



Playdoh Circuits

Aims

The aim of the activity is for children to learn about simple circuits and to create models from playdoh that light up. This activity is suitable for children aged from 3.

Intended Learning Objectives

All children will be able to:

- create a basic circuit with a LED and battery pack.
- create a model that lights up using playdoh.

Some children will be able to:

- describe how a basic circuit works;
- create a series circuit with their models;

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- include switches and buzzers in their models.

Materials

- Playdoh of different colours.
- Battery holders for 2 x AA, 3 x AA and 4 x AA batteries.
- AA batteries.
- Crocodile clips.
- LEDs of different colours.
- Switches.
- Buzzers.

Activity

1. Children can create models with the Playdoh.
2. As the playdoh is conductive, they can create simple circuits with pieces of the playdoh linked separately to the positive and negative elements of the battery pack. If the pieces of play doh touch, a short circuit will occur.
3. It is possible to make non-conductive/ insulating playdoh to place between the conductive play doh to prevent this happening (see recipe here: <http://www.squishycircuits.com/wp-content/uploads/2015/07/Making-Insulating-Dough.pdf>)
4. Using different battery packs (2, 3, 4) will enable experimentation with the number of LEDs that can be lit up by the batteries.
5. For children who are able to take the activity further, introduce the notion of a series circuit, and the use of switches and buzzers



Notes created by Broomhall Nursery School, Sheffield.

Note

Thanks to Squishy Circuits for inspiration.

<https://squishycircuits.com>