



Physical Science Night: Family Take Home Activity

Positively Negative

Objective: You will use static electricity to “magically” attract objects.

Materials: Balloon, paper towel or wool material, tissue paper, salt, pepper, styrofoam, non-waxed floss, cereal

FCAT Vocab: *Attract* – to pull towards.

Friction – a force caused by two touching objects moving in opposing directions.

Procedure

1. Blow up a balloon and tie the end.
2. Cut the tissue paper into one square centimeter pieces. Set out the tissue, salt, pepper, Styrofoam, and non-waxed floss on a flat surface.
3. Hypothesize which materials will be attracted to the balloon.
4. Vigorously rub the balloon with a piece of wool or a paper towel for about 1 minute.
5. Slowly move the balloon towards the tissue, without touching.
6. What happened?
7. Slowly move the balloon towards the other items, without touching.

Discussion

Which objects did the balloon attract?

The balloons should've attracted the tissue, pepper, Styrofoam, cereal and floss. If it is humid, it may not attract as well. Try using a hair dryer near the experiment area. Static electricity happens when negative charges build up (in this case, from rubbing the balloon). The negative charges are attracted to positive charges. Opposites attract. The balloon will pick up an object if it has an opposite charge and is lightweight.

Where else have seen or experienced static electricity?

Lightning is static electricity. Sometimes in the winter, you can rub your socks on the carpet, and then get shocked when you touch something metal. If you slide down a plastic slide, the metal pins at the bottom can shock you.

What other objects around your home does your balloon attract?

Web Resources

<http://pbskids.org/zoom/activities/sci/staticelectricity.html>