

Creating Video Games Using Scratch

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What is Scratch?



Click on the link to visit the Scratch page:

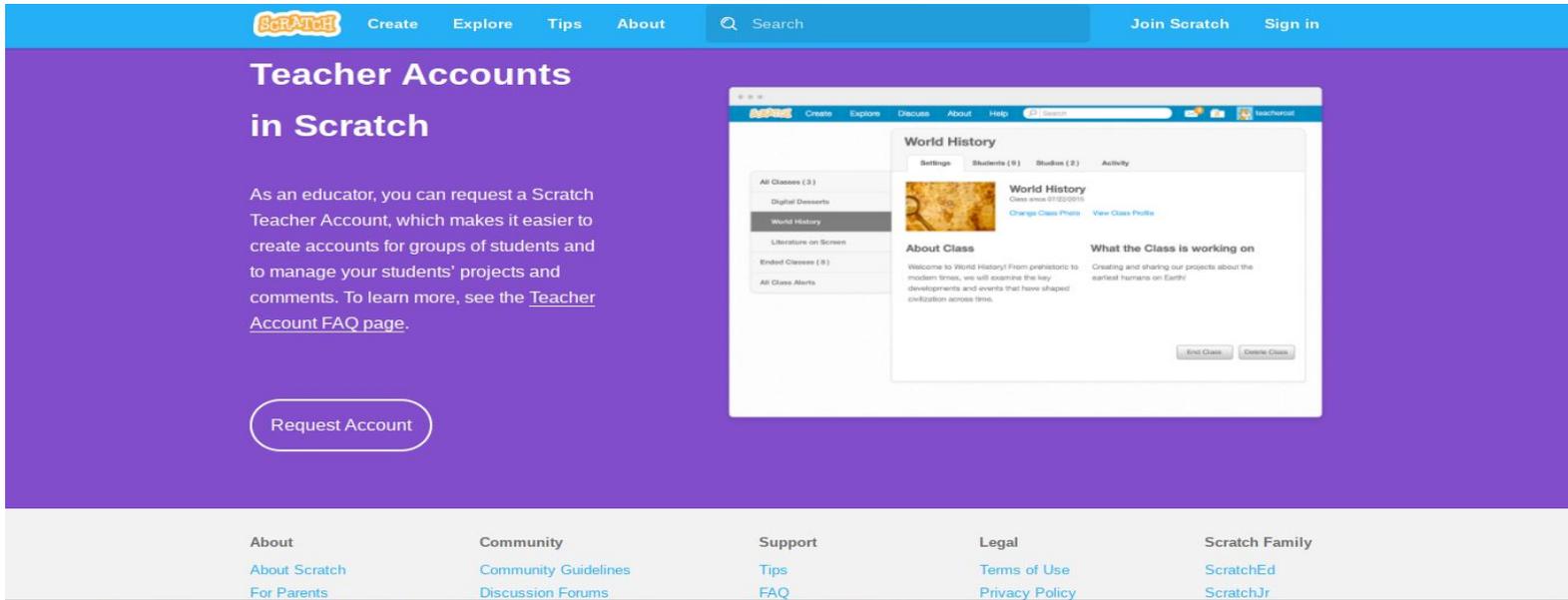
<https://scratch.mit.edu/>

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 displayed. Below it, a paragraph explains that educators can request a Scratch Teacher Account to manage student projects and comments, with a link to the 'Teacher Account FAQ page'. A 'Request Account' button is located below the text. On the right, a screenshot of the Scratch interface shows a class management page for 'World History'. The page includes a sidebar with 'All Classes (3)', 'Digital Desserts', 'World History', 'Literature on Scratch', 'Ended Classes (8)', and 'All Class Alerts'. The main content area shows the 'World History' class details, including a class photo, a description of the class, and 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

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

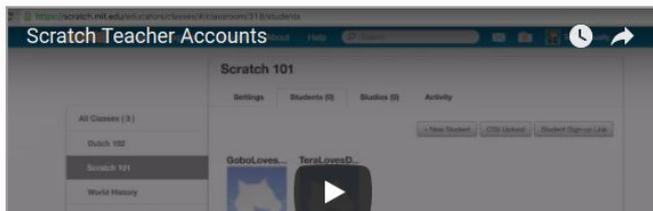
[Create](#)[Explore](#)[Tips](#)[About](#)[Join Scratch](#)[Sign in](#)

Scratch Teacher Account FAQ

Scratch Teacher Account FAQ

What are teacher accounts?

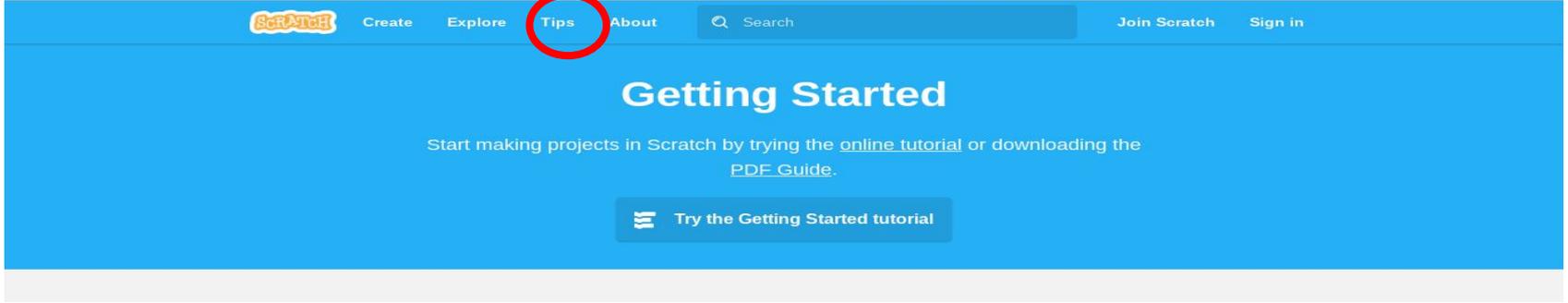
A Scratch Teacher Account provides teachers and other educators with additional features to manage student participation on Scratch, including the ability to create student accounts, organize student projects into studios, and monitor student comments. Learn more about Teacher Accounts in the video below:

[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.

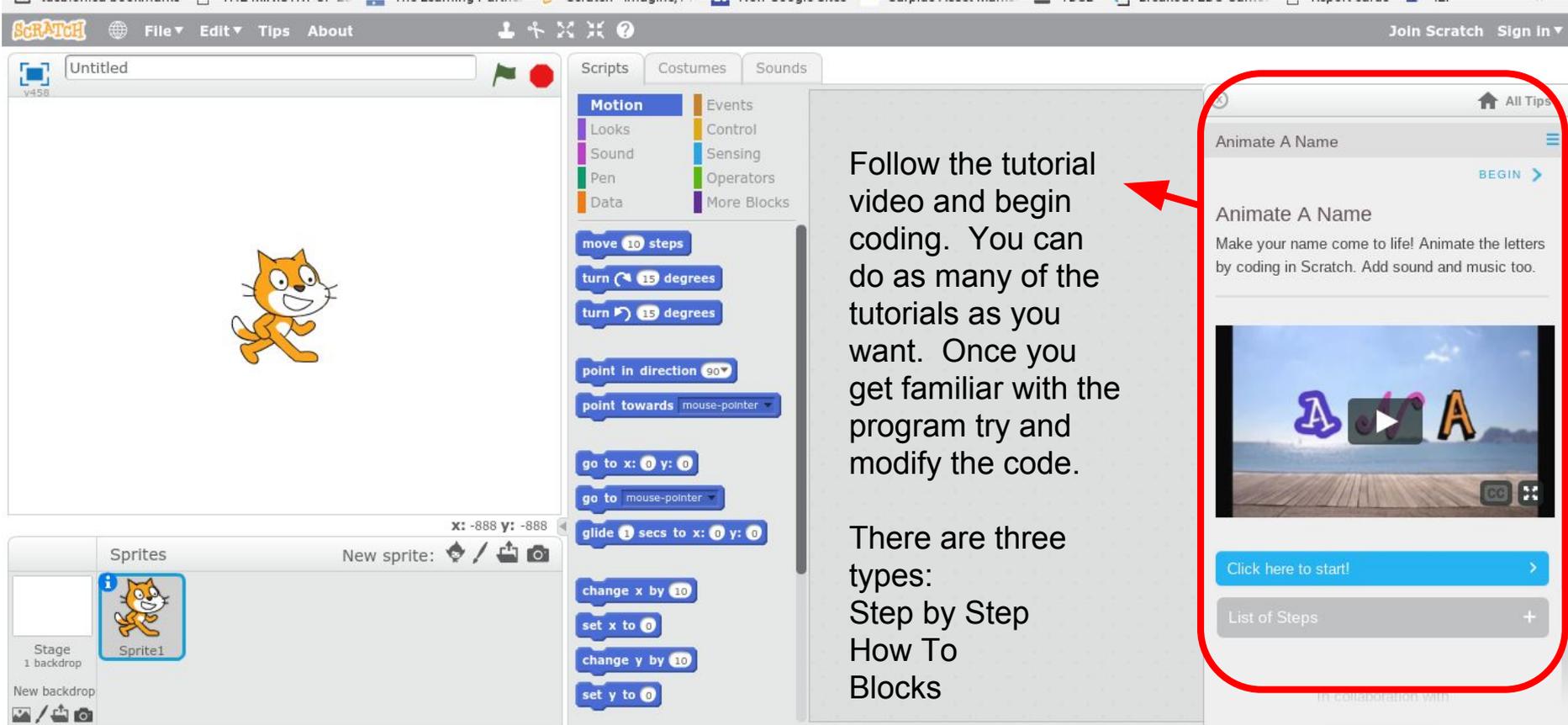
Tutorial
Animate a Name
Animate the letters of your username, initials, or favorite word.
[See Cards and Guides](#)

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

Starting to Program



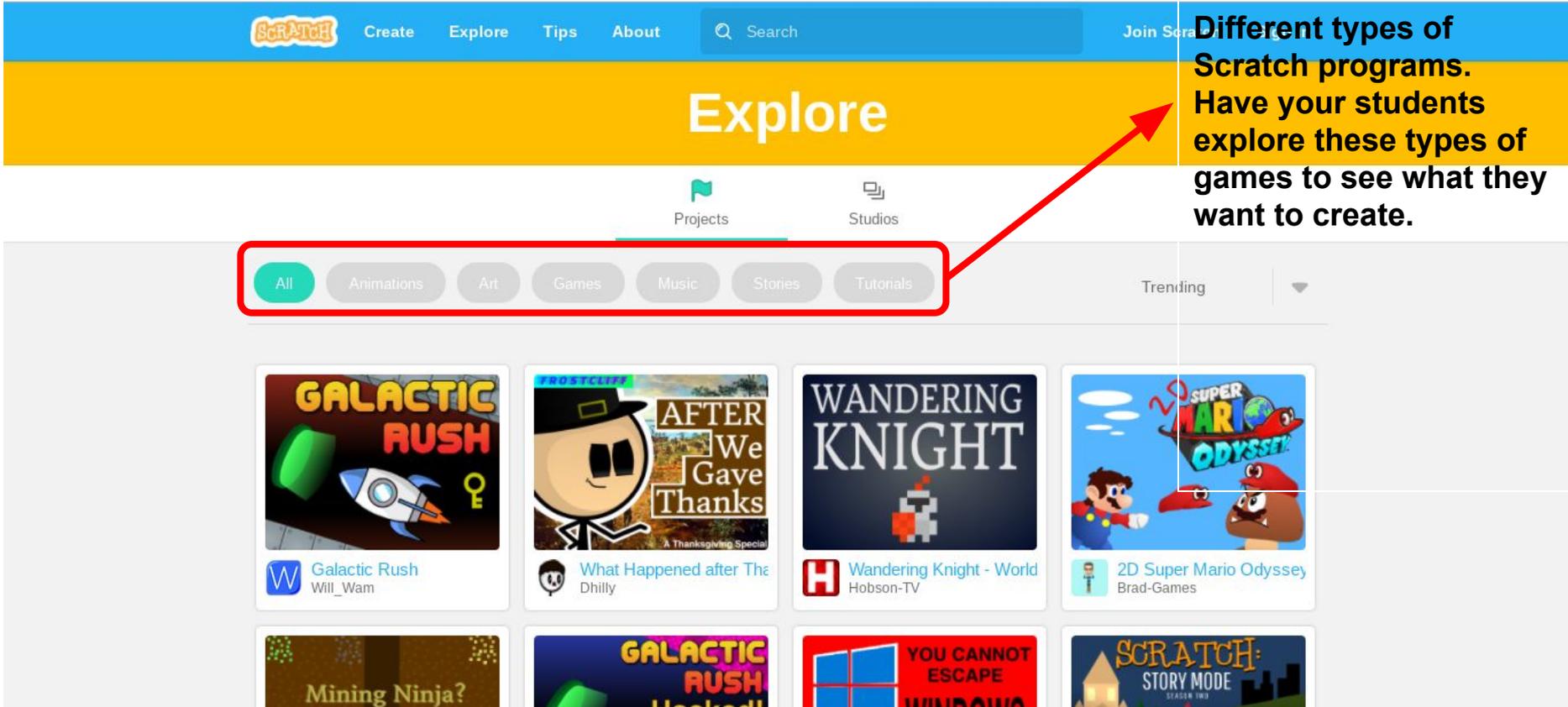
The image shows the Scratch programming environment. The main workspace contains a cat sprite. The block palette on the right lists categories: Motion, Looks, Sound, Pen, Data, Events, Control, Sensing, Operators, and More Blocks. The 'Animate A Name' tutorial panel is highlighted with a red border and contains the following text:

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

The tutorial panel also includes a video player with a play button and a 'Click here to start!' button.

Explore Scratch to get IDEAS



The screenshot shows the Scratch website's 'Explore' page. At the top, there is a blue navigation bar with the Scratch logo, 'Create', 'Explore', 'Tips', 'About', a search bar, and 'Join Scratch'. Below this is a yellow banner with the word 'Explore' in white. Underneath the banner are two icons: 'Projects' (a green flag) and 'Studios' (a blue folder). A red box highlights a row of category filters: 'All', 'Animations', 'Art', 'Games', 'Music', 'Stories', and 'Tutorials'. A red arrow points from this box to a text box on the right. Below the filters, there are several project thumbnails, each with a title and creator name. The first row includes 'Galactic Rush' by Will_Wam, 'What Happened after The Dhill' by Dhilly, 'Wandering Knight - World' by Hobson-TV, and '2D Super Mario Odyssey' by Brad-Games. The second row shows 'Mining Ninja?', another 'Galactic Rush' project, 'YOU CANNOT ESCAPE WINDOW', and '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

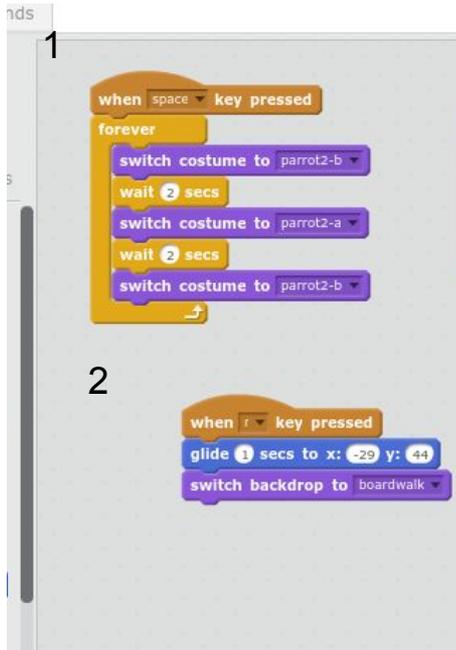
I found it helpful for students to write a procedural writing piece for each section of code. It allowed my Special Education students to articulate in words what they want to happen. This help me try and figure out why the code did not work.

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.**

Remixing

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

The image shows the Scratch programming environment. The top bar includes the Scratch logo, menu options (File, Edit, Tips, About), and user options (Join Scratch, Sign In). The project title is "Gobasketball" by GameBakery. The stage shows a basketball hoop and a ball. The Sprites area contains a Basketball sprite and a fireball sprite. The Scripts area is open, showing a complex script for the basketball game. A red arrow points to the "Remix" button in the top right corner of the Scripts area.

Scratch

File Edit Tips About

Join Scratch Sign In

Gobasketball
by GameBakery

Total Points 3

2

Motion

Events

Looks

Control

Sound

Sensing

Pen

Operators

Data

More Blocks

move 10 steps

turn 15 degrees

turn 15 degrees

point in direction 90°

point towards mouse-pointer

go to x: -168 y: -100

go to mouse-pointer

glide 1 secs to x: -168 y: -100

change x by 10

set x to 0

change y by 10

set y to 0

when I receive message1

change by 1

forever

if touching Sprite1? then

play sound boing

change yseppd by round yseppd - yseppd - yseppd * 1.75

else

change yseppd by -1

when I receive begin

wait 1 secs

broadcast message1

when I receive begin

wait 1 secs

broadcast message1

when clicked

when I receive .green

bro

set yseppd to 0

go to x: -168 y: -100

set to 0

change yseppd by 20

when I receive begin

repeat until = 1

if touching Sprite1? then

when I receive begin

forever

if yseppd = 0 or yseppd = 1

wait 1.5 secs

if yseppd = 0 or yseppd = 1 then

broadcast stop

Sprites

New sprite:

Basketball

Sprite1

Sprite2

Sprite3

Sprite4

Stage
1 backdrop

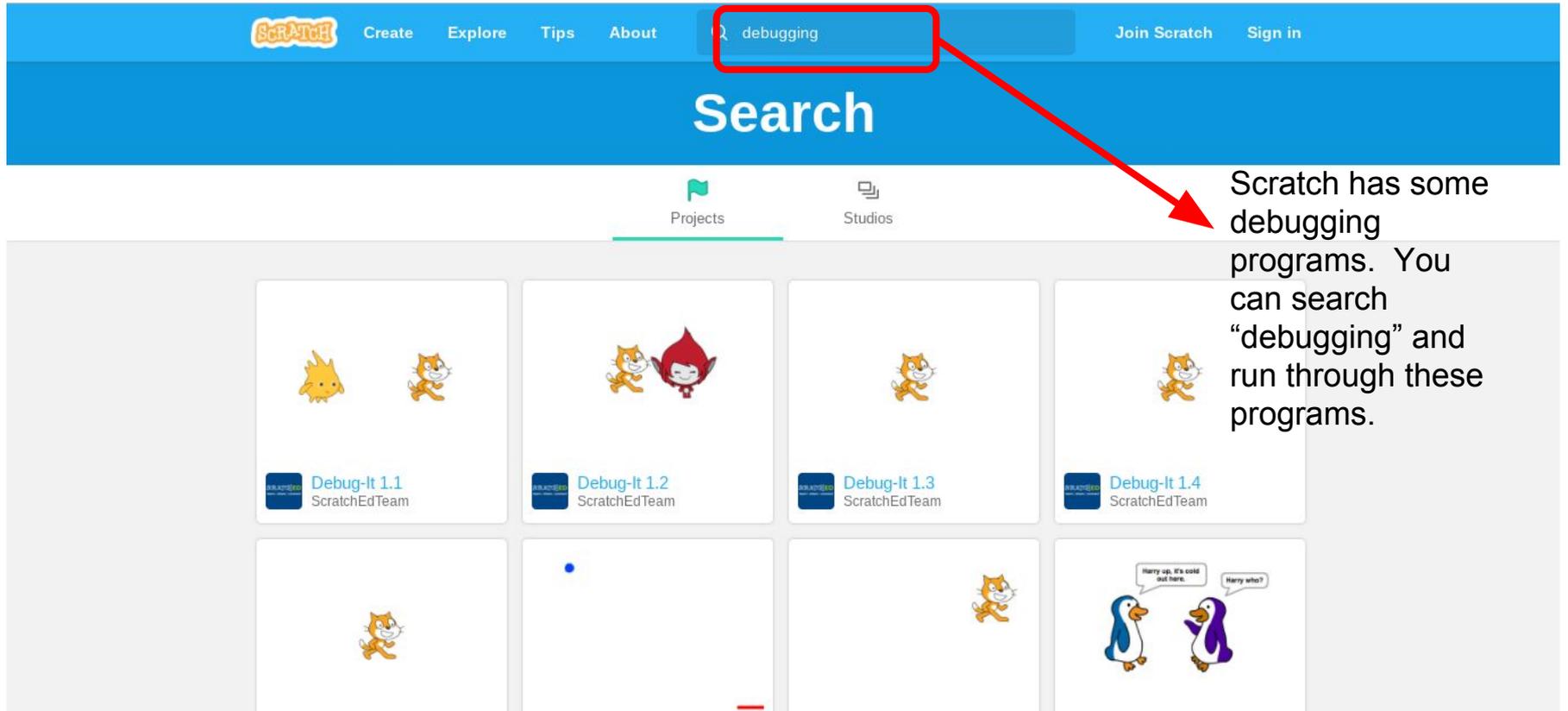
New backdrop

x: 240 y: 103

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

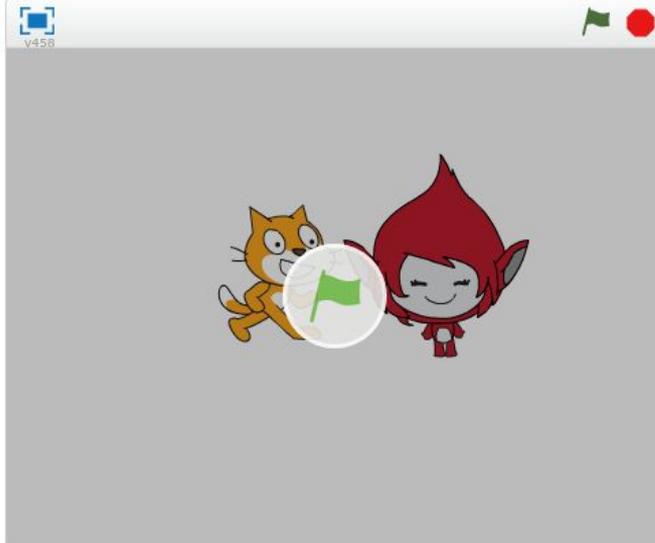
by ScratchEdTeam

1 scripts

2 sprites



v458



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.

