Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences --particularly students of color and girls -- by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

experience static electricity using a cloth and a balloon. You will also get to test other materials to see how static electricity works.

Supplies Required:

- Pencil
- 16 oz empty soda or water bottle
- Balloon
- Cotton cloth or a teeshirt
- Other objects to test such as a comb or a ruler
- Scraps of paper

Video

See how static electricity affects different objects: https://tinyurl.com/uzaavtu

Overview

When you rub two things together such as a balloon and a cotton cloth, one gets a positive charge and the other gets a negative charge. When you rub things together you are creating static. We see static electricity everyday. Items with different charges (positive and negative) will attract each other, while items with similar charges (positive and positive) will push away from each other. It's kind of like a magnet!

Instructions

1. Inflate your balloon.
2. Rub the cotton cloth or teeshirt against the balloon.
3. Try other objects such as the pencil. What happens when you rub the balloon on the cloth and try to make your pencil move?
4. Can you balance the pencil on the top of the bottle?
5. Try other objects and record your observations.

Additional Resources

Think About It! What objects and materials moved towards each other? What objects moved away from each other? Is electricity a powerful force? Explain your thinking!

1. Watch Bill Nye explain static electricity: https://tinyurl.com/seq2tqy
2. Read about static electricity with Ducksters and take the quiz: https://tinyurl.com/y52oo6os
3. Participate in more static electricity experiments: https://tinyurl.com/smn2urq

Share It Out

Share on social media: record a video of what static electricity looks like for you. Take a picture of the coolest thing you used to create static electricity and share your picture on social media using the hashtags:

#StaticElectricity
#ProjectExploration
#StemAtHome

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 215 Learn more at www.projectexploration.org/explore-store

Join PE's character contest!
Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at: www.projectexploration.org/character-contest.