Makey Makey®

MAKE MUSIC DAY
JUNE 2023

MAKE MUSIC DAY GUIDE

SUGGESTED USE

This guide is designed to help Make Music Day chapters set up Makey Makey for maximum fun!

We recommend volunteers play and work with Makey Makey before the event.
During a community event, lots of issues might (or might not!) happen. Make sure the main volunteer has done some playing and troubleshooting with Makey Makey. Below are the activities we suggest for getting ready for the big day!

Hands-On Makey Makey Exploration
Learn how Makey Makey works and learn how to invent on the fly! Use your hands to trigger Makey Makey inputs on our piano app, play a human piano and explore playable drawings with Makey Makey.
- First Time Setup (15 min)
- Hands-On a Makey Makey Lab (30 min)
- Make Interactive Drawings with Plug and Play App

DEVICE COMPATIBILITY

Makey Makey works on Windows, Mac, Chromebook and on many flavors of Linux (Ubuntu, etc.).
If your computer supports a USB keyboard or mouse, it should work with Makey Makey.

iPad Compatibility: The new iPad OS supports arrow keys and mouse or trackpad movement. As of April 13th 2020, iPads running iOS 13.4 work with Makey Makey v.1.4 and higher with the official Apple Lightning to USB Camera Adapter. Note: Most iOS apps are not coded to work with key presses, but browser-based programs like Scratch and our piano app work with Makey Makey and an iPad adapter.More info on this here.

WHAT'S IN THIS GUIDE?

BECOMING FAMILIAR WITH MAKEY MAKEY

STATION SETUP IDEAS

CONNECT WITH US

BECOMING FAMILIAR WITH MAKEY MAKEY

Makey Makey is designed for quick connections between a computer and a variety of objects. Learners can experiment with various configurations to create a complete circuit.

The Makey Makey kit (see fig. 1) includes the Makey Makey board, a USB cable, seven alligator clips, six connector wires, and an instruction sheet.

MAKEY MAKEY BOARD   **7 ALLIGATOR CLIPS**   **INSTRUCTIONS**
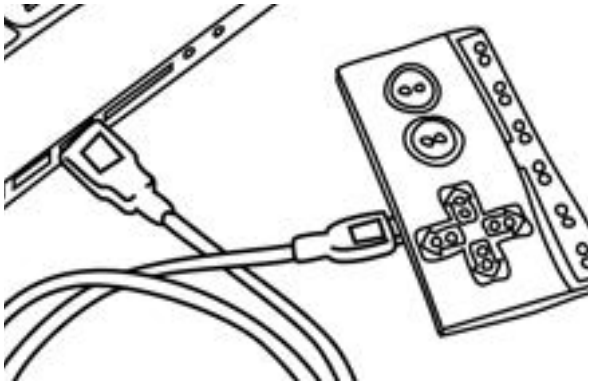
USB CABLE   **6 CONNECTOR WIRES**

Figure 1. Makey Makey Kit
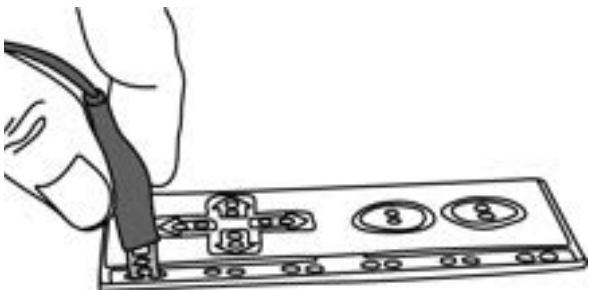
HOW MAKEY MAKEY WORKS

1. Plug in USB

The smaller side of USB cable plugs into Makey Makey, and the larger side plugs into the computer.
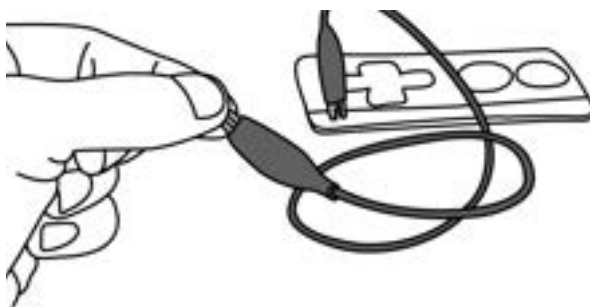
2. Close Pop-Up Window

The computer may ask to install drivers or complete another setup. Click Cancel or close the window.

3. Connect to Earth

Connect one end of an alligator clip to **EARTH** on the bottom of the front side of Makey Makey.

4. Connect to Yourself

Hold the metal part of the other end of the alligator clip between your fingers. You are now **grounded**.

5. Connect to "Space" and Try It

While you are still grounded, touch the round **Space** pad on the Makey Makey. A green light should appear on the Makey Makey, and the computer will "think" the spacebar was pressed. Also, complete the circuit by connecting another alligator clip to **Space**.
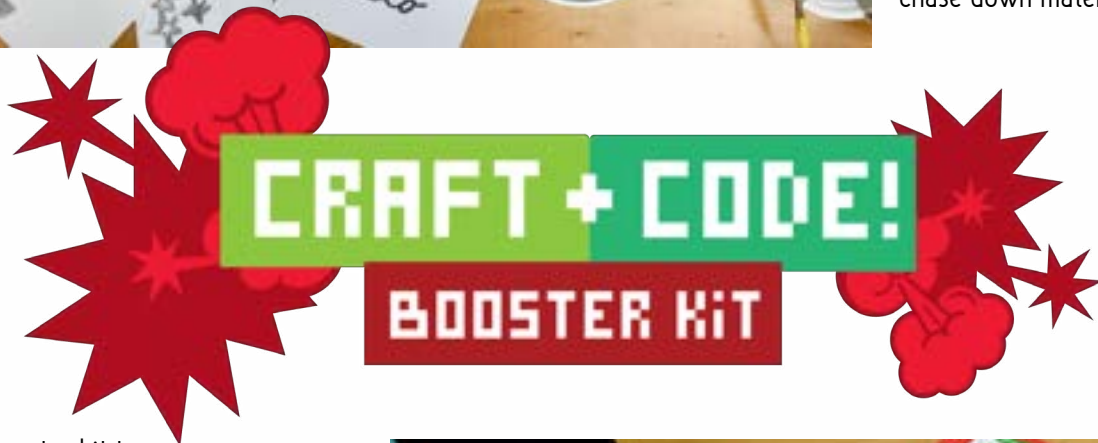
6. Experiment, Innovate, and Invent

Experiment by turning various items, objects, or substances into a computer key. A connection can be made through anything that is even slightly conductive of an electrical current, so be innovative. Create inventions that combine conductive and non-conductive parts to solve real-world challenges.

MAKEY MAKEY BOOSTER KITS

The Craft + Code Booster Kit is inspired by all of the crafting and inventiveness we've seen created by the community over the years. This booster kit is a balanced combination of creative materials, such as binder clips and aluminum foil, as well as hard-to-find components such as conductive thread, conductive fabric, and Makey Makey-optimized pencils. This gold mine of materials will help you focus on merging art and technology, without having to chase down materials.

Use this booster kit to:
- Draw playable circuits
- Create tilt sensors out of recyclables
- Craft unconventional circuits
- Invent musical instruments
- Make STEM fun!

Each booster kit:
- Combines familiar and inspirational materials to maximize fun!
- Has easy-to-follow pictorial guides making them perfect for center and station activities.
- Is paired with Makey Makey apps to maximize hands-on invention time!

www.MakeyMakey.com/CraftandCode

The Get Up + Go! Booster Kit is designed to get you up and moving around and using your Makey Makey in new ways. The materials included in this booster kit, along with the inspiring project guides, should get you thinking about incorporating Makey Makey into oversized inventions and physical activities for the perfect combination of movement, science, and technology.

Use this booster kit to:
- Create oversized inventions.
- Challenge students to create STEM-in-the-Gym activities.
- Combine science and physical activities.

Each booster kit:
- Combines familiar and inspirational materials to maximize fun!
- Includes inspiring project guides making them perfect for center and station activities.
- Easily pairs with plug-and-play apps to maximize hands-on invention time!

www.MakeyMakey.com/GetUpandGo

MAKEY MAKEY SOFTWARE   www.MakeyMakey.com/Apps

Makey Makey works with any software that uses the keyboard, mouse, and/or arrow keys. Try Makey Makey out by using the device with any web page or computer application where a keyboard and/or mouse is required. Below are just a few of the computer applications that can be used with Makey Makey.

Bongos - Play some bongo drums with the spacebar and left arrow. Turn anything into a drum!
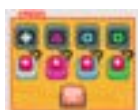
Piano - A piano designed for Makey Makey. Play a melody with the arrow keys and spacebar (and click, too).
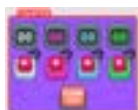
Adjustable Piano - Add more keys, change instruments, or octaves in this new plug and play app.

Audio Sampler - Play our samples or record your own to plug and play your musical creations!

Buzzer - Run your own gameshow and Buzz in with Makey Makey!

Counter - Use your Makey Makey to tally votes, collect data, and more.

Make a Sketch - Use your Makey Makey to doodle and draw on your computer screen.

Timer - Use your Makey Makey to start and stop a stopwatch or countdown timer. Adjust to time minutes or milliseconds. Add up to 8 timers!

Scoreboard - Use Makey Makey to keep score for your handmade games! Build physical input devices, and keep score with this awesome adjustable app. Each input can be adjusted to add, subtract, or reset the score.

USING MAKEY MAKEY WITH SCRATCH

Scratch is a free programming environment and online community developed at the MIT Media Lab where interactive stories, games, and animations can be created. (Scratch.mit.edu)

MAKE MUSIC: EXPLORING MAKEY MAKEY PIANOS

Objectives: Exploring Makey Makey

- Make a simple sketch of Makey Makey
- Use hands to trigger piano notes
- Build a human circuit
- Play and explore with Makey Makey

INTRODUCTORY AND BEGINNER MAKEY MAKEY ACTIVITIES

If you are new to Makey Makey, this is the perfect place to start!

Hands-On Makey Makey Exploration
Learn how Makey Makey works and get campers inventing on the fly! Use your hands to trigger Makey Makey inputs on our piano app, play a human piano and making music with Makey Makey.
- First Time Setup aka Banana Piano (15 min)
- Hands-On a Makey Makey Lab (30 min)

Musical Water
Add food coloring to glasses of water and have children play music based on color!
- Making Music with Makey Makey (15-30 min set up)

Super Easy Floor Piano
Create a Super Easy Floor Piano with HVAC tape you can play with your feet!
- Super Easy Floor Piano (30 min)
- Need something more complex? Build a Full Scale Portable Piano and write musical masterpieces other makers can play with their feet. (1 hr)

SAMPLER App
Use our Sampler app to play musical BEETS, record your own sounds, and jam out with fruit and bananas.
- Check out our Sampler App
- Musical Floor Mat with Sampler

MAKE MUSIC DAY

CARDBOARD GUITAR STATION

Objectives: Musical Instrument Challenge
- Learn how to craft circuits to build a DIY instrument
- Craft an instrument out of recyclables and office supplies that will trigger notes on a Makey Makey app
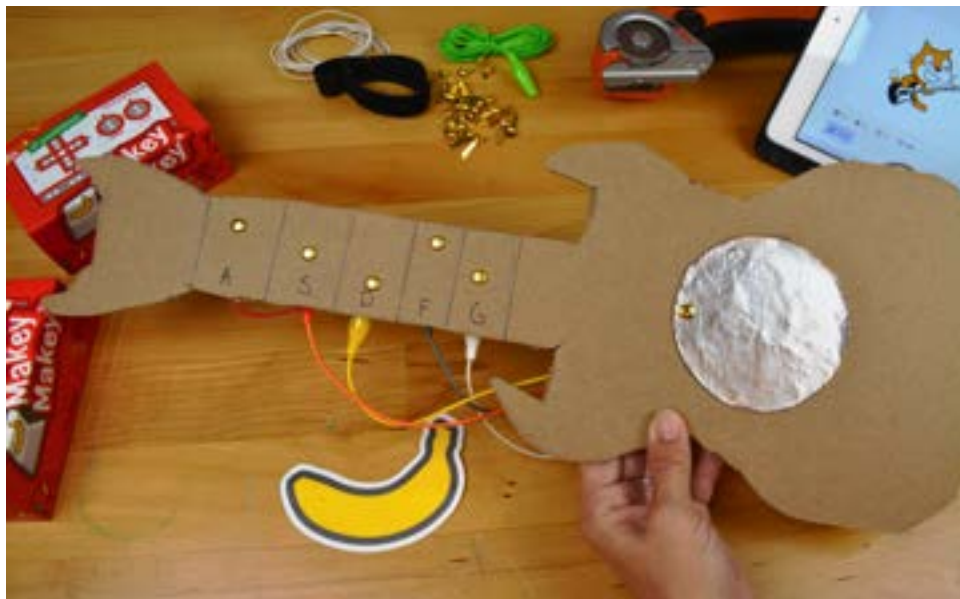
PLUG-AND-PLAY MUSICAL INSTRUMENT CHALLENGES

Create musical instruments out of recyclables and everyday stuff so children can play different fun instruments made out of recyclables.

Cardboard Guitars
Grab some hairspray, cardboard, and office supplies to build cardboard guitars and play hair-raising metal!
- Cardboard Guitar Guide (1 hr)
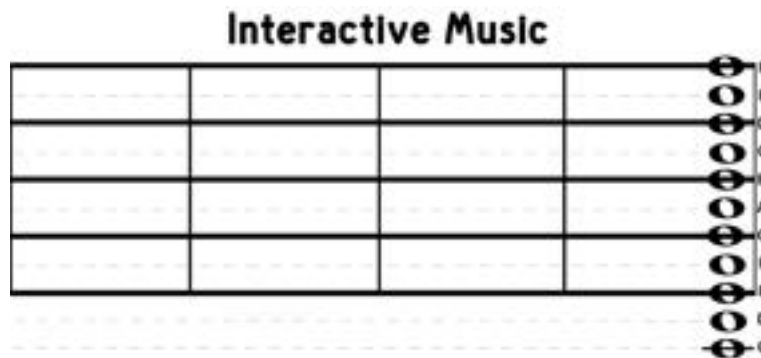

Musical Instrument Challenge
Gather recyclable materials and challenge makers to design and build an instrument they can play with the Makey Makey piano or bongo app. Want a little more fun? Record audio samples on our new sampler app, and volunteers can design and create their own custom intsruments to go with their custom sounds!

- Some chapters are discussing having community groups build instruments ahead of Make Music Day. Maker sure to have lots of recyclables and conductive tape on hand! Check out these examples from rockstar teacher Dori Friedman for inspiration.
- **Musical Apps to plug and play**
  - Legacy Piano App
  - Bongo App
  - Adjustable Piano App
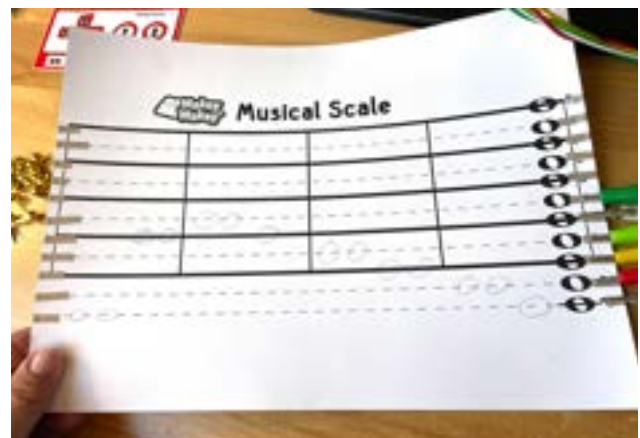 - Sampler App

MAKE MUSIC DAY

INTERACTIVE SHEET MUSIC

1. Print a blank Interactive Sheet Music. (MakeyMakey.com/MakeySheetMusic)

Interactive Music

2. Place conductive tape on the back of printed scale for each note.

3. On the front side, attach alligator clips to each musical note and connect to Makey Makey. Draw where you want to place musical notes.

MAKE MUSIC DAY
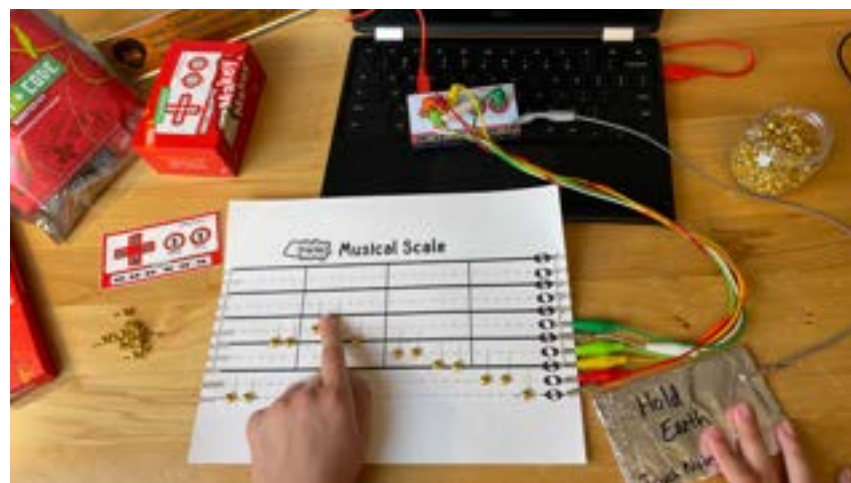# INTERACTIVE SHEET MUSIC CONTINUED

4. On the front of the sheet music. Push brass fasteners through for each note you want to play.

5. Make sure to press the fasteners on the back so the fastener makes contact with the tape. (Also make sure it only touches each note you want to play.)

6. Hold EARTH and touch each note to play the song!

MAKE MUSIC ON MAKEY MAKEY SAMPLER

With out new Sampler, you can record voice samples and sound effects directly into our Sampler app and connect straight to Makey Makey for a plug-and-play experience! A music sampler is composed of pads that let you sample music on each pad. Think of it like a food sampler, but with music!

The Sampler is a plug-and-play experience without any coding! Ask students to click on the microphone to record their own sounds. Press and hold the microphone to record. (Five second limit for recording.)

To test the sample, click on "Press to Test," then click on the sound wave to trim.

Once a sound sample is made, ask students to name it and press "Save to Library" to save it to the library. "My Sounds" appear at the top of the library of sounds and are highlighted green.

To place a sound, click on the library icon, then click on the sound to be moved. All of the Sampler buttons will jiggle, ask students to click on the sample pad where they want to save the sound.

Sounds will only be stored for this session, so if students like all recordings and want to use them again, they will need to export the sample pack (all of the sounds visible on the Sample pads) once all samples are recorded and placed accordingly.

Once new sounds are placed on the sample pad, an "Export" icon will appear. This will export a ZIP file that students can save to a Google Drive and reupload to the Sampler as needed.

(Full video tutorial: http://makeymakey.com//SamplerTutorial)

CONNECT WITH US!

Our team is constantly updating and sharing new ideas on our how-to page and hosting webinars with educators and counselors just like you! Sign up for our newsletter to learn more ways to go beyond the banana!

- **How-To Page:** https://makeymakey.com/pages/how-to
- **Resources for Beginner and Intermediate Inventors:** https://bit.ly/MakeyAtHomeProjects
- **Information about Webinars and Teacher Projects:** https://makeymakey.com/blogs/blog
- **Sign Up for Our Newsletter:** http://bit.ly/makeysignup
- **Join Our Facebook Educator Group:** https://www.facebook.com/groups/makeymakeyeducators/

EMAIL

Education orders: education@joylabz.com

Interested in carrying Makey Makey in your store?
Retail orders: sales@joylabz.com

Have a question about an event? A project you want to bring to life?
General inquiries: info@joylabz.com

Having issues with your board? Have a tricky technical question?
Tech support: support@joylabz.com

Have a question about ordering, or about an existing order?
Orders and shipping: support@joylabz.com

PHONE

You can reach us Monday - Friday, 9:00 - 5:00 (US Pacific Time) at: +1-831-460-6242
If you don't get an answer right away, shoot us an email.

THE INTERNET

We're on social media! We love to see you there and the things you invent. Tag us and send us your campers' creations on:

Facebook.com/makeymakeykit

Twitter.com/makeymakey

Instagram.com/makeymakey

Youtube.com/c/makeymakey