



# Sowing the Seeds for a More Creative Society

Mitchel Resnick  
MIT Media Lab



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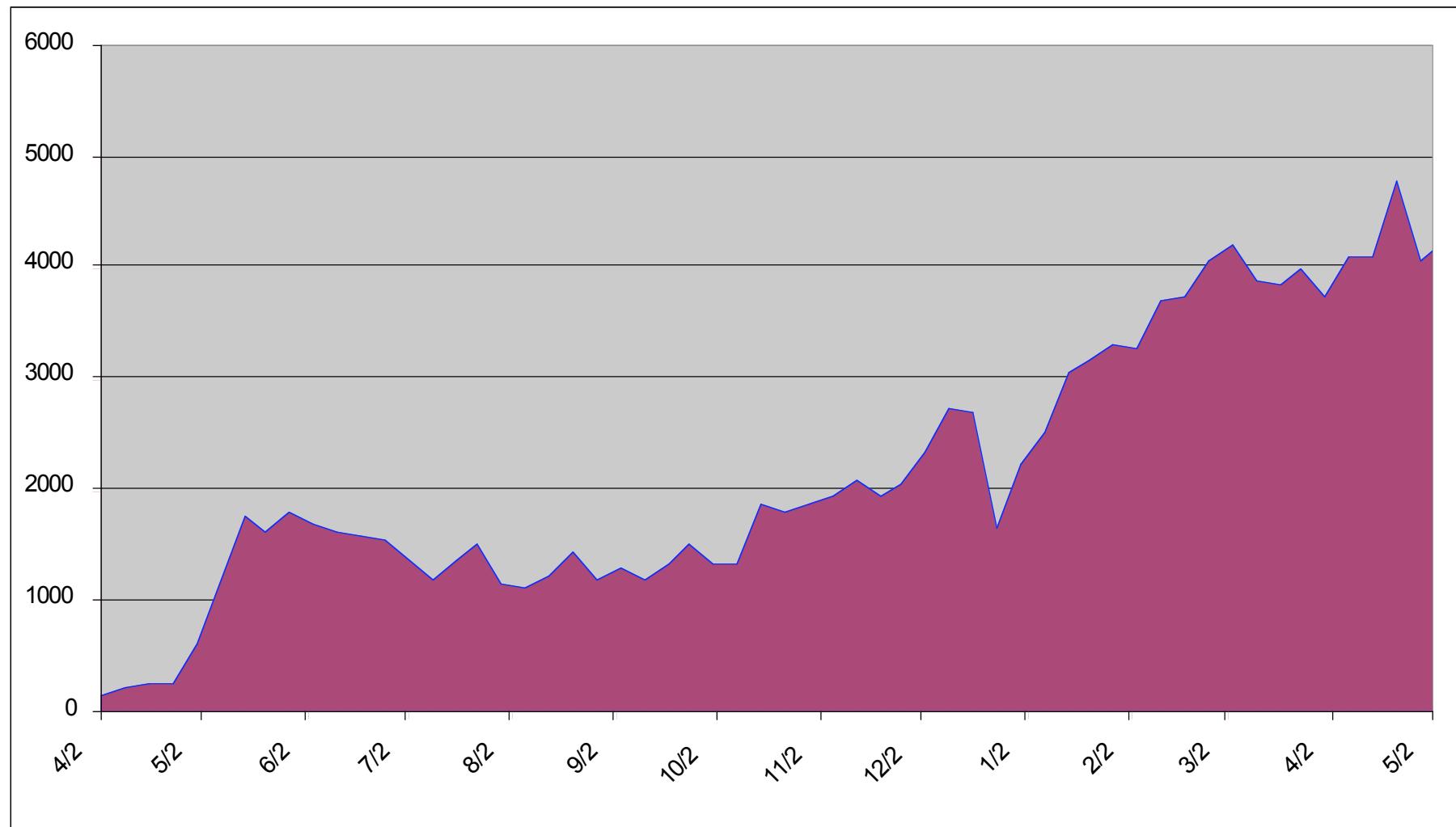
**More than 350,000 downloads of the software**

**More than 175,000 projects uploaded**

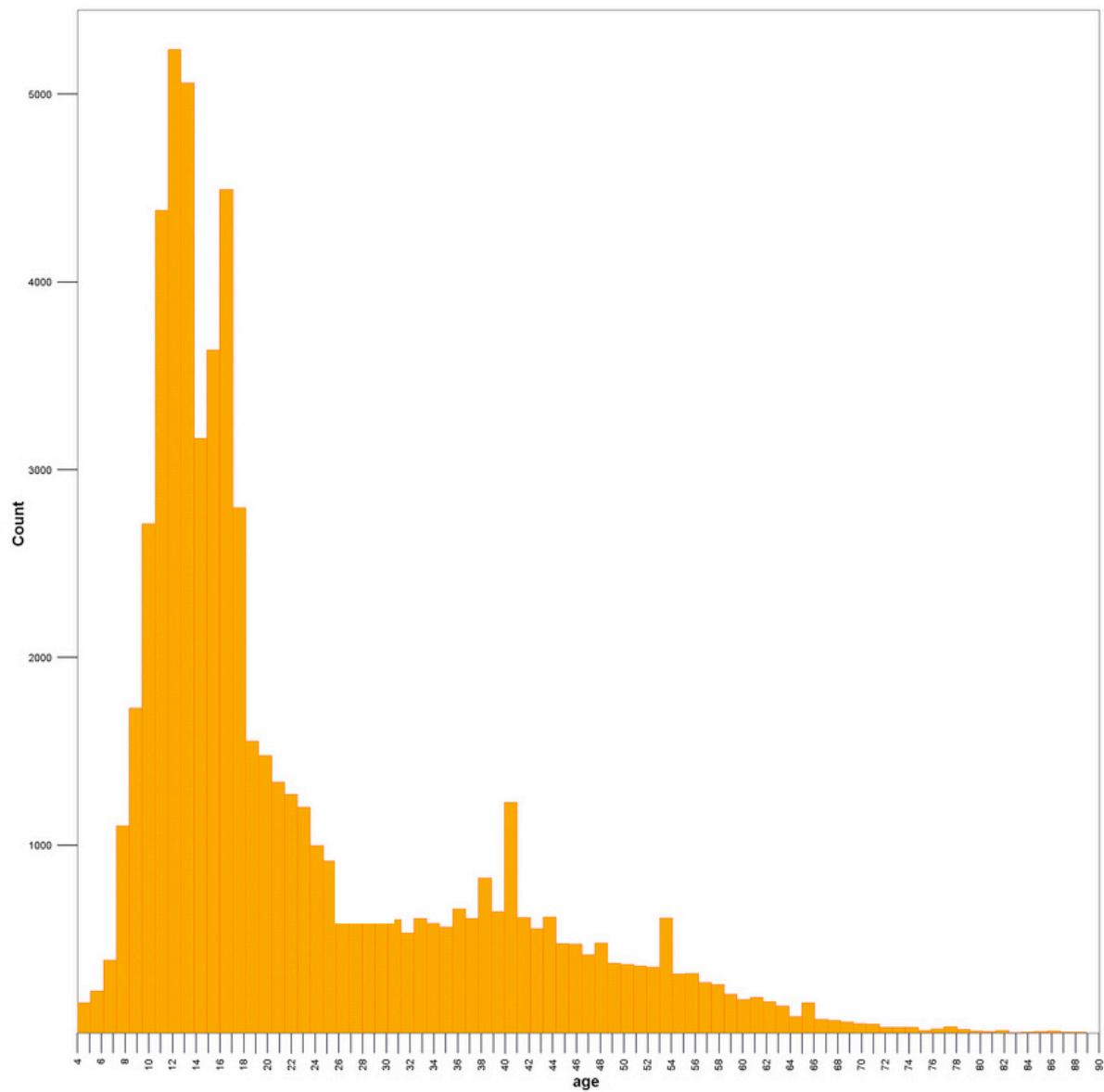
**A new project every two minutes**

**More than 15% of projects are remixes**

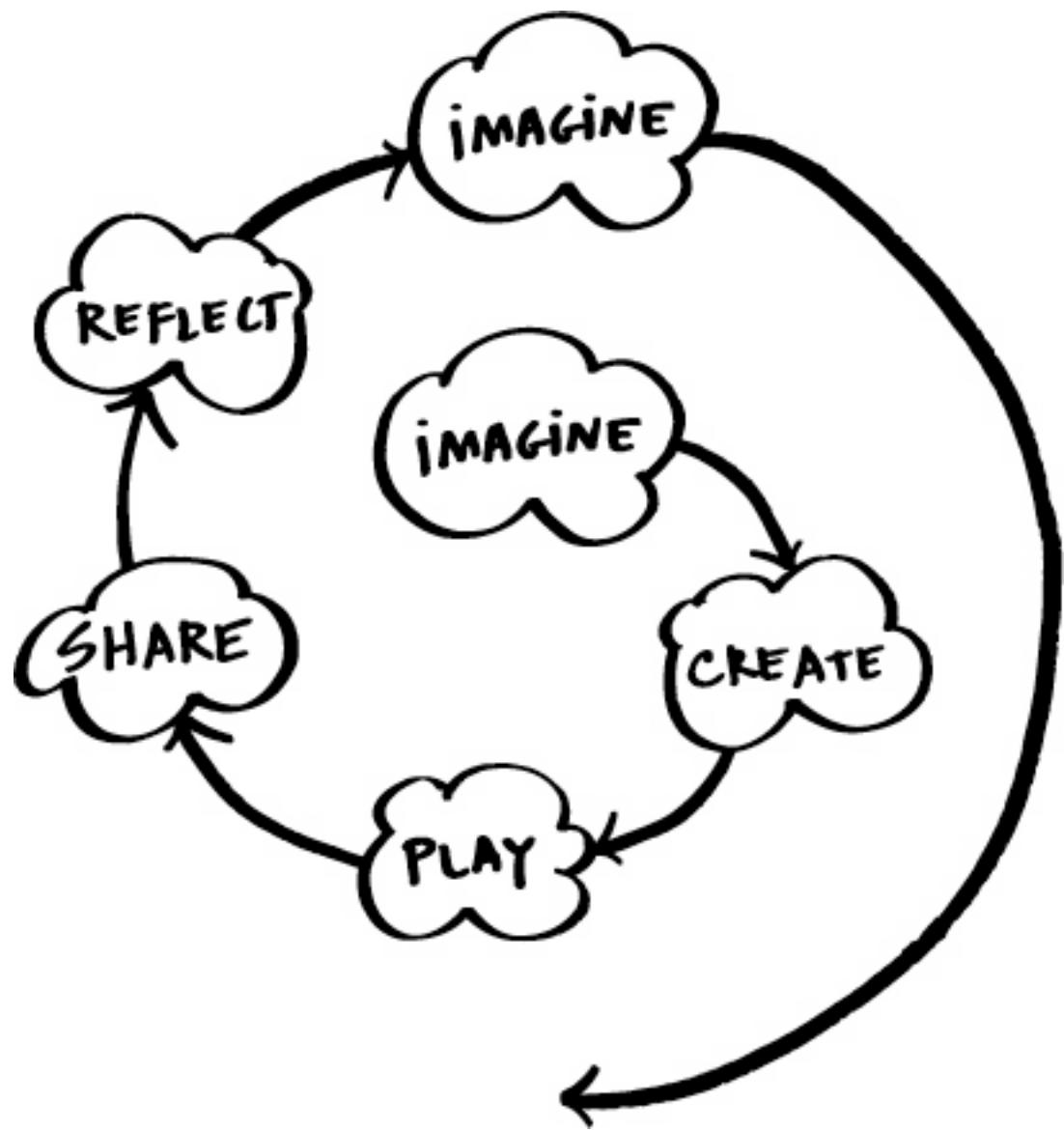
**SCRATCH**

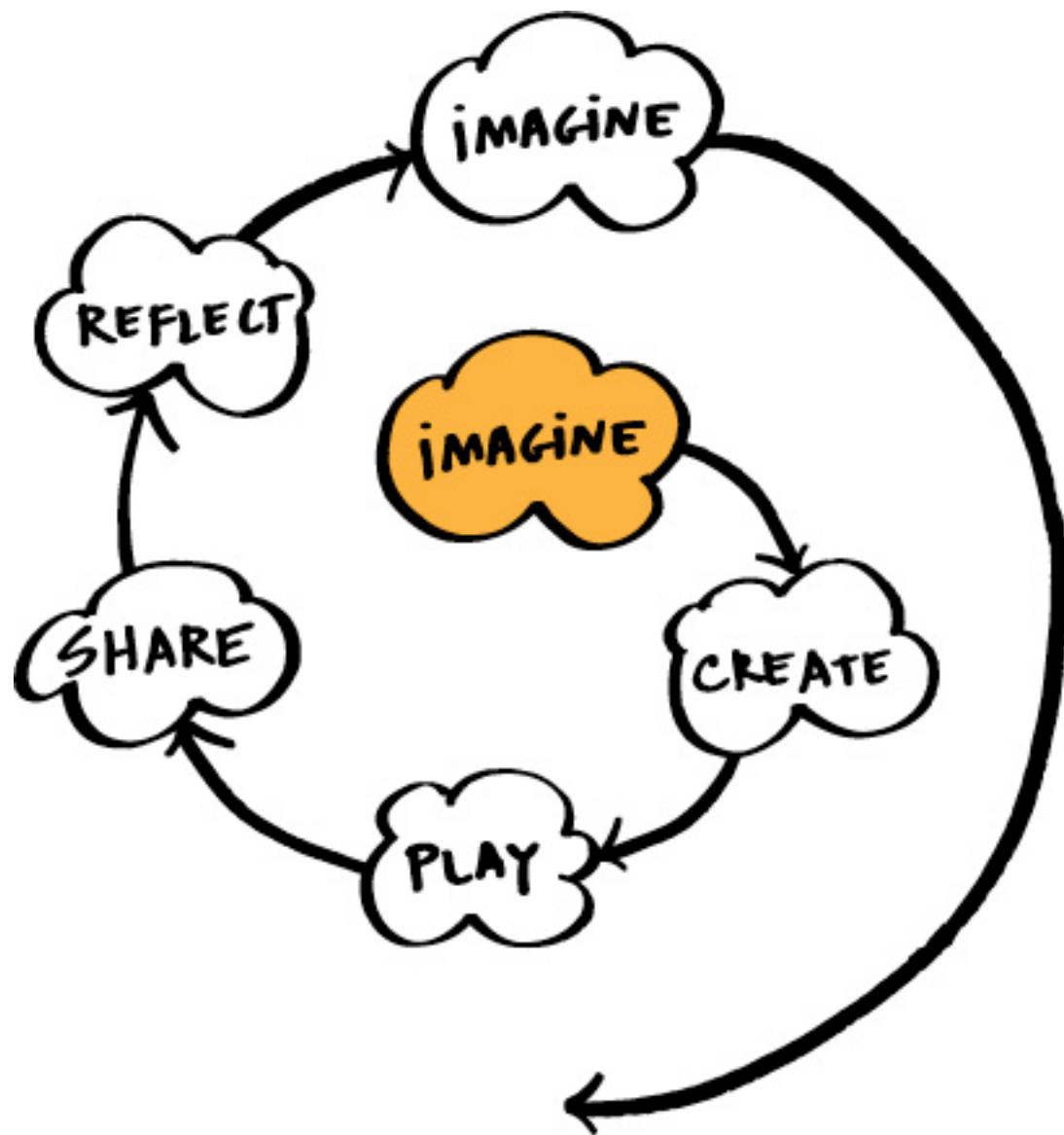


SCRATCH



SCRATCH





# **High Ceiling**

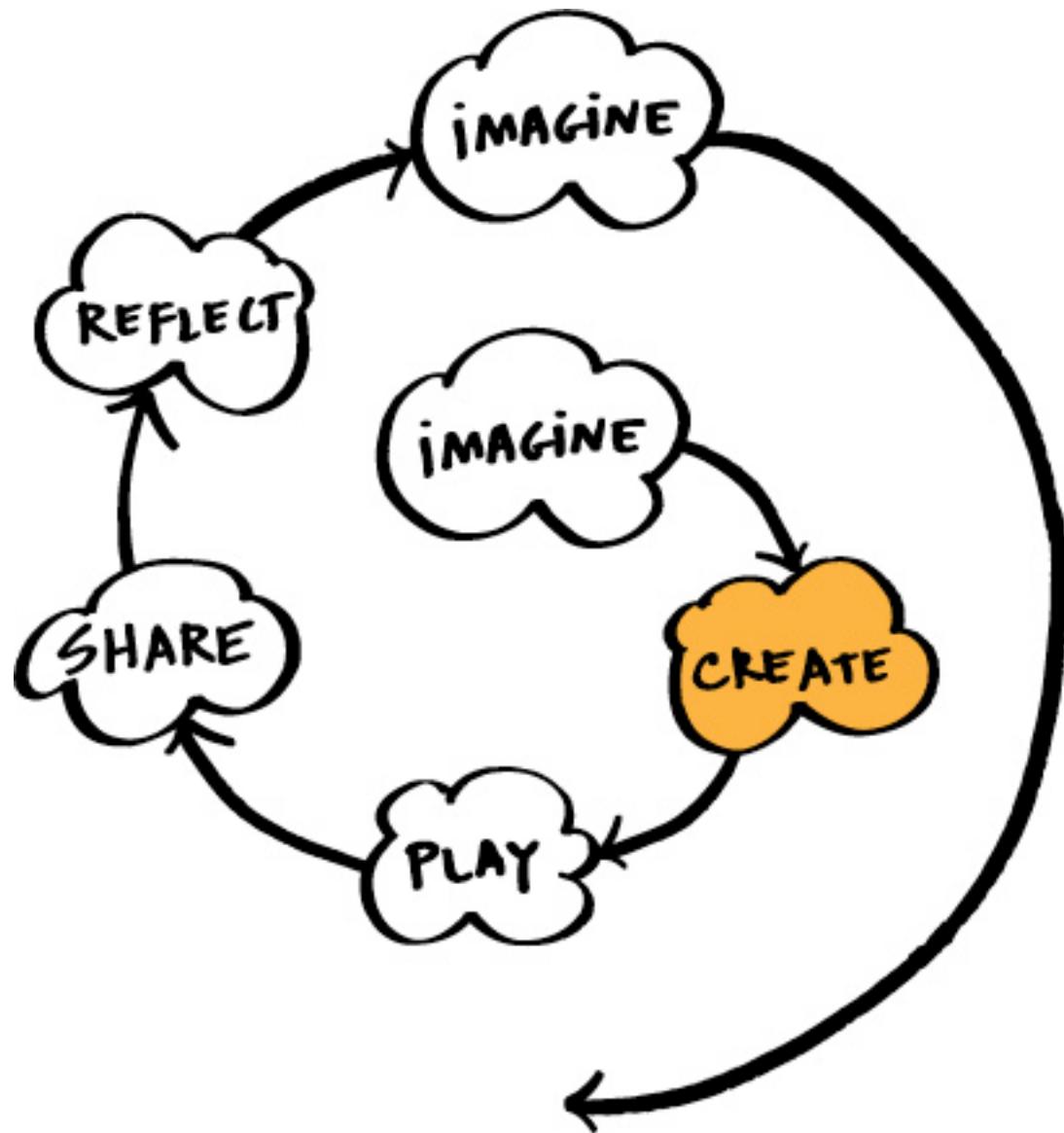


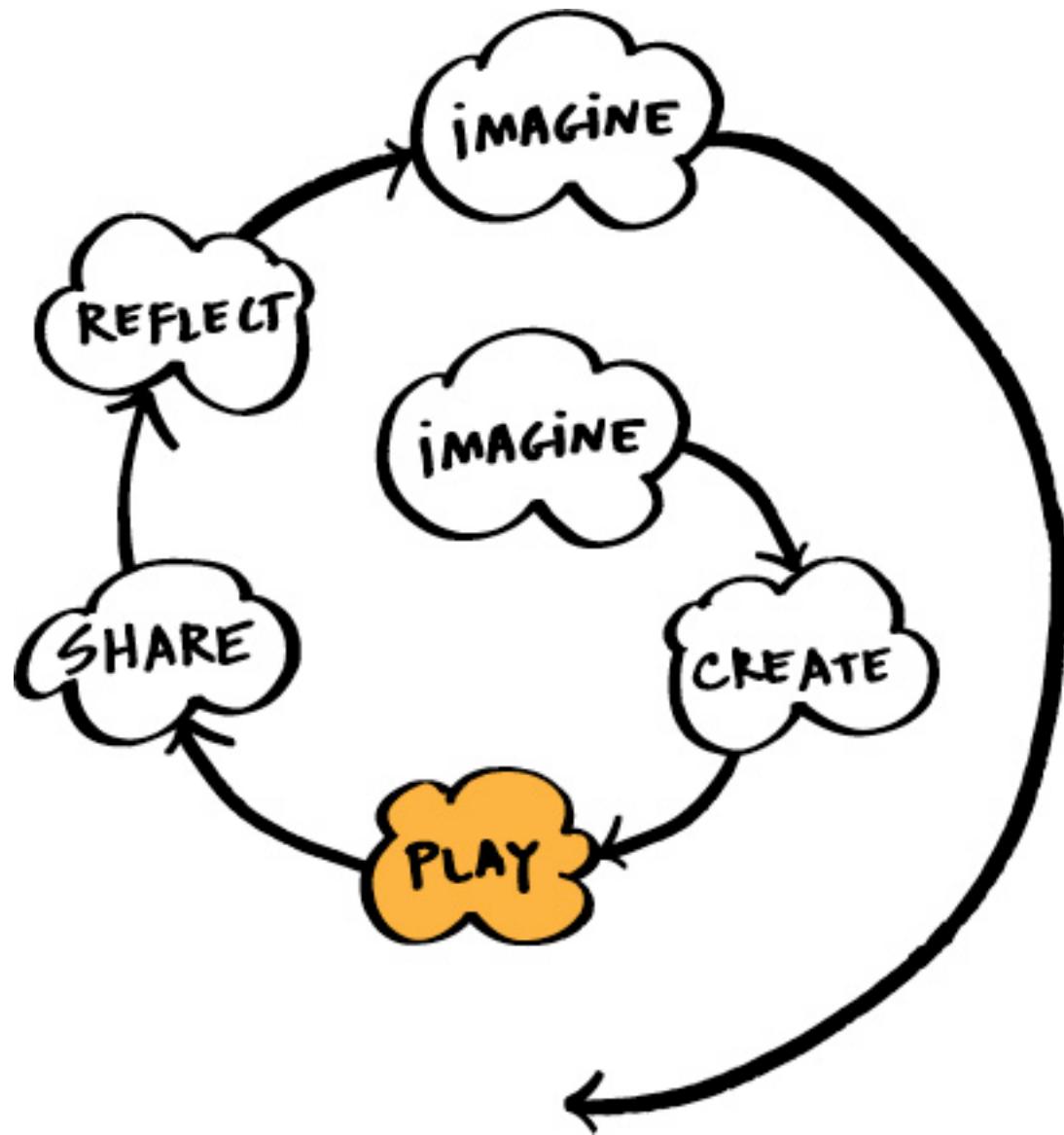
# **Low Floor**

# **High Ceiling**



# **Low Floor**





**SCRATCH**

New Open Save Save As Share! Undo Language Extras Want Help? 03 BeeStory

**Motion** **Control**  
**Looks** **Sensing**  
**Sound** **Numbers**  
**Pen** **Variables**

**Scripts** **Costumes** **Sounds**

**Maja** x: -160 y: 10 direction: 90 Export

**when Maja clicked**  
**broadcast start**

**when I receive start**  
**go to x: 0 y: -20**  
**go to front**

**when up arrow key pressed**  
**change y by 10**  
**broadcast flatter**  
**if y position > 200**  
**set y to -200**

**when I receive start**  
**forever**  
**set MayaY to y position**  
**set MayaX to x position**  
**wait 0.1 secs**

**when down arrow key pressed**  
**change y by -10**  
**broadcast flatter**

**you have to go back:  
First see all pictures  
and solve all tasks!**

mouse x: 232 mouse y: -337

**Stage** 5 backgrounds 9 scripts

**M** 2 scripts Blume1 2 costumes 2 scripts

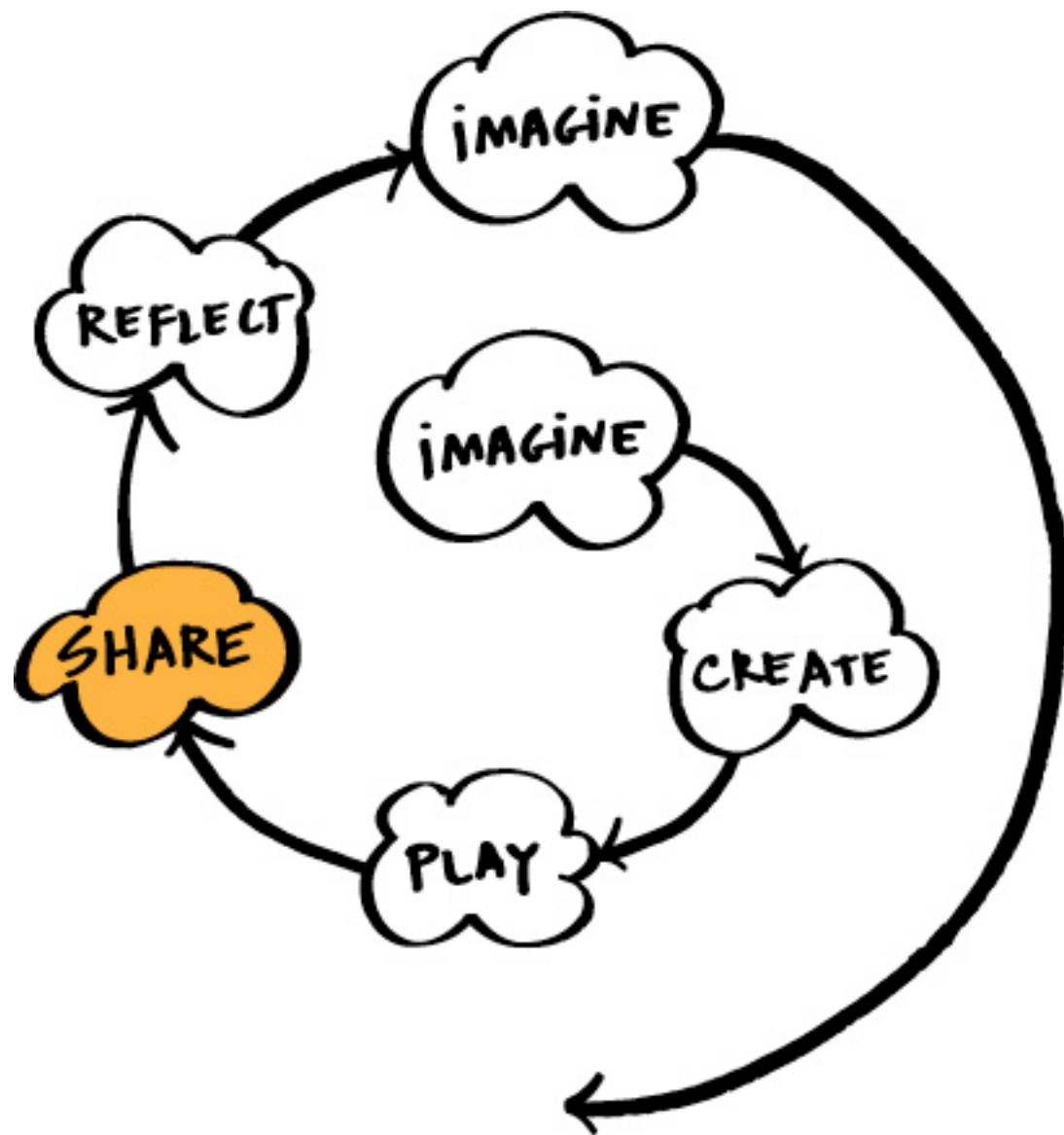
**A** 2 scripts Blume2 2 costumes 2 scripts

**J** 2 scripts Blume3 2 costumes 2 scripts

**A2** 2 scripts Blume4 2 costumes 2 scripts

**Maja** 2 costumes 10 scripts

**Kaefig** 2 scripts





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Snap together blocks



to create  
stories, games  
and animations



and share your creations  
on the web

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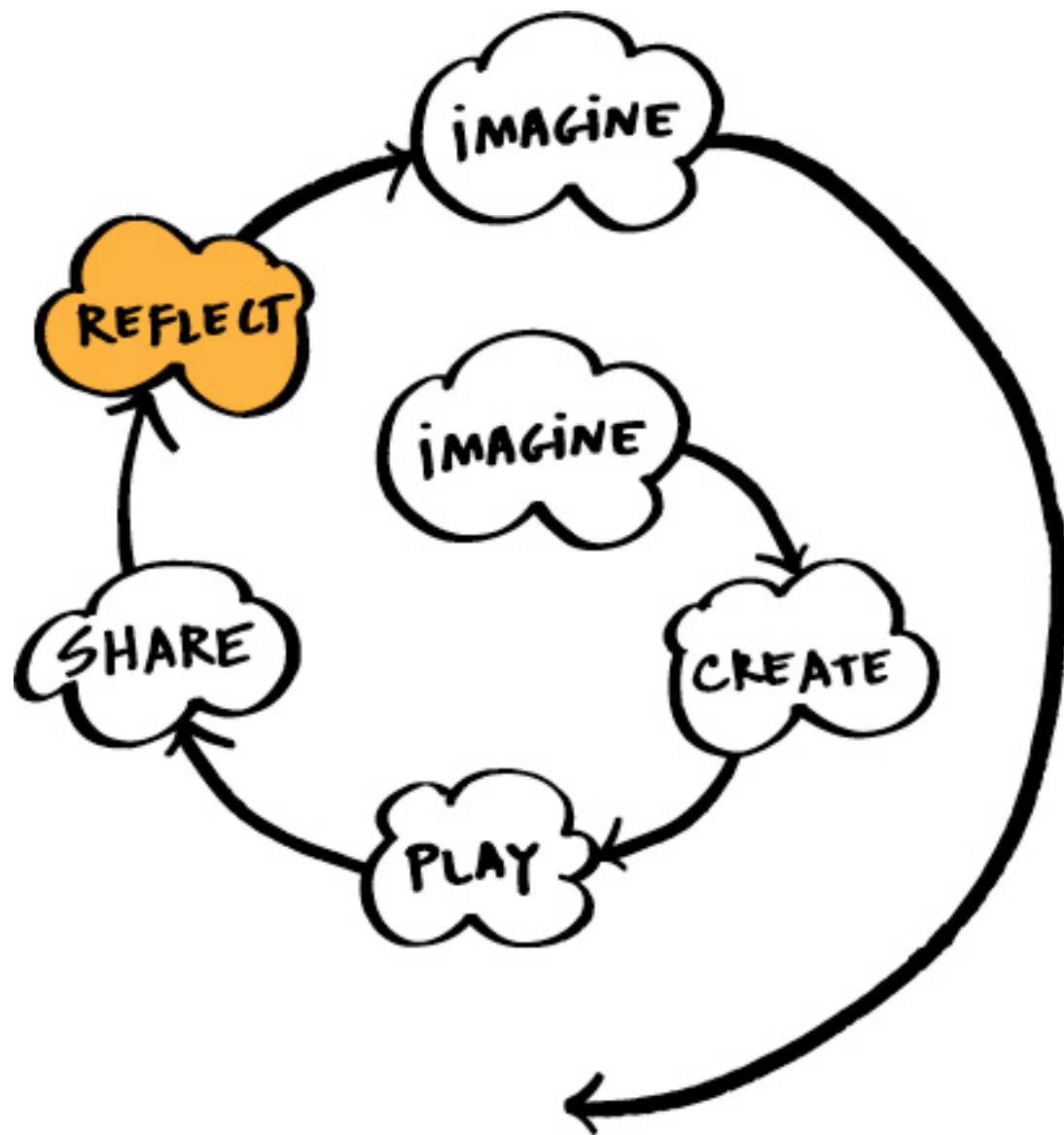


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by [locke](#)

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# Scratch Forums

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Mick  
Member

I learned what x & y mean in 3 days with Scratch.

natalie  
Scratch Team

How did you learn to use them? I'm interested to know, what do you think is the hardest part to understand or figure out?

Mick  
Member  
Registered: 2007-03-23

um.. well i double click the block then put different numbers in it & after a while i knew what they meant. the hardest bit would be 'why are they called x & y'. i still haven't figured that out. 😊

LeBurt  
Member  
Registered: 2007-09-12

Mick: X and Y are just labels, we could have called them anything but the inventor of this system (called the cartesian system of coordinates), the French René Descartes, decided to give them these names.

# Scratch Forums

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**dingdong**

Member

Registered: 2007-08-09

Posts: 494

I have been taught in my algebra class how to use these formulas, but my math teacher didn't mention how to use the formulas on just numbers. So how do I use this formula? because I still don't understand how I scroll in steps

```
/           \ /           \
<change X by | sin of direction * 1 | * | speed * -1 |>
\           / \           /
/           \ /           \
<change Y by | cos of direction * 1 | * | speed * -1 |>
\           / \           /
```

**archmage**

Member

Do you want me to write up a small lesson on trig? It might be a bit difficult for someone who is in 7th grade (and a lot to type out for me).

**dingdong**

Member

I guess so, I really want to try understand sin, cos, and tan so I can make better games

---

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2008-07-10 15:04:22

#1

[ashbyr1](#)

Member

Registered: 2007-12-04

Posts: 43

## [Critique Groups](#)

The worst feeling in the world is to pour your hard work and creativity into a project only to have it ignored completely by the Scratch community. The problem is not that the Scratch community doesn't care. In fact this is one of the most vibrant and positive communities I've seen online. The problem is that we are all overwhelmed with the number of new projects.

Joining a small critique group (5-7 members) will give you valuable feedback on your projects. Members of your group can highlight what is great about your project and suggest ways to improve it. In addition, the act of critiquing other peoples work can be one of the most powerful ways to punch your own skills to the next level.

If you are new to Scratch, look through the list of open groups below.

1. Find a group that feels like a good fit and is currently accepting members.
2. Bookmark the gallery.
3. Introduce yourself with comment to the group's gallery.
3. Offer a critique of at least one project. [Critique Guidelines](#)



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## Newest Projects in Beginner Critique Group

Sort by: [creator](#) | [title](#) | [creation date](#) | [addition date](#)

Showing: 1-15 of 18

1 | 2

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[Danger Zone](#)  
by [soccerisawsome](#)



[3D Close Far ...](#)  
by [soccerisawsome](#)



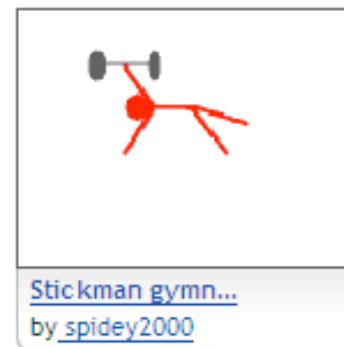
[Fishing](#)  
by [soccerisawsome](#)



[DID YOU LIKE IT?](#)  
[I WILL MAKE MORE IF 3 PEOPLE DO.](#)  
[SIGNED: spidey2000](#)  
[SCRATCH CAT R...](#)  
by [spidey2000](#)



[SPIDER-MAN CH...](#)  
by [spidey2000](#)



[Stickman gym...](#)  
by [spidey2000](#)

### Beginner Critique Group

Gallery owner: [Bluestribute](#)

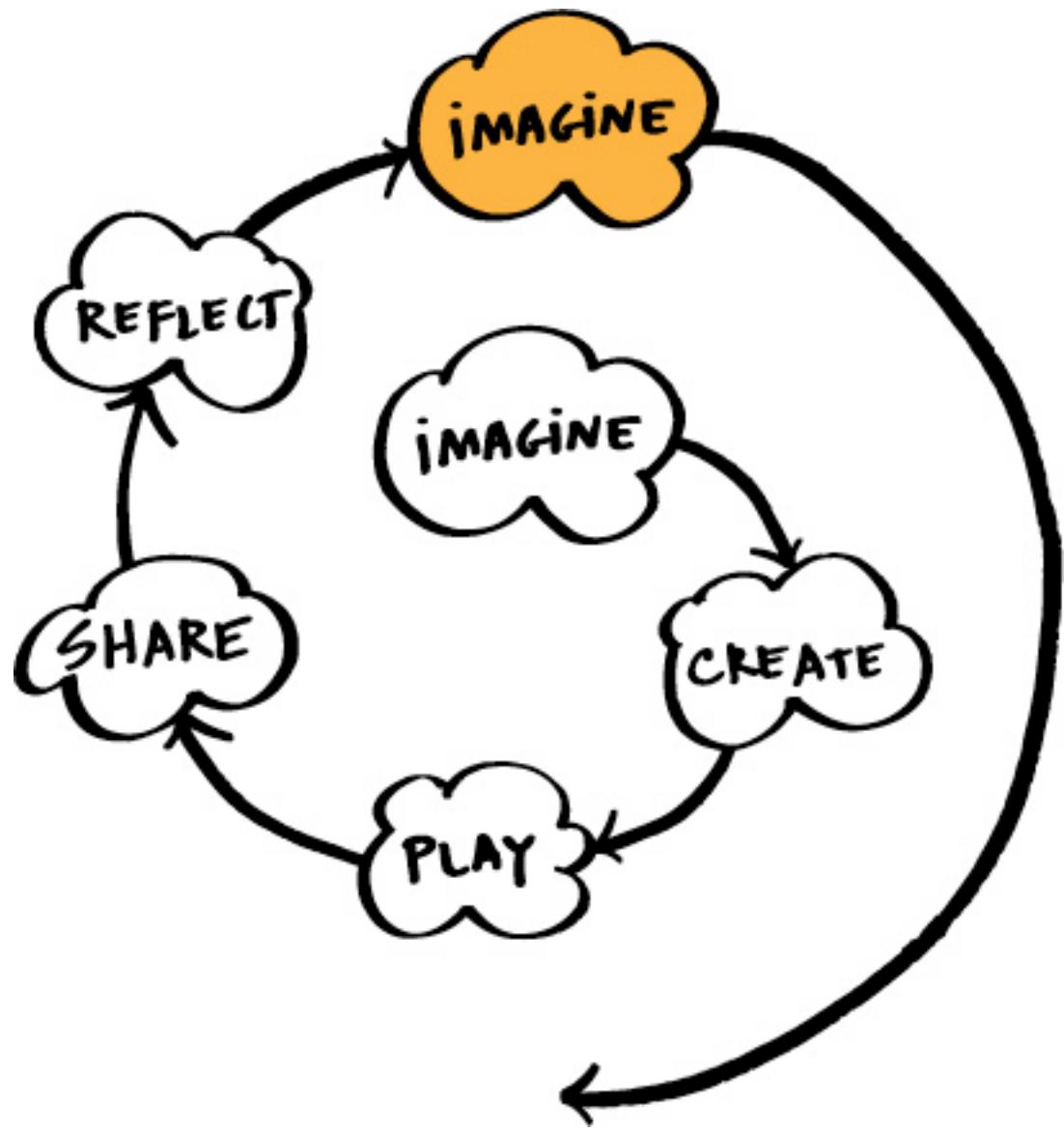
Created: 1 week, 5 days ago

[add my projects](#)  
[bookmark gallery](#)

### Gallery description

Challenge 1: Make a fishing game. Controls are your choice, but be able to catch fish, but make bad fish too You may also challenge other Scratchers to make a project if you wish

A small critique group for beginner looking to learn how to make



SCRATCH BETA

新規 開く 保存 名前をつけて保存 取り消し

動き 制御  
見た目 調べる  
音 数値  
ペン 変数

Sprite1 x: 33 y: 6 向き: 90

スクリプト コスチューム 音

がクリックされたとき  
コスチュームを costume1 にする

キーが押されたとき  
次のコスチュームにする

歩動かす 度回す 度回す 度に向ける  
度に向ける  
へ向ける  
x座標を 33 、y座標を 6 へ行く  
1 秒でx座標を 33 に、y座標を 6 へ  
x座標を 10 ずつ変える  
x座標を 0 にする  
y座標を 10 ずつ変える  
y座標を 0 にする  
もし端に着いたら、跳ね返る  
x座標

Català Deutsch English Español Euskara Français Français (Canada) Galego Hrvatski Italiano Khmer Kreyòl ayisyen Nederlands Português Português (Brasil) Română Slovenscina Türkçe dansk magyar norsk polski suomi svenska český jazyk Ελληνικά Македонски јазик Русский язык Хэл-Нэр українська мова മലയാളം العربية (UAE) തമിഴ് ചുവർന്നാം ഹിരാഗന ജപ്പാൻ മുത്ത്

見る? メニュー

How\_to\_Draw\_Ayame!

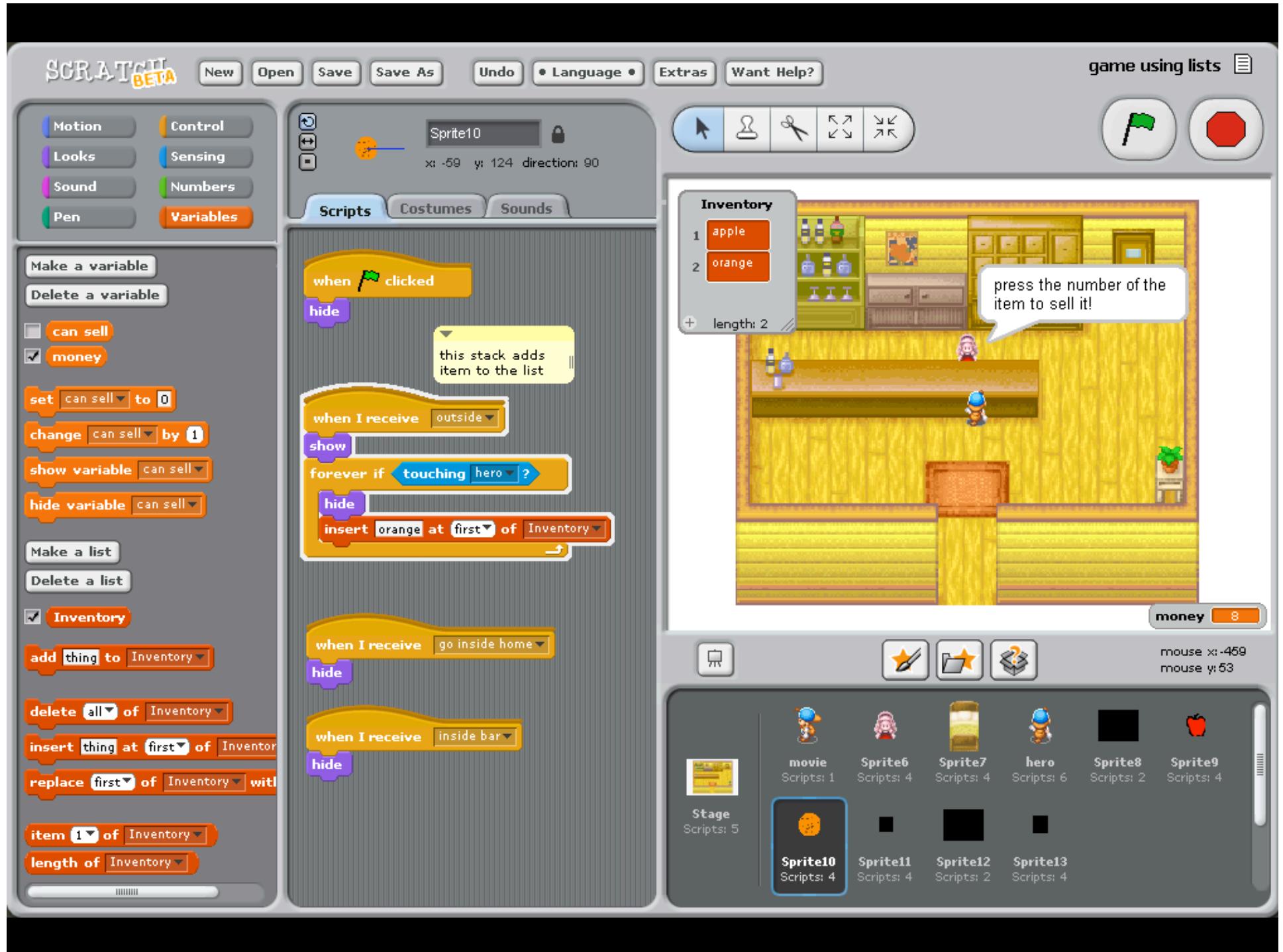
Welcome to how to draw Ayame!

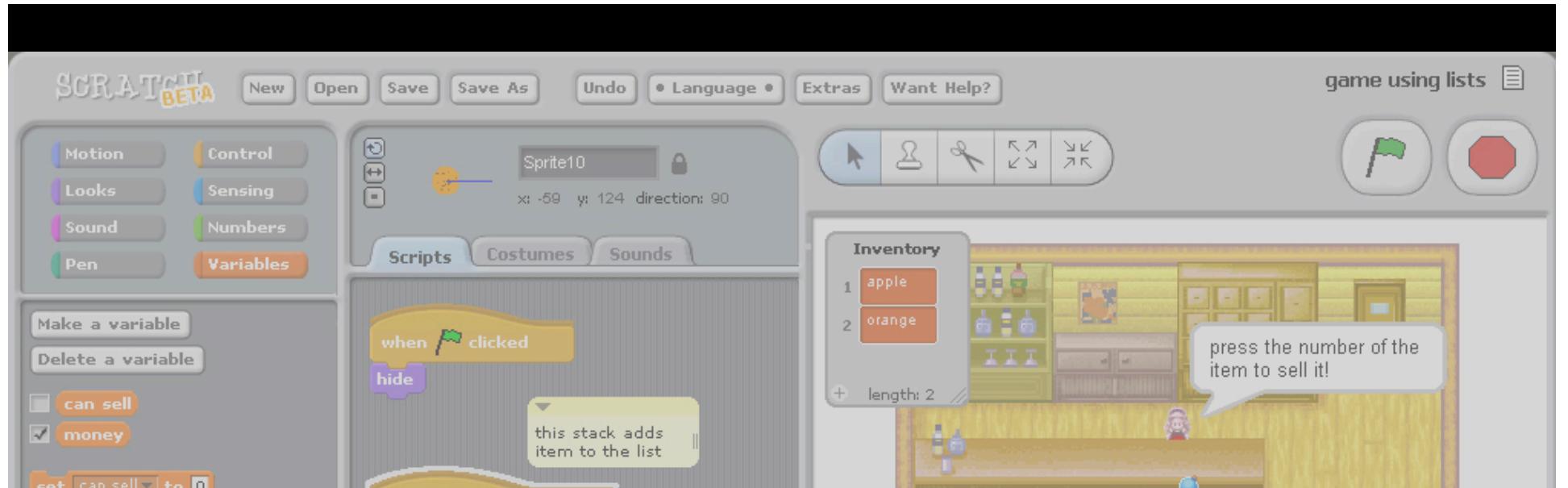
マウスのx座標: 27  
マウスのy座標: -303

Listen =w=

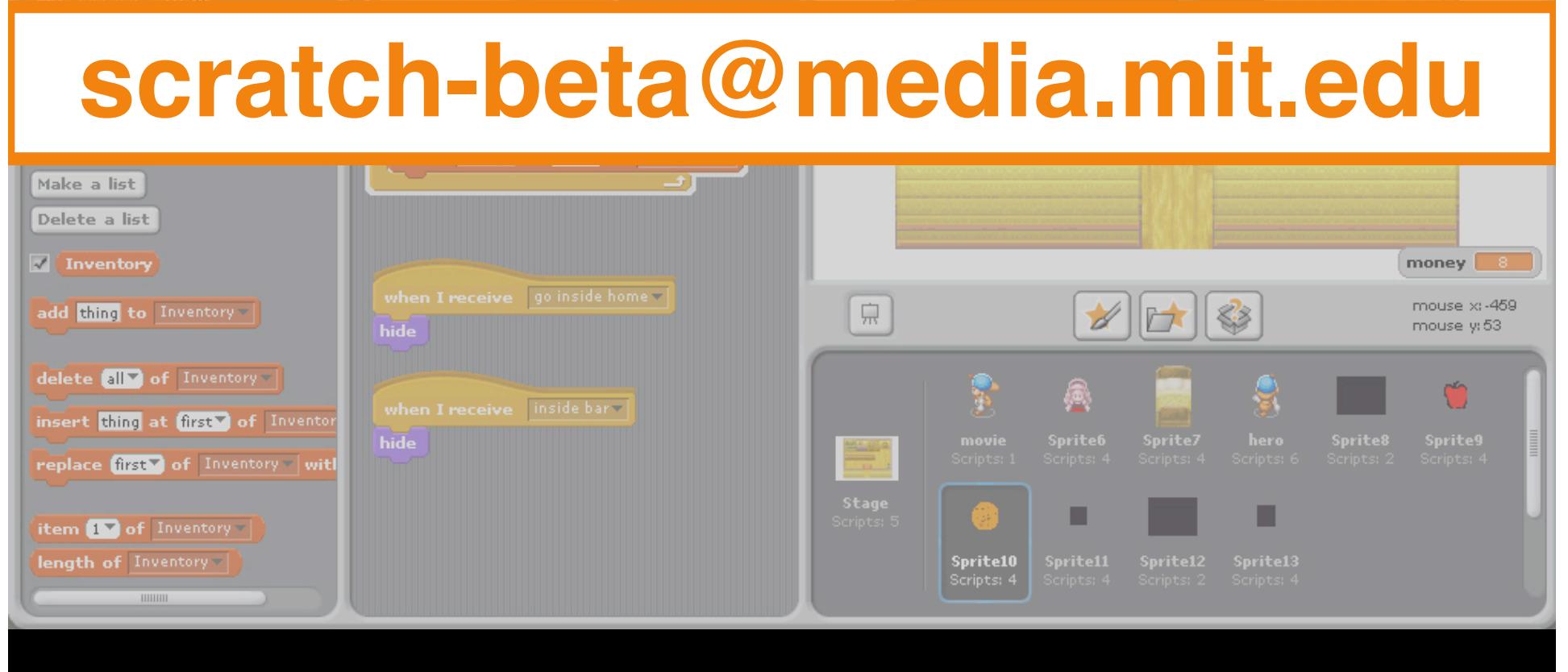
Sprite2 Sprite3 Sprite4

To see the next step hit space  
e(w)e





# scratch-beta@media.mit.edu





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to create  
stories, games  
and animations



and share your creations  
on the web

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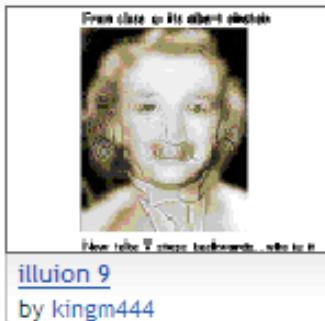


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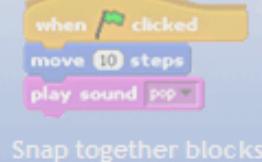
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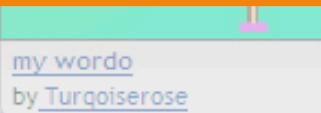
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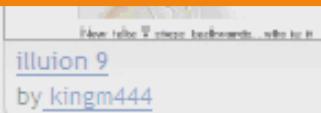
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Join educators, researchers and

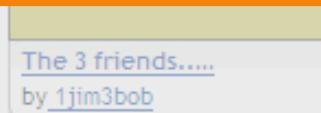
# scratch-clubs@media.mit.edu



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What do you hope  
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# SCRATCH سكراتش

الرئيسية 🔍 اتصل بنا 🔍 خريطة الموقع 🔍

تخيل • برمج • شارك

ملحة عن سكراتش المشاريع المعارض الدعم المنتديات أشيائي



آخر الزوار



مرحبا بك معنا في موقع سكراتش ، تسجيل دخول



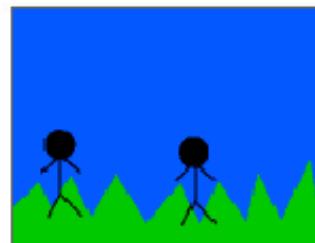
## أحدث المشاريع

المزيد من المشاريع



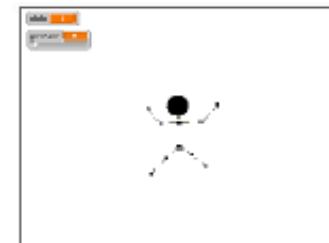
اسم المشروع هنا

بواسطة: اسم صاحب المشروع



اسم المشروع هنا

بواسطة: اسم صاحب المشروع



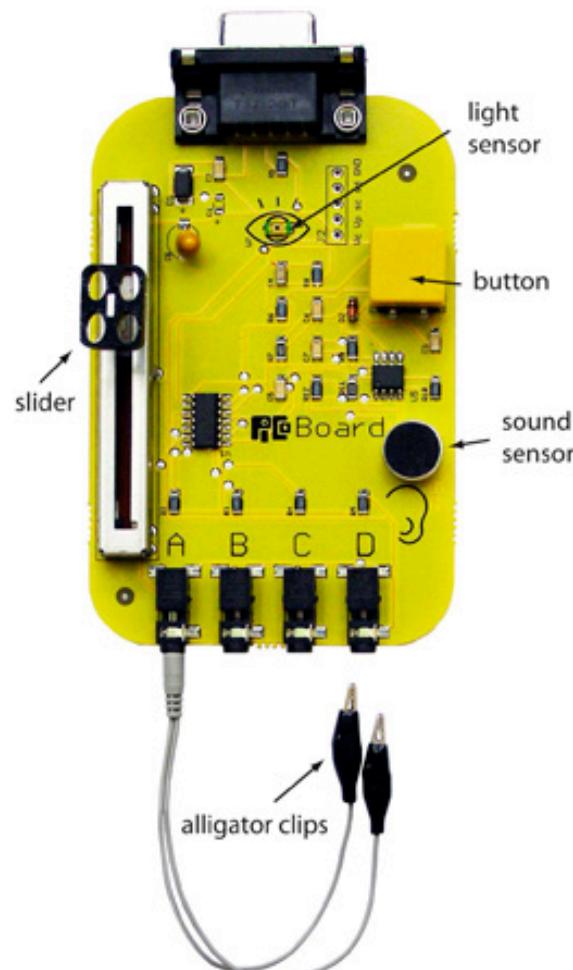
اسم المشروع هنا

بواسطة: اسم صاحب المشروع

المزيد من المشاريع

## المشاريع المميزة

## Connect real-world sensors to your Scratch projects



Visit the [Scratch](#) site for more details on how to imagine, program, and share Scratch projects!

To connect with others using Scratch and the PicoBoard, visit the [Scratch Forums](#).

With the **PicoBoard**, your [Scratch™](#) projects can sense – and respond to – things going on in the world outside your computer.

For example, using the **sound sensor**, you can make a sprite change how it looks whenever there is a loud sound.

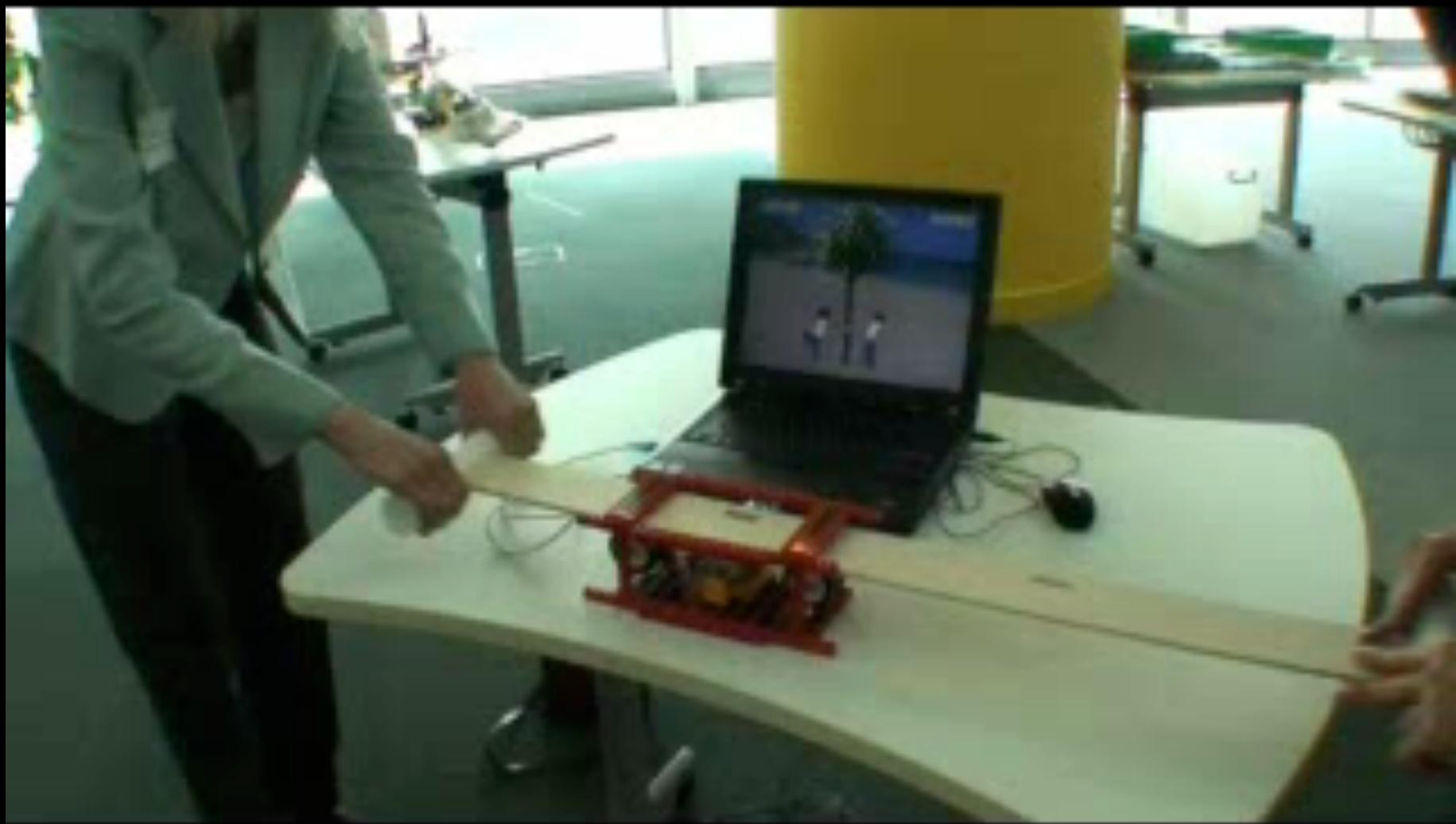


Or, using the readings from a PicoBoard's **light sensor**, you can program a sprite to hop up and down whenever a shadow passes by.

You can use the **slider** and **button** to control a character in a video game.

A PicoBoard also comes with a **USB to serial cable** and four sets of **alligator clips** that measure the electrical resistance in a circuit. You can use the alligator clips to build all kinds of custom sensors. For example, if you attach the clips to a pair of home-made bracelets, you can detect when your wrists touch.











SCRATCH

New Open Save Save As Undo

copy Linden script

Motion Looks Sound Pen Control Sensing Numbers Variables

Scripts

when I receive [disappear v]  
play sound [upward zing v]  
repeat (10)  
  change ghost effect by (10)  
  wait (0.1) secs

when I receive [come back v]  
play sound [cricket v]  
repeat (10)  
  change ghost effect by (-10)  
  wait (0.1) secs

when I am touched  
change color by (5)

when I am created  
set color to (0)

```
move (1) meters
turn ← (15) degrees
turn ↑ (15) degrees
up (1) meters
down (1) meters
roll (15) degrees
pitch (15) degrees
go home
set home to here
point toward nearest avatar
point toward owner
point in direction (90)
direction
when I receive [disappear v]
play sound [upward zing v]
repeat (10)
  change ghost effect by (10)
  wait (0.1) secs
when I receive [come back v]
play sound [cricket v]
repeat (10)
  change ghost effect by (-10)
  wait (0.1) secs
when I am touched
change color by (5)
when I am created
set color to (0)
```





## Stories

### Game Dev at TCNJ

At TCNJ this term, we've been exploring the possibilities of using Scratch as a game development prototyping platform. In this class of 10 senior undergraduates, we ...

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## Discussions

### 1 Hour Scratch Workshops

Post: Session durations?  
Written by: Lauren Trey  
Posted: 10 February 2008

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## Materials

### Perspectives

Written by: admin  
Posted: 1 April, 2008  
Subjects: arts, technology  
Grade/Age: post-secondary  
Type: lesson plan

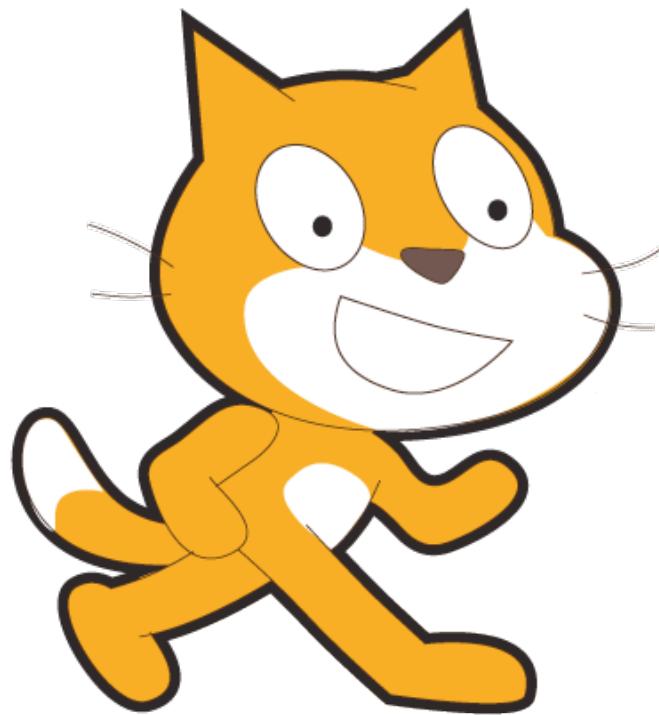
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## Meetups



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July 24 - 26, 2008

	<b>Day 1</b> <b>Thursday</b> <b>July 24, 2008</b>	<b>Day 2</b> <b>Friday</b> <b>July 25, 2008</b>	<b>Workshops</b> <b>Saturday</b> <b>July 26, 2008</b>
<b>8:00-9:00</b>	Registration and Continental Breakfast		
<b>9:00-9:30</b>	Welcome	Registration and Continental Breakfast	Continental Breakfast
<b>9:30-10:30</b>	Keynote	Concurrent Sessions	Self-Organizing Workshops
<b>10:30-11:00</b>	Break	Break	Break
<b>11:00-12:00</b>	Concurrent Sessions	Concurrent Sessions	Self-Organizing Workshops
<b>12:00-1:30</b>	Lunch	Lunch	Lunch
<b>1:30-2:30</b>	Concurrent Sessions	Concurrent Sessions	Self-Organizing Workshops
<b>2:30-3:00</b>	Break	Break	Community Discussion
<b>3:00-4:00</b>	Concurrent Sessions	Keynote	
<b>4:00-4:30</b>	Break		
<b>4:30-5:30</b>	Demos		
<b>5:30-7:00</b>	BBQ Dinner		
<b>7:00-8:00</b>	Magic Seth		

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<b>4:30-5:30</b>	Demos		
<b>5:30-7:00</b>	BBQ Dinner		
<b>7:00-8:00</b>	Magic Seth		

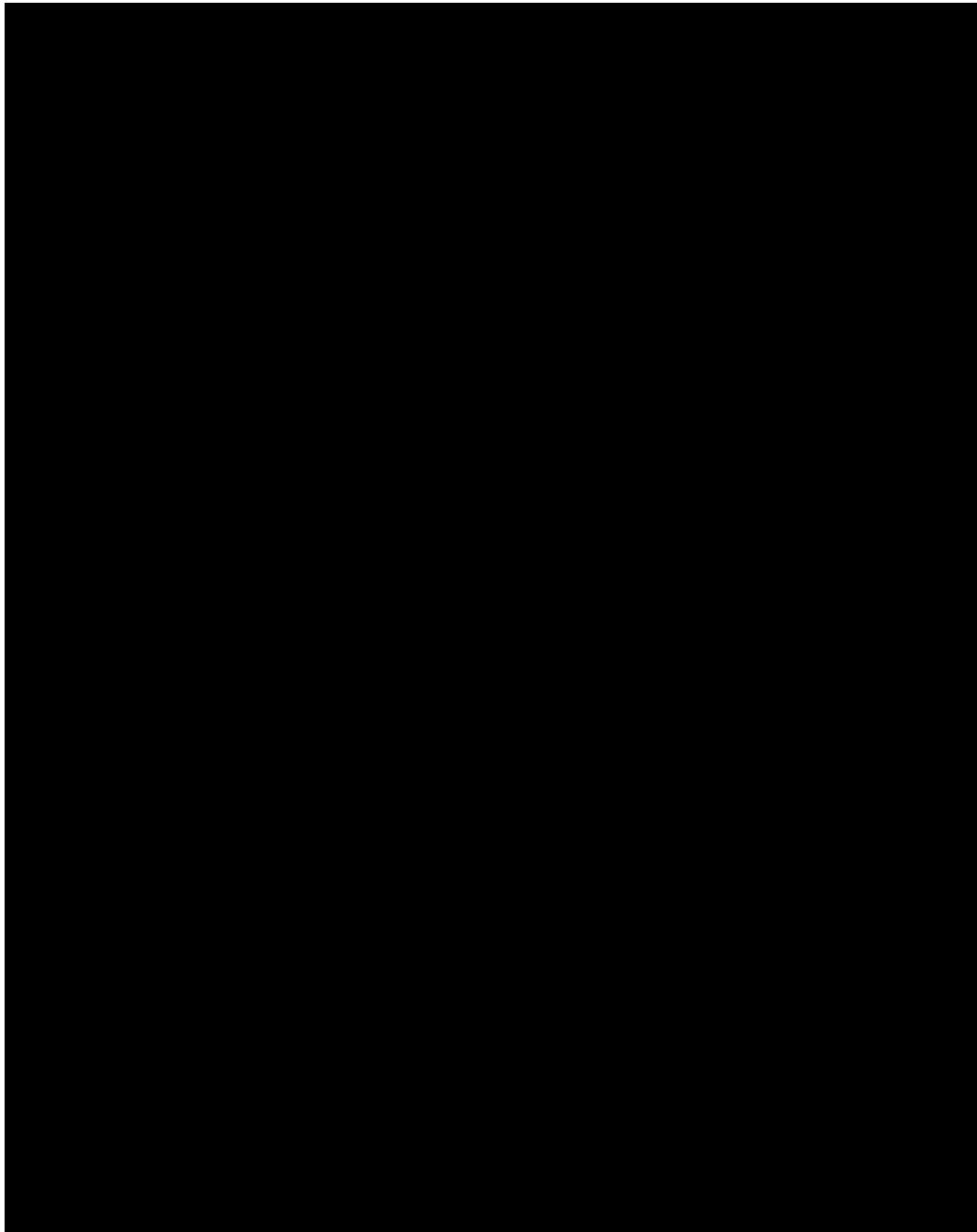
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	<b>Day 1</b> <b>Thursday</b> <b>July 24, 2008</b>	<b>Day 2</b> <b>Friday</b> <b>July 25, 2008</b>	<b>Workshops</b> <b>Saturday</b> <b>July 26, 2008</b>
<b>8:00-9:00</b>	Registration and Continental Breakfast		
<b>9:00-9:30</b>	Welcome	Registration and Continental Breakfast	Continental Breakfast
<b>9:30-10:30</b>	Keynote	Concurrent Sessions	Self-Organizing Workshops
<b>10:30-11:00</b>	Break	Break	Break
<b>11:00-12:00</b>	Concurrent Sessions	Concurrent Sessions	Self-Organizing Workshops
<b>12:00-1:30</b>	Lunch	Lunch	Lunch
<b>1:30-2:30</b>	Concurrent Sessions	Concurrent Sessions	Self-Organizing Workshops
<b>2:30-3:00</b>	Break	Break	Community Discussion
<b>3:00-4:00</b>	Concurrent Sessions	Keynote	
<b>4:00-4:30</b>	Break		
<b>4:30-5:30</b>	Demos		
<b>5:30-7:00</b>	BBQ Dinner		
<b>7:00-8:00</b>	Magic Seth		

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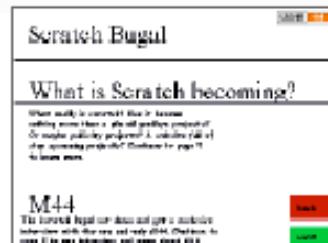


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