

CONDUCTIVE PLAY DOUGH

SANTA'S WORKSHOP

After completing the Circuit Basics assignment, you are now ready to put your knowledge to the test. Your team will be creating a dough mock-up of a fun, functional toy that kids could use. Let your imagination run and be creative.

A. DESIGN CHARACTERISTICS

- The toy should have a distinct and creative style.
- The toy should function and do something entertaining.
- The toy should match its marketing and packaging.

B. PROCESS

1. Gather your materials. They should include:

- conductive dough
- insulating dough
- battery pack
- LEDs
- rotating motor
- vibrating motor

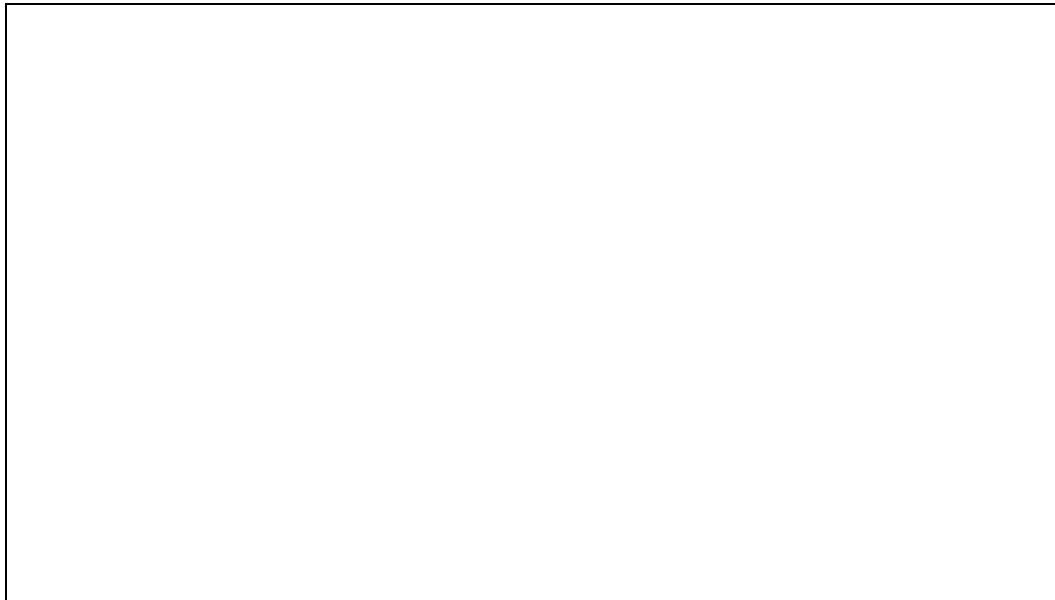
2. As a group, brainstorm some design elements.

a. What will your toy do? _____

b. What do you want it to look like? _____

c. Who is the target buyer? _____

d. Sketch some thoughts of what the toy might look like and do:



3. Once you agree on an idea, use the battery pack, conductive dough, and motors to create the functioning “internals” of the toy. Take care to maintain a functioning circuit and not short circuit the toy.
4. Now utilize the insulating dough to create the external details. Give it style, personality and character. What would make someone want to buy your toy?
5. How do you turn it on and off? Is there a straightforward way to make a usable switch?
6. Trade toys with another group in order to test it with them. Does it work as it is supposed to?

INTERDISCIPLINARY EXTENSIONS

English Language Arts: Imagine your toy is personified. Write the backstory about your toy.

Social Studies/Service: Think about sharing your toys with younger students or at a local childrens' hospital.

Math: Can you figure how much money your toy cost to build? What price should it be?

Art/Design: Finally, create the packaging for the product. How can your packaging lure in a potential new customer?