

Static Races

Lesson Plan: Activity

Subject	Grade Level	Time
Science	Elementary and up	10 minutes

Overview

In this experiment we are going to gain a better understanding of Static Electricity, how to generate it, and what it can do.

Standards

Next Generation Science Standards

3-PS2-3 Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.

MS-PS2-S Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.

Materials

- Balloon¹
- Soda Can
- Long flat surface

Lesson Body

1. Intro Video: Understanding Static
 - a. [Understanding Static Grade 2-6](#)
 - b. [Understanding Static Grades 7-12](#)
2. Experiment
 - a. Place soda can on its side. Rub the balloon on your head and hold it near the can. The can should move! Set up a race track and see who can get to the end first!
3. Expand
 - a. Want to do more with static Electricity? Try some of these [experiments!](#)

Extended Learning:

- **Discussion Questions:**
 - Research the history of Static Electricity. Who discovered it?
 - Which famous American did a famous experiment with Static? What was the experiment?
 - Where do we see static electricity in nature?

¹ You can also use a PVC Pipe and a cloth, or the bottom part of a plastic coat hanger. Experiment with different materials around your house!

- What could we use static electricity for?
- **Definition Detectives:** Have students come up with definitions for these vocabulary words based on what you've learned so far, then look up the words in a dictionary and see if you were right!
 - Static Electricity
 - Conductors
 - Electrons
 - Charge