

Makey Makey + Music

Green Level: Unit 3, Lesson 12

Objectives

In this activity, students will:

- explore and experiment with a variety of materials to discover which ones are conductive and can be connected to a Makey Makey.
- use physical computing to control a web-based music app with external objects.

Activity Description (45-60 minutes)

5 min.	Show the video Makey Makey Music Examples (3:27) to introduce students to the idea of creating and controlled music with a Makey Makey. After the video, ask students to brainstorm then share the types of musical instruments they want to create and how they would control them with a Makey Makey.
5 min.	Review the list of possible materials that could work with a Makey Makey that students worked on in the previous class. Solicit any additions to the list, or any items that need to be moved from the “will work” category to the “will not work” category.
10-15 min.	Divide students into groups based on the number of Makey Makeys you have. Explain that their first challenge is to create a set of bongos using the Makey Makey. Direct students to look at the diagrams on the Exploring Makey Makey page of the Green Level Student Workbook, using them to set up their set of bongos. Remind students of the importance of staying connected to “earth” for the Makey Makey to continue working.
15-20 min.	Next, prompt students to create a piano using the Makey Makey. This will require more alligator clips as well as additional materials to connect to it. Encourage students to try out a range of different materials as they build their piano.
5-10 min.	Provide students with enough time to clean up and put the Makey Makey and accompanying materials back in the box neatly. Debrief the experience by allowing students to share both successes and struggles in using the Makey Makey. Review the list of materials that students brainstormed at the beginning of class to determine which materials worked and which materials did not. See if you can add any additional materials to the list, both those that will work and those that will not.
5 min.	Ask students to think back on their experience with Makey Makey by responding to these reflection prompts:

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| | <ul style="list-style-type: none">• What is one success you had with the Makey Makey today? What is one struggle you had with the Makey Makey today?• What ideas do you have for using the Makey Makey in the future? |
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Reviewing Student Work

- ★ Are students able to figure out which materials work with a Makey Makey and which ones do not?
- ★ Are students able to successfully hook up the Makey Makey to their computer so that it can be used to control a web-based app? Do students successfully remember to complete the circuit by grounding themselves to earth?

Lesson Notes

- ✚ Conductive materials that work with Makey Makey include tin foil, graphite pencils, plants, Playdoh, slime, metal objects like coins, clips, and spoons, and food materials like fruit (bananas and apples are always a favorite), vegetables, and marshmallows.
- ✚ Non-conductive materials that won't work with a Makey Makey include paper, plastic, wood, and rubber.
- ✚ When distributing the Makey Makey kits, only provide students with the materials they need. Remove the instructions, stickers, white wires, and any alligator clips they will not need. Otherwise, these extraneous materials end up being a distraction and could potentially get lost or damaged.