



## Stichting NIOC en de NIOC kennisbank

Stichting NIOC ([www.nioc.nl](http://www.nioc.nl)) stelt zich conform zijn statuten tot doel: het realiseren van congressen over informatica onderwijs en voorts al hetgeen met een en ander rechtstreeks of zijdelings verband houdt of daartoe bevorderlijk kan zijn, alles in de ruimste zin des woords.

De stichting NIOC neemt de archivering van de resultaten van de congressen voor zijn rekening. De website [www.nioc.nl](http://www.nioc.nl) ontsluit onder "Eerdere congressen" de gearchiveerde websites van eerdere congressen. De vele afzonderlijke congresbijdragen zijn opgenomen in een kennisbank die via dezelfde website onder "NIOC kennisbank" ontsloten wordt.

Op dit moment bevat de NIOC kennisbank alle bijdragen, incl. die van het laatste congres (NIOC2025, gehouden op donderdag 27 maart 2025 jl. en georganiseerd door Hogeschool Windesheim). Bij elkaar zo'n 1500 bijdragen!

We roepen je op, na het lezen van het document dat door jou is gedownload, de auteur(s) feedback te geven. Dit kan door je te registreren als gebruiker van de NIOC kennisbank. Na registratie krijg je bericht hoe in te loggen op de NIOC kennisbank.

Het eerstvolgende NIOC vindt plaats in 2027 en wordt dan georganiseerd door HAN University of Applied Sciences. Zodra daarover meer informatie beschikbaar is, is deze hier te vinden.

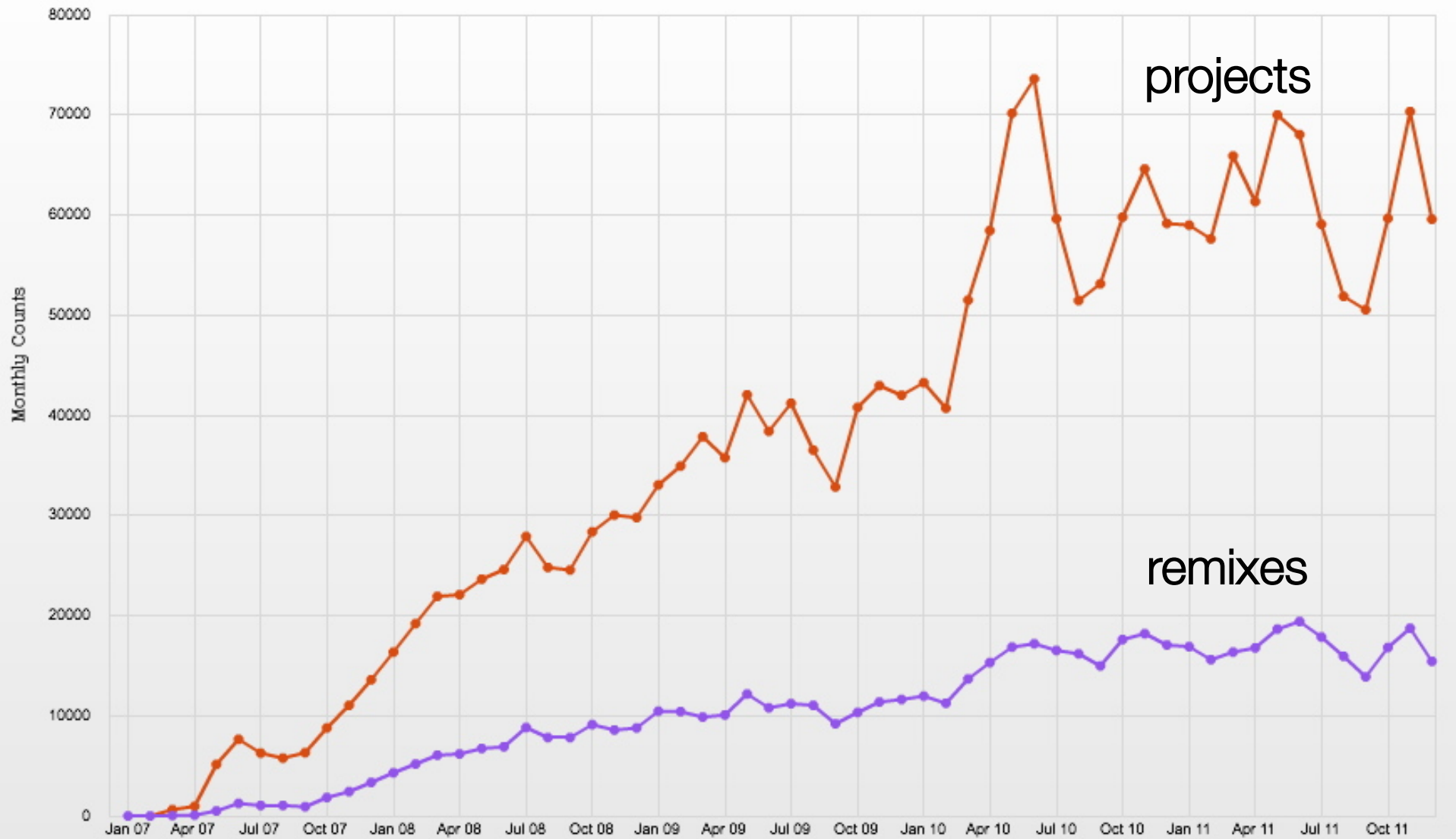
Wil je op de hoogte blijven van de ontwikkeling rond Stichting NIOC en de NIOC kennisbank, schrijf je dan in op de nieuwsbrief via

[www.nioc.nl/nioc-kennisbank/aanmelden\\_nieuwsbrief](http://www.nioc.nl/nioc-kennisbank/aanmelden_nieuwsbrief)

Reacties over de NIOC kennisbank en de inhoud daarvan kun je richten aan de beheerder:

R. Smedinga [kennisbank@nioc.nl](mailto:kennisbank@nioc.nl).

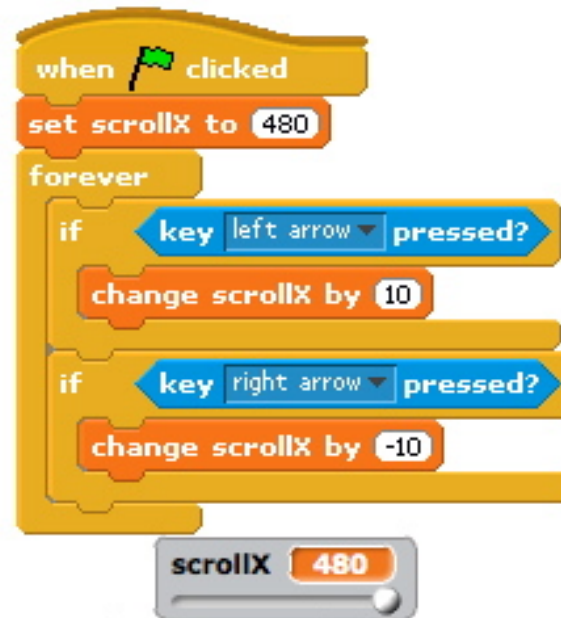
Vermeld bij reacties jouw naam en telefoonnummer voor nader contact.



## Scrolling Done Right



This script is located on the stage.



Press the right arrow key to see the terrain sprites scroll past the screen.



[archmage](#) shared it 3 years, 9 months ago



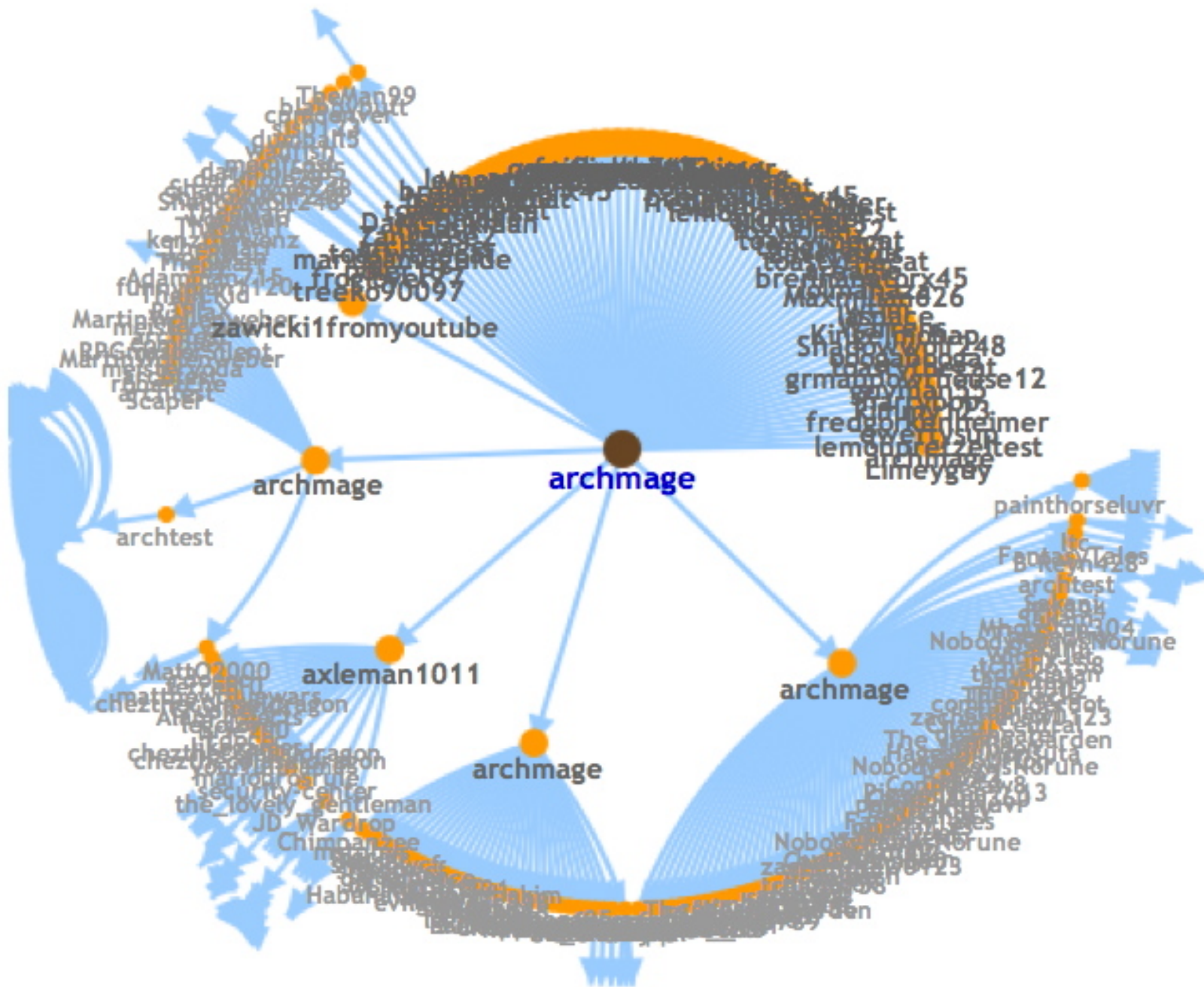
Some rights reserved

5051 views, [42 taggers](#), [129 people](#) love it , [460 remixes](#) by 291 people, 1208 downloads, in [29 galleries](#)

**This script is located on the stage.**



**Press the right arrow key to see the terrain sprites scroll past the screen.**



GRAY

BEAR



PRODUCTIONS



# Panther - based on Scratch

[Home](#)[Projects ▼](#)[Support ▼](#)[Forums](#)[Download Panther](#)[Meet The Developers](#)[Contests](#)[Featured projects](#)[Panther Features](#)[Tutorials](#)[Upload a project](#)[Blockshop](#)

Many thanks to [Skystar](#) for this amazing image!

## Panther - What the community wants

Panther is a programming language aimed at young users with only a small knowledge of programming. Panther offers you a more advanced version of Scratch, a simple programming language developed at MIT.

With a host of new features such as file and webpage manipulation and advanced colour sensing, cloning and much more besides, Panther provides advanced usage for avid Scratchers around the globe as well as new programmers looking for a fluid, easy to understand starting language. *Why not visit our [Wiki page](#) for a full list of our features?*

[Welcome to ProgrammingFreak - our newest developer for Panther 1.1!](#)

**stats:**

---

**Panther**

---

**Blockshop**



**But...**

**How do we make this  
interestingness accessible to  
more young people?**

## What is Scratch?

Scratch is a programming language that makes it easy to create interactive art, stories, simulations, and games – and share those creations online.

[Learn more »](#)

## What is ScratchEd?

ScratchEd is an online community where Scratch educators:



share stories



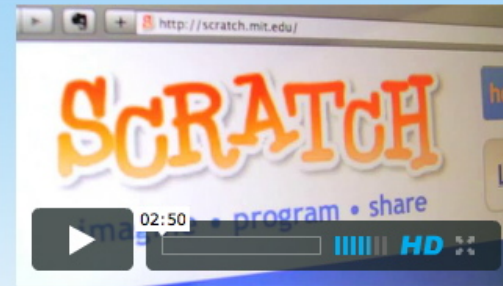
exchange resources



ask questions



find people



### Get Started with Scratch

Imagine the creative possibilities with Scratch and the online community in this intro video.

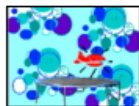
### New Stories



#### Sharing with Scratch: Episode 5 - Publishing Scratch Work Online

Sharing with Scratch is a video webseries for Scratch educators to encourage thought and conversation around the ways in which Scratch can promote cooperation and collaboration in the classroom.

Aaron Morris posted this 2 days ago



#### Tech and Textile: An Interview with Gretchen Tanzer of Cape Cod Academy

Gretchen shares her story and strategies for integrating Scratch in a high school arts course.

ScratchEd Team posted this 4 days ago



#### Sharing with Scratch: Episode 4 - Checking in with a Neighbor

Sharing with Scratch is a video webseries for Scratch educators to encourage thought and conversation around the ways in which Scratch can promote cooperation and

### New Resources

#### Actividad1 - on Spanish

Marisa Conde posted this 21 hours ago



#### Digital Schoolhouse Tutorial Video: Maths Quiz

ScratchEd Team posted this 3 days ago



#### Digital Schoolhouse Tutorial Video: Dance Moves

ScratchEd Team posted this 3 days ago



#### Digital Schoolhouse Tutorial Video: Making a Shape Calculator with Variables

ScratchEd Team posted this 3 days ago

[Find a resource](#)

[Share a resource](#)

### New Discussions

#### Scratch News for the New School Year - ScratchNotes Newsletter, Vol. 4, Iss. 1

ScratchEd Team posted this 14 hours ago

#### New guide from Edutopia - Mobile Devices for Learning: What you Need to Know

ScratchEd Team posted this 17 hours ago

#### Super Scratch Programming Adventure! A new programming comic for kids

Tyler Ortman commented on this 19 hours ago

#### Scratch 2.0 on Chromebooks

John Maloney commented on this 1 day ago

## Members



### All Members - Most Recently Online



**Kim Wilkens**

Member since: September 25, 2011  
Last access: September 29, 2012

I love technology and teaching kids about the amazing ways it can be used to create and share their ideas, voices and passions with the world. Even though I have been a woman in computer science for...



**Karol Linkiewicz**

Member since: September 17, 2012  
Last access: September 29, 2012

I'm a parent of 5 and 7, looking for truly interactive toys for them. Apparently Scratch fits this category perfectly :-)

### Find Others

Whether close by or far away, there are numerous Scratch educators around the world for you to connect with. Explore the map or browse the members list to find people with shared interests and experiences.

[Create an account](#)

### Filter by member's interests:

**Curricular Area:**

- Computer Science
- Engineering
- Language Arts
- Mathematics
- Music
- Science
- Social Studies
- Teacher Education
- Technology
- Visual Arts
- Other

**Education Level:**

- Preschool and Kindergarten
- Elementary School
- Middle School
- High School
- College and University
- Professional Development
- Other

**Language:**

<Any>

# CREATE YOUR WORLD

## Scratch Goes to School

Judy Barbera

Sandra Reyes

David Grammerstorf

Nicole Hovsepian

Andrea Edwards

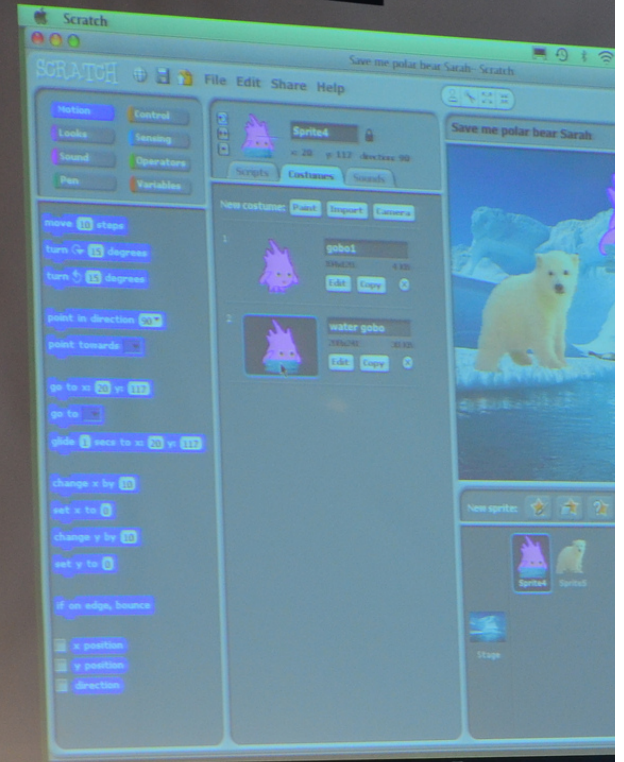
Genna Colonnato

Jacob Goodman

Jason Kardon

Sarah Katz

Joe Ligresti

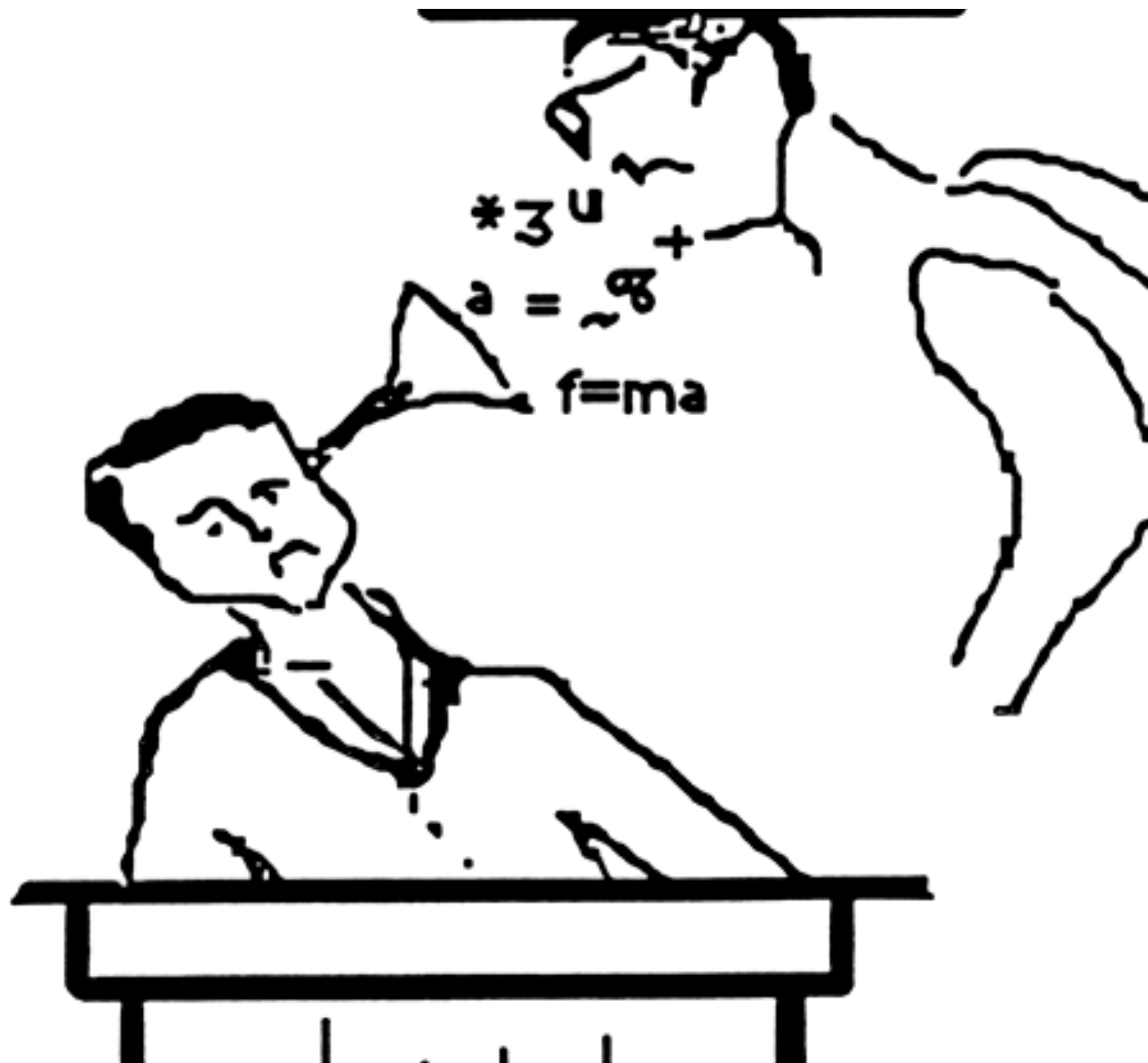




**CREATIVE COMPUTING**  
*a design-based introduction to computational thinking*

*DRAFT*  
*Friday, September 23, 2011*

**Won't school destroy all of  
the interestingness that  
we see with  
out-of-school learning?**





**structure**

**Homogeneity in activity**  
**Learning as individual process**

**creating**  
**connecting**

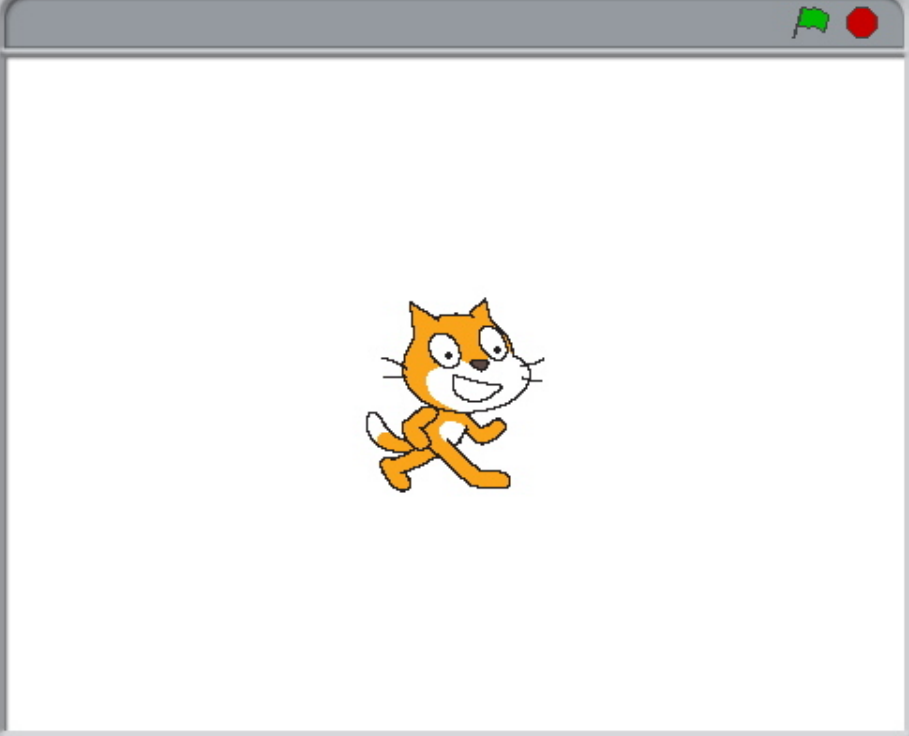
**creating**

connecting

- Motion
- Control
- Looks
- Sensing
- Sound
- Operators
- Pen
- Variables


Sprite1
x: 0 y: 0 direction: 90

Scripts
Costumes
Sounds



- move 10 steps
- turn 15 degrees
- turn 15 degrees
- point in direction 90
- point towards
- go to x: 0 y: 0
- go to
- glide 1 secs to x: 0 y: 0
- change x by 10
- set x to 0
- change y by 10
- set y to 0
- if on edge, bounce
- x position
- y position
- direction

New sprite: x: 231 y: 266



# SUPER SCRATCH PROGRAMMING ADVENTURE!

COVERS  
VERSION 1.4

LEARN TO  
PROGRAM  
BY MAKING  
COOL  
GAMES!



THE **LEAD** PROJECT



SUPER SCRATCH PROGRAMMING ADVENTURE!  
©2012, THE LEAD PROJECT

# 4

STAGE

Now we'll add more programs to the Virus to keep score. These programs use blocks from the **Control** and **Variables** palettes to record and signal the conditions for winning and losing.

Program 4 creates a new variable called **score** and the conditions we need to meet for the script to broadcast **win**. Your score will now appear on the Stage.

```
when I receive start
set score to 0
wait 0.5 secs
forever
  if touching Neo-cat?
    change score by 1
    wait 0.5 secs
  if score > 29
    hide
    broadcast win and wait
    stop all
```

Program 5 creates a variable called **chance**, which keeps track of how many times the Virus is allowed to touch the Server sprite before the player loses. We'll give Scratchy five chances to start. When you're out of chances, the program broadcasts **lose**. Just like the player's **score**, the number of tries the player has left is displayed on the Stage as **chance**.

```
when I receive start
set chance to 5
wait 0.5 secs
forever
  if touching Server?
    change chance by -1
    broadcast Oh
    wait 0.5 secs
  if chance < 1
    hide
    broadcast lose and wait
```



Tip: When setting the rules for winning and losing in your games, use the greater-than symbol (>) or the less-than symbol (<) instead of the equal sign (=), as we do in programs 4 and 5. This will prevent the game from breaking when a variable changes too quickly!

Why might the variable change too fast in this game? Scratchy might touch the Virus a few times in quick succession, and the program won't realize that you've won the game.

chance

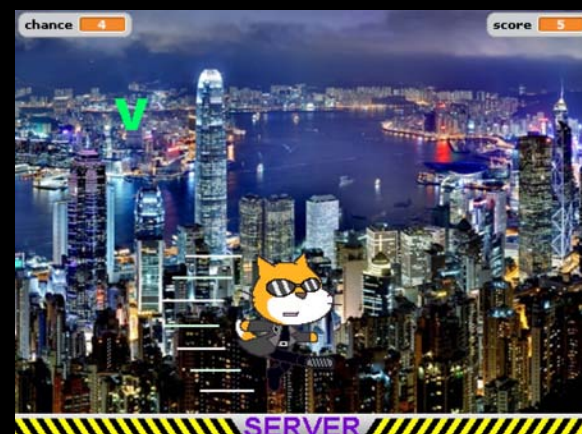
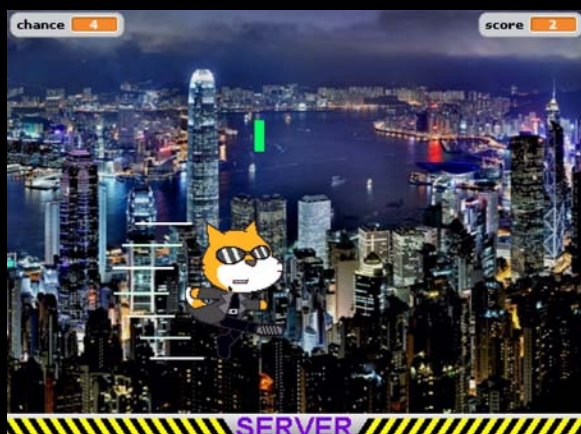
5

score

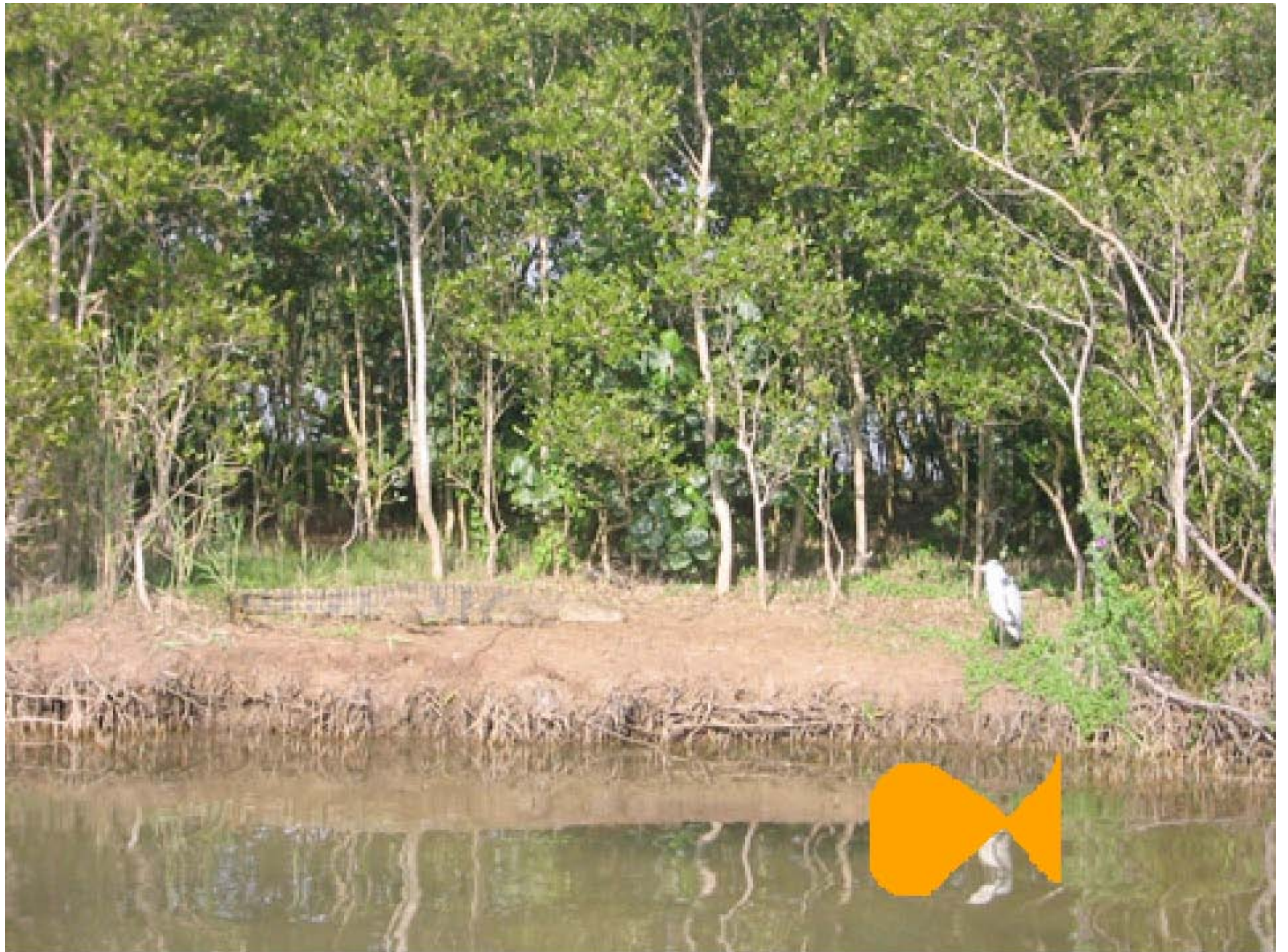
1

**Protect Hong Kong!**  
**Defend the server from virus attacks**  
**Click your mouse to move Scratchy!**  
**Press <SPACE> to start!**

**SERVER**











When you do run into difficulties, it's not time to give up or cry.

It's time to think about the strategies that you have to solve your problem or to look for help.

No reason to break down or give up – you keep at it.

Taylor, Elementary School Teacher

creating

**connecting**



imagine • program • share

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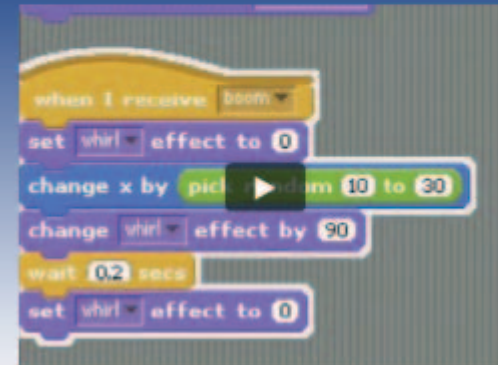
# Create and share your own interactive stories, games, music, and art

[Check out](#) the 3,225,784 projects from around the world!

To create your own projects:



[Download Scratch](#)



## Featured Projects

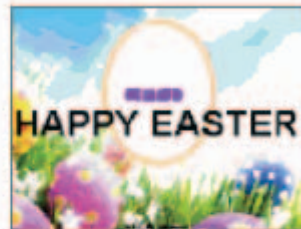
[See more](#) ▶



[Connexions](#)  
by [richjones69](#)



[Scratch 2.0 Updates!](#)  
by [gobo](#)



[Make your own e...](#)  
by [rootsroi01](#)

## Scratch 2.0 Beta



Try out the Scratch 2.0 Beta, and help us make it better!

[Check it out](#) ▶

## Scratch Day



Be a part of Scratch Day - a worldwide network of gatherings, where Scratchers come together to meet, share, and learn.

[Find out more](#) ▶

## Projects Selected by ErnieParke

[Learn more](#) ▶



## ScratchEd

----- Original Message -----

Subject: Checking for remixing

Date: Sat, 3 Dec 2011 17:35:19

From: -----

To: [scratched@scratch.mit.edu](mailto:scratched@scratch.mit.edu)

Hi, Is there a way for educators to simply check student work to determine how much is original, and how much was simply copied from the Scratch site? I don't want to upload individual projects from my students. I just want a way to see if the work is original or not. Thanks.

How are you using the Scratch website?

Coming from an English background, it was really important to me that there was a “publication” step. As a writer, the last step is always sharing, getting feedback, and critiquing.

My middle-schoolers are mostly inspired by the feedback they get from their peers and the gratification they get from sharing their projects in such a public way.

Jess, Middle School Teacher



**So what's next?**

**creating**  
**connecting**

Create stories, games, and animations  
Share with others around the world



A creative learning community with **3,064,516** projects shared

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## Featured Projects



**Tilt Cloud**  
by aaroncolin



**Fish Tank**  
by CANSLP



**Frogs on Logs**  
by learnegy

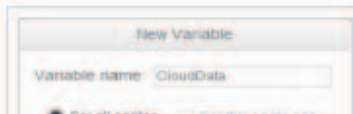
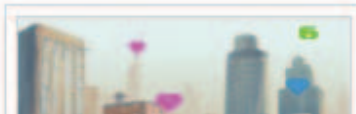


**Scratch 2.0 Updates!**  
by gobo



**2.0 BUBBLE**  
by Failord

## Featured Studios



# Fish Tank

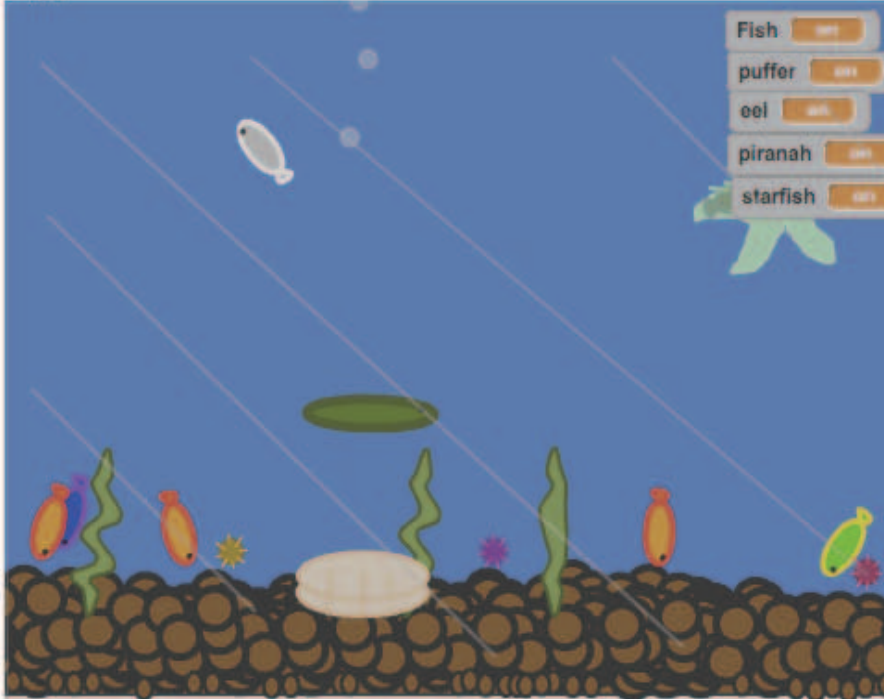
by CANSLP

26 scripts  
19 sprites

See inside

 DRAFT

v280



## Instructions

Clicky clicky for BUBBLES!! (And a piranah attack, but, lets just think about the bubbles ok?)

Touch puffer w/ mouse for BOOM!

Touch eel w/ mouse for ZAP!

Click eel for MEGA ZAP!!!

Movable urchins!(Suggested by cheddagirl\*)

Turbo mode for "Hyperactive fish". :3

Random starfish! (Suggested by ThePancakeMan)

## Notes and Credits

This got featured!?? YES!!!! SECOND ONE THIS YEAR!! (also I have 39 messages right now. \*gasps\*(now 40!)) Love it to suggest a fish.

[simulations](#) x[animations](#) x[art](#) x

© Shared on: 26 Feb 2013

Last modified: 4 Apr 2013



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## Comments (71)



Leave a comment

## Remixes (4)

[View all](#)**Fish Tank Rema...**  
by Klinklang  
14 views



Sprites

New sprite: [New] [Image] [Library] [Camera]

Glass	Seaweed	Clam/Bub...	Clam Bub...	Fish1
Mouse Bu...	Fish2	Fish3	Fish4	Fish5
Puffer	Eel	ZAP!!	Star fish	pirana

Scripts | Costumes | Sounds

Motion

- move 10 steps
- turn 15 degrees
- turn 15 degrees
- point in direction 90
- point towards
- 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
- if on edge, bounce
- set rotation style left-right

Events

- when green flag clicked

Control

- forever

Sensing

- when green flag clicked

Operators

- set ghost effect to 60

Pen

- clear

Data

- set variable to 0

Backpack

Remix See project page

```

when green flag clicked
  forever loop
    go to x: 0 y: 0
    set ghost effect to 60
    go to front
  
```

Search icons: [Search] [Reset] [Zoom In]



Scripts Costumes Sounds

Remix See project page

- Motion
- Looks
- Sound
- Pen
- Data
- Events
- Control
- Sensing
- Operators
- More Blocks

```
move 10 steps
turn 15 degrees
turn 15 degrees
point in direction 90
point towards
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
```

Sprites New sprite: [ ] [ ] [ ] [ ]

Stage 1 backdrop	Glass	Seaweed	Clam/Bub...	Clam Bub...	Fish1
New backdrop: [ ] [ ] [ ] [ ] [ ]	Mouse Bu...	Fish2	Fish3	Fish4	Fish5
	Puffer	Eel	ZAP!!	Star fish	pirana

Backpack

```
when green flag clicked
forever
  go to x: 0 y: 0
  set ghost effect to 60
```

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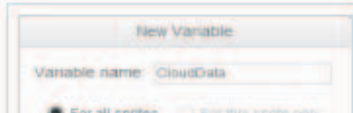


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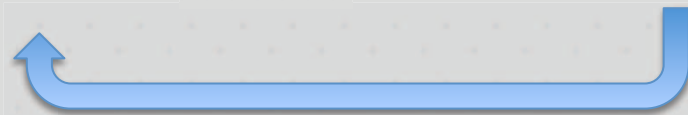
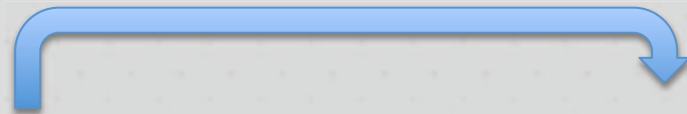


**in school vs. out of school**



**in school**

**out of school**



“

Scratch lets you explore your imagination.  
You design your own stuff, and once you start,  
you just don't want to stop.  
Because as you learn more, you can see there are  
more possibilities, and the more possibilities there  
are, the more you want to expand on what  
you just learned.

”

Bradley, 12 years old



[karen\\_brennan@gse.harvard.edu](mailto:karen_brennan@gse.harvard.edu)

<http://scratch.mit.edu/>  
<http://scratch-ed.org/>