

MAKEY MAKEY MUSIC AND FUN!

OVERALL TIME 60- to 75-minute lesson

GROUPS Three to four kids per kit and computer

Next Generation Science Standards:

3-5-ETS1-3

Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

OBJECTIVE

Design a musical device or game controller using Makey Makey.

OVERVIEW

Makey Makey is a computer chip that connects objects to a computer, changing those objects into a musical device or a game controller. Kids will use their knowledge of basic circuitry as they create their own design.

MATERIALS

- **Electronic device - connected to the internet**
- **Makey Makey kit & How To Use It sheet**
- **Music and Fun Challenge Sheet**
- **Additional Materials: bananas, oranges, celery, lemons, cardboard, paper, aluminum foil, Playdoh**

PREPARATION

Gather as many of the additional materials ahead of time.

LAUNCH 5 to 10 minutes

Have kids form a circle. As a group, ask the kids to raise their hand and name different musical instruments. As the instruments are named, have the kids make the sound that instrument makes. You can also record the responses on a whiteboard.

If the group is having difficulty coming up with instruments, suggest a few and ask the group if they know what sound the instrument makes. Once you cover a few different types of instruments, shift the discussion and ask if they can name any video games or consoles that use a controller. Some examples are Xbox, PlayStation, Wii, Nintendo, Mario Kart, Minecraft, etc.

EXPLORATION 35 to 40 minutes

During the previous activity, kids had the chance to share different musical instruments and gaming systems, now they can transfer those ideas into a Makey Makey design challenge. Task the teams to design a musical device or game controller.

Challenge: Try to include one or more of the additional materials as part of the design.

Review the materials that come in the kit: Makey Makey board, alligator cables, white wires, and USB cord, How-to Use It guide, and additional resources.

CLOSING 10 to 15 minutes

Invite two teams to partner up and share their designs with each other.

Here are some possible questions they can address while sharing:

- *What is your Makey Makey design?*
- *What worked well with this activity?*
- *Were there any challenges your team faced with this activity?*
- *How did your team address these challenges?*
- *What would you change, modify, or add to the design?*

Take time for teams to thank each other for being a part of their learning community.

ENRICHMENT AND NEXT STEPS

Have the kids create their own game or instrument simulator using scratch, then create the controller or instrument using Makey Makey.

