

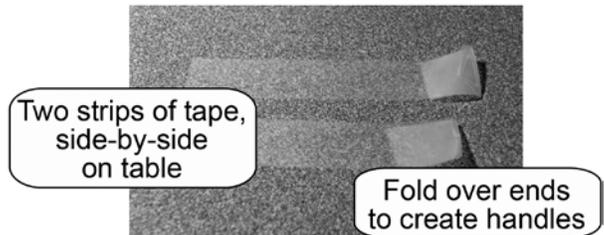
Investigation 18C: Static electricity on transparent tape

Essential question: How can you show that there are two different kinds of electric charge?

There are many ways to create static electricity. This investigation shows how you can separate static charge on two pieces of ordinary transparent tape. Whether you observe attraction, repulsion, or both tells you about the polarity of the charge.

Part 1: Charging the transparent tape

1. Take two pieces of transparent tape about 3-4 inches long. Fold over a small part of one end of each piece to act as a handle.
2. Put both pieces of tape, sticky-side down, on the table (but not touching each other). Grab the “handles” and lift both tape strips up quickly.



Questions

- a. What happens when you bring the two tape strips close to each other (but not touching)?
- b. What can you infer about the similarities or differences in electric charges on the two strips?
- c. What happens when you bring one strip near to your hand? Why?

Part 2: Charging the tape in another way

1. Put one piece of tape on the table, sticky-side down. Place the other piece on top of it, sticky-side down.
2. Use the lower handle to pull both strips off of the table together. Rub the tape with your fingers to remove any charge.
3. Pull the tape strips apart by holding the handles.

