

SCRATCH EDUCATOR SHOW & TELL

ScratchEd Webinar Series

Monday, June 27, 2011

7pm-8pm EST

Hosted by Mitch Resnick

With special guests Lisa Radden, Lou Lahana, and Laura Webber

Tonight's Scratch Educators

- **Lisa Radden**
 - Boston Renaissance Charter Public School (Hyde Park, MA)
- **Lou Lahana**
 - Island School (New York, NY)
- **Laura Webber**
 - Roland Park Country School (Baltimore, MD)



Show & Tell

Scratch @ BRCPS

Lisa Radden

Boston Renaissance Charter Public School (Hyde Park, MA)

Getting Started

- 2008-2009: What's Scratch?!
 - C4CFM meetings
 - MIT Media Lab web site
 - Harvard Ed Tech Masters program
- 2009-2010: Try and Buy
 - 1st grade Math class
 - TechSperts Academy: a Grade 4-6 after school program
 - Integrated with Netsmartz.org curriculum
 - Internet Safety games
 - MIT Scratch Day
 - Planning session with MIT Media Lab student
 - ScratchedEd: networking

SOLD! Add it to the SY2010-2011 image

Getting Started

- 2010-2011: Expansion & Integration
 - TechSperts Academy
 - Blog of student reflections
 - Share projects at MIT Scratch Day!
 - Introduced at TLT Workshop
 - Attended Teacher MeetUps at MIT
 - Invited to participate in EDC Scratch Evaluation
 - Provided computational thinking blog questions
 - Integrated into 5th Grade ELA curriculum
 - Coteaching and in-class support provided
 - ScratchEd: rubrics

TechSperts Academy

- ...Blogging our experiences with Scratch on Ms. Radden's blog.
[Click here to read our blog > >](#)
- ...Meeting twice a month after school.
[Click here to view this year's calendar of meetings > >](#)
- ...Learning how to stay safe online.
[Click here to learn how to Use Your NetSmartz > >](#)
- ...Making Internet Safety games by learning how to Scratch!
[Click here to view our Scratch games > >](#)

ELA: Bud Not Buddy Unit

- Technology Lead Teacher (TLT) and 5th Grade teacher, Joe Roche
- Objective
 - Illustrate a scene and a theme from the book, But Not Buddy.
- Unit Plan and Project Examples
 - <http://scratched.media.mit.edu/resources/integration-scratch-5th-grade-ela>
- Reflections
 - <http://scratched.media.mit.edu/resources/reflections-computation-thinking-blog>

Student Examples

- Animate A Word:
 - YAWN:
<http://scratch.mit.edu/projects/techsperts/1675845>
 - SPLASH:
<http://scratch.mit.edu/projects/techsperts/1675847>
- Internet Safety Gallery:
 - <http://scratch.mit.edu/galleries/view/128720>
- Bud Not Buddy Gallery:
 - <http://scratch.mit.edu/galleries/view/128723>

SY 2011-2012 Planning

- Summer 2011 Computational Thinking Camp @ MIT
 - 2 teachers attending
- Technology Scope and Sequence
 - Grade 4-6: SWBAT use programming skills to think logically, algorithmically, and recursively.
- Professional Development
 - Grade Level Workshops
 - Teacher MeetUps @MIT
 - Scratch Day
 - ScratchEd
- TechSperts Academy

Resources

- Scratch Projects
 - <http://scratch.mit.edu/users/techsperts> The TechSperts
 - <http://scratch.mit.edu/users/jroche> Joe Roche
 - <http://scratch.mit.edu/users/lradden> Lisa Radden
 - <http://www.brcps.org/technology/techsperts-academy/> The TechSperts
- Scratch Ed Profiles
 - <http://scratched.media.mit.edu/lradden> Lisa Radden
 - <http://scratched.media.mit.edu/user/8380> Joe Roche
 - <http://scratched.media.mit.edu/stories/techsperts-attend-scratch-day-mit>
- Reflections/Blog Questions
 - <http://scratched.media.mit.edu/resources/reflections-computation-thinking-blog>
- Rubrics
 - <http://scratched.media.mit.edu/resources/internet-safety-game-rubric-and-criteria>



Questions?

Scratch @ BRCPS

Lisa Radden

Boston Renaissance Charter Public School (Hyde Park, MA)



Show & Tell

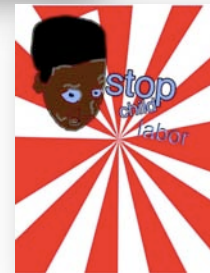
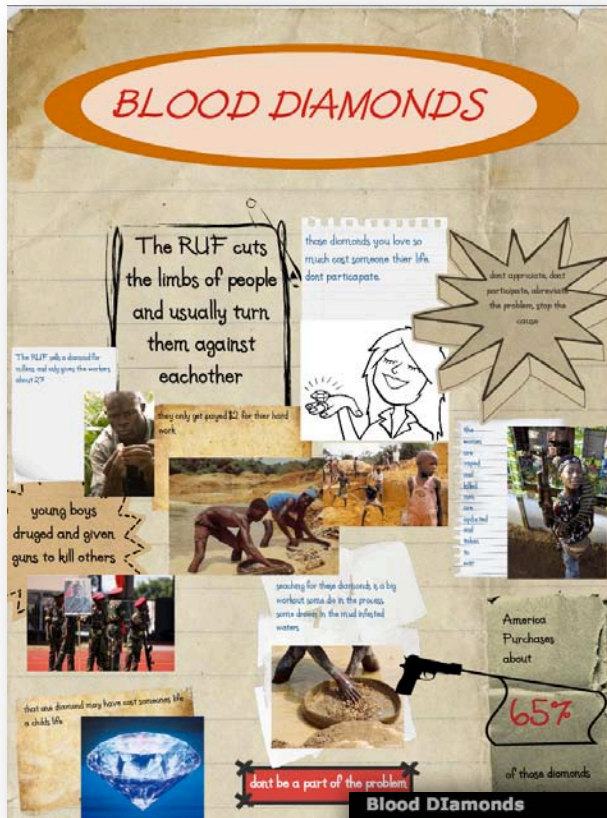
Scratch + Blogging = Social Action

Lou Lahana

Island School (New York, NY)


Techbrarian.com

Techbrarian: Products



FRIDAY, OCTOBER 8, 2010

Behind the swoosh Part 3

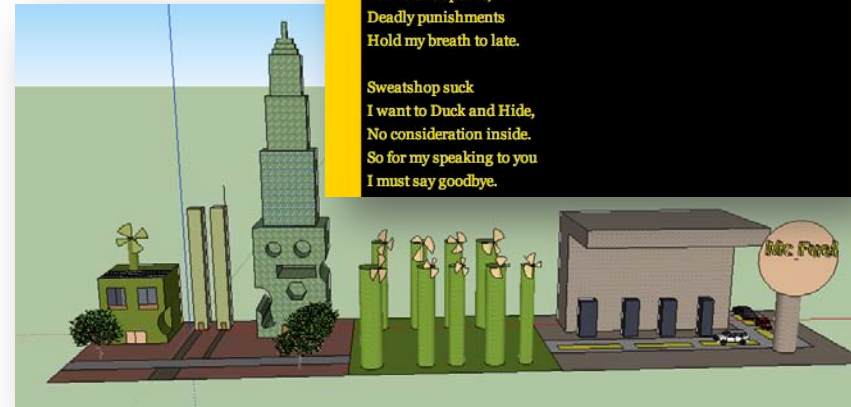


I sleep at nit with bugs
I wash my body cold,
I feel lonely that i cant tell
I lie and my Flu has rise.

Help cant you see
The pain that i feel,
They make me lie
I feel my inside peel.

Jim try to help
But no one speaks,
Deadly punishments
Hold my breath to late.

Sweatshop suck
I want to Duck and Hide,
No consideration inside.
So for my speaking to you
I must say goodbye.



Scratch & Social Issues: Flower Bombs



Blog + Scratch

Assignment 10 (7th and 8th Grade), Assignment 12 (6th Grade): Flower Bombing



by Hungry Designs

In our last assignment, we created a future habitat that would be greener and include alternate forms of energy (wind power, solar power, and fry oil.) But unless you have access to heavy-duty machinery, it is unlikely you can create these habitats right now. In this assignment, you'll learn something you *can* do right now. It's called Flower Bombing.

1. Watch this Slideshow about Flower Bombing:



Slide 1 / 11 Google docs Menu

2. Now, make a flower bomb and take a picture of it using Photo Booth (Ask Mr. Lahana for the materials.)

3. Finally, write a blog post in which you describe **where** you will be throwing your flower bomb and **why**. Please include the picture of your flower bomb.

Amanda's Shooting game

v39



Assignments – Scratch Projects

Assignment 17 (7th and 8th Grade), Assignment 14 (6th Grade): Flower Tank



In this Scratch lesson, you'll be taking a tool for violence and changing it into a tool of beauty. Much of the programming skills you'll need for this lesson you already have! One of the differences in this lesson is you'll need to use a special folder filled with images that's not included in Scratch.

You can download the Flower Tank folder [HERE](#). Once you download it, double-click on it to open it.

[CLICK HERE FOR FLOWER TANK, PART 1](#)

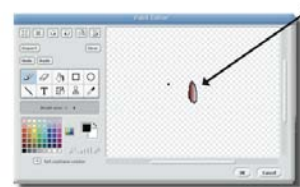
18. Drag the following code for your target to follow the mouse.



19. For the last set of steps we are going to create a seed that fires from the tank. Start by clicking "Paint new Sprite" and drawing a seed.



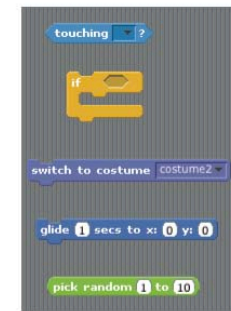
20. Draw a small seed.



Extra Credit: Soldiers & Speed

1. You'll notice in the "Flower Tank" folder that there are some male and female soldiers and male and female gardeners. Try to write a program that has the soldiers running around, but if they get hit with a seed, they turn into farmers.

Think about how you can use the following code blocks:

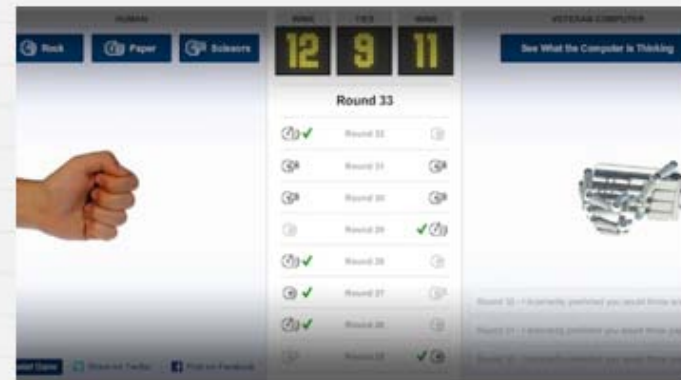


Artificial Intelligence

Read/Played a New York Times article about Watson
And its application to Rock, Paper, Scissors

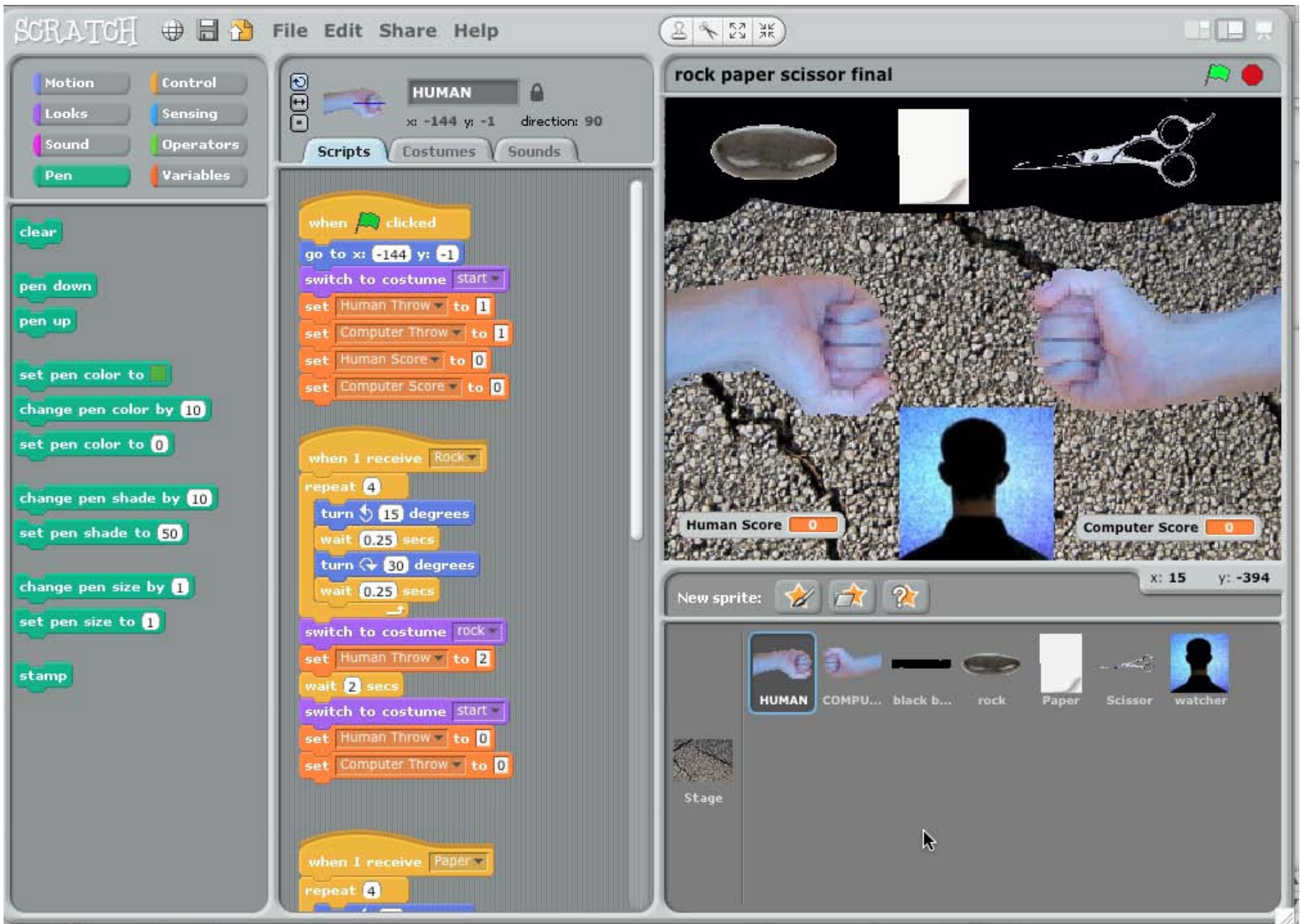


Assignment 20 (7th and 8th Grade), Assignment 16 (6th Grade): Rock-Paper-Scissors



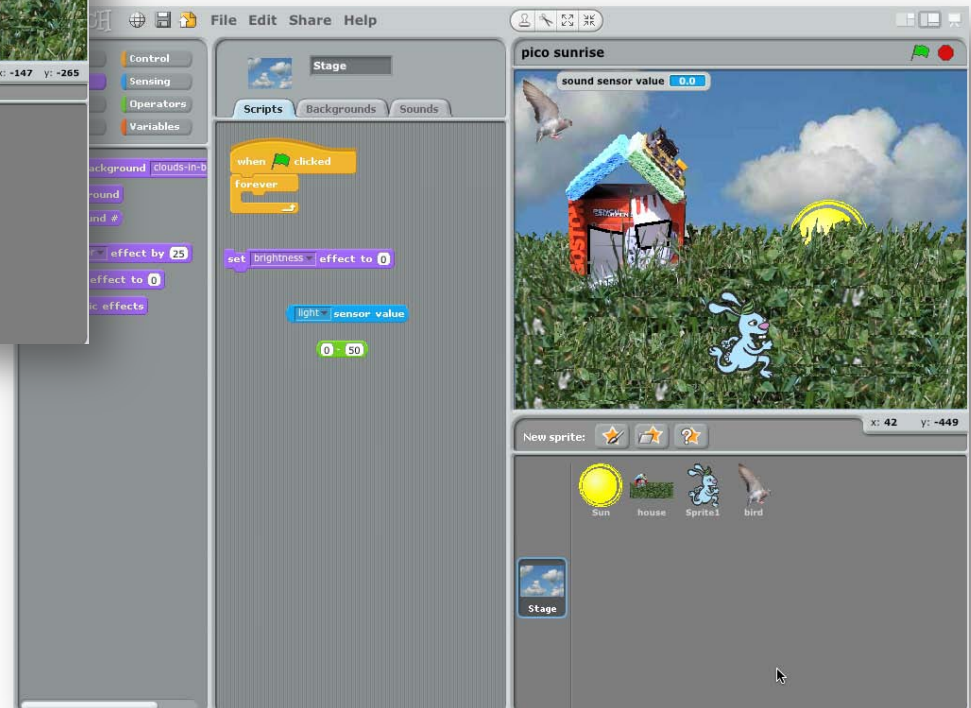
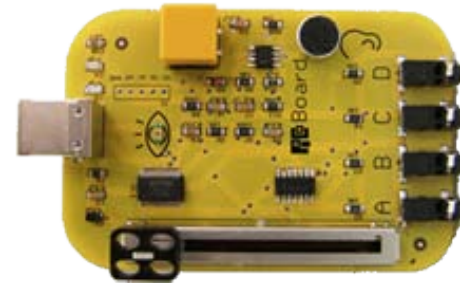
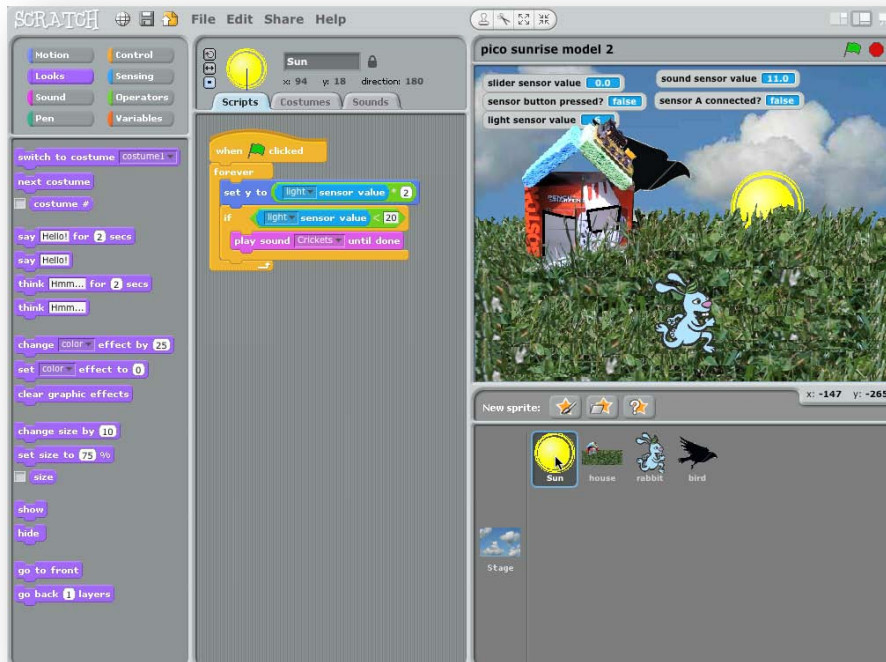
Recently, I saw a cool game on New York Time's Website. It had you playing Rock-Paper-Scissors against a smart computer. For this challenge, create a Rock-Paper-Scissors game using Scratch. Click [HERE](#) for Part 1 Directions. Click [HERE](#) for Part 2 Directions. Also, feel free to re-mix [THIS](#) game.

If you don't feel like making the Scratch game, write a blog post about **the strategies you think the computer is using to win.**



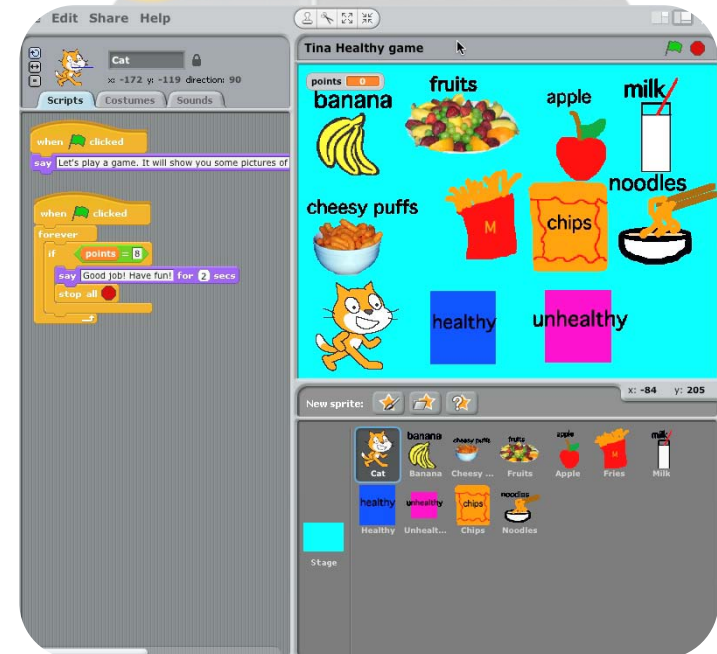
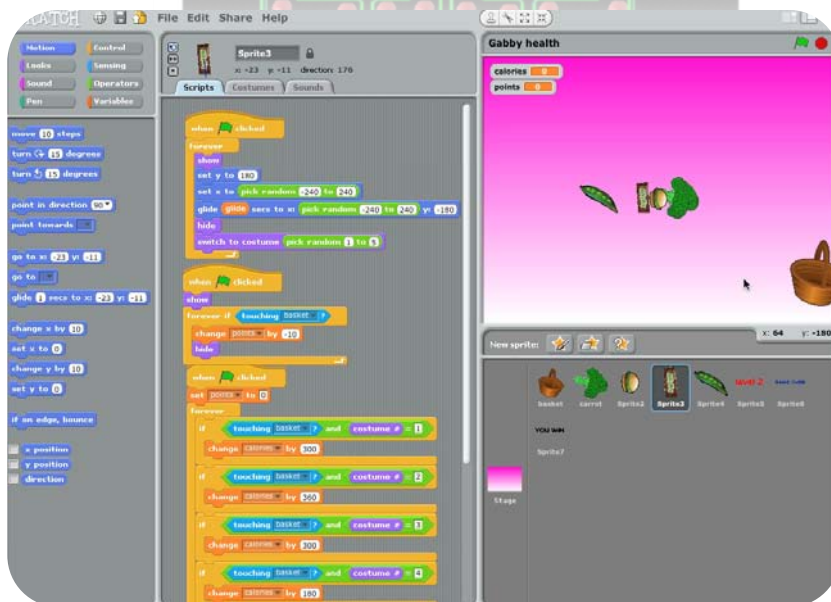
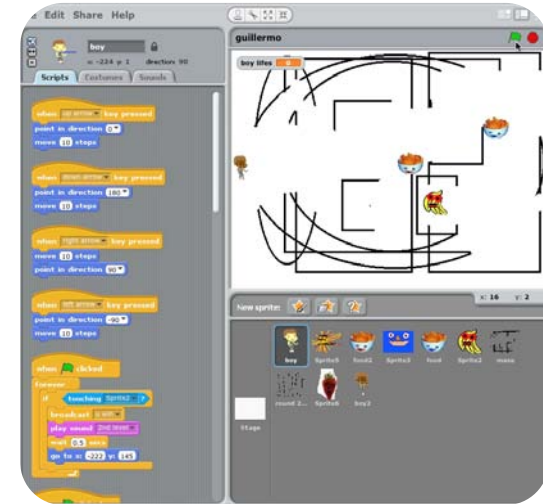
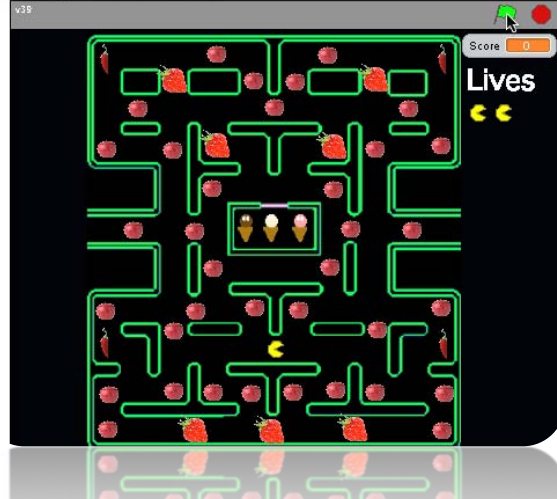
PicoBoard

Piecing together, debugging, and expanding using the PicoBoard



Healthy Eating Contest

Healthy Pac-Man V0.5



Serious Games: Ayiti



Future Directions

- Ayiti Adaptation
- More use of Scratch Board
- Osculator + Wiimote
- Classroom teacher Collaboration

Contact

- For more information go to:
Techbrarian.com
- Contact Info:
Lou.Lahana@gmail.com
- For more videos go to:
Vimeo.com/user4957028



Questions?

Scratch + Blogging = Social Action

Lou Lahana

Island School (New York, NY)

Techbrarian.com



Roland Park Country School

A college preparatory school educating girls and young women from Kindergarten through Grade 12

Show & Tell

Scratch @ RPCS

Laura Webber

Roland Park Country School (Baltimore, MD)

About RPCS

- K-12 Independent Girls' School
- Baltimore, Maryland
- Cross-Registration with Gilman (Boys' School) and Bryn Mawr (Girls' School)
- 3 courses
 - Introduction to Computer Science: Games & Graphics
 - Matlab
 - AP Computer Science

Why Scratch at RPCS?

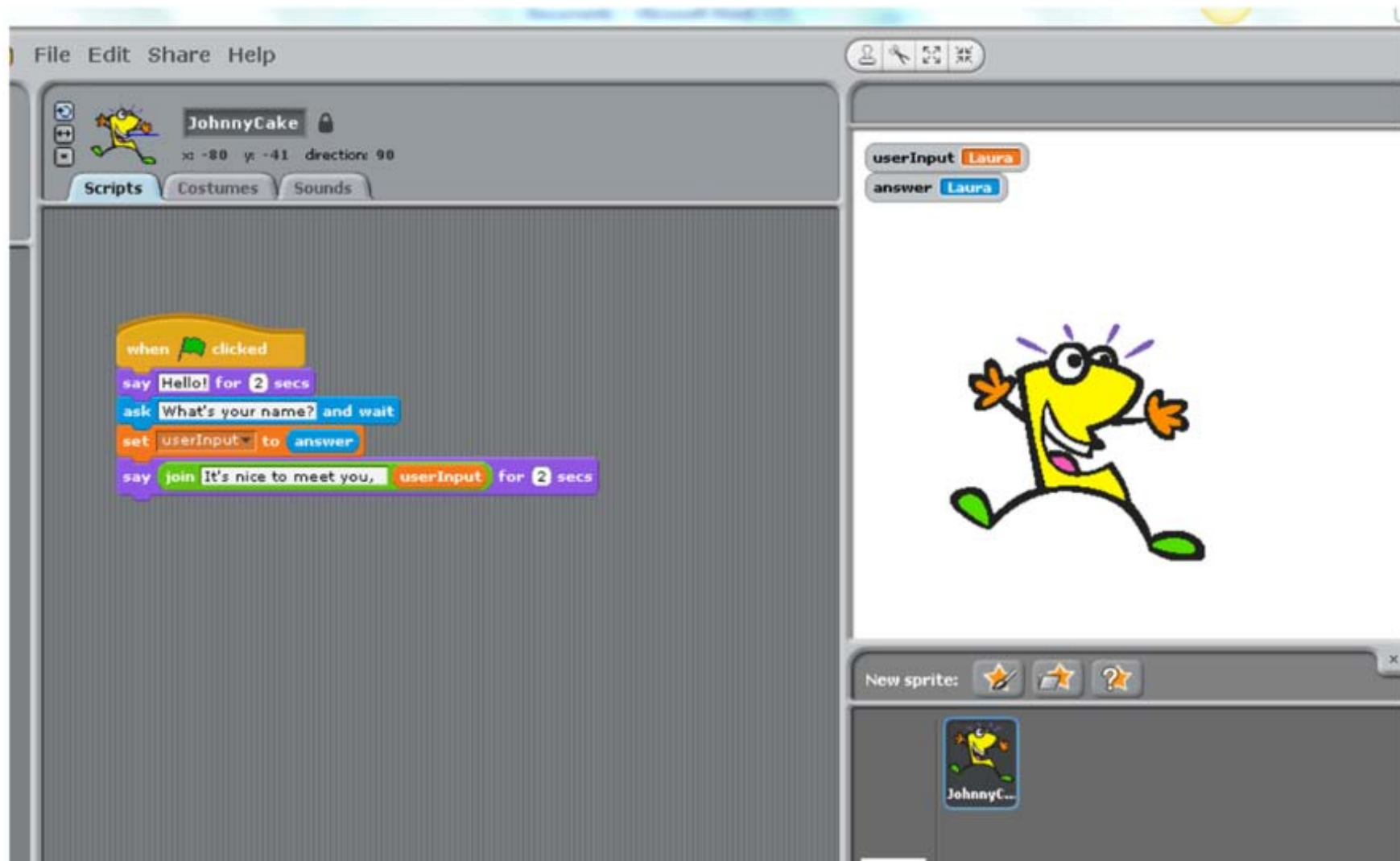
- No prerequisites for APCS
 - Intro is a new elective class
 - Not mandatory
 - 9th and 10th graders.
- Programming is really weird if you're thinking about semi-colons and brackets all the time.
- Girls respond to artistic, creative aspect of programming.
- Special 9th grade cohort of APCS especially responsive.

Scratch Topics for APCS

- Strings
- Math functions
- Variables
- Loops
- Conditionals
- User input
- Random behavior
- Lists
- Broadcasts

User Input: Strings

JohnnyCake Says Hello



User Input, Arithmetic, and Variables

Lester Does Math

The image shows a Scratch project titled "Lester Does Math". The character is a blue, round, spiky creature named Lester. The script is as follows:

```
when green flag clicked
  say The square root of 100 is... for 2 secs
  say sqrt of 100 for 2 secs
  wait 0.5 secs
  say The absolute value of -35 is... for 2 secs
  say abs of -35 for 2 secs
  wait 0.5 secs
  say 3 times 5 is... for 2 secs
  say 3 * 5 for 2 secs
  wait 0.5 secs

when space key pressed
```

The right panel shows the character Lester and two variables: **bookCost** with a value of 2, and **totalBooks** with a value of 4. The bottom right panel shows the "New sprite" button with three options: a pencil, a star, and a question mark.

User Input & Conditionals

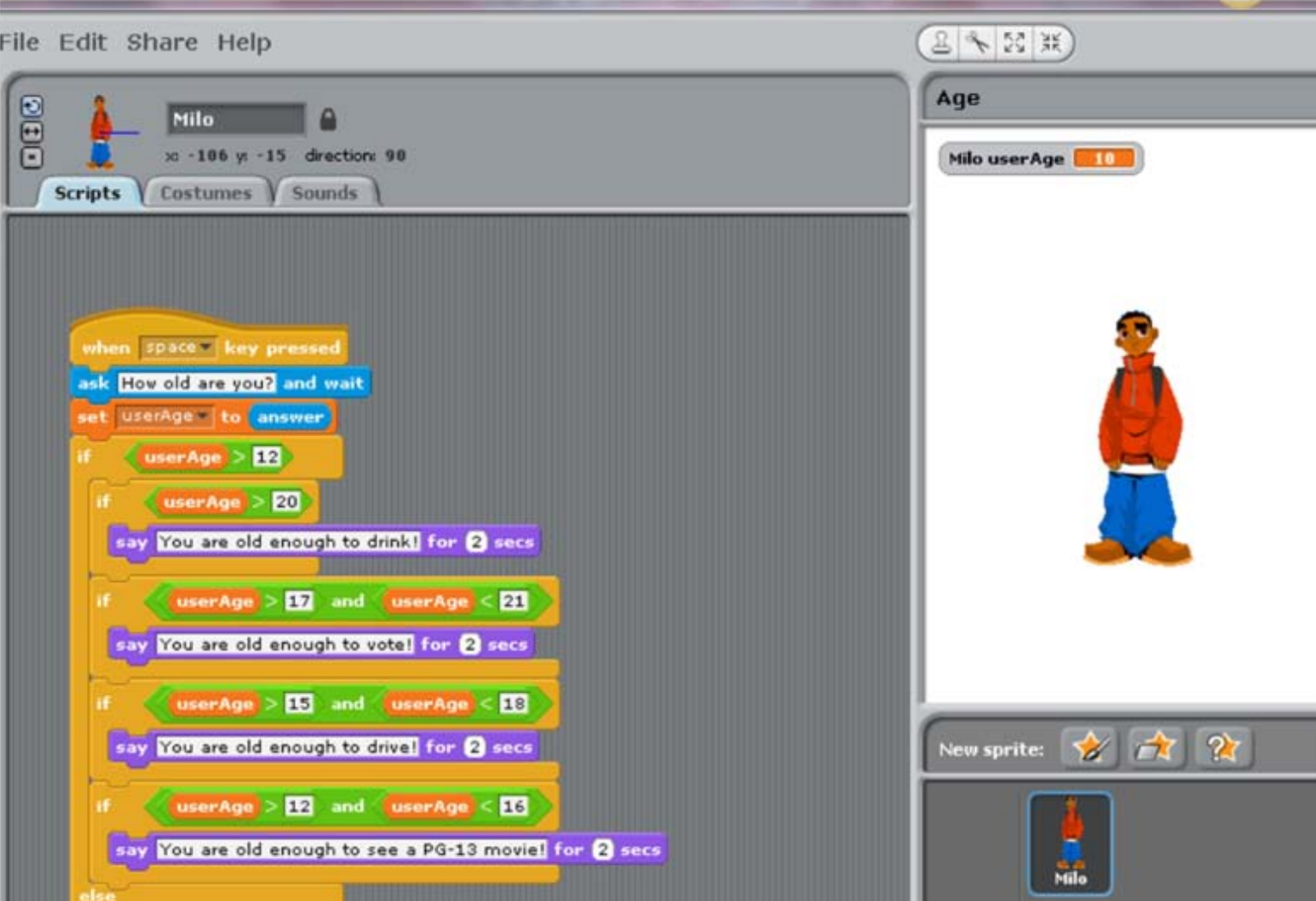
The image shows a Scratch project titled "Squirrel" with a squirrel sprite. The script area contains the following code:

```
when clicked
ask What's your name? and wait
set userName to answer
if userName = doug
say You are a loser! for 2 secs
else
say You are my best friend! for 2 secs
```

A yellow tooltip explains the "ask" block: "Asks for user's name and outputs a result based on input".

The right panel shows the "Squirrel" sprite with a text box labeled "Squirrel userName" containing the value "0". The bottom panel shows the "New sprite:" section with a "Squirrel" sprite selected.

Making Decisions with Conditionals

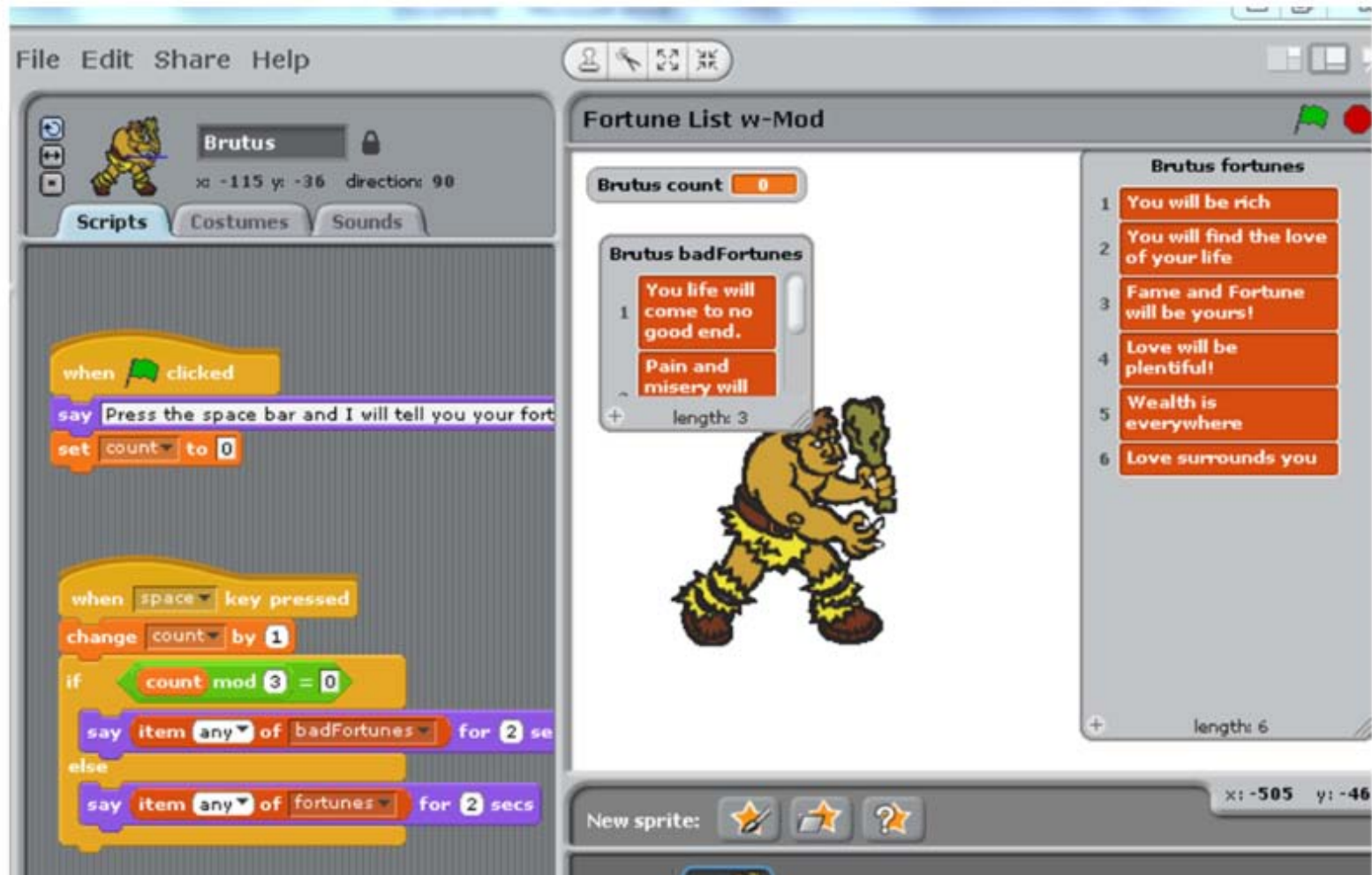


The image shows a Scratch project titled "Milo" with a script that uses conditionals to determine what to say based on a user's age. The script is as follows:

```
when space key pressed
ask How old are you? and wait
set userAge to answer
if <userAge > 12>
  if <userAge > 20>
    say You are old enough to drink! for 2 secs
  if <userAge > 17 and userAge < 21>
    say You are old enough to vote! for 2 secs
  if <userAge > 15 and userAge < 18>
    say You are old enough to drive! for 2 secs
  if <userAge > 12 and userAge < 16>
    say You are old enough to see a PG-13 movie! for 2 secs
else
```

The project also features a character named Milo, a boy with a red jacket and blue pants, standing on a white background. The "Age" monitor shows "Milo userAge" as 10. The "New sprite" button is visible at the bottom right.

Give a Bad Fortune Every 3 Time the User Asks

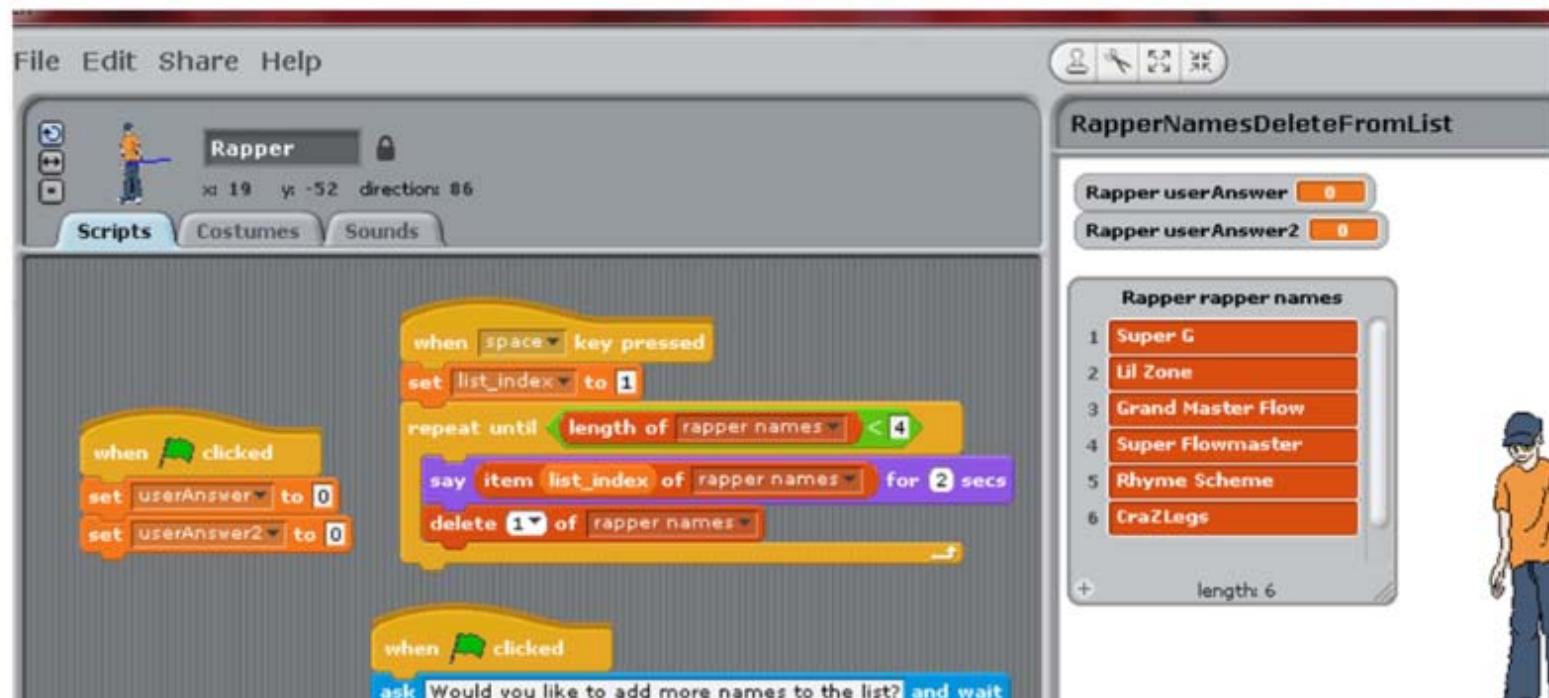


Rapper Names: Adding to and Deleting from a List

When the space bar is pressed, this program deletes three names from the top of the list and then stops. Each time the name is said, it is then deleted from the list.

When the green flag is clicked, it resets the two variables `userAnswer` and `userAnswer2` back to 0 and then asks the user if they would like to add more names to the list.

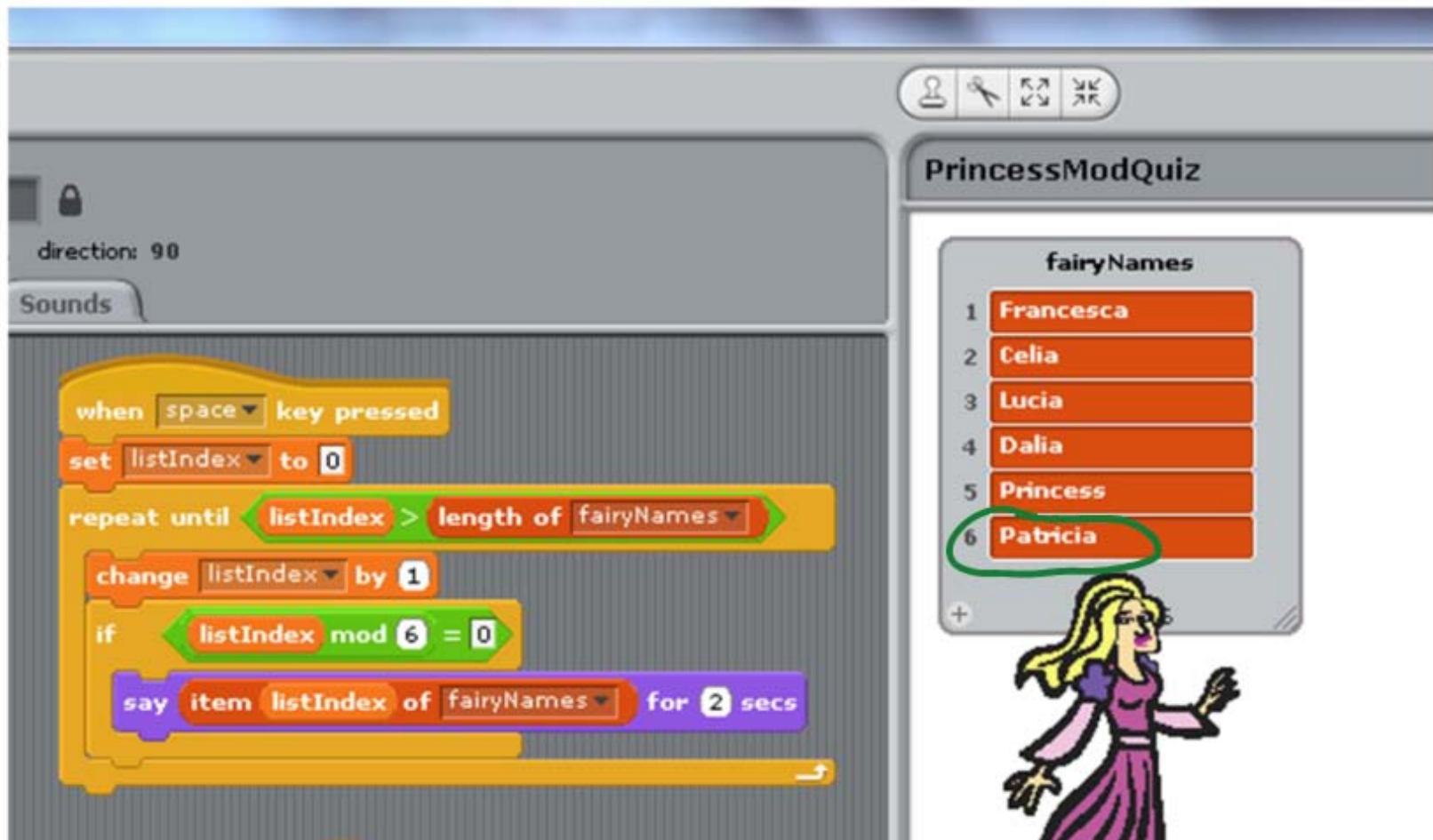
As long as the user doesn't press the 'x' key, the program adds the names the user types in to the bottom of the list. When the user presses the 'x' key, the program says goodbye and stops.



The image shows a Scratch project titled "Rapper Names". The stage features a character named "Rapper" with a skin tone of 19, a y-position of -52, and a direction of 86. The Scripts area contains three event-driven code blocks: a "when green flag clicked" block that sets `userAnswer` and `userAnswer2` to 0 and asks "Would you like to add more names to the list?"; a "when space key pressed" block that sets `list_index` to 1 and enters a loop that repeats until the length of the `rapper names` list is less than 4, where it says the item at `list_index` for 2 seconds and then deletes it; and a "when green flag clicked" block at the bottom. The right sidebar shows the "RapperNamesDeleteFromList" script area with two variables, `Rapper userAnswer` and `Rapper userAnswer2`, both set to 0. Below these is a list titled "Rapper rapper names" containing six items: Super G, Lil Zone, Grand Master Flow, Super Flowmaster, Rhyme Scheme, and CraZLegs. The list has a length of 6. A small character icon is visible on the right side of the interface.

Princess Quiz – Answer Key

1. When the space key is pressed, the Princess loops through the list until she finds a name whose index is divisible by 6 ($\text{listIndex} \bmod 6 = 0$). The only name that meets that criteria is "Patricia." So for this question, the Princess says the name "Patricia" and nothing else.



The image shows a Scratch script and data area for a quiz titled "PrincessModQuiz".

Script Area:

- when space key pressed
- set listIndex to 0
- repeat until listIndex > length of fairyNames
 - change listIndex by 1
 - if listIndex mod 6 = 0
 - say item listIndex of fairyNames for 2 secs

Data Area:

fairyNames

1	Francesca
2	Celia
3	Lucia
4	Dalia
5	Princess
6	Patricia

A green circle highlights the name "Patricia" at index 6. A cartoon princess character is shown at the bottom right.

 **Baby** 
x: 0 y: 0 direction: 90

Scripts Costumes Sounds

```
when clicked
ask Do you want a girl or a boy baby? and wait
set Gender to answer
set count to 0
if answer = girl
broadcast odd names
else
if answer = boy
broadcast even names
else
say Thank you for stopping by! for 2 secs
```

```
when I receive odd names
if Gender = girl
repeat until count > length of baby names
change count by 1
if count mod 2 = 1
say item count of baby names for 2 secs
```

```
when I receive even names
```

baby name generator

Baby Gender **girl**
count **7**



baby names	
1	Samantha
2	Jason
3	Karlie
4	Jake
+ length: 6	

New sprite:



Baby



Stage



Roland Park Country School

A college preparatory school educating girls and young women from Kindergarten through Grade 12

Questions?

Scratch @ RPCS

Laura Webber

Roland Park Country School (Baltimore, MD)

Questions?

- **Lisa Radden**
 - Boston Renaissance Charter Public School (Hyde Park, MA)
 - lradden@bostonrenaissance.com
- **Lou Lahana**
 - Island School (New York, NY)
 - Lou.Lahana@gmail.com
 - Techbrarian.com
- **Laura Webber**
 - Roland Park Country School (Baltimore, MD)
 - WebberL@rpcs.org

THANK YOU!

<http://scratched.media.mit.edu>

<http://scratched.eventbrite.com>

Next webinar: ScratchEd Resources

Monday, July, 25, 2011

7pm-8pm EST

<http://www.surveymonkey.com/s/2011-06-webinar>