

STEM

with



It's Electric... Electricity is one of the most powerful forces in nature. Electricity is a natural element, but it is harnessed to power our homes, businesses, and even modes of transportation!

To power anything with electricity, electrical currents must first be moved from point A to point B through wires. The electric power we use can be created from a variety of sources, including: fossil fuel, moving water, uranium, wind, sunlight and even garbage! The majority of electrical power in Oklahoma comes from fossil fuels, but wind energy has become increasingly important in our state as well.

Classroom Activity: Wiggle-Bot

In this activity, you will create an electric current to power your very own wiggle-bot

Materials:

- Disposable cup
- Electrical tape
- 3 Markers
- 2 "AAA" battery holder
- 2 "AAA" batteries
- 1.5-3 V DC Motor
- Clothespin
- Popsicle stick
- Googly eyes (optional, you could always just draw them on)
- Scissors
- Permanent marker
- Glue (optional, for attaching googly eyes)

Instructions:

1. Tape the markers in the inside of the cup as legs.
2. Attach the battery pack to the DC motor by wrapping the wire around the leads on the motor.
3. Now that the battery pack is attached to the motor, tape the battery pack on the top of the cup, slightly off center.
4. Next, tape the DC motor on to the cup next to the battery pack.
5. Now turn the motor on by placing the batteries into the holder. Does anything happen to the cup? Add the clothespin to the motor. Now what happens to the cup? It should be wiggling slightly.
6. To make the cup wiggle more, you will need to make the motor even more off balance. Try taping the popsicle stick to the clothespin and see if the wiggling increases. (You might need to add some extra tape on to the motor to keep the clothespin attached.)
7. Now make a face on your Wiggle-Bot, put in the batteries, put it on a blank piece of paper and let it wiggle and spin!

Check out a Wiggle-Bot in action:

https://www.youtube.com/watch?time_continue=1&v=sz_232n29WM

