# Telekinesis or Opposites Attract

**Objective: Students will be able to describe the cause and effect of electrons transferring between two objects.**

## Procedure

Ask: Has anyone heard of telekinesis? What might it mean? Allow a few students to share responses, clarifying as needed. Tell students to raise their hands if they believe that people can actually move objects with their minds. Explain that today, they will learn a trick that uses science to create the illusion of telekinesis.

Show students Impossible Science! video to 2:01.

Have students try to recreate the experiment on their own. Ask them to explain how and why they believe it may or may not work. If it is not working, tell students to try rubbing the straw with the wrapper or napkin first.

Students should write down their observations, and any

### Materials:

- A straw
- Any object with a slightly curved top (like a salt shaker)
- A paper napkin or paper straw wrapper

### Optional extension materials:

- two styrofoam plates per group
- washcloth for each group

hypotheses as to why they can direct the movement of the straw without touching it after rubbing the straw on the napkin.

Review vocabulary with students, then show them Impossible Science! video to 3:00.

## Vocabulary:

Atom: The smallest piece of any kind of matter (millions could fit on the head of a pin). Protons and neutrons exist in the nucleus, and electrons orbit the nucleus.

Proton: Part of an atom that has a positive charge. Protons push other protons away, and they are attracted to electrons.

Electron: Part of an atom that has a negative charge. Electrons push other electrons away, and they are attracted to protons.

Electric Charge: The amount of electricity based on the number of protons and electrons in an object. If two objects carry the same charge (both positive or both negative), they will repel one another. If two objects carry opposite charges (one negative and one positive) they will be attracted to one another.

Telekinesis: Making an object move without any physical reason. Making objects move with thoughts.

Static Electricity: the buildup of charge on an object or the spark that build up of charge creates.

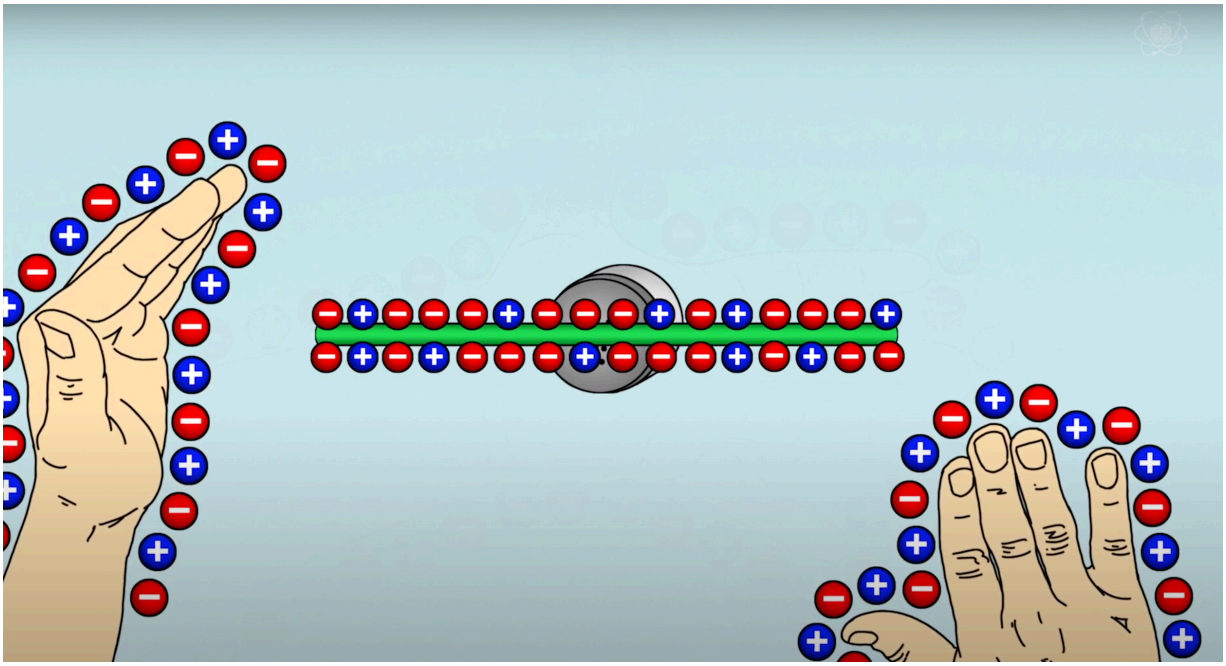
Ask a student to come up and explain why the straw moves when your skin gets near it.

Students write down an explanation in their own words. When negatively charged electrons on your skin disperse as they approach the negatively charged electrons on the straw, protons (positive charge) move into the space left behind, making your skin positively charged. Slightly positively charged skin attracts the slightly negatively charged straw (opposites attract).

Show students the remainder of the video and have them recreate the experiment with new understanding.

## Assessment:

Working in groups or pairs, students will write working definitions of static electricity and electric charge, along with a visual component showing how objects are attracted or repelled. The visual component could be a poster, a skit, a video or a model.



## Modifications:

1. Have students rub the bottoms of two styrofoam plates with a washcloth. Predict what will happen, then try to place the bottoms of the plates together and write down observations.

2. Repeat the experiment, but this time, place your hand above the plate you try to place on top. Observe what happens.

## Safety Note:

Adult Supervision Recommended

Watch the companion video here:

YouTube