Electric Play Dough Project 3: Light Up Your Sculptures!

https://www.sciencebuddies.org/science-fair-projects/project-ideas/Elec_p075/electricity-electronics/squishy-circuits-project-3 (http://www.sciencebuddies.org/science-fair-projects/project-ideas/Elec_p075/electricity-electronics/squishy-circuits-project-3)

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Experimental Procedure

Note: This engineering project is best described by the **engineering design process,** as opposed to the **scientific method.** You might want to ask your teacher whether it's acceptable to follow the engineering design process for your project before you begin. You can learn more about the engineering design process in the Science Buddies Engineering Design Process Guide (http://www.sciencebuddies.org/engineering-design-process/engineering-design-process-steps.shtml).

1. Optional: if you are making your own homemade conductive and insulating dough in addition to using the dough in the kit, follow the instructions on Electric Play Dough Recipes (http://www.sciencebuddies.org/science-fair-projects/references/squishy-circuits-recipes).
2. Insert the four AA batteries into the battery pack that came with your kit.
3. Now, plan out the three-dimensional creation that you want to make and how you want to add lights. It might help if you sketch your design on paper. Remember that you need to connect your LEDs *in parallel*, and that the actual shape of the Play-Doh does not matter, as long as each LED has its own "loop" formed with the battery. You might need to use modeling clay in some places to prevent a short circuit. Once you have a plan, start building!
4. Can you cleverly design your sculpture so the LED leads are not showing? How can you cover them with the right type of dough (conducting or insulating) to hide them without creating a short circuit?
5. Are there size limitations on your sculpture? Do the LEDs get dimmer if they get too far away from the battery pack?
6. If your LEDs do not light up, remember to try reversing them, because electricity can only flow through them in one direction. Also make sure your battery pack is turned on. If you are having trouble, consult the FAQ (http://www.sciencebuddies.org/science-fair-projects/project-ideas/Elec_p075/electricity-electronics/squishy-circuits-project-3#help) for other tips and tricks.

Frequently Asked Questions (FAQ)

FAQ for this Project Idea available online at https://www.sciencebuddies.org/science-fair-projects/project-ideas/Elec_p075/electricity-electronics/squishy-circuits-project-3#help (http://www.sciencebuddies.org/science-fair-projects/project-ideas/Elec_p075/electricity-electronics/squishy-circuits-project-3#help).