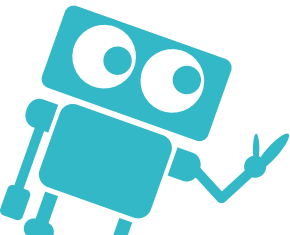# Makey Makey
Conductive Bongo

Create a bongo using Makey Makey and an online bongo program. Can you add conductive elements to make the bongo?

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

MackinMaker

T Tinker

5 Points

Materials:
- Makey Makey
  Gator clips
- USB cable & 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 other gator clips to the arrow pointing left and the "space" on the Makey Makey.
4. Attach the other ends of both gator clips to different conductive items or practice holding one of them while completing the next step.
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.
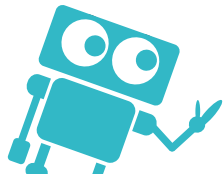
Hints and Tips:
- Makey Makey has a wealth of information, games, apps, and ideas on how to use your Makey Makey. Head to Makeymakey.com for resources.
- To make sure the Makey Makey is working, touch the "Earth" with one hand, and the "arrow" or, "space" with the other hand. If a red light turns on, the Makey Makey is working.

Extended Challenges
Music: Try out other virtual instruments like the piano at https://apps.makeymakey.com/piano/.
Music: Rhythm! Can you play the bongos in time with another Makey Makey piano (or other instrument)? Try making your own band!

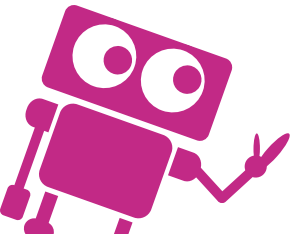Projects inspired by and reproduced with permission of Makey Makey LLC.

Makey Makey
Scratch + Makey Makey

Learn to trigger sounds, movements and more by combining Scratch and Makey Makey. Can you make Makey Makey trigger custom sounds and recordings?

Scratch.mit.edu

Mackin Maker

Materials:
- Makey Makey
  Gator clips
- USB cable & 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.
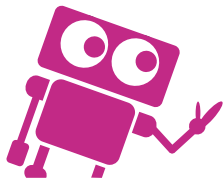- You can trigger sounds or even record your voice with Scratch and trigger what you've recorded!

Extended Challenges
Music: Make something that plays notes. Can you play a song?
Social Studies: Research a topic and engineer a way to share something you learned through Scratch and Makey Makey.

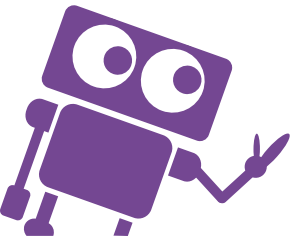Projects inspired by and reproduced with permission of Makey Makey LLC.

Makey Makey
Far Out Space Design

Draw a space scene and use Scratch to program some space sounds into your art. Will you include an alien spaceship? A planet and stars? A rover? You decide!

MackinMaker

Materials:
- Makey Makey
  Gator clips
- USB cable & computer with web access
- 6B pencil and paper
- Optional: Foil & black markers, conductive tape, or conductive paint

Quick Start:
1. Gather a 6B pencil, paper, Makey Makey, and any other materials you want to use to create your drawing.
2. Draw your space design. How and where will you connect the Makey Makey to trigger Scratch?
3. Plug your Makey Makey into the computer.
4. Connect the Makey Makey to the conductive pieces of your image. Do you have a spot for your Earth connection?
5. Create a new project in Scratch with your space sounds mapped to keys.
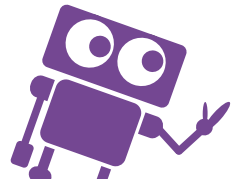6. Test your drawing. Does it work?

Hints and Tips:
- Make sure each alligator clip is attached to a unique conductive shape that you have drawn. If any lines are connected to other parts of the drawing, they will not work the way you want.
- In the sounds on Scratch, there is an entire Space sounds section. Make sure to grab some sounds from that section or make your own custom sounds!

Extended Challenges
English/Language Arts: Can you write a story about the space scene you have created? Could you add a touch pad to the drawing that when pressed tells part of your story?
Computer Science: Can you add in more than just sounds? Could your space drawing trigger online Scratch animations? Or move a character through a programmed space scene? Think creatively and deepen your coding skills too!

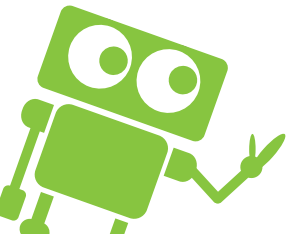Projects inspired by and reproduced with permission of Makey Makey LLC.

Makey Makey
Model Talk

Build a 3D model or structure and use Makey Makey and Scratch to make it talk. What will it say? Will it tell a story or explain something you've recently learned? Or will it make a silly sound?

MackinMaker

Materials:
- Makey Makey
  Gator clips
- USB cable & computer with web access
- Cardboard and other assorted materials of your choice
- Foil & black markers, conductive tape, or conductive paint

Quick Start:
1. Gather a Makey Makey and any other materials you want to use to create your 3D model.
2. Sketch out a plan. How and where will you connect the Makey Makey to trigger Scratch when you want it to?
3. Plug your Makey Makey into the computer.
4. Connect the Makey Makey to the conductive pieces of your model. Do you have a spot for your Earth connection?
5. Create a new project in Scratch with your sounds mapped to keys.
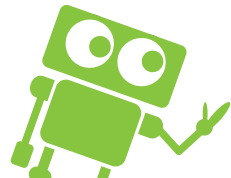6. Test your 3D model. Does it work?

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 what you've recorded!
- What materials are conductive? Brainstorm the conductive materials you want to use so the Makey Makey can more easily get triggered through your structure. Can you make tabs that you connect the alligator clips to?

Extended Challenges
Computer Science: Can you add in custom sounds or recordings? Could your model trigger online Scratch animations? Think creatively and test out different codes in Scratch!

English/Language Arts: Can your model be related to a story you are reading in some way? What would a main character say or sound like? Record a custom sound that is triggered by touching your model.

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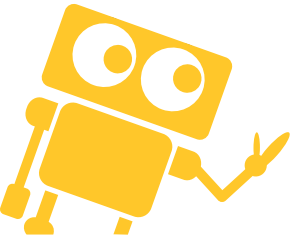with permission of Makey Makey LLC.

Makey Makey
Talking Toy

Make a prototype of something you or someone you know would like to play with using Makey Makey, Scratch, and any other programs and materials you can think of. Will it talk? Will it interact with an image or trigger something in an online video game? You decide!

MackinMaker

Materials:

- Makey Makey
  Gator clips
- USB cable & computer with web access
- Cardboard and other assorted materials of your choice
- Foil & black markers, conductive tape, or conductive paint

Quick Start:

1. Gather assorted craft materials, paper, and markers.
2. Plan your toy. What elements will be conductive and what will they trigger?
3. Create your masterpiece.
4. Add conductive pads to your toy 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/cardboard, and work great for Makey Makey triggering.

Extended Challenges

Art: Can you make a toy that is related to your favorite movie? What characters might you recreate and what would they say?

Science: Build an animal and use Scratch to program the right sounds. Can you create a habitat to go with it?

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