Give Me Some Static

General Description

Students will conduct simple balloon experiments to demonstrate that static electricity can move objects without touching them.

Objectives

Students will investigate the force of static electricity and how it can move objects.

Arizona State Standards

 SC00 S1C1 PO1 Observe common objects using multiple senses
 SC00 S1C2 PO2 Participate in guided investigations in life, physical, Earth and space sciences
 SC00 S1C4 PO1 Communicate observations with pictographs, pictures, models, and/or words
 SC00 S5C3 PO2 Investigate how forces can make things move without another thing touching them (e.g. magnets, static electricity)

W00 S1C1 PO1 Generate ideas through class discussion
W00 S1C1 PO2 Draw a picture about ideas generated through class discussion
W00 S3C2 PO1 Participate in crating expository texts (e.g. Labels, lists, observations, journals, summaries) through drawing or writing

LS R3 Share ideas, information, opinions and questions

Teacher Background

Static electricity can act as a magnet. It can attract and/or repel objects. There is an invisible electric field around all matter. Most matter has a neutral charge but some matter has a negative or positive electric charge. These charges make up a field which we experience as static electricity. Static electricity has the ability to move objects depending on their positive or negative charge.

Materials

Paper for recording pictures Crayons/markers Balloons Paper to record observations String

Procedure/Exploration

- 1. Blow up the balloons. You may have to do this for the students.
- 2. The students will rub the balloon on a piece of cloth or a stuffed animal. Do not allow the students to rub the balloon in their hair for reasons of hygiene.
- 3. Hold the balloon near a stream of running water. Have the students draw what they see.



- 4. Cut some stiff paper into small strips or pieces.
- 5. The students will rub the balloon on a piece of cloth or a stuffed animal.
- 6. Hold the balloon about four inches away from the paper after rubbing it.
- 7. Record the results by drawing what they saw.
- 8. Tie two balloons each on opposite ends of a string.
- 9. The students will rub the balloon on a piece of cloth or a stuffed animal.
- 10. Hold the string in the middle and lift them up and record what happens in their science journals or on their papers.
- 11. Put the stiff paper between the balloons. Record the results.
- 12. Have the student draw a series of pictures that illustrate what the student has learned about static electricity.
- 13. Share with the class.

