

The Great Electron Rip-Off!

Have you ever heard that opposites attract? In this activity, you will take two similar pieces of clear tape and give them opposite charges. When you hold the tape pieces close to each other, they will move even closer to one another! So, *stick* around and get a *charge* out of static electricity.

Materials:

- Clear cellophane tape (2 pieces, about 30 centimeters (cm) each)
- Table or desk with smooth surface

Note: In this activity, you will stick tape to a table or desk and then pull it off. This may leave a mark or damage the surface of some pieces of furniture. Ask an adult to help you find a flat smooth surface that is safe to use.

Procedures:

1. Stick the two pieces of tape to the surface of a table. Leave about 1-2 cm. hanging off the edge.
2. Peel one piece of tape off the table and let it hang down.



3. Slowly bring your finger from your other hand toward the bottom end of the tape. What happens?
4. Now peel the other piece of tape off the table and let it hang down. Slowly bring the two pieces of tape near each other. What do you notice?

5. Tape one of the pieces to the edge of the table so that it hangs down. Pull the other piece through your thumb and index finger.
6. Slowly bring this piece of tape near the one hanging down from the table. What happens?



Think about this ...

When you pulled the tape off the table, it either pulled electrons off the table or some of the tape's electrons stuck to the table. Let's say that electrons from the table ended up on the tape. This would give the tape a negative charge. When you brought your finger near the tape, why do you think the tape moved toward your finger?

Where's the Chemistry?

Since the tape has extra electrons, it has a negative charge. When you move your finger close to the tape, electrons in your skin are repelled and move away. This makes the skin on your finger tip have a slight positive charge. Since positive and negative attract, the tape moves toward your finger.



The American Chemical Society develops materials for elementary school age children to spark their interest in science and teach developmentally appropriate chemistry concepts. The *Activities for Children* collection includes hands-on activities, articles, puzzles, and games on topics related to children's everyday experiences.

The collection can be used to supplement the science curriculum, celebrate National Chemistry Week, develop Chemists Celebrate Earth Day events, invite children to give science a try at a large event, or to explore just for fun at home.

Find more activities, articles, puzzles and games at www.acs.org/kids.

Safety Tips

This activity is intended for elementary school children under the direct supervision of an adult. The American Chemical Society cannot be responsible for any accidents or injuries that may result from conducting the activities without proper supervision, from not specifically following directions, or from ignoring the cautions contained in the text.

Always:

- Work with an adult.
- Read and follow all directions for the activity.
- Read all warning labels on all materials being used.
- Wear eye protection.
- Follow safety warnings or precautions, such as wearing gloves or tying back long hair.
- Use all materials carefully, following the directions given.
- Be sure to clean up and dispose of materials properly when you are finished with an activity.
- Wash your hands well after every activity.

Never eat or drink while conducting an experiment, and be careful to keep all of the materials used away from your mouth, nose, and eyes!

Never experiment on your own!

For more detailed information on safety go to www.acs.org/education and click on "Safety Guidelines".

