Experiment 5

Resisting Balloons

WHAT YOU NEED

Tape
Scissors
Door frame
Two balloons
String
Wool sweater

PROCEDURE

1. Cut two strings the same length and tape them to the top of the door frame an inch apart.
2. Blow up the balloons and tie the ends.
3. Tie a balloon on the end of each of the strings. They should hang at the same height and rest against each other.
4. One at a time, rub each of the balloons on the wool sweater. After you have rubbed the balloons, they will push away from each other. If you rub just one, they should attract each other.

WHY THIS HAPPENS

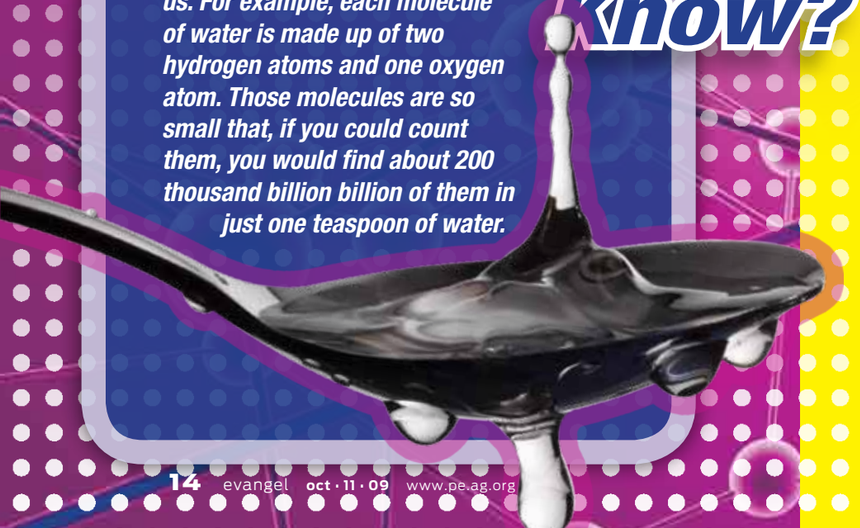
The balloons will resist each other because they have both become negatively charged. Matching charges will repel each other. But if one of the balloons is rubbed, it will have a different charge from the other balloon. They will want to stick together.

From Atoms to Adam

by Christina Quick

Did You Know?

Atoms are really, really tiny. They clump together to make molecules of the stuff around us. For example, each molecule of water is made up of two hydrogen atoms and one oxygen atom. Those molecules are so small that, if you could count them, you would find about 200 thousand billion billion of them in just one teaspoon of water.



Have you ever pulled a towel from the dryer and found a sock stuck to it like glue? Static electricity is the reason for the strange attraction. It begins with something called atoms.

Everything around you contains atoms. They're too small for you to see. But atoms are the little building blocks that make up your socks, this magazine page, your dog and even you.

Atoms contain even smaller parts called protons, electrons and neutrons. We say protons and electrons are "charged." Protons have positive charges, and electrons have negative charges. Charges that are alike (such as two positives) repel or move away from each other. Different charges (one positive and one negative) attract one another, just like that sock is attracted to the towel.

When your laundry rolls around in the dryer, the atoms in your socks and towels rub against each other. Before long, the bumping atoms start trading and sharing electrons. Atoms that pick up extra electrons become negatively charged. Atoms that lose electrons become positively charged. The attraction between these opposite charges explains why your socks and towels stick together. When you separate them, you may see little sparks and hear a popping sound as electrons are released.

The Bible teaches that we're naturally attracted to some things too. Ever since Adam and Eve first sinned, humans have been drawn toward disobedience. As we bump up against temptation, we can be pulled toward things we know aren't right. (See Genesis 3.)

But here's the good news. Jesus died on the cross so we can be free from sin. When we accept Him as Savior, our sins are forgiven. But that's not all. God also changes us so that we can resist sin rather than moving toward it. We become attracted to God's truth instead of things that would harm us and separate us from Him.

"Hate what is evil; cling to what is good" (Romans 12:9, NIV). e

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