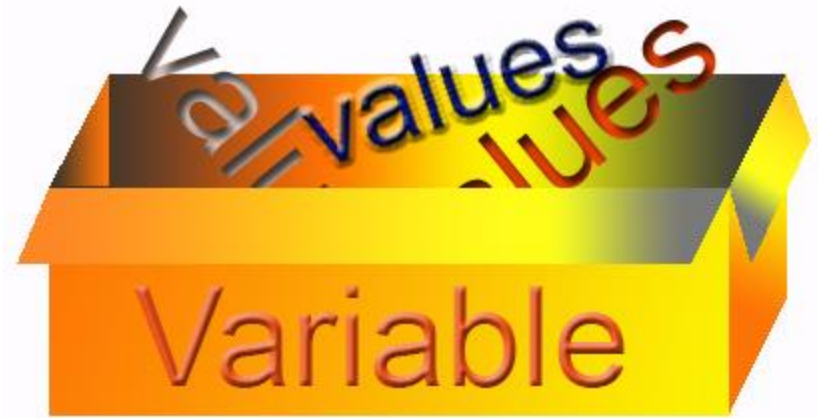
```
when green flag clicked
  go to x: -228 y: -161
  forever loop
    if touching color light green ? then
      go to x: -228 y: -161
```

The code block is set on a Scratch stage with a small character of Little Bo Peep in the top right corner. The script starts with a yellow 'when green flag clicked' block, followed by a blue 'go to x: -228 y: -161' block. Below that is an orange 'forever' loop containing an orange 'if touching color light green ? then' block, which is followed by a blue 'go to x: -228 y: -161' block. The loop ends with a white arrow icon.

Lets Add our Dinosaur....and Dragon



A variable is something that can be changed



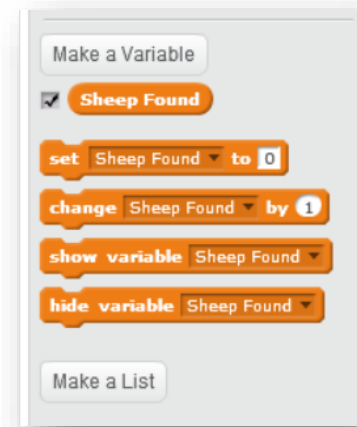
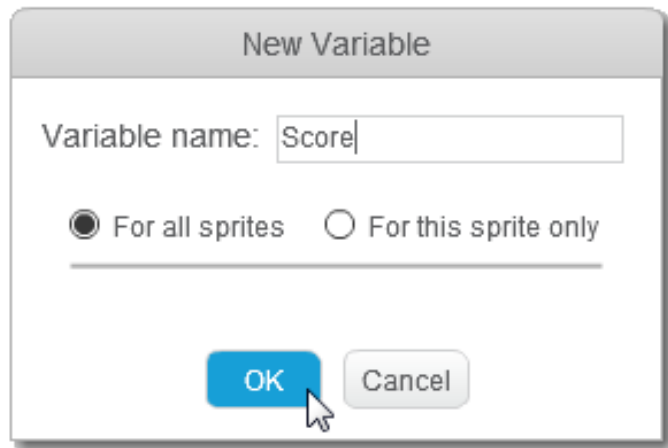
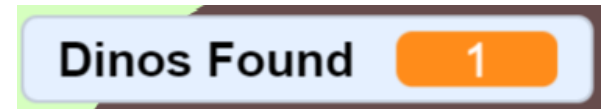
In computer programming we use variables to store information that might change and can be used later in our program.



# Variables For Dinosaurs Found

To keep track of a number, 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



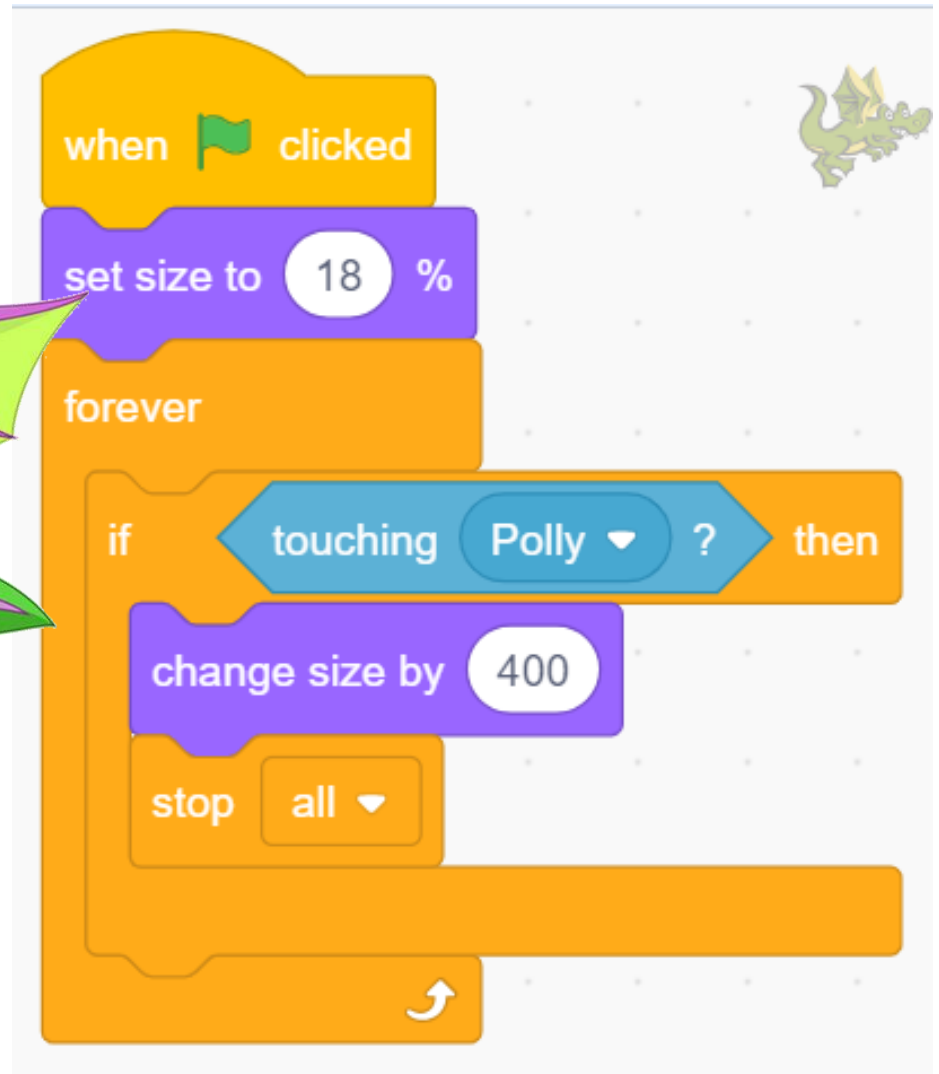
# For Each Dino



A Scratch script on a grid background. The script starts with a yellow 'when green flag clicked' block. This is followed by a purple 'show' block. Then, an orange 'forever' loop block contains an orange 'if touching Polly?' block. Inside the 'if' block, there is a purple 'start sound guitar strum' block, a purple 'hide' block, and an orange 'change Dinos Found by 1' block. A small green dinosaur icon is visible in the top right corner of the script area.

```
when green flag clicked
show
forever
  if touching Polly? then
    start sound guitar strum
    hide
    change Dinos Found by 1
```

# Don't forget the Dragon





What happens  
when she finds  
her Dinos

```
when clicked
  go to x: -228 y: -161
  forever
    if touching color [ ] ? then
      go to x: -228 y: -161
      if Dinos Found = 3 then
        say Yippee I found my Dinos! for 2 seconds
```

# SAVE & SHARE!

**Upload to the Scratch Website**

***Scratch.mit.edu***

***Username: ExplorersAthenry***

***Password: athenry2022***