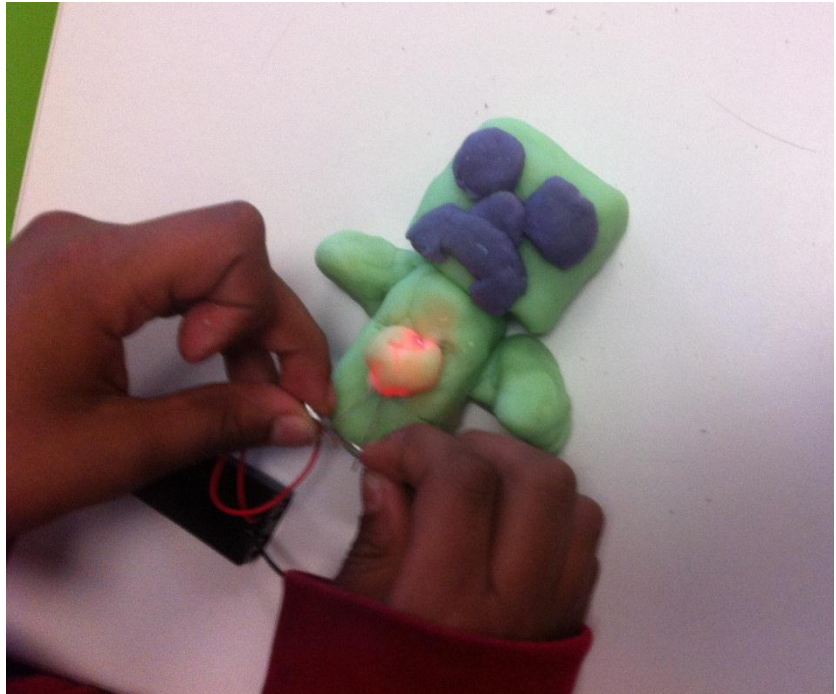


Squishy Circuits*

*based on a project from the Thomas Lab at the University of St. Thomas

Materials:

Plain white all-purpose flour
Sugar
Small container of vegetable oil
Large package of salt
Cream of tartar or lemon juice
Food colouring
Access to a stove/hot plate and pot
Water
Distilled water
LED bulbs with two leads
Toy motors
Battery packs with leads
Batteries
Terminals
Soldering iron
Solder
Needle-nose pliers



Directions:

– In advance of the program –

1. Solder terminals to battery pack and toy motor leads
2. Make conductive and insulating dough according to the directions on courseweb.stthomas.edu/apthomas/SquishyCircuits

– During the program –

1. Preamble about the basics of what makes a circuit work. I just printed out the “Circuit Basics” slides (courseweb.stthomas.edu/apthomas/SquishyCircuits/PDFs/Circuit%20Basics.pdf) and blew them up a bit so the kids could see them easily. I then went over the slides with the kids, and also mentioned that a motor could be used instead of an LED. I made a quick example as I was talking of a closed circuit vs. open circuit vs. short circuit in order to illustrate.
2. A little talk about safety concerns (never connecting the terminals directly to the battery pack, which will cause the battery pack to overheat and the LEDs to potentially burn out).
3. Let the kids get to it! Mentioned that they could make sculptures and use the lights to make certain parts light up, and the motor to make other parts move. Also made extra salt and lemon juice/cream of tartar available and suggested that maybe they could make the conductive dough more conductive by adding extra salt and/or lemon juice/cream of tartar.