

# Creating Video Games Using Scratch

Moe Perera  
@MoePerera

# What is Scratch?



Click on the link to visit the Scratch page:

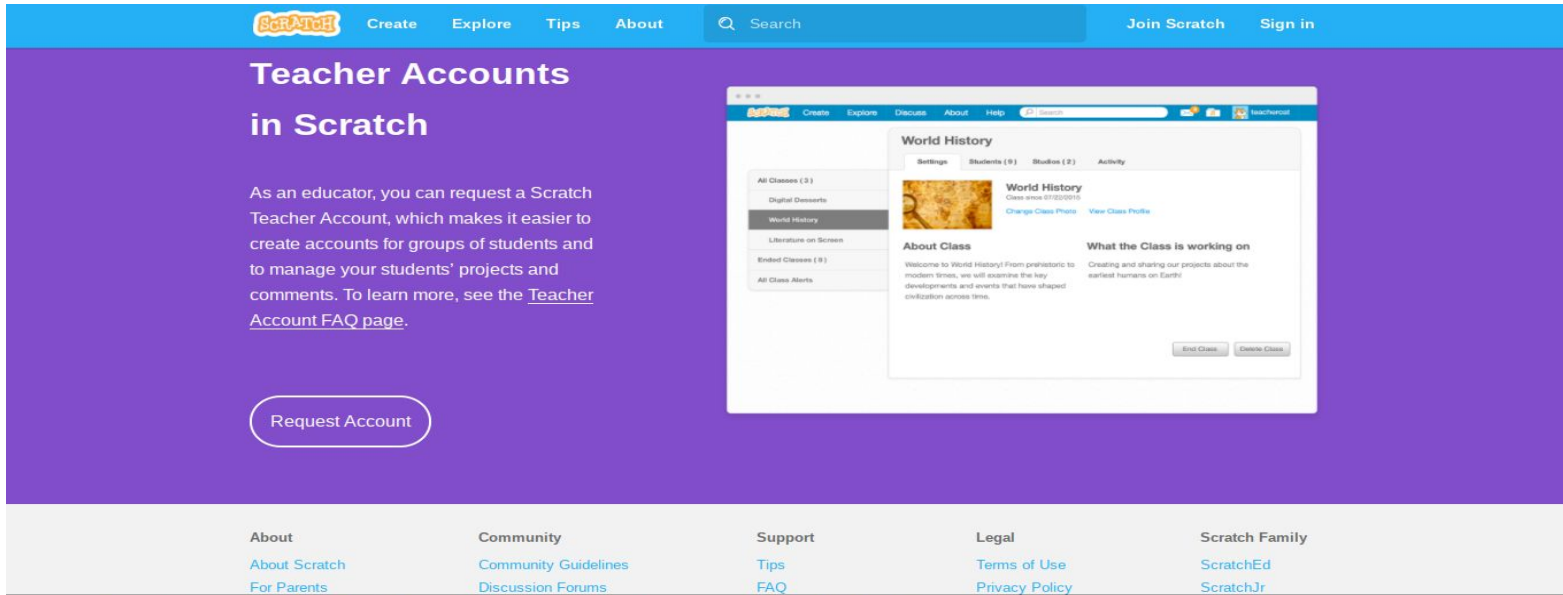
<https://scratch.mit.edu/>

Next step: Use Scratch



This video is a basic introduction for scratch.

# Creating a Scratch Teacher Account



The image shows a screenshot of the Scratch website. The top navigation bar is blue with the Scratch logo and links for 'Create', 'Explore', 'Tips', 'About', 'Search', 'Join Scratch', and 'Sign in'. The main content area has a purple background. On the left, the heading 'Teacher Accounts in Scratch' is followed by a paragraph explaining that educators can request a Scratch Teacher Account to manage student projects and comments. Below this is a 'Request Account' button. On the right, a screenshot of a Scratch class management page is shown. The page title is 'World History' and it includes tabs for 'Settings', 'Students (0)', 'Studio (2)', and 'Activity'. The 'About Class' section contains a welcome message and a description of the class's focus on world history. There are also buttons for 'End Class' and 'Delete Class'.

**Teacher Accounts in Scratch**

As an educator, you can request a Scratch Teacher Account, which makes it easier to create accounts for groups of students and to manage your students' projects and comments. To learn more, see the [Teacher Account FAQ page](#).

[Request Account](#)

**World History**

Settings Students (0) Studio (2) Activity

**World History**  
Class since 07/20/2015  
[Change Class Photo](#) [View Class Profile](#)

**About Class**

Welcome to World History! From prehistoric to modern times, we will examine the key developments and events that have shaped civilization across time.

**What the Class is working on**

Creating and sharing our projects about the earliest humans on Earth!

[End Class](#) [Delete Class](#)

**About**  
[About Scratch](#)  
[For Parents](#)

**Community**  
[Community Guidelines](#)  
[Discussion Forums](#)

**Support**  
[Tips](#)  
[FAQ](#)

**Legal**  
[Terms of Use](#)  
[Privacy Policy](#)

**Scratch Family**  
[ScratchEd](#)  
[ScratchJr](#)

Click on the image to create a Teacher Account

# Teacher Account FAQ

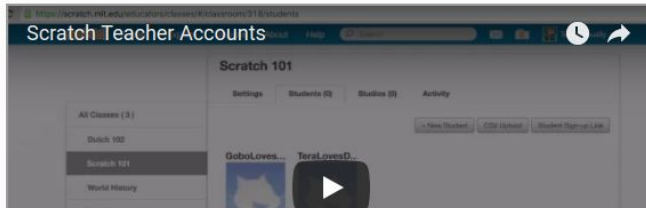
[Create](#)[Explore](#)[Tips](#)[About](#)[Join Scratch](#)[Sign in](#)

## Scratch Teacher Account FAQ

### Scratch Teacher Account FAQ

#### What are teacher accounts?

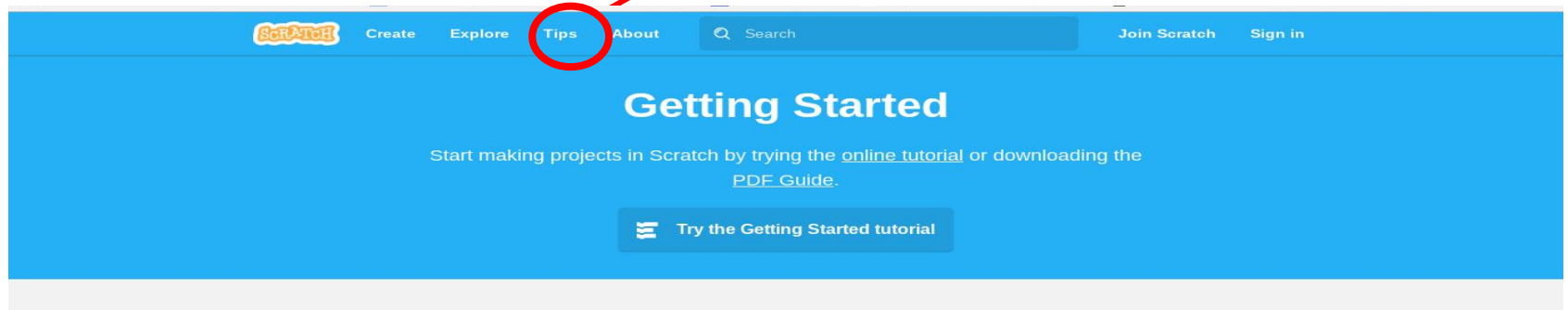
A Scratch Teacher Account provides teachers and other educators with additional features to manage student participation on Scratch, including the ability to create student accounts, organize student projects into studios, and monitor student comments. Learn more about Teacher Accounts in the video below:

[Scratch Teacher Account FAQ](#)[Student Accounts](#)[Community](#)

Click on the image to view the FAQ

# Starting to Program

Click on the “Tips” option.



# Starting to Program

These are step-by-step tutorials that will teach you how to program.

If you click on the the tutorial it, you will be redirected to the Scratch "Create" Page

SCRATCH Create Explore Tips About Search Join Scratch Sign in

What do you want to make with Scratch? For each activity, you can try the Tutorial, download a set of Activity Cards, or view the Educator Guide.

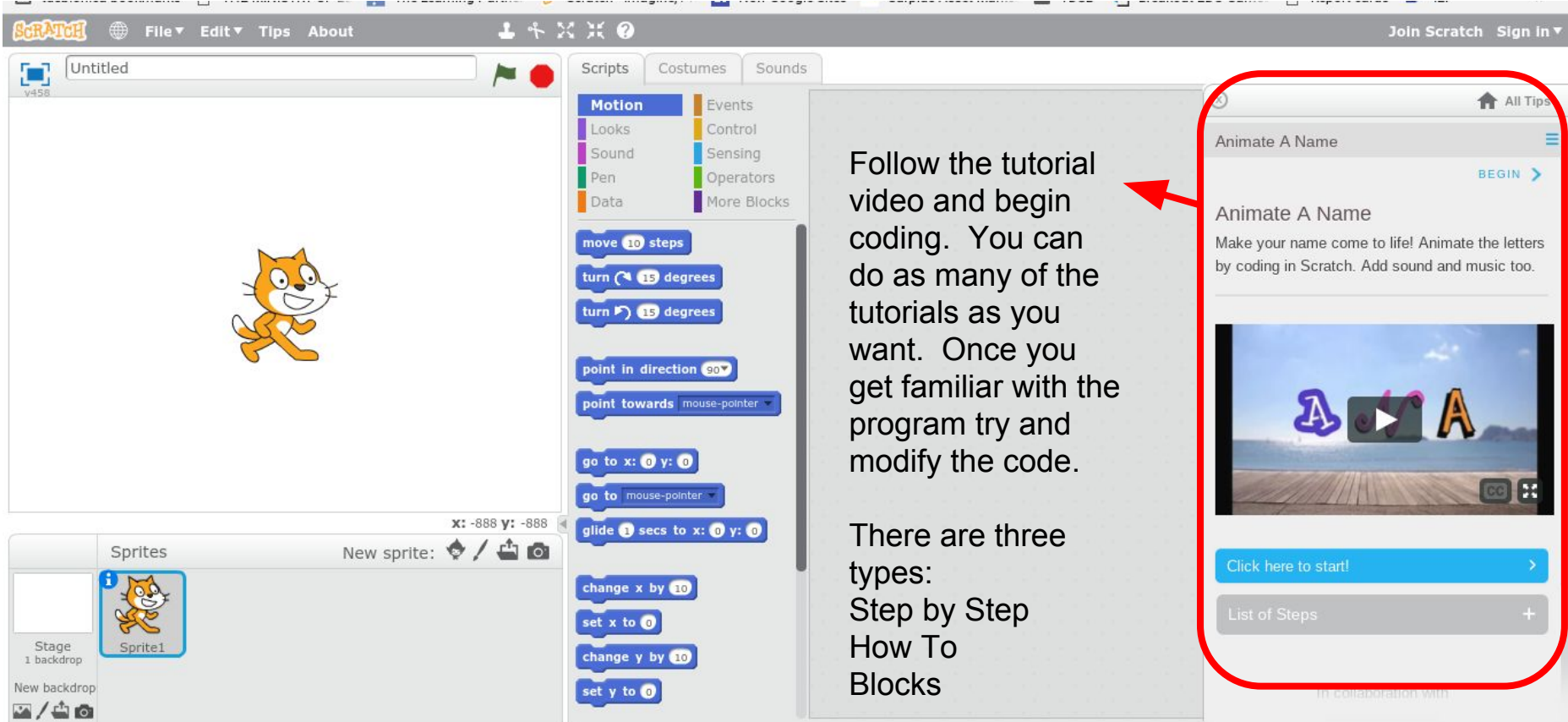
**Tutorial**  
**Animate a Name**  
Animate the letters of your username, initials, or favorite word.  
[See Cards and Guides](#)

**Tutorial**  
**Make It Fly**  
Animate the Scratch Cat, The Powerpuff Girls, or even a taco!  
[See Cards and Guides](#)

**Tutorial**  
**Make Music**  
Choose instruments, add sounds, and press keys to play music.  
[See Cards and Guides](#)

[https://scratch.mit.edu/projects/editor?pin\\_bar=fly](https://scratch.mit.edu/projects/editor?pin_bar=fly)

# Starting to Program



The image shows the Scratch programming environment. On the left is the main workspace with a cat sprite. In the center is the block palette with categories like Motion, Looks, Sound, Pen, Data, Events, Control, Sensing, Operators, and More Blocks. On the right is a tutorial panel for 'Animate A Name' which includes a video player and a 'Click here to start!' button. A red arrow points from the text in the center to the tutorial panel.

Scratch

File Edit Tips About

Join Scratch Sign In

Untitled

Scripts Costumes Sounds

Motion

- Events
- Control
- Sensing
- Operators
- More Blocks

move 10 steps

turn 15 degrees

turn 15 degrees

point in direction 90

point towards mouse-pointer

go to x: 0 y: 0

go to mouse-pointer

glide 1 secs to x: 0 y: 0

change x by 10

set x to 0

change y by 10

set y to 0

Follow the tutorial video and begin coding. You can do as many of the tutorials as you want. Once you get familiar with the program try and modify the code.

There are three types:  
Step by Step  
How To  
Blocks

Animate A Name

BEGIN

Animate A Name

Make your name come to life! Animate the letters by coding in Scratch. Add sound and music too.

Click here to start!

List of Steps



# Explore Scratch to get IDEAS

Scratch Create Explore Tips About Search Join Scratch

## Explore

Projects Studios

All Animations Art Games Music Stories Tutorials Trending

**Galactic Rush**  
Will\_Wam

**What Happened after The Dhill**  
Dhilly

**Wandering Knight - World**  
Hobson-TV

**2D Super Mario Odyssey**  
Brad-Games

**Mining Ninja?**

**Galactic Rush Hooked**

**YOU CANNOT ESCAPE WINDOWS**

**SCRATCH: STORY MODE SEASON TWO**

**Different types of Scratch programs. Have your students explore these types of games to see what they want to create.**

# Planning code

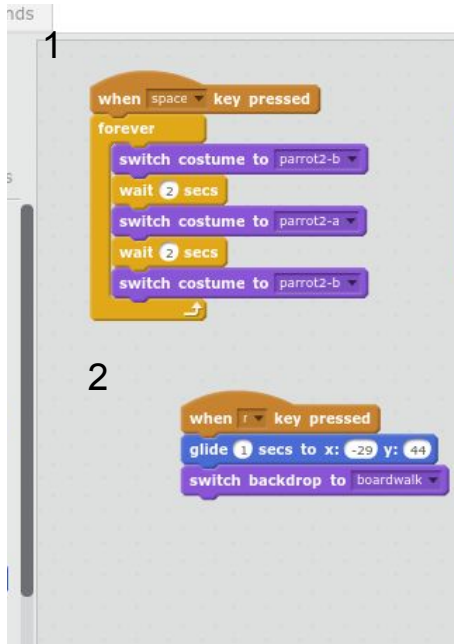
I found it helpful for students to write a procedural writing piece for each section of code. It allowed my Special Education students to articulate in words what they want to happen. This help me try and figure out why the code did not work.

Example: When I press 'green flag' the cat will move to the right 100 steps

There are multiple ways to get the sprite to do something.



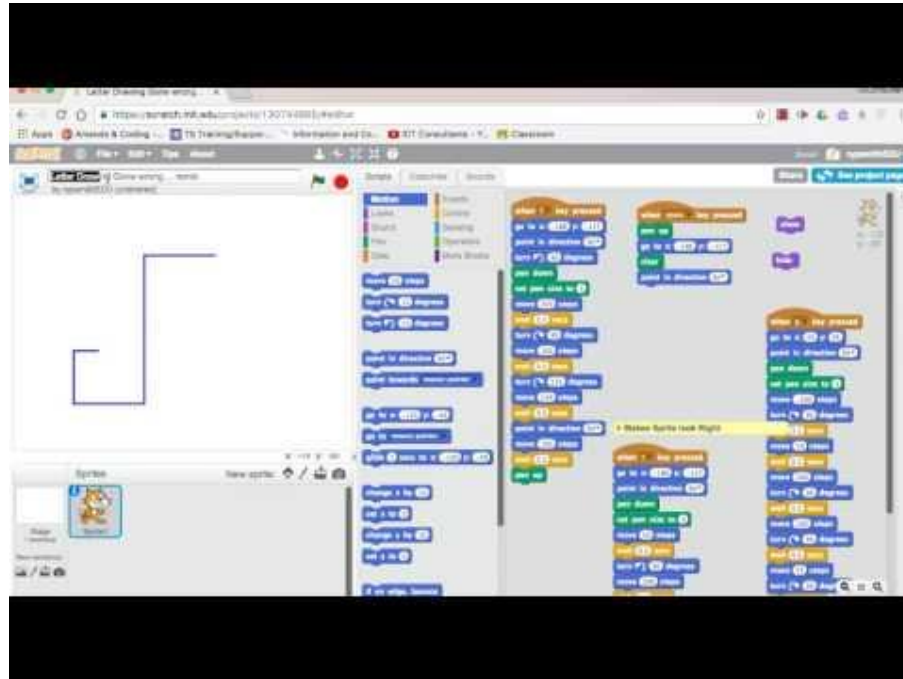
# Planning code



1. When the spacebar is pressed the sprite will switch to costume A, wait 2 seconds and switch to costume B, wait two seconds and switch to costume A. This will happen forever.
2. When the r key is pressed, the sprite will go to location (-29,44). **This is a reset. It is important to create a reset when you have sprites moving. This brings everything back to the starting position.**

# Remix codes

The Scratch program allows students to use the code created by the community. You are able to 'remix' the code and incorporate it in your own project.



# Remixing

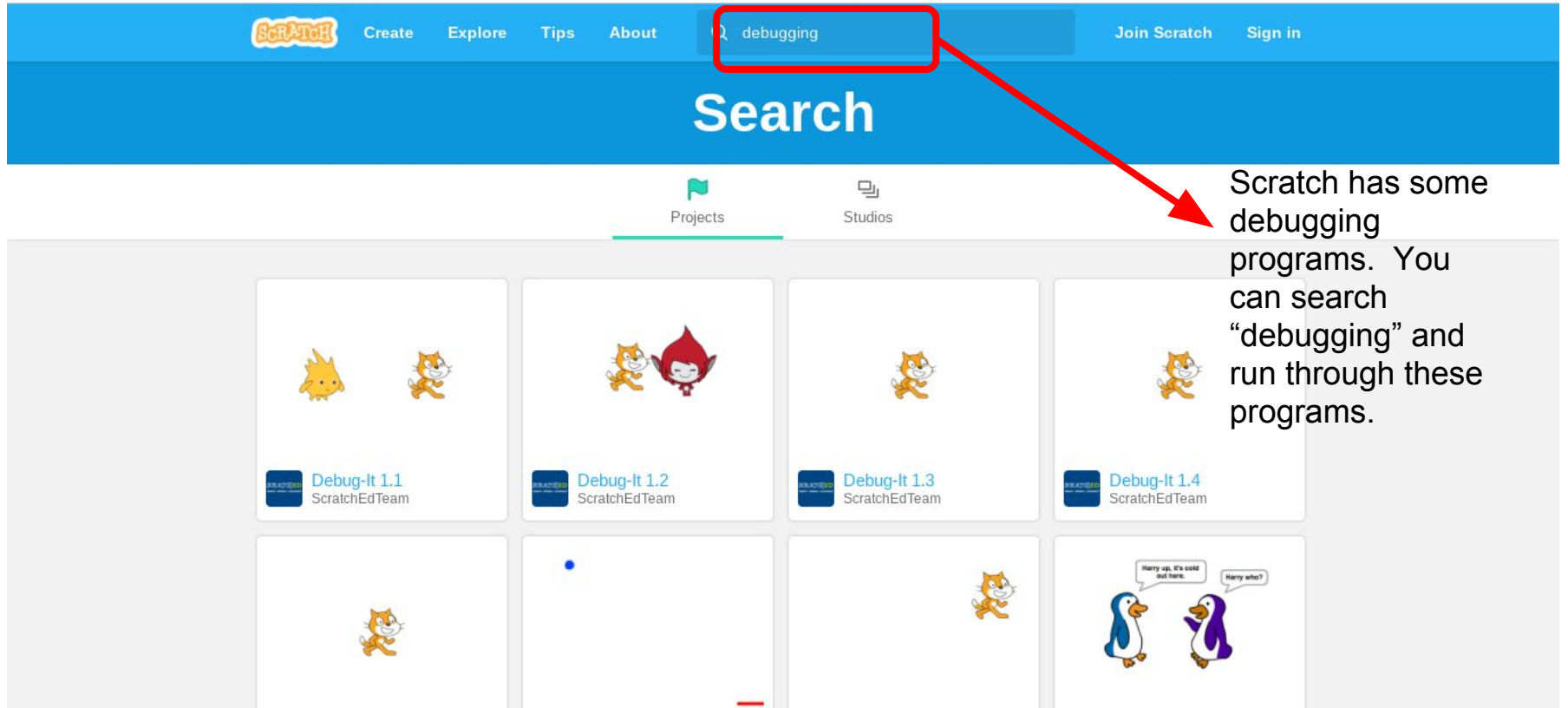
This is the  
“Remix”  
button. Click on  
this to save the  
program

The image shows the Scratch IDE interface for a project titled "Gobasketball" by GameBakery. The main stage displays a basketball hoop and a ball. The left sidebar shows the "Sprites" panel with a "Basketball" sprite selected. The right sidebar shows the "Scripts" panel with a "Remix" button highlighted by a red square and a red arrow pointing to it from the text above. The main workspace shows a complex script with various blocks including "when I receive", "change", "forever", "if", "touching", "play sound", "change", "when I receive", "set", "go to x:", "set", "change", "when I receive", "repeat until", "if", "touching", "change", "change", "wait", "if", and "broadcast".

# Debugging

Debugging is a really important skill when you code. Debugging is process f figuring out why the code does not perform the task as intended. Debugging is the reason why I have my students write out the program using words before they program. It allows the students to explain what is supposed to happen in that segment of code.

# Debugging



The image shows the Scratch website's search interface. At the top, a blue navigation bar contains the Scratch logo, links for 'Create', 'Explore', 'Tips', and 'About', a search bar with the text 'debugging' (highlighted by a red box), and links for 'Join Scratch' and 'Sign in'. Below the navigation bar, the word 'Search' is displayed in large white text. Underneath, there are two tabs: 'Projects' (selected) and 'Studios'. The main content area displays a grid of search results. The first row contains four project cards, each titled 'Debug-It 1.x' (where x is 1, 2, 3, or 4) and attributed to 'ScratchEdTeam'. Each card features a Scratch cat icon. The second row shows the beginning of another set of results, including a card with a Scratch cat icon and a card with two penguins and speech bubbles.

Scratch has some debugging programs. You can search “debugging” and run through these programs.

# Sample Debugging Program

Scratch

Create

Explore

Tips

About

Search

Join Scratch

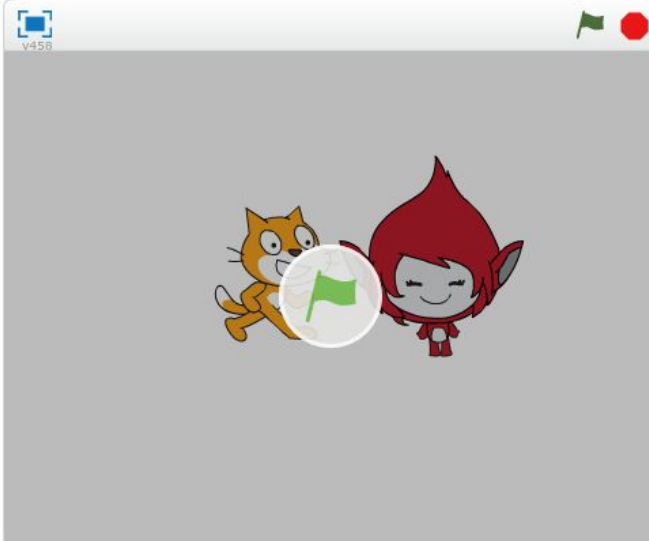
Sign in

## Debug-It 1.2

by ScratchEdTeam

1 scripts  
2 sprites

See inside



### Instructions

In this project, when the green flag is clicked, the Scratch Cat should start on the left side of the stage, say something about being on the left side, glide to the right side of the stage, and say something about on the right side.

It works the first time the green flag is clicked, but not again.

How do we fix the program?

### Notes and Credits

This debugging challenge is part of Week 1, Day 4 activities for the Creative Computing Online Workshop.

debugit challenge debugging

Shared: 24 May 2013

Modified: 5 Jun 2014

★ 519

♥ 637

👁 131524

🌳 23287



# Good Luck

Good Luck, Enjoy  
watching your students  
create using Scratch.

