

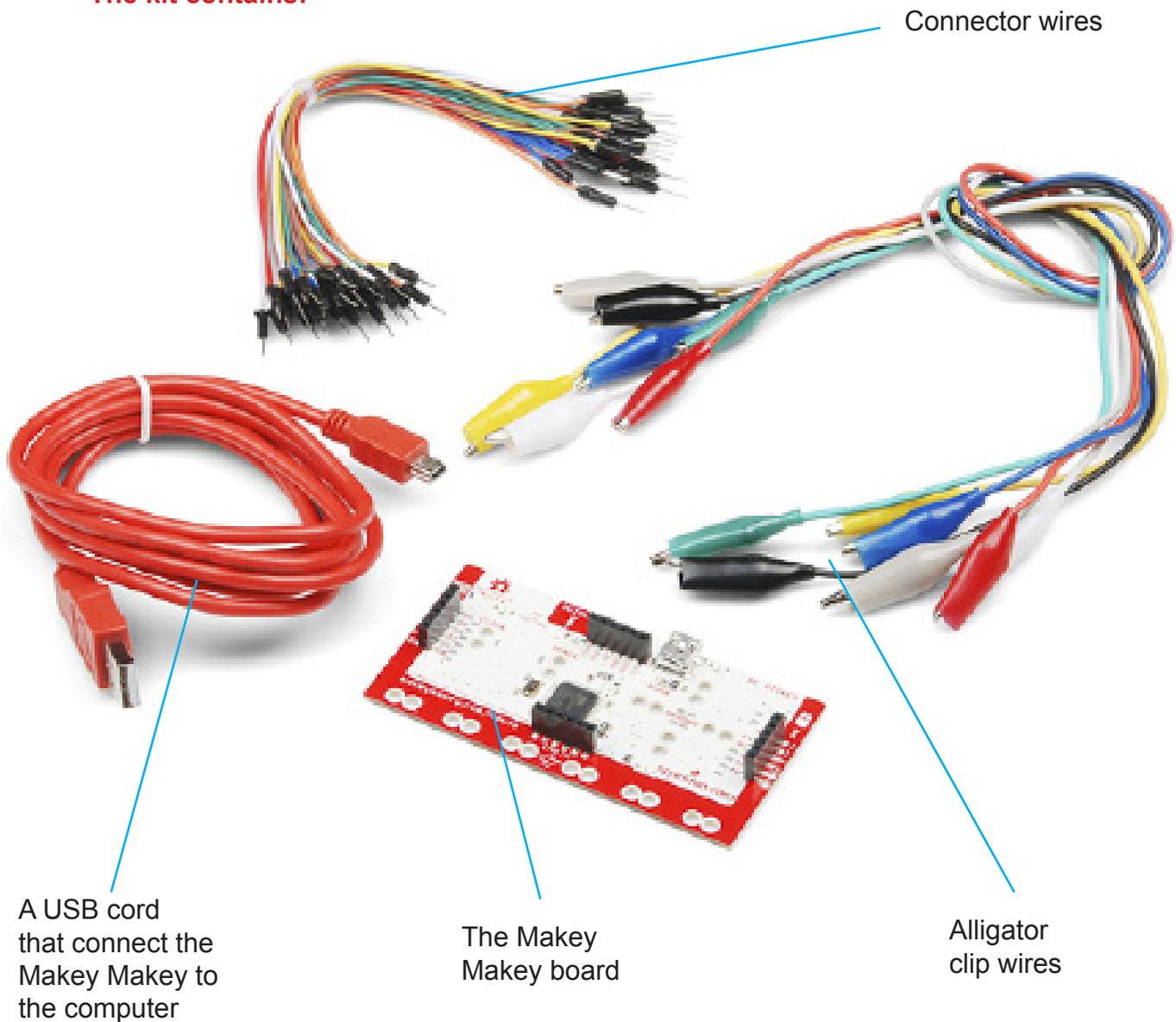
# Intro to Makey Makey

Jill Work  
Stuart Country Day  
School of the Sacred Heart  
jwork@stuartschool.org

**Makey Makey** is a circuit board that comes with alligator clip wires, connectors wires and a cable that connects the board to your computer via USB.

It serves as the intermediary connection to nontraditional input devices; i.e., items that take the place of a keyboard, mouse, and/or joystick.

## The kit contains:



A USB cord that connect the Makey Makey to the computer

The Makey Makey board

Connector wires

Alligator clip wires

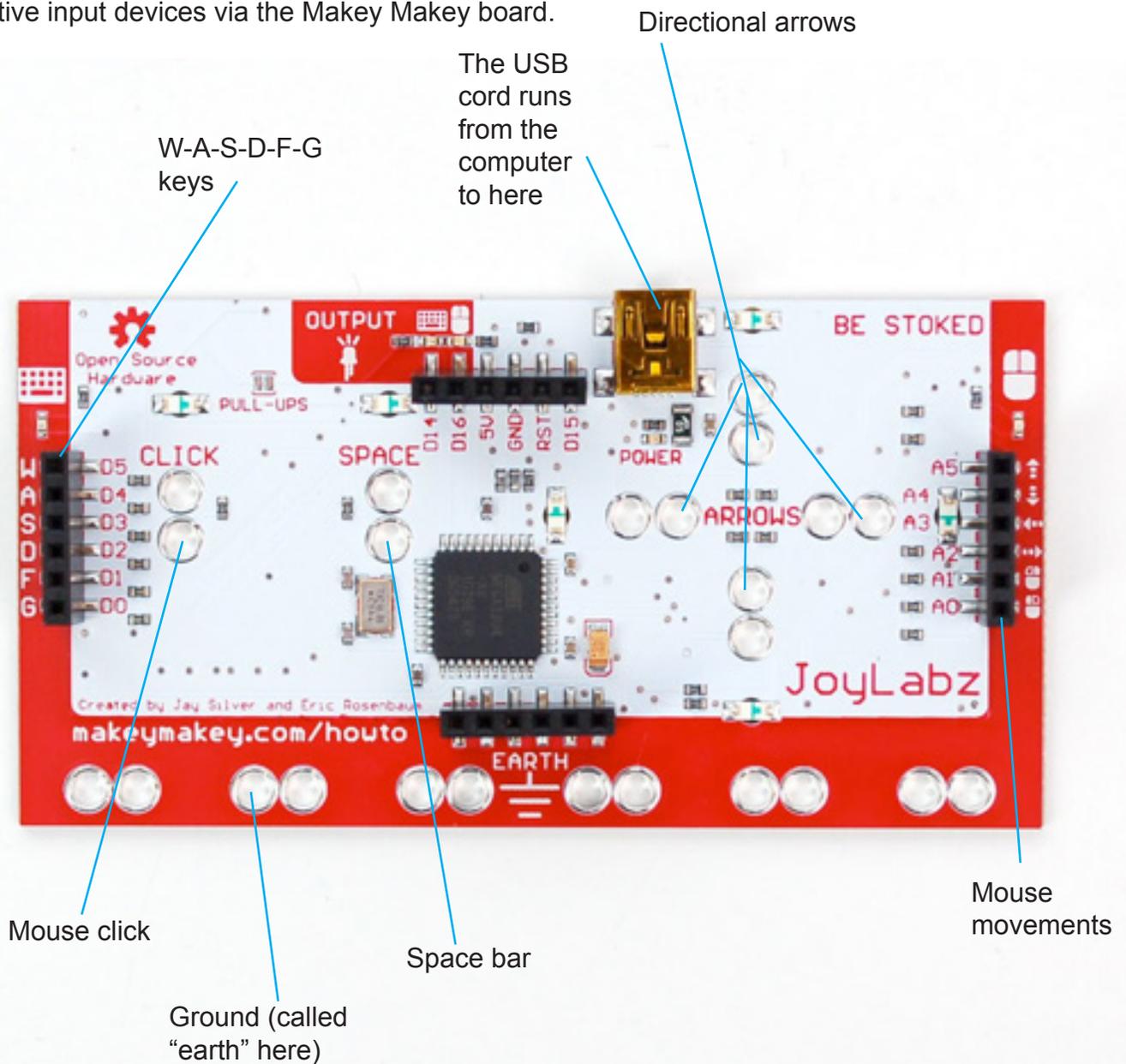
**The concept:** Items that are not keyboards, mice, or joysticks will mimic the function of keyboards, mice and joysticks.

**The process:**

1. Connect the board to the computer with the USB cable
2. Connect alligators clips or connector wires to specific spots on the board
3. Connect conductive items (metal, fruit, vegetables, liquid, etc.) to the wires and clips.
4. Connect an alligator clip to an “earth” slot as a ground
4. Hold the other end of the ground in one hand and “play” the conductive item; the conductive items will mimic the function to which they are attached.

For example, you could connect an alligator clip to the UP ARROW, then connect the other end of the alligator clip to a strawberry. Clip a ground wire to “EARTH” and hold the other end of the ground wire in one hand (or tape it to your wrist), and touch the strawberry. The strawberry function as an UP ARROW.

**Mimicable functions:** The mouse, keyboard and joystick functions below can be replaced by alternative input devices via the Makey Makey board.

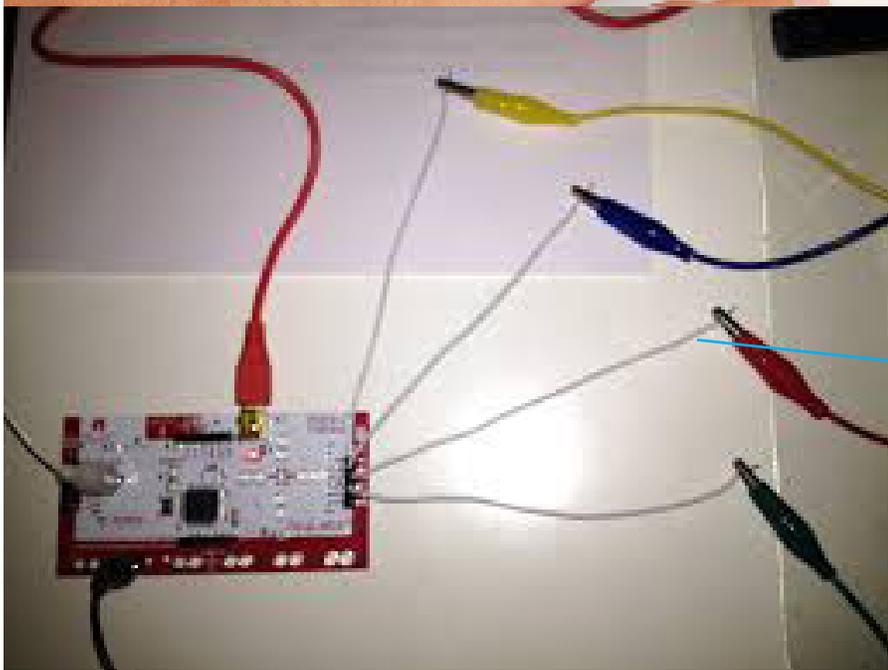
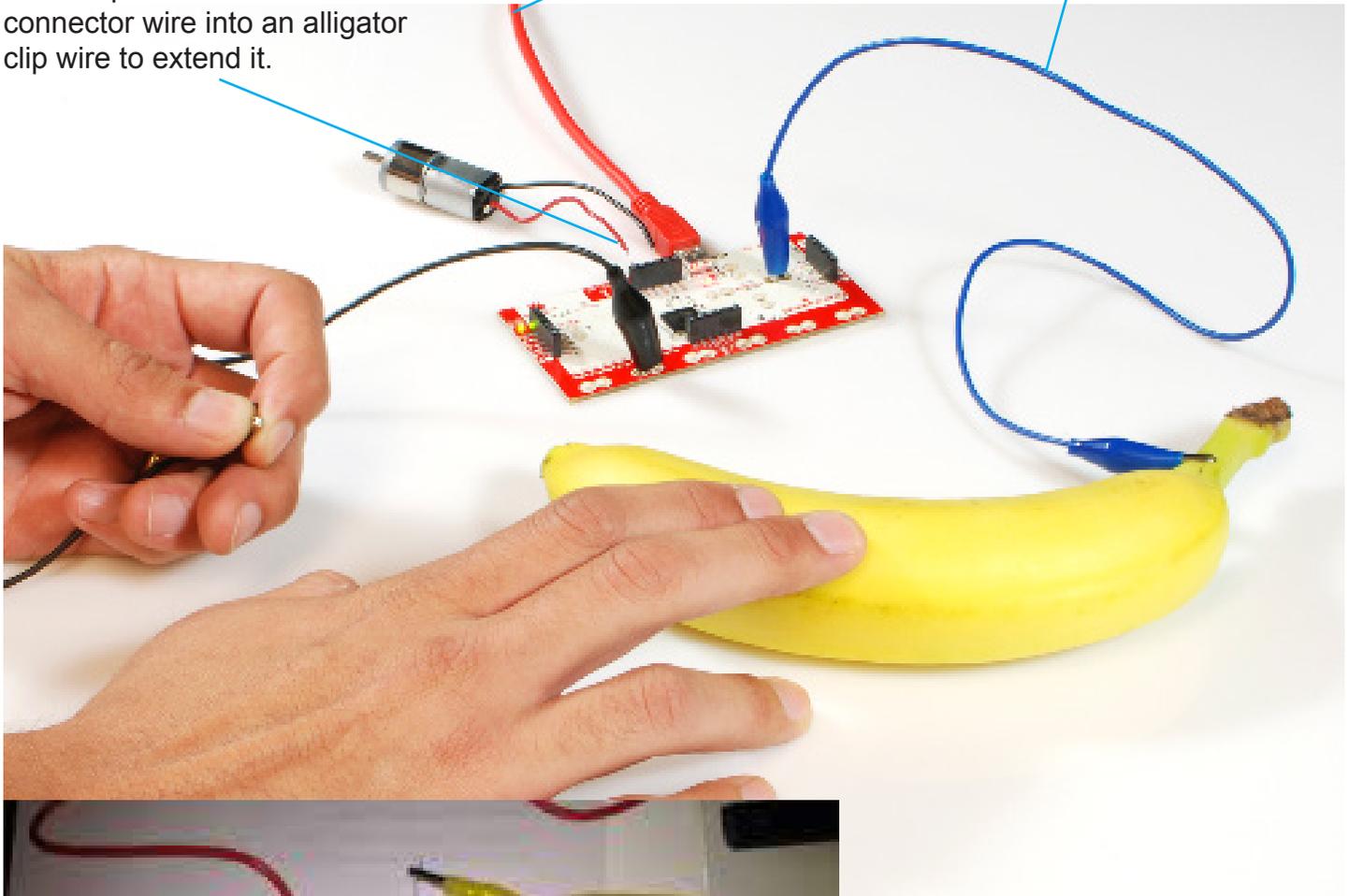


**How the hook-ups work:** The mouse, keyboard and joystick functions below can be replaced by alternative input devices via the Makey Makey board.

The kit's connector wires can be inserted in the letter slots (WASDFG), with the other end inserted into the Play-Doh or fruit (or whatever), or you could clip the loose end of the connector wire into an alligator clip wire to extend it.

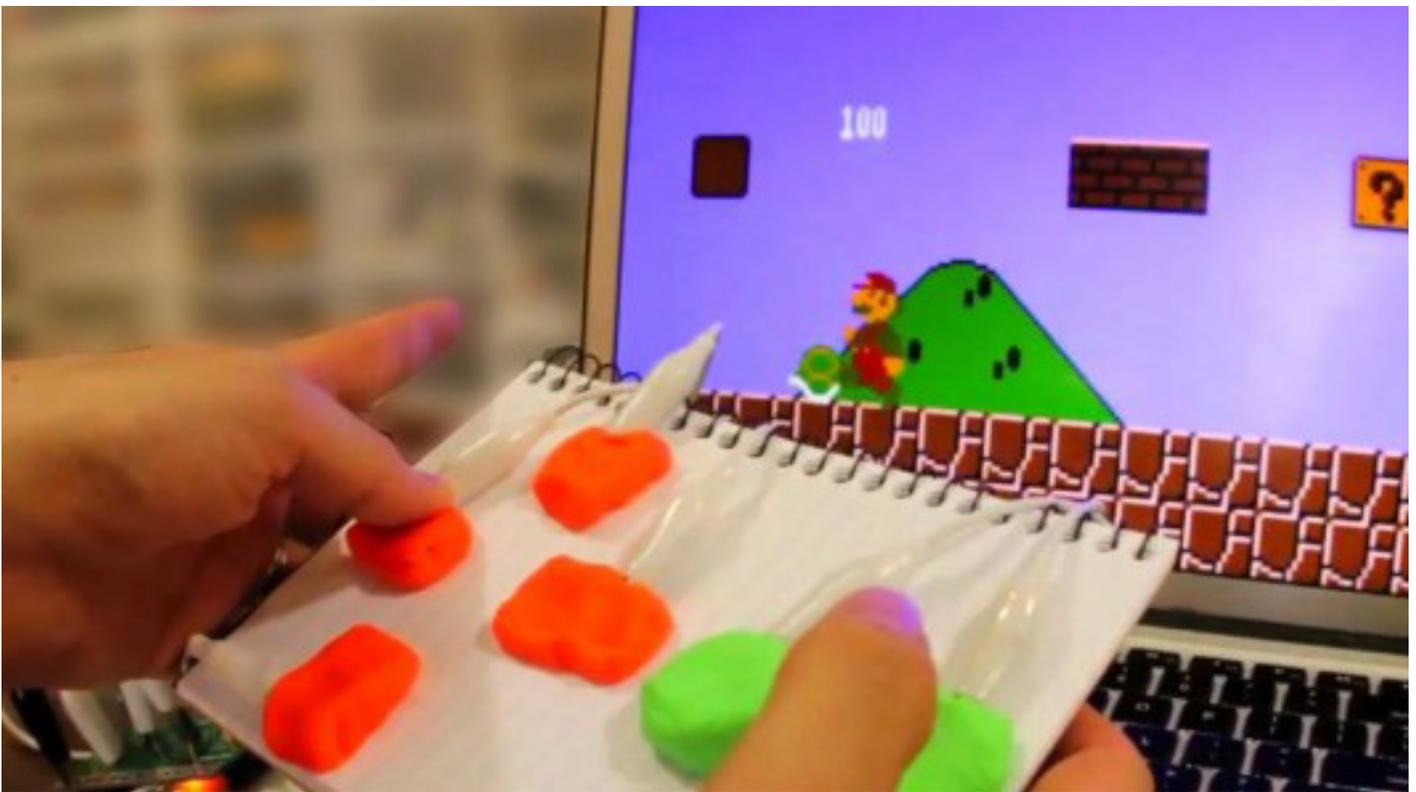
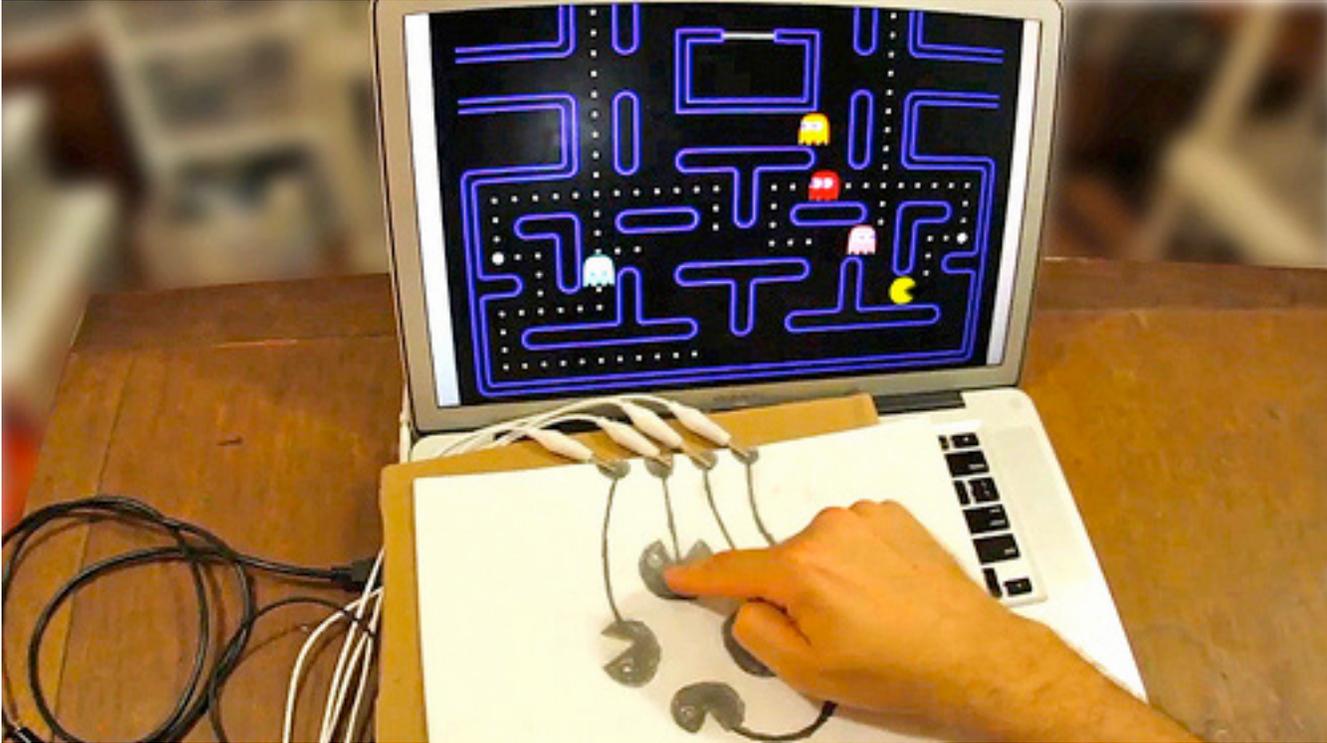
The USB cord that runs from the computer

Alligator clip connecting banana and board



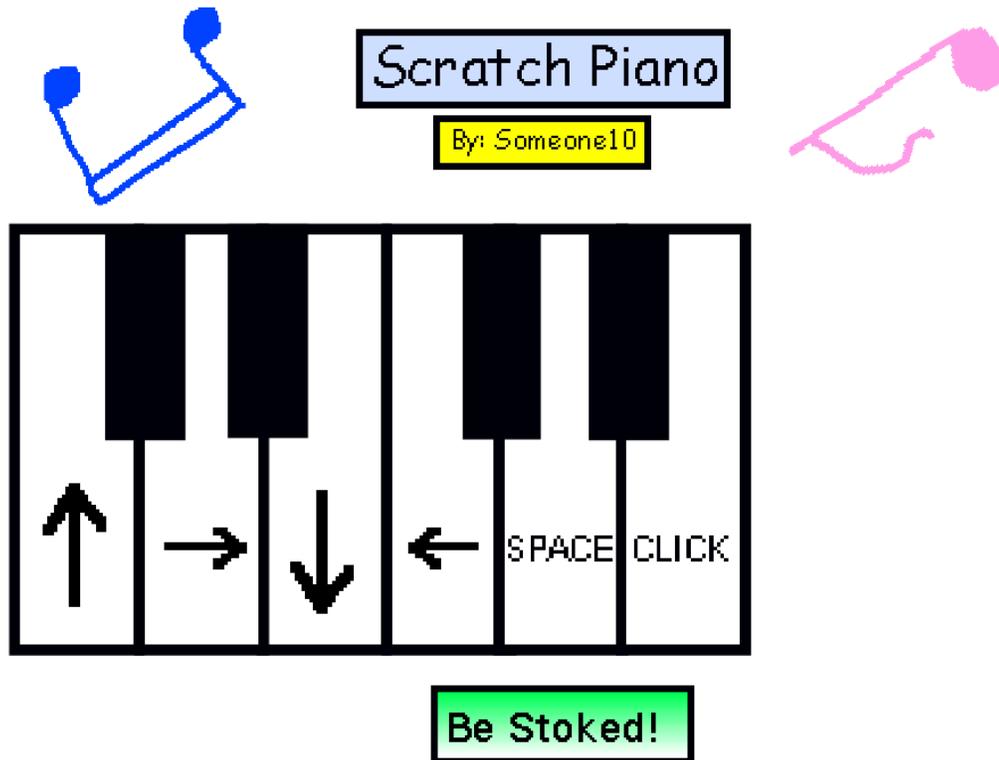
Connector wires that have been connected to the alligator clip to extend the length

**Joystick:** Conductive materials can be used to make a gaming console. The PacMan console (below, top) was made with a pencil drawing on paper (graphite is conductive). The Mario Brothers console (below, bottom) was made with Play-Doh.



**MakeyMakey banana piano:** MIT's visual programming software, Scratch, features many projects made for Makey Makey. This piano [<http://scratch.mit.edu/projects/2543877/>], allows the user to play piano with the directional arrows, the space bar, and a mouse click.

To make it a "banana piano," attach the Makey Makey board to the computer, then alligator clip into the directional ARROWS, SPACE BAR, and MOUSE CLICK holes. Attach the other ends to bananas. Attach the ground wire to "EARTH" and hold the loose end in your hand.



This 5-note banana piano can use the "simplified" side of the Makey Makey Board. The lime is the ground, so to play it, you would rest your left hand on the lime while playing the bananas with your right hand.



### Check out the videos:

The Stuart Lower School Library YouTube playlist, "Makey-Makey Projects," includes an intro to Makey Makey, a sampling of music and art projects, Dip Hop Pizza Hut, An Edible Star-Spangled Banner, and a strawberry piano.

(playlist: <https://www.youtube.com/playlist?list=PLBWtiW2dL5VZO04iQKZgv2MVw61LIA-bt>)



### More resources:

Makey Makey website: <http://makeymakey.com>

Scratch website: <http://scratch.mit.edu/>

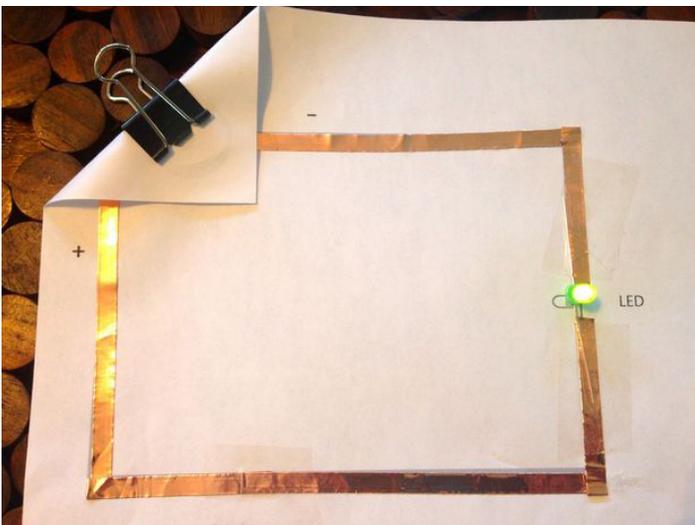
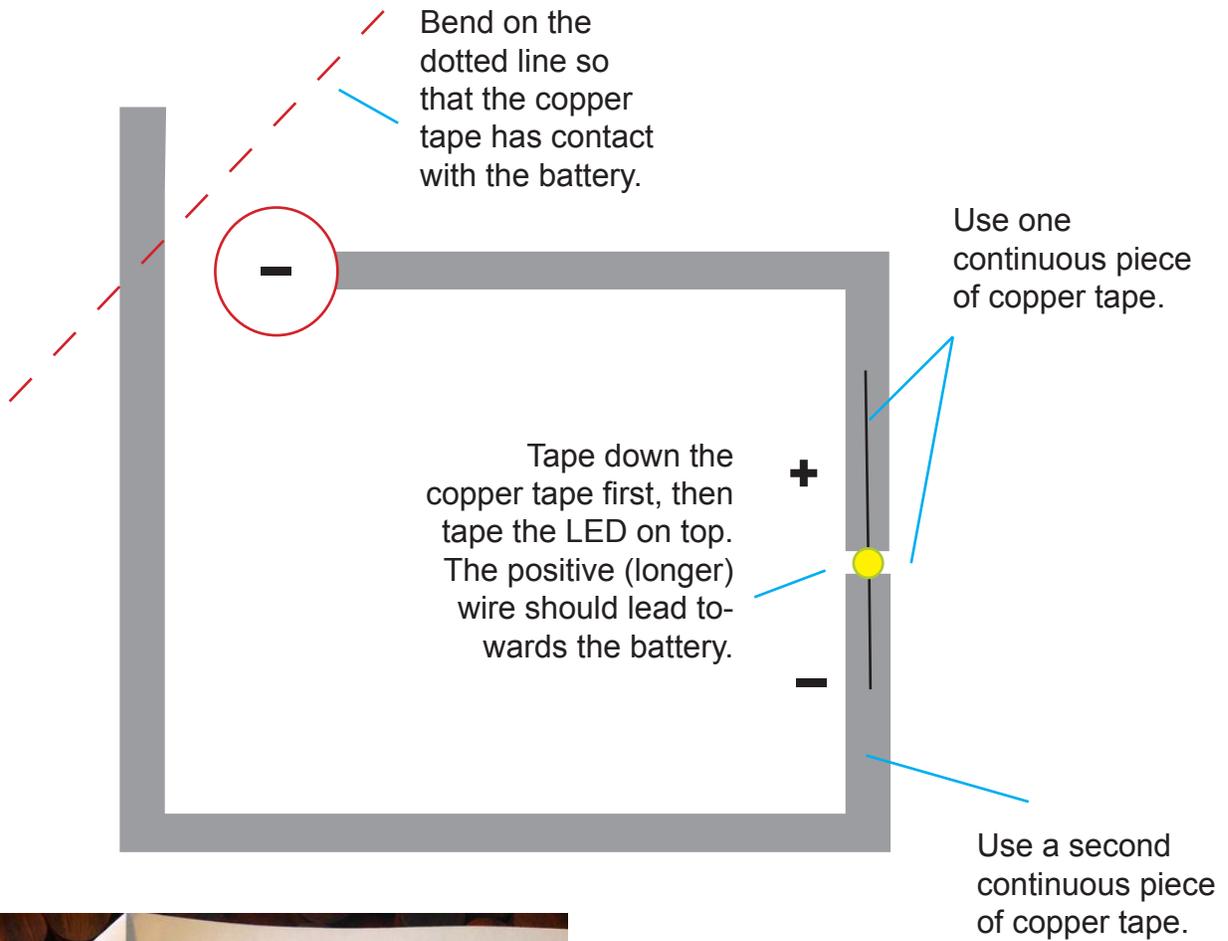
### Stuart Lower School Library YouTube playlist: "Makey-Makey Projects"

<https://www.youtube.com/playlist?list=PLBWtiW2dL5VZO04iQKZgv2MVw61LIA-bt>

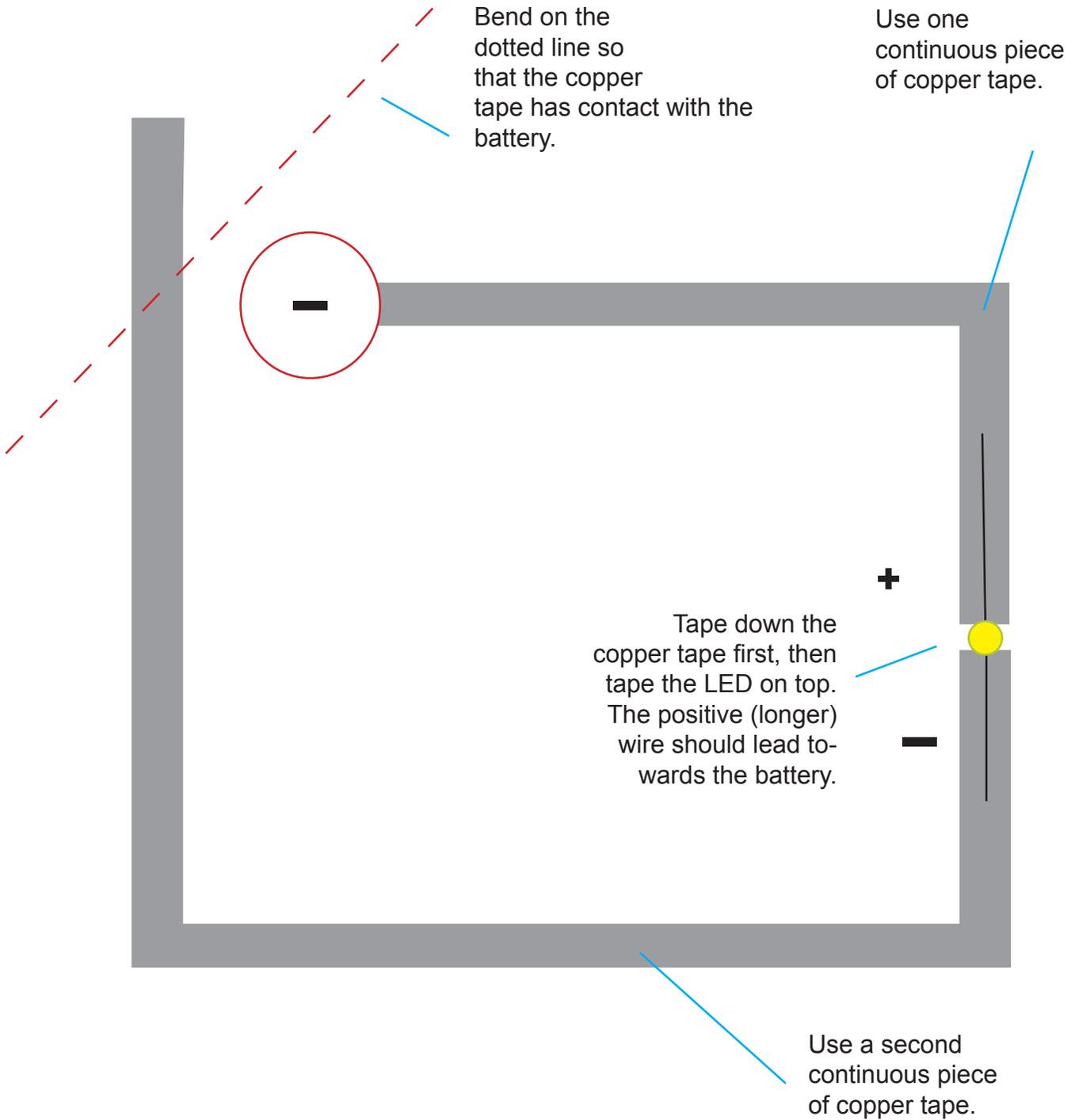
# Paper Circuits

Jill Work  
Stuart Country Day  
School of the Sacred Heart  
jwork@stuartschool.org

**Paper Circuits** use copper tape (#2032), a coin-cell battery, and a mini LED light to create working circuits with paper. These can be used in a variety of paper creations such as greeting cards and origami.



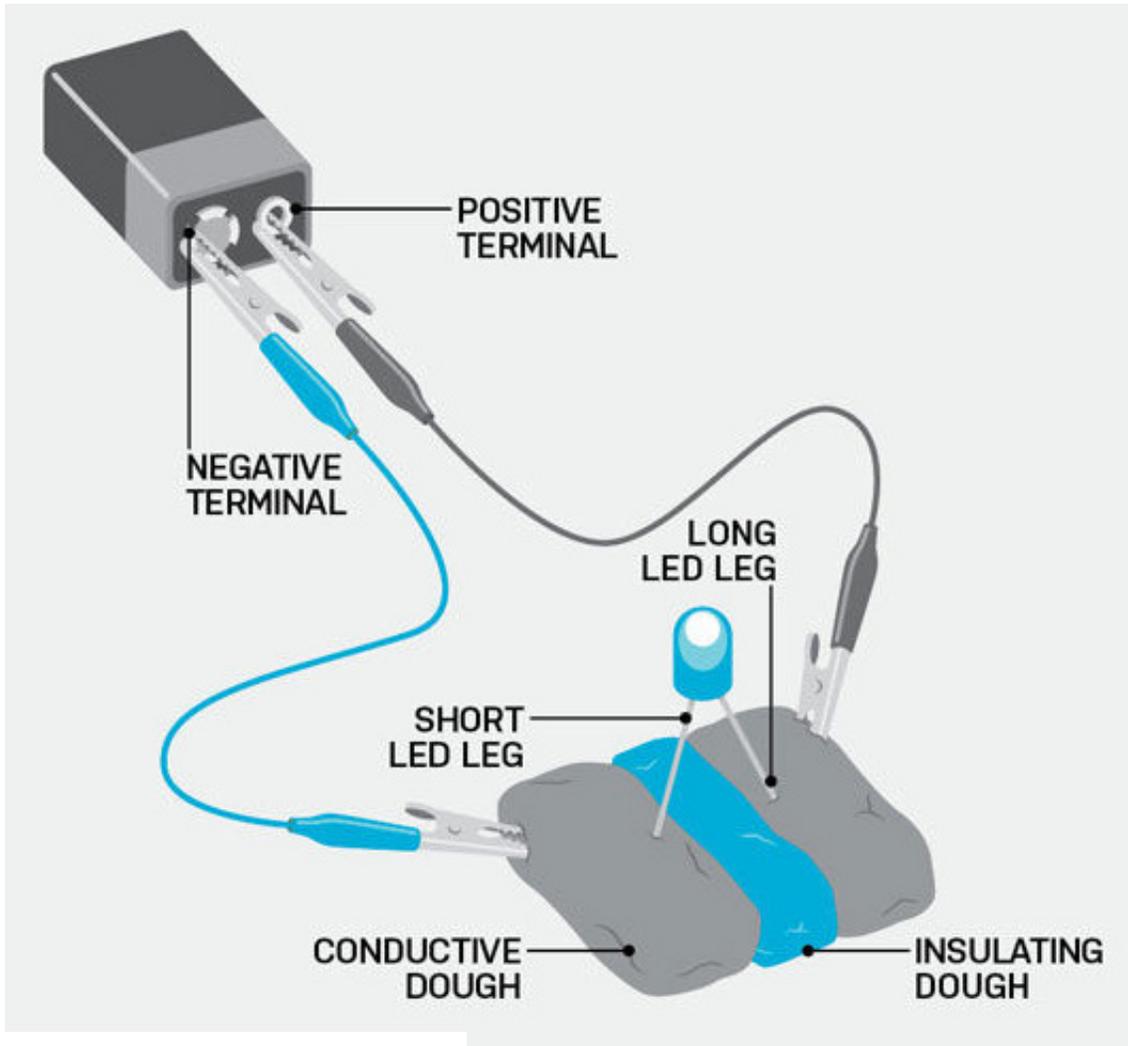
## PAPER CIRCUIT TEMPLATE



# Other Circuitry Kits/Projects

Jill Work  
Stuart Country Day  
School of the Sacred Heart  
jwork@stuartschool.org

**Squishy Circuits** use conductive dough, or a combination of and conductive and insulating doughs to create light-up dough sculptures.



**For more information:** <http://courseweb.stthomas.edu/apthomas/SquishyCircuits/howTo.htm>  
and <https://squishycircuits.com>

