


**PENCIL code** ★ New Account | Login


## Dream it. Code it.

Learn professional programming languages using an editor that lets you work in either blocks or text. Create art, music, games, and stories. Or invent a program that will change the world.


[Let's play!](#)

```
tree = {color} =>
  if size > 5
    dot pink
    return
  fd size
  angle = 20 + random
  tree size * .7
  lt 2 + angle
  tree size * .7
  rt angle
  bk size
  pen saddlebrown
  tree 60
```






**Draw**  
Create art



**Jam**  
Make music



**Imagine**  
Code an adventure

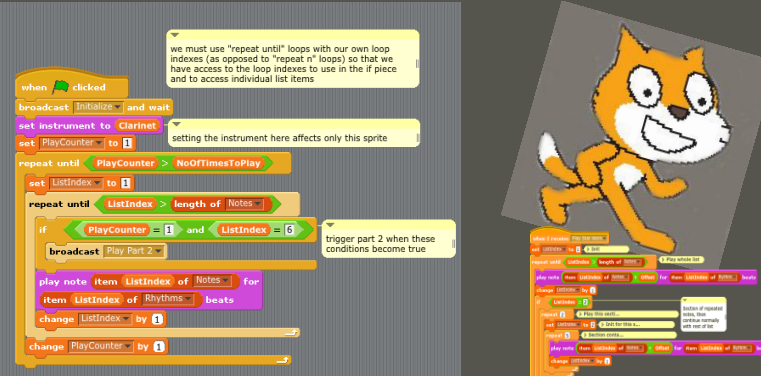
**Get Creative**  
Get some ideas for art, music, or games. Or to code anything, start on a blank page.

### Thanks to:

- NSF TUES-Type 2 Award
- NSF AISL Award
- Departments of Music and Computer Science
- scratch.mit.edu
- pencilcode.net
- Lowell High School Department of Fine Arts
- Dr. Sharon Clark – Coordinator, K-12 Arts Professional Development
- Peter Carney, Patricia Fitzpatrick, James Lutz – Music Teachers




# PROGRAM



we must use "repeat until" loops with our own loop indexes (as opposed to "repeat n" loops) so that we have access to the loop indexes to use in the if piece and to access individual list items

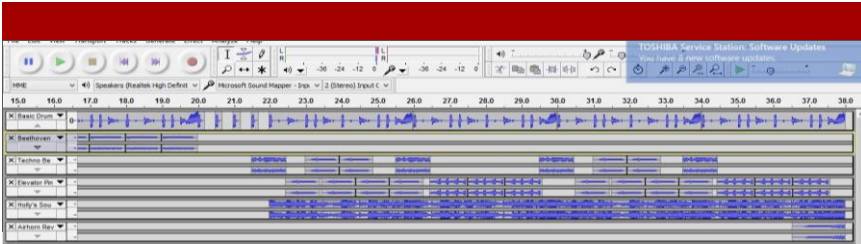
setting the instrument here affects only this sprite

trigger part 2 when these conditions become true



**GENA R. GREHER – MUSIC**  
**JESSE M. HEINES – CS**  
 PRESENT  
**SOUND THINKING**  
**FINAL PRESENTATION**  
 APRIL 28, 2016

**AT**  
**LOWELL HIGH SCHOOL**



MaKey MaKey Extravaganza  
By Eric Miller & Rodrigo Souza

A Thousand Years  
By Hannah Ewing, Mirza Garcia & Shannon Nugent

Random Improvisation  
By Justin DeJoy & Kevin Goddu

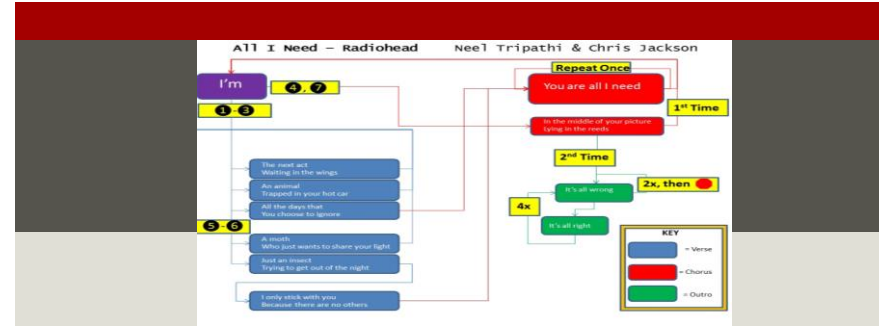
Scratch Man  
By Yusuf Mulyo & Eduardo Pozo

Pencil Code Stuff  
By Mohd Anwar, Kyle Elardo & Brad Swenson

Down to the Wire  
By Alex Casperson & Brian Edson

So Much Love  
By Daniel Lee & John McManus

MaKey MaKey Revolution  
By Tyler McMillan, Martha Robertson & Dylan Wetherald



Mash-Up Mix-Up  
By Lauren Ciccarelli & Andrew Cornish

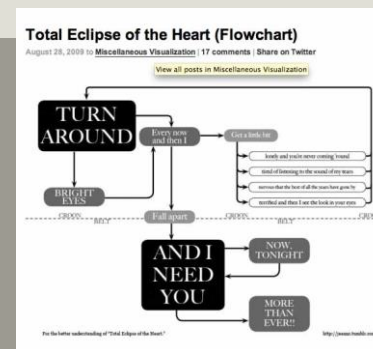
Coding Creative Covers  
By Mia Cariuolo, Christian Hernandez & John Kelly

Matt's and Max's Wonderful Creation  
By Matthew Hart & Max Nelson

The Penciltainer  
By Reagan McCann & Michael Zajac

Musical Pong  
By Gregory Caldwell Jr, Takyiu Lo & Zachary Wong

MaKey MaKey Loopy Loopy  
By Becca Crivello & Chris Kelleher



```
dot thistle, 1000
dot snow, 100
fd 80
dot snow, 80
fd 60
dot snow, 50
```