

Building Squishy Circuits with Playdoh

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SUMMARY: In this session, we'll use two kinds of Playdoh that you can make at camp to build real circuits that can light up LEDs or power a motor or buzzer. We'll also try out some great ways to use Playdoh as an anytime, on-the-go, back-pocket program.

GOALS:

- You will learn new and creative uses of playdoh that will engage campers with different kinds of interests
- You will try out some strategies to help get kids talking or to help them calm down with a simple material that you can keep in your backpack

AUDIENCE: The science element of this program is well suited to younger campers and campers with a strong interest in STEM or creative building activities. The processing and self-regulation strategies are helpful for campers (and staff) of any age.

TIMING: 75 minutes

MATERIALS:

- Conductive and Resistive dough
- Conductive and Resistive dough recipes ([link](#))
- "AA" battery holders ([link](#))
- Alligator clip ([link](#)) or other wires ([link](#))
- LED bulbs, Buzzers, Motors (Assorted Kit)
- Playdoh prompt questions
- OPTIONAL: [Makey Makey](#)

HELPFUL RESOURCES/LINKS:

- [Link](#) to Squishy Circuits
- [Link](#) to Squishy Circuits' videos

SET-UP: Making the Playdoh requires space with access to a stove or hotplate. This might be a cooking area or an Art and Crafts location. The circuitry aspect of the program needs to be done somewhere with large, smooth, easily cleaned surfaces and potentially access to electrical outlets. Playdoh as a tool for reflection, processing, and self-regulation is totally portable and can be done anywhere with little to no prep.

SESSION TIMELINE

- 00:00-00:05 – *Introductions*
- 00:05-00:15 – *Play with Materials*
- 00:15-00:35 – *Modeling Processing*
- 00:35-00:50 – *Making a Museum*
- 00:50-01:00 – *Ranking the questions*
- 01:00-01:15 – *Behind the program/adapting*

SESSION OUTLINE

00:00-00:05 – Introductions

The facilitator introduces the session topic and leads the group in a round of introductions by asking participants to use Playdoh to make a symbol of their favourite activity at camp.

00:05-00:15 – Play with Materials

The goal of this part of the workshop is to help participants get comfortable with the material and learn how it all works. Facilitator models the basic creation of circuits using conductive and resistive dough with battery packs and electronic components. Participants experiment with the materials and work to create an initial playdoh shape that incorporates at least one motor, buzzer, LED, or other electronic component. After some time, everyone comes back together and participants are invited to show their first experiments, ask each other questions, and get some ideas about how to incorporate different electronics into their next model.

00:15-00:35 – Modeling Processing

The facilitator then gives some specific prompts and invites participants to make Playdoh creations with or without electronics. The electronic components can give some added impact to the sculptural responses, but if participants want to just use Playdoh, that works too. Participants can choose any of the following prompts or create their own.

Potential Prompts

Something you are good at
 Something you are not good at but would like to be
 Your most prized possession
 A food that reminds you of home
 A symbol of someone you look up to
 Something you are afraid of
 Something that is hidden
 Symbol of Israel
 Something that is full of awe and wonder
 a symbol of your personal Jewish identity (something that makes you feel proud, good, or strong as a Jewish person)

00:35-00:55 – Making a Museum

Ask participants to find 2 or 3 others to make a museum-style display of their work with. Participants need to find and discuss what connects their symbols/ideas/experiences together so that a kind of theme or narrative emerges from their curated display. Then, each small group will have a turn to show their display to the whole group. The goal of this short part of the workshop is to help participants get to know one another. If participants seem really into building, you could also have them build a new creation altogether.

00:55-01:00 – Ranking the questions

Ask participants to consider all the questions and rank the three best questions. Great questions have the capacity to generate lots of learning and reveal something important about the person answering it.

01:00-01:15 – Behind the program/adapting

Facilitator will highlight ways that the program might be adapted while still addressing the main goals. Participants are invited to suggest groups that they think the activity might be well suited for and to ask any questions about adaptations that they might consider.

- Could these conversations be facilitated with different art media?
- How might participants responses inform future actions or relationships within a group?
- How might a project like this be scaled up or down for different groups?
- What are the most impactful elements of this program for different kinds of campers?
- How might these activities be adapted to support staff training or professional development?

BRINGING IT TO YOUR CAMP

I often give a few containers of Playdoh to first year counsellors to put in a backpack that they carry with them. There are a million ways that Playdoh can be a helpful tool at camp whether it helps to pass time between activities or is used as a fidget toy for campers who are feeling restless, or as an alternative way for campers to reflect on and share their thoughts and feelings.

The program can be adapted to do with or without electronic components. The circuitry aspect may provide an exciting entry point for campers who are curious about science or enjoy building and experimenting. The circuitry adds an element of skill that is totally different than the basic art component of sculpting which can help engage people who are intimidated by art.

The prompt questions can also be modified to suit any programmatic purpose. You could ask questions about group dynamics, leadership, identity, or hopes. The medium provides a format for discussion about almost any topic whether silly and light-hearted, or serious and reflective.