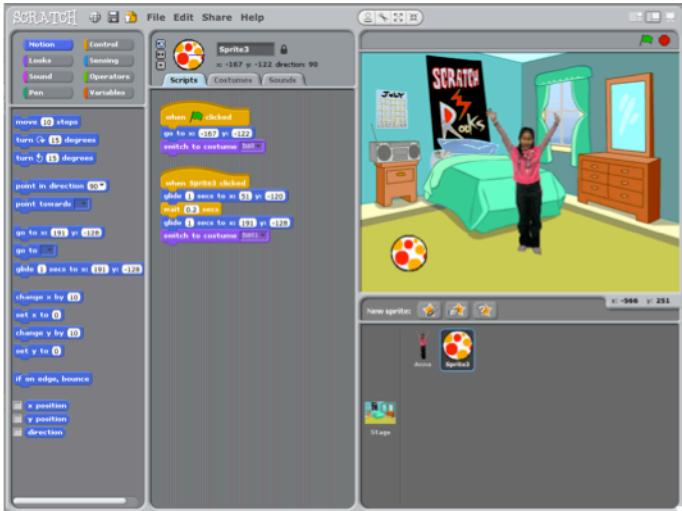


Appendix: Handouts

This appendix includes the following handouts:

Session #	Handout
2	About me
4	Dance party
5	Useful blocks for arts-themed projects
	Square, circle
	Build-a-band
	Automatic drawing
8	Useful blocks for stories-themed projects
	Conversation
	Scenes
	Slideshow
9	Debug it!
10	Maze
12	Useful blocks for games-themed projects
	Collide
	Catlibs
	Scrolling
13	Plans for my final project
	Sketches of my final project
16	Project feedback
18	My project reflections

ABOUT ME



How can you combine interesting images and sounds to make an interactive collage about yourself?

STEP BY STEP...

1. Add a sprite



paint your own sprite choose a downloaded or library sprite get a surprise sprite

2. Make it interactive

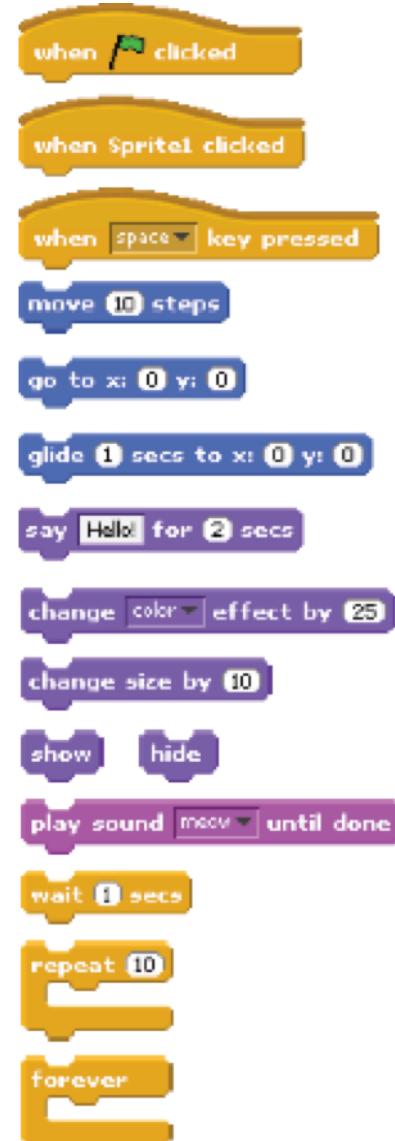


make your sprite interactive by adding scripts that have the sprite respond to clicks, key presses, and more



3. Repeat!

BLOCKS TO PLAY WITH...



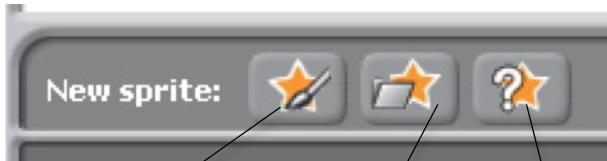
DANCE PARTY



Create your own interactive dance party where sprites get down with cool costumes and funky beats.

STEP BY STEP...

1. Add a sprite



paint your own sprite choose a downloaded or library sprite get a surprise sprite

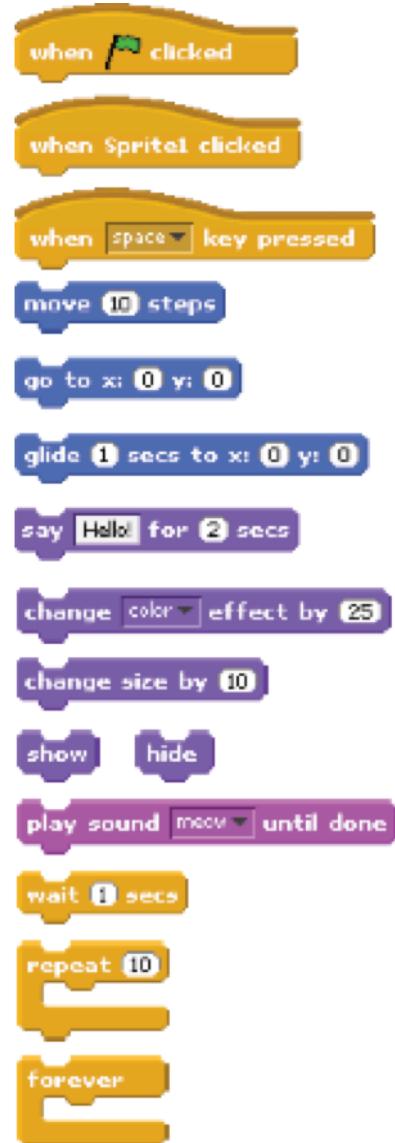
2. Make it interactive



snap blocks together to make your sprite dance

make your sprite interactive by adding scripts that have the sprite respond to clicks, key presses, and more

BLOCKS TO PLAY WITH...



3. Repeat!

ARTS

Here are some blocks that can be useful in arts-themed projects.

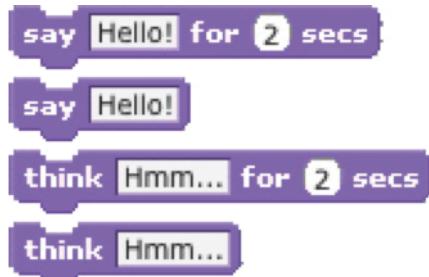
WAIT

Insert a pause



SAY/THINK

Have a speech or thought bubble appear over a sprite



SOUNDS

Play recorded and synthesized audio



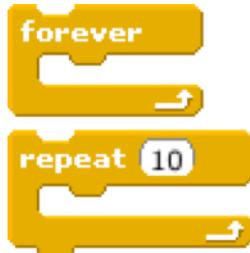
VISIBILITY

Make a sprite appear or disappear



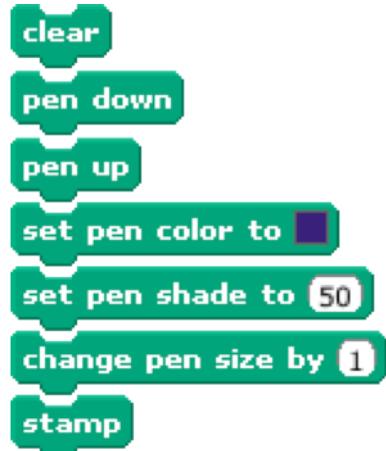
LOOP

Repeat stacks of blocks



PEN

Leave visual lines and sprite stamps on the stage



RANDOM

Get a computer-generated number from a specified range

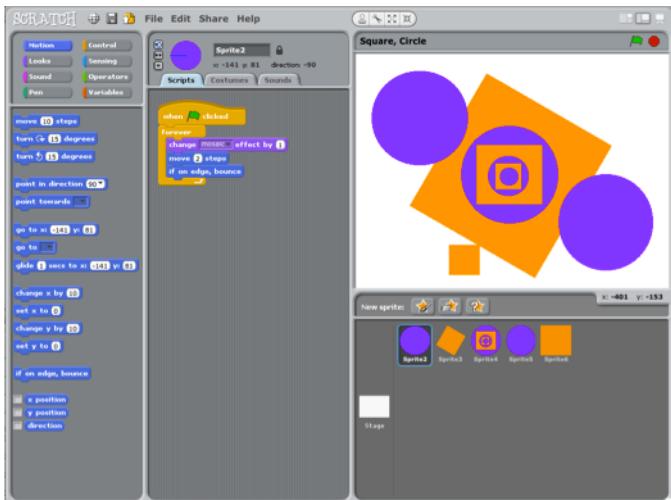


KEY PRESS

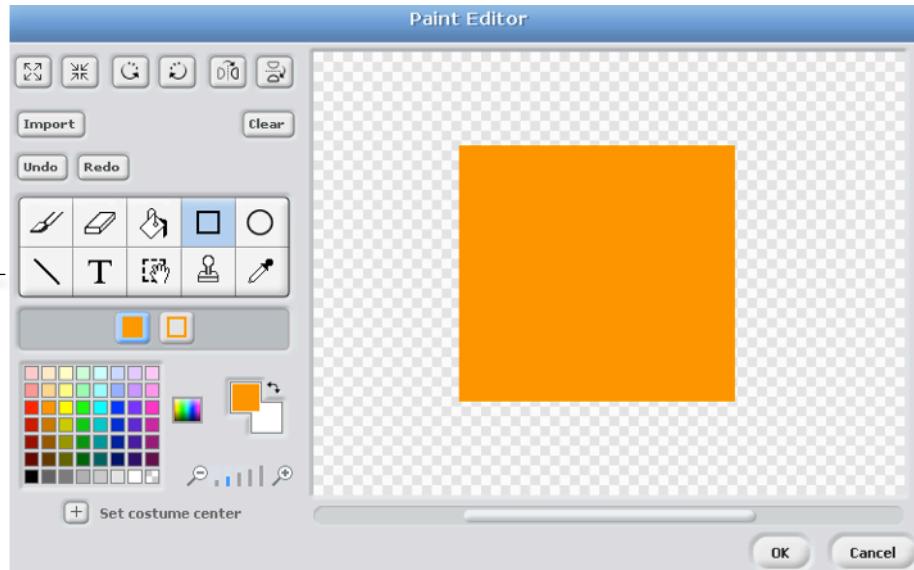
Make a sprite respond when different keys are pressed



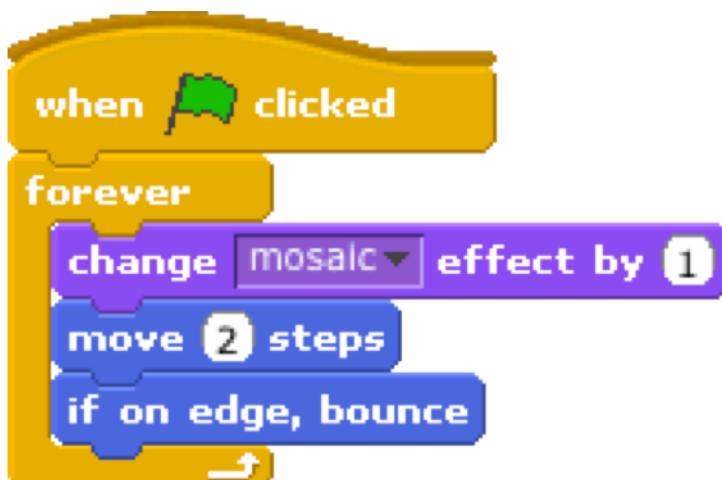
SQUARE, CIRCLE



What project can you create that includes an orange square and a purple circle?



use the paint editor
to design sprites
that incorporate an
orange square and a
purple circle



experiment with
different motion
and looks blocks
to bring your
sprites to life

BUILD-A-BAND

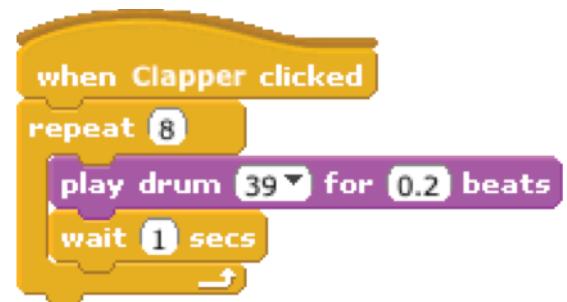
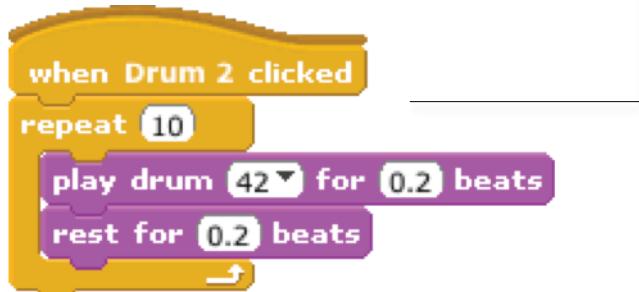


Create your own musical group by pairing sprites with sounds to make interactive instruments.

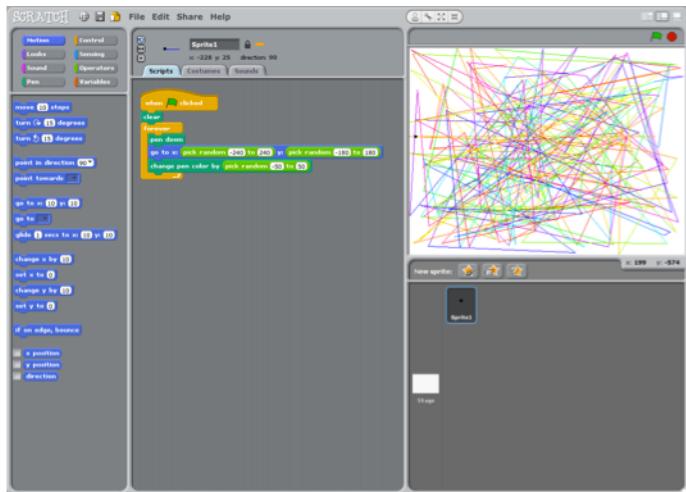


use the repeat block
to make a sound play
more than once

experiment with different
music and beats, or
import your own sounds

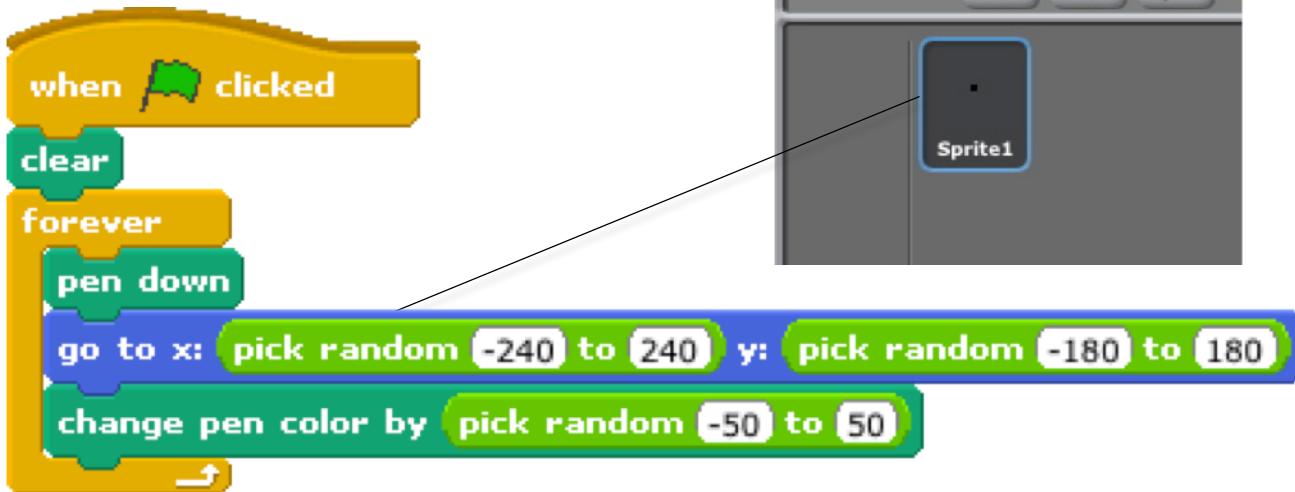
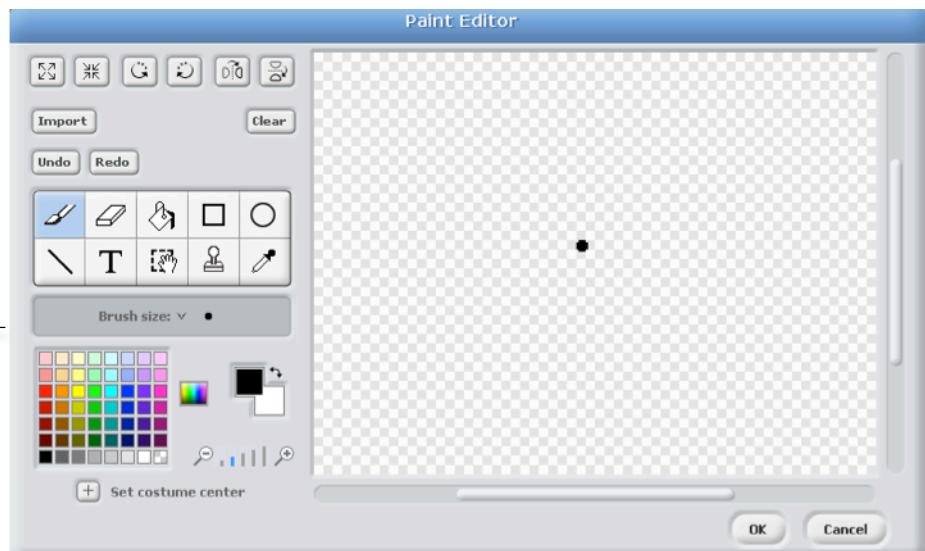


AUTOMATIC DRAWING



Make a project that draws something on its own.

create a sprite that
is just a small dot



STORIES

Here are some blocks that can be useful in story-themed projects.

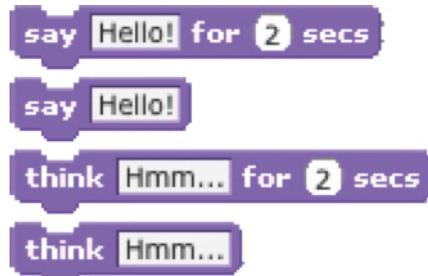
WAIT

Insert a pause



SAY/THINK

Have a speech or thought bubble appear over a sprite



SOUNDS

Play recorded audio



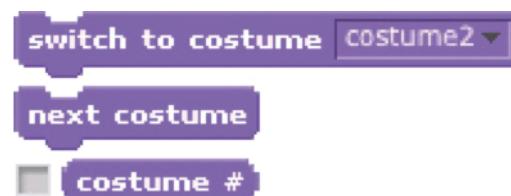
VISIBILITY

Make a sprite appear or disappear



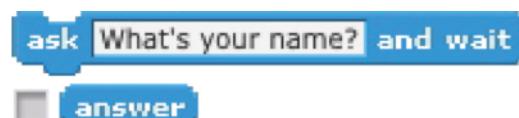
COSTUMES

Change the appearance of your sprite



ASK

Get input to use in a project



STRINGS

Test, access, and change words and sentences



COORDINATE

Synchronize actions between and within sprites



CONVERSATION



Get two characters talking to each other.
Use the **say** and **wait** blocks to coordinate
the conversation.

Scratch interface showing two sprites: Romeo and Benvolio. The Stage has a background image of a town by a river.

Romeo's Script:

```
when green flag clicked
  say [Ay me! Sad hours seem long.] for [2] secs
  wait [2] secs
  say [Not having that, which, having, makes them short.] for [2] secs
  wait [2] secs
  say [Out--] for [2] secs
  wait [2] secs
  say [Out of her favour, where I am in love.] for [2] secs
```

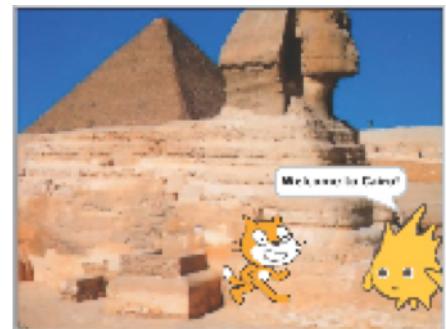
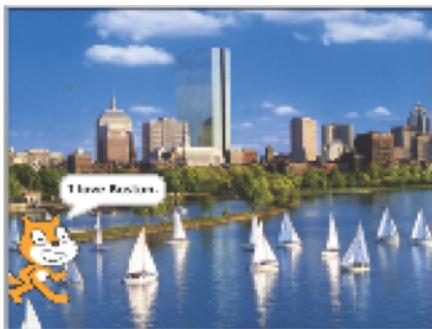
Benvolio's Script:

```
when green flag clicked
  wait [2] secs
  say [What sadness lengthens Romeo's hours?] for [2] secs
  wait [2] secs
  say [In love?] for [2] secs
  wait [2] secs
  say [Of love?] for [2] secs
  wait [2] secs
  say [Alas, that love, so gentle in his view,] for [2] secs
  say [Should be so tyrannous and rough in proof!] for [2] secs
```

Annotations:

- "1 script" points to both the Romeo and Benvolio scripts.
- "no scripts add a background" points to the Stage area.

SCENES



Use the **broadcast** and **when I receive** blocks to create a multi-scene story.

add 3 background images

4 scripts

4 scripts

2 scripts

New sprite:

Stage

Sprite1

Sprite2

when green flag clicked

- broadcast [scene-boston v] and wait
- broadcast [scene-paris v] and wait
- broadcast [scene-cairo v] and wait

when I receive [scene-boston v]

- say [I love Boston.] for [2] secs
- glide [1] secs to x: [-80] y: [-100]

when I receive [scene-paris v]

- say [But Paris is great.] for [2] secs
- glide [1] secs to x: [40] y: [-100]

when I receive [scene-cairo v]

- say [Whoa!] for [2] secs

when I receive [scene-boston v]

- switch to background [boston v]

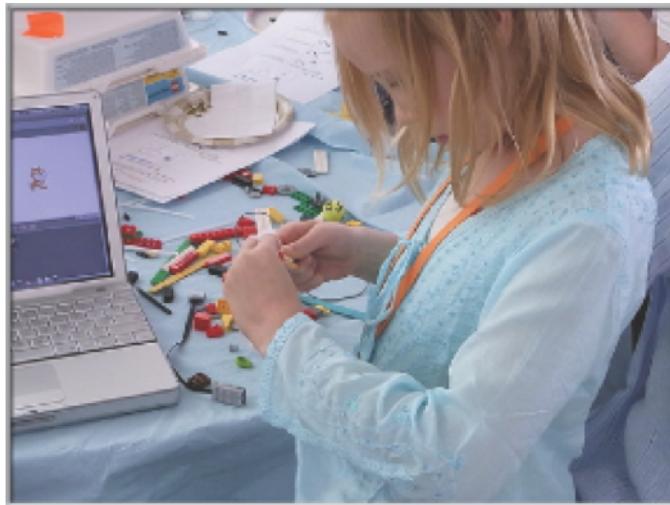
when I receive [scene-paris v]

- switch to background [paris v]

when I receive [scene-cairo v]

- switch to background [cairo v]

SLIDESHOW



Create your own slideshow – a collection of background images accompanied by audio narration.

The image shows the Scratch interface with three main panels:

- New sprite:** Shows a single sprite named "ScratchDay".
- Stage:** Shows the stage area with a blue border.
- Scratch Editor:** Contains:
 - Backgrounds:** A list of six background images: "ScratchDay", "ScratchDay_Home", "ScratchDay_Beach", "ScratchDay_Swift", "ScratchDay_MIT", and "ScratchDay_Cat".
 - Scripts:** A list of six scripts labeled "part1" through "part6", each associated with a sound file.

Annotations on the left side of the interface:

- 1 script
- 6 background images
- 6 recorded sounds

Annotation pointing to the Sound Recorder:

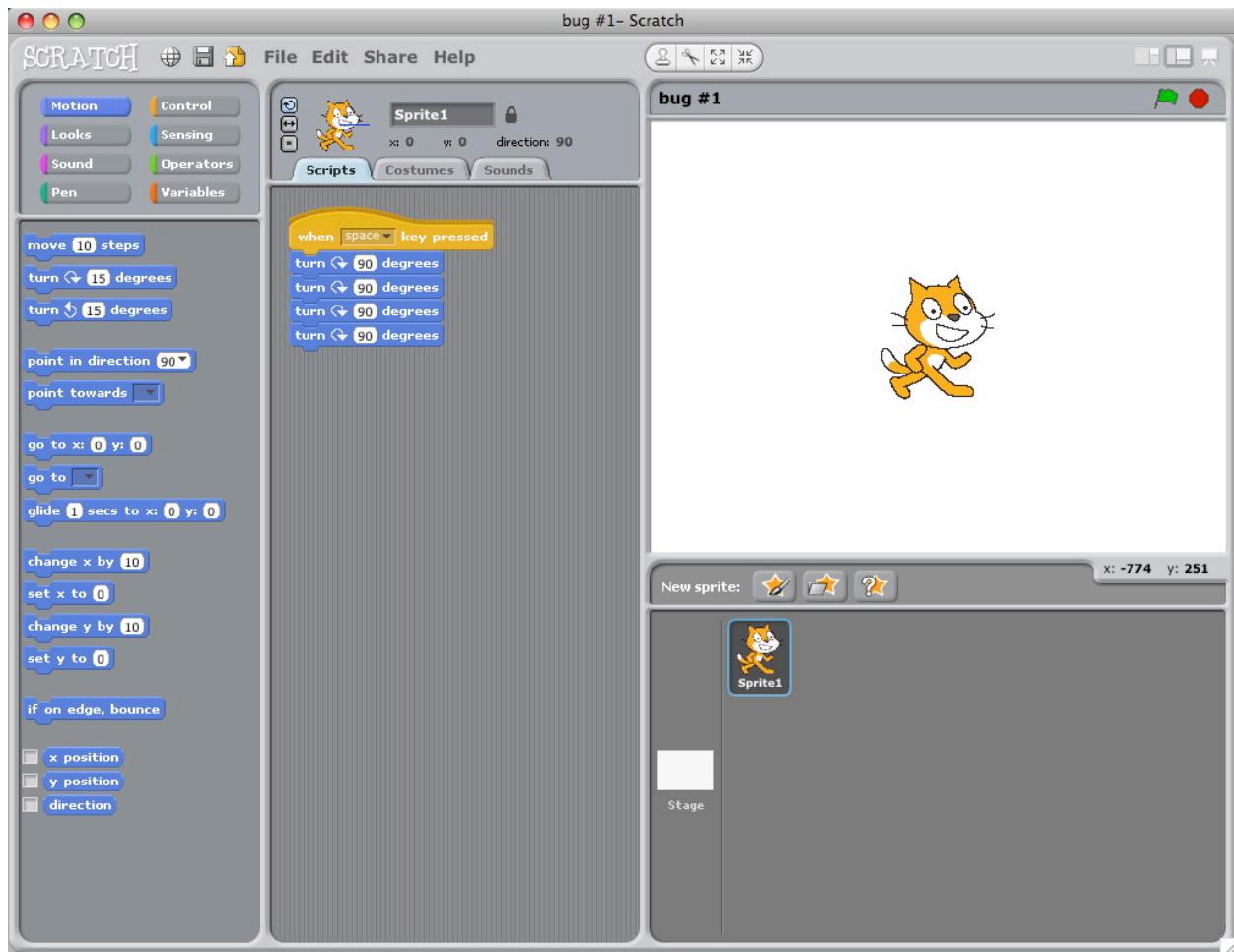
record your narration right in Scratch with the sound recorder

A Scratch script attached to a green flag (when green flag clicked):

```
when green flag clicked
  switch to background [ScratchDay v]
  play sound [part1 v] until done
  next background
  play sound [part2 v] until done
  next background
  play sound [part3 v] until done
  next background
  play sound [part4 v] until done
  next background
  play sound [part5 v] until done
  next background
  play sound [part6 v] until done
  next background
```

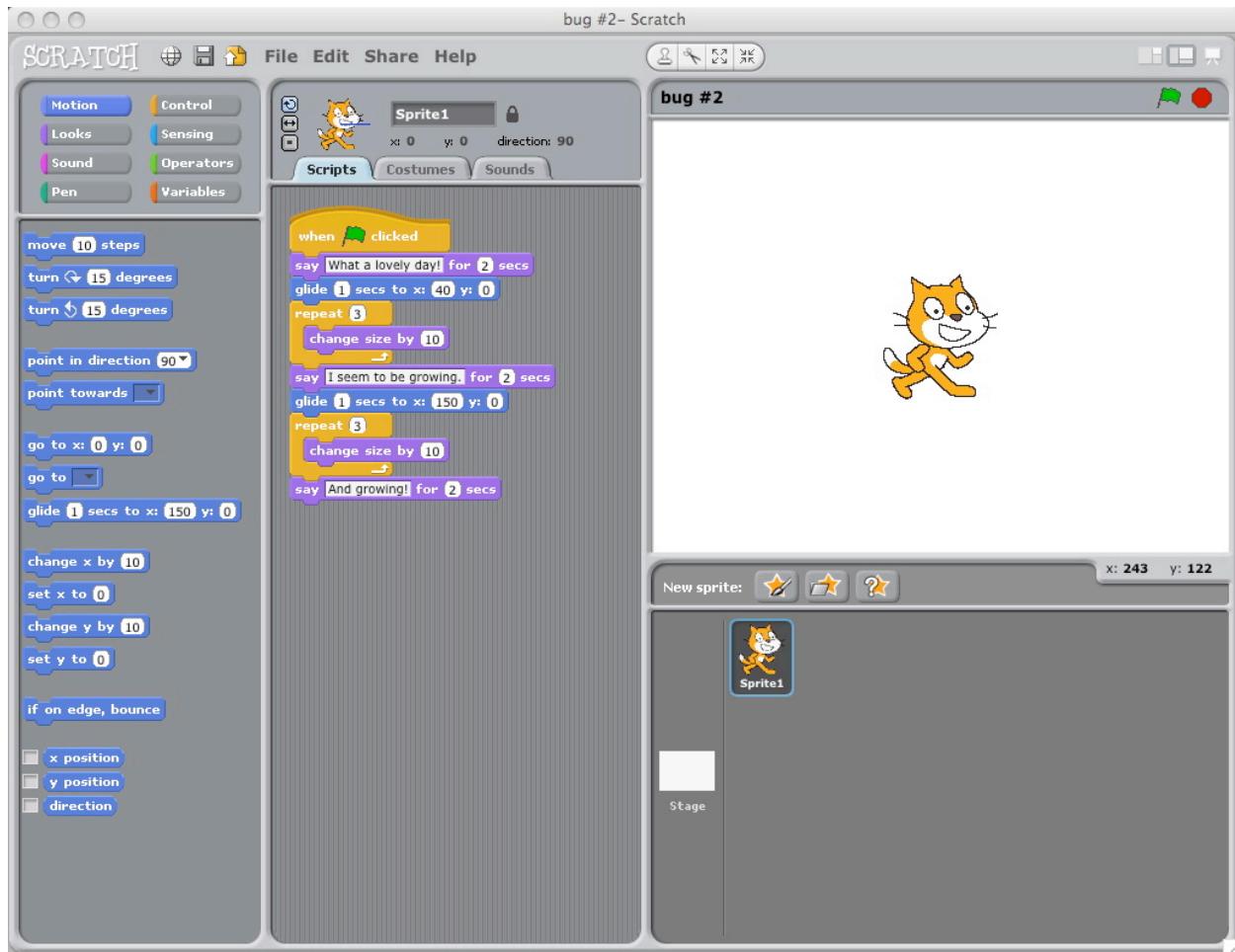
BUG #1

Farooq wants his cat to rotate when he presses the space bar. But the cat isn't moving! What's going on?



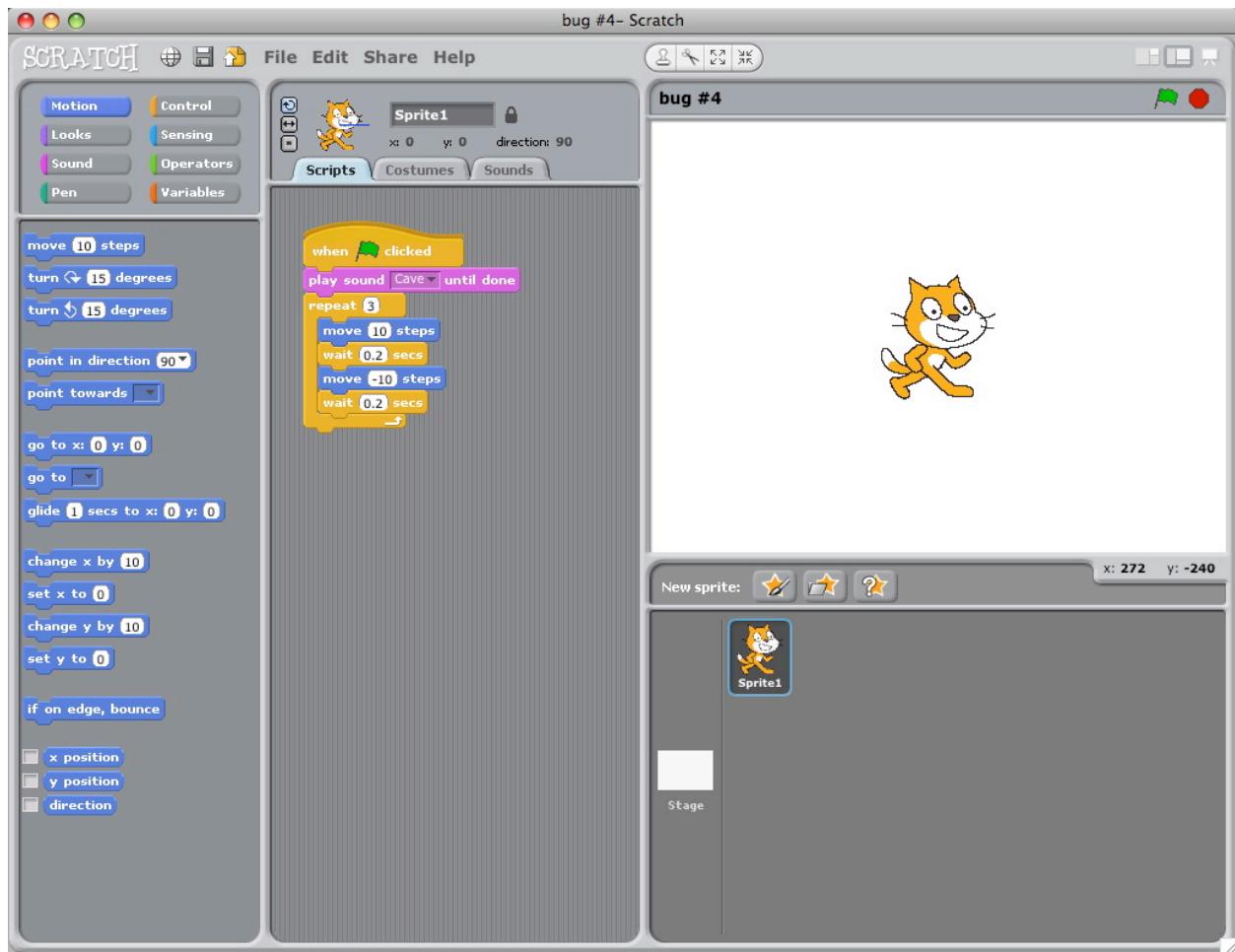
BUG #2

Michelle wants the cat to start in the middle of the stage, then move across the stage and grow. It works the first time she clicks the green flag – but not when she clicks it again! What's going on?



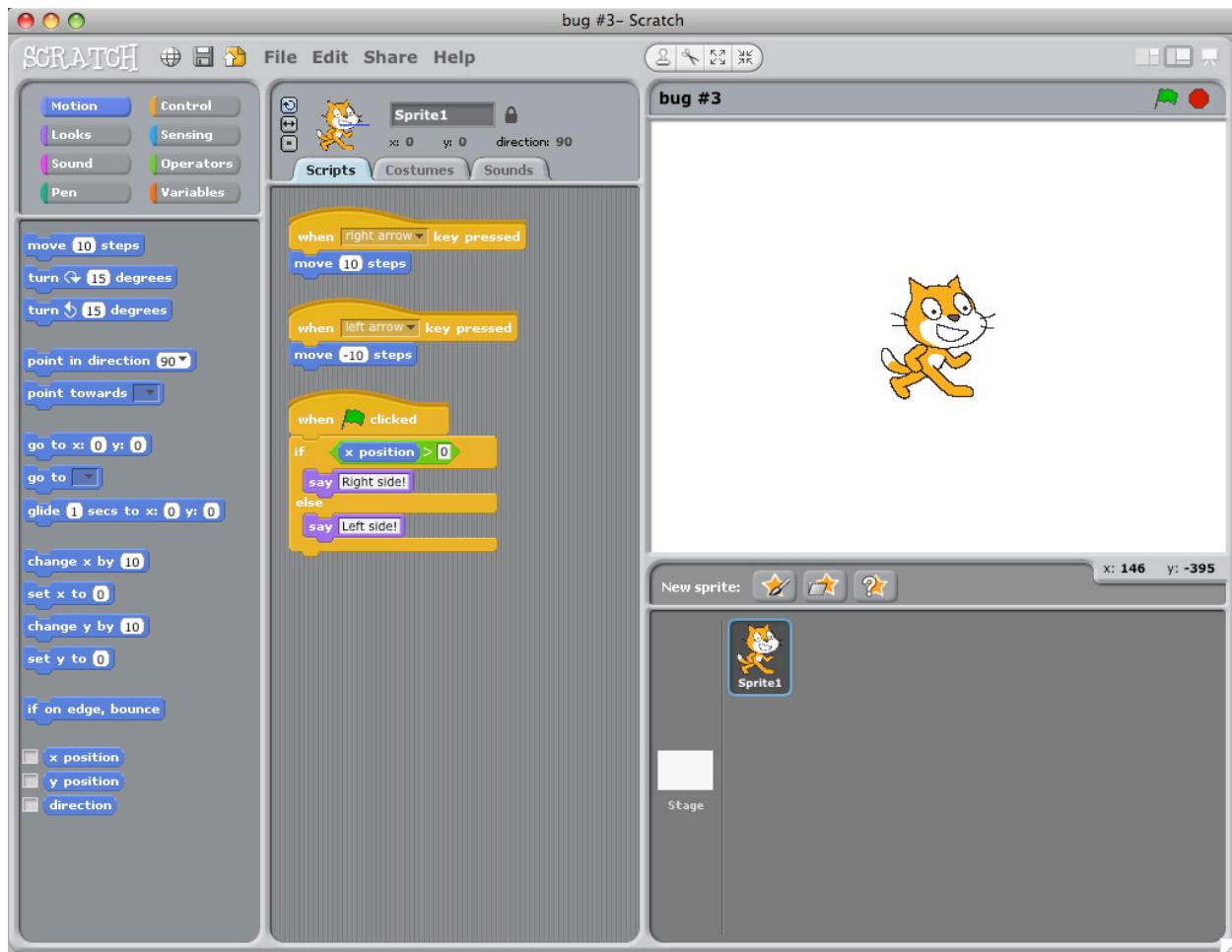
BUG #3

Alex wants his cat to dance to some music. But the cat is dancing after the music is over! What's going on?



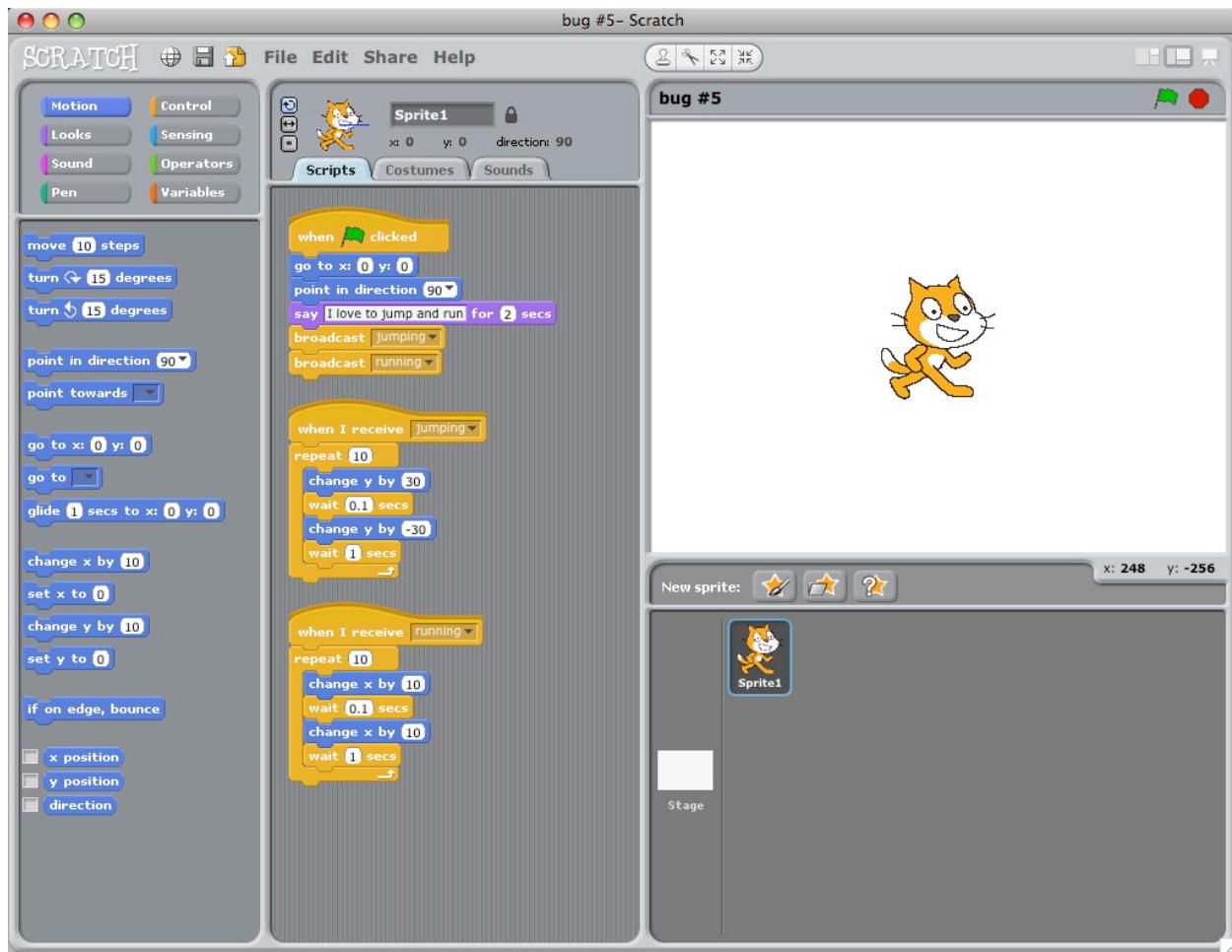
BUG #4

Praneetha wants to control the cat's x-position with the keyboard: right arrow moves the cat right, left arrow moves the cat left. She also wants the cat to say if it's on the right side or the left side, depending on its x-position. The cat's moving, but not saying its position correctly! What's going on?



BUG #5

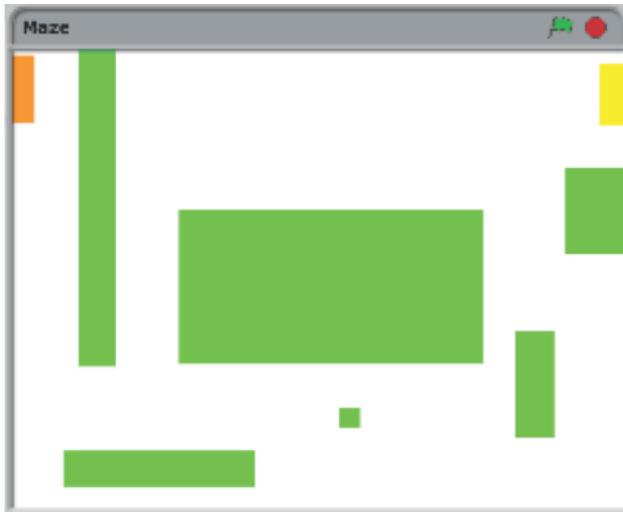
Nobuyuki wants his cat to jump up and down, and then move across the screen. But the cat's hopping across the screen! What's going on?



BUG #6

Design your very own puzzling Scratch program to debug.

MAZE



Create a game where you get a sprite from the start to the end of a maze without touching the walls.



no scripts,
draw a maze-like
background with
colored walls and
a differently colored
end marker

7 scripts total

move the sprite around

```
when down arrow key pressed
point in direction 180
move 10 steps
```

```
when up arrow key pressed
point in direction 0
move 10 steps
```

```
when right arrow key pressed
point in direction 90
move 10 steps
```

```
when left arrow key pressed
point in direction -90
move 10 steps
```

have the sprite bounce off the green walls

```
when green flag clicked
go to x: -249 y: 149
```

```
when green flag clicked
forever if touching color [green v]?
turn [180] degrees
move [10] steps
```

```
when green flag clicked
wait until touching color [yellow v]
say [You win!] for [2] secs
```

players wins when sprite reaches the yellow end marker

GAMES

Here are some blocks that can be useful in games.

TOUCHING

See if two sprites are touching or if a sprite is touching a color



VISIBILITY

Make a sprite appear or disappear



RANDOM

Get a computer-generated number from within a specified range



TIMING

Have the computer keep track of time for you



STRINGS

Test, access, and change words and sentences



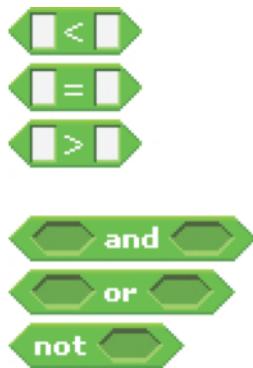
VARIABLES

Store a number or string in a container to access later



COMPARE

Compare values to help make decisions within your game

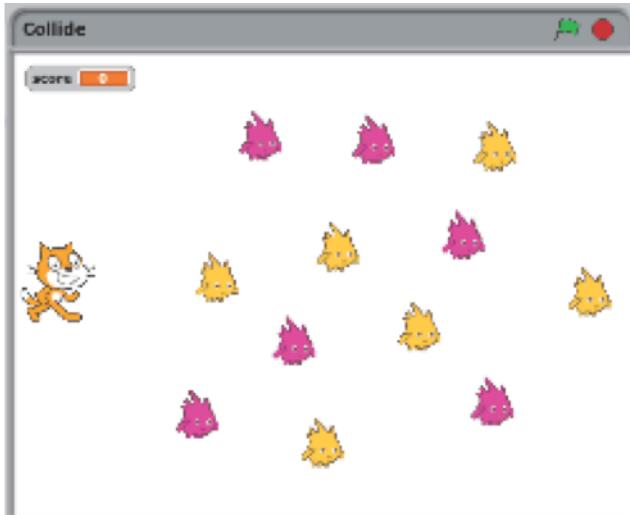


KEY PRESS

Make a sprite respond when different keys are pressed



COLLIDE



Help the cat navigate a field of Gobos.
Collect yellow gobos to earn points,
avoid pink gobos to avoid losing
points.



no scripts

reset the cat's position
and the score

when green flag clicked

- go to x: -190 y: 0
- set [score v] to [0]

when green flag clicked

forever

- go to [mouse-pointer v]

when the cat collides with a
yellow gobo, the gobo disappears
and the score increases by 10

when green flag clicked

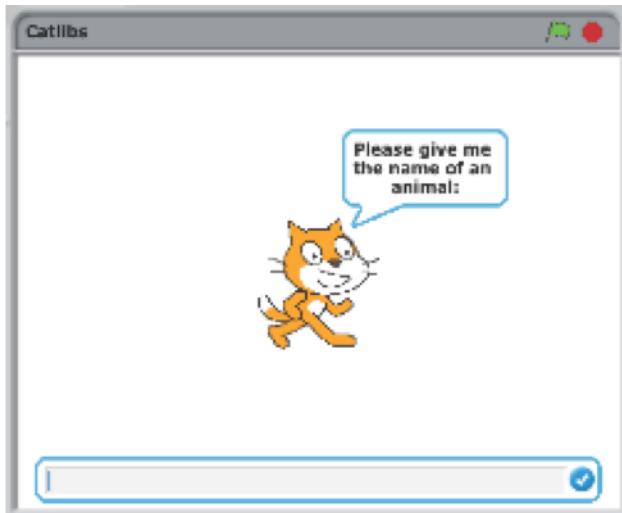
- show
- wait until [touching [cat v] ?]
- change [score v] by [10]
- hide

when the cat collides with a
pink gobo, the gobo disappears
and the score decreases by 10

when green flag clicked

- show
- wait until [touching [cat v] ?]
- change [score v] by [-10]
- hide

CATLIBS



Create a unique Madlib story by collecting user input.

no scripts

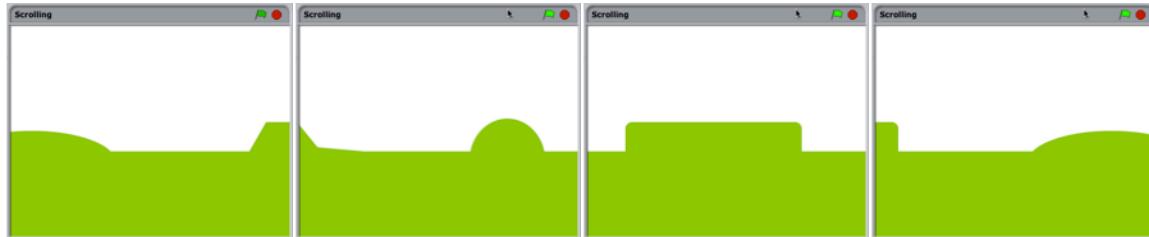
1 script
4 variables

```
when green flag clicked
say [Welcome to CatLibs! for 2 secs]
say [Let's create a story together. for 2 secs]
ask [Please give me the name of a friend:] and wait
set [friend's name] to [answer]
ask [Please give me the name of an animal:] and wait
set [animal] to [answer]
ask [Please give me the name of a place:] and wait
set [place] to [answer]
ask [Please give me the name of a thing:] and wait
set [thing] to [answer]
say [One day, for 2 secs]
say [join [friend's name] [and a] [animal] for 2 secs]
say [join [went to] [join [place] [join [to see a] [thing] for 2 secs]]]
```

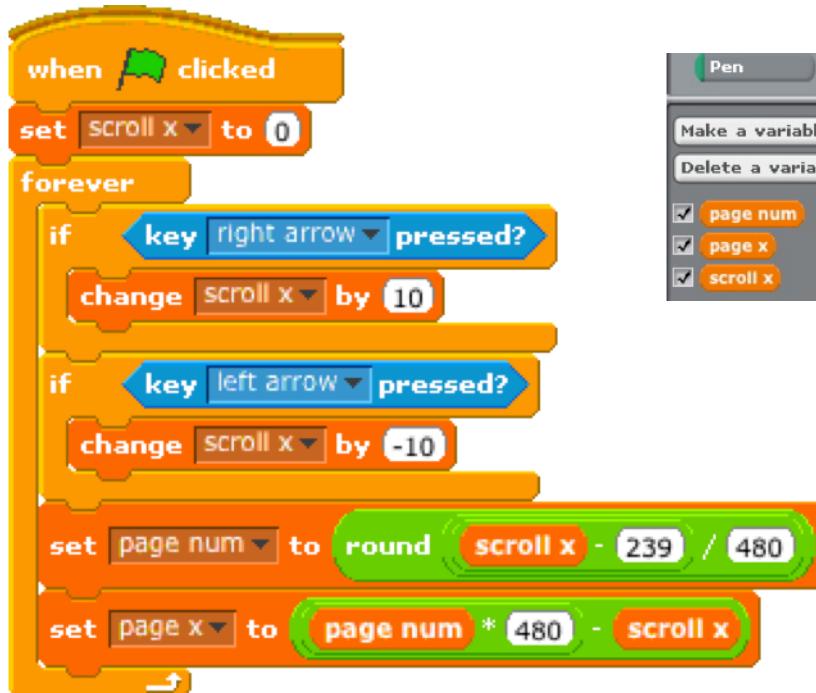
The stage shows a single cat sprite named "Sprite1".

The Variables panel shows four variables: "animal", "friend's name", "place", and "thing". It also contains a "set animal to 0" block.

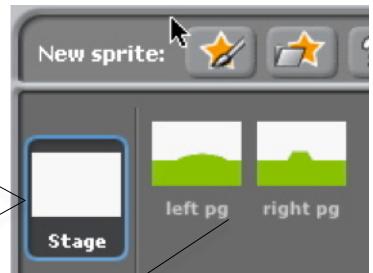
SCROLLING



Create the foundation for a side scrolling game.



3 variables



1 script



create two sprites:
one for the left background panel,
one for the right background
panel

add the same (2 or more)
costumes to each sprite

add this script to the left sprite

add this script to the right sprite

