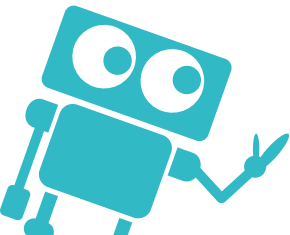


T

Tinker

3

Points



Makey Makey Conductive Bongo

Create a bongo out of any
conductive item using Makey
Makey and an online bongo
program.

<https://apps.makeymakey.com/bongos/>

Mackin**Maker**

T

Tinker

3

Points

Materials:

- Makey Makey, gator clips, USB cable, and computer with web access
 - Assorted conductive items (metal, 6B pencil, copper tape, foil, etc.)
-

Quick Start:

1. Follow the Makey Makey setup instructions (plug in USB to Makey Makey and into the computer).
2. Attach one gator clip to "Earth."
3. Attach the other gator clips to arrow keys on Makey Makey.
4. Attach the other end of gator clip to a conductive item.
5. Hold the "Earth" gator clip with one hand and touch one of your conductive items with the other hand to trigger your bongo sounds.

Hints and Tips:

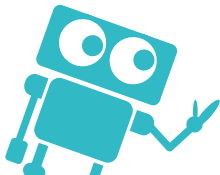
- Makey Makey has a wealth of information, games, apps, and ideas on how to use your Makey Makey.
 - To make sure it's working, touch the "Earth" with one hand, and the "arrow" or, "space" with the other hand... if a red light turns on, the Makey Makey is working.
-

Extended Challenges

Music: Try out other virtual instruments like the piano at <https://apps.makeymakey.com/piano/>.

Music: Can you play the bongos in time with another Makey Makey piano (or other instrument)? Try making your own band!

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A small, stylized Scratch robot character is positioned in the bottom left corner of the image. It has a square head with two large circular eyes, a rectangular body, and thin limbs. It is facing towards the right.

S

Skill-Up

7

Points

Makey Makey **Scratch + Makey Makey**

Learn to trigger sounds, movements and more by combining Scratch and Makey Makey. Try to make a simple video game, or a way to trigger custom sounds and recordings.

[Scratch.mit.edu](https://scratch.mit.edu)

Mackin**Maker**

S Skill-Up

7 Points

Materials:

- Makey Makey, gator clips, USB cable, and computer with web access
- Assorted conductive items (metal, copper tape, foil, etc.)

Quick Start:

1. Follow the Makey Makey setup instructions (plug in USB to Makey Makey and into the computer).
2. Attach one gator clip to “Earth.”
3. Attach the other gator clips to arrow keys on Makey Makey.
4. Attach the other ends of the gator clips to conductive items.
5. Use MIT’s Scratch block coding to map keyboard keys to sounds, or make digital characters move.

Hints and Tips:

- Look in the “Events” section of Scratch to find the “when ____ is pressed” block to get started.
- You can trigger sounds or even record your voice with Scratch and trigger that!

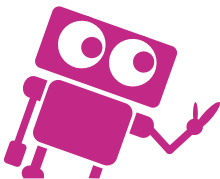
Extended Challenges

Computer Science: Use Makey Makey and Scratch to program a simple game. Discuss inputs and outputs, variables, loops, and more.

Music: Challenge yourself to theme your program around a famous composer.

Social Studies: Research a topic and engineer a way to share something you learned through Scratch and Makey Makey.

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D

Design

14

Points

Makey Makey Interactive Book Talk

Build an interactive book talk from a book that you are currently reading or that you have recently read. Use the website [Scratch.mit.edu](https://scratch.mit.edu).

MackinMaker

D Skill-Up

14
Points

Materials:

- Makey Makey kit
- Device with USB plug
- 6B Graphite pencil
- Multi-colored paper, cardstock, and/or copy paper
- Recycled cardboard, containers, cups, and/or plastic bottles

Any additional low-tech engineering supplies that may include but are not limited to:

- | | |
|---------------------------------------|---------------------|
| • Tape (masking, scotch, and/or duct) | • Aluminum foil |
| • Hot glue | • String |
| • Craft sticks | • Coloring supplies |
| | • Copper tape |
| | • Brass fasteners |

Quick Start:

1. What makes a good book talk? Brainstorm key elements of book talks and choose a book that you will discuss.
2. Write out a book talk script.
3. Plug your Makey Makey into the computer.
4. Create a new project in Scratch and record your voice on Scratch. Code them to trigger when specific keys are pressed.

5. Add conductive pads to your message and hook up to Makey Makey.
6. Build an interactive “book talk” with Makey Makey that will play in the library or another space near a book collection.

Hints and Tips:

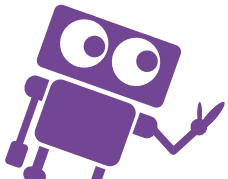
- Looking for ideas? Create a pressure sensitive switch and place it next to the book on the shelf.
- If you are finding it difficult to choose a book or to review a novel, complete a book talk for a picture book instead. Make something that could be shared with or given to an elementary library to entice younger readers.

Extended Challenges

Social Studies: Research an element from a history unit and use Makey Makey and materials available to teach key facts about this time.

English/Language Arts: Create a book talk from a character’s point of view within a novel you are reading for class

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**G**

Global

**18**

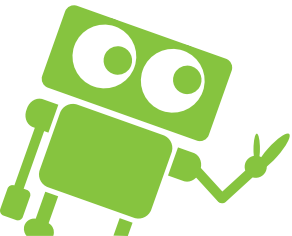
Points



Makey Makey

Interactive Poster

Make a poster that is interactive!
Will you add sound to a map or
trigger audio from a civil rights
march? It's up to you and your
imagination.

**MackinMaker**

Materials:

- Makey Makey, gator clips, USB cable, and computer with web access
- Conductive tape, foil, 6B pencil, or paint
- An assortment of crafty supplies

Quick Start:

1. Gather assorted craft materials, paper, and markers.
2. Plan your poster. What elements will be conductive and what will they trigger?
3. Create your poster masterpiece.
4. Add conductive pads to your poster and hook them up to Makey Makey.
5. Plug your Makey Makey into the computer and go to Scratch.
6. Create a new project in Scratch with your outputs (sounds, sprite movement, etc.) mapped to various keyboard keys.
7. Show it off to others.

Hints and Tips:

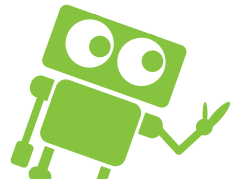
- Brass fasteners (or brads) are conductive, easy to punch through paper/poster board, and work great for Makey Makey triggering

Extended Challenges

Social Studies: Can you make a poster about a famous inventor or a historical event?

Science: Try to create a teaching poster where each conductive pad will trigger an explanation. This could be the parts of a cell diagram, animal kingdoms chart, or parts of a habitat.

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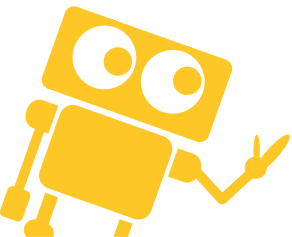


I

Innovator

25

Points



Makey Makey

Makey Make-ing Solutions

Think of a problem or inconvenience in your life or the life of someone you know. Can you make a device to help solve that inconvenience?

Mackin**Maker**

Materials:

- Makey Makey, gator clips, USB cable, & computer with web access
- A supply of crafty materials
- Conductive objects, tape, 6B pencil, copper tape, etc.

Quick Start:

1. Brainstorm problems in your life or talk to someone about obstacles or things they need help with throughout the day. How will you use design thinking to create a prototype of a device to support them and/or solve a problem?
2. Gather materials and start to create.
3. Test and iterate your design.
4. Show off your final prototype to your class or friends.

Hints and Tips:

- Really get to know your user. Have empathy for what it might be like to live every day in their shoes.
- If you need help with inspiration, go to <https://www.instructables.com/howto/makey+makey/>

Extended Challenges

Social Studies: Research the people of various countries and what issues they may be facing. Can you develop a device that would help them?

Computer Science: Think about how you can do other things with the Makey Makey to help people. Can you code a calculator app? Or a way to help measure things with Makey Makey?

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