HILL AEROSPACE MUSEUM
HILL AIR FORCE BASE | UTAH

Electricity

Opposites Attract!

This activity and the companion lesson align with Utah SEEd Standard 4.2.1, 4.2.2, and 4.2.3

Atoms are tiny particles that make up everything! There are three parts of an atom: the proton, the neutron, and the electron.

Each of these parts has a charge. A proton has a POSITIVE charge (+). A neutron has a NEUTRAL charge(-/+). And finally, an electron has a NEGATIVE charge (-). Electricity is named after the electron.

Opposites attract, and likes repel! Since protons have a positive charge, and electrons have a negative charge, they are attracted to each other! If you have two electrons, or two protons, together, they repel each other because they have the same charge.

Jumping Frogs!

Materials:

- Balloon
- Tissue Paper
- Markers
- Scissors

For this activity each student will draw a frog on a piece of tissue paper and cut it out. They will then blow up their balloon and rub it on their hair. They should rub it on their hair until their hair starts to stand up.

When they put the balloon next to their frogs, the frogs will “jump” and be attracted to the balloon! When they rub their balloon on their hair, you can explain that they are putting electrons onto the balloon.

The tissue paper has a positive charge (protons) so they are attracted to the electrons. As the balloon loses it’s charge, the frog will not “jump” towards the balloon anymore, because it is losing it’s electrons. To get your frogs to jump again, rub the balloon on your hair and it will put more electrons on the balloon.

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Jumping Frogs!

STEP 1

Draw some frogs on your tissue paper and cut them out.

STEP 2

Blow up your balloon and rub it on your hair.

Hypothesis:

What do you think will happen if you put the balloon next to your frogs?

STEP 3

Put your charged balloon above your frogs.

Draw a picture of what happened to your frogs.

Was your frog attracted to or repelled from the balloon?

Attracted Repelled

What charge did the balloon have BEFORE you rubbed it on your hair?

Positive Neutral Negative

What charge did the balloon have AFTER you rubbed it on you hair?

Positive Neutral Negative

What charge did your frog have?

Positive Neutral Negative