

MAKE YOUR OWN

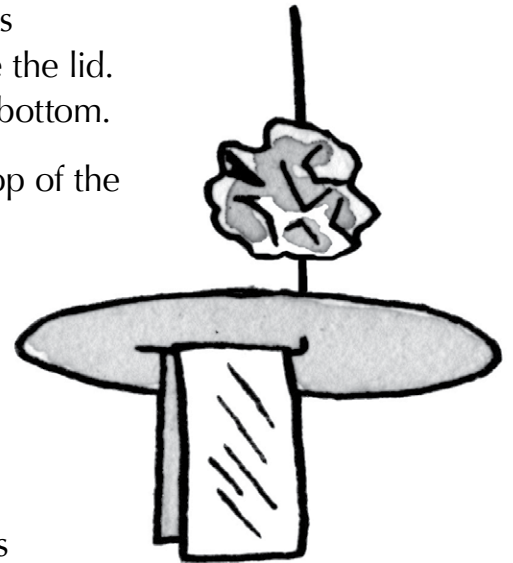
SUPPLIES

Electroscope

William Gilbert used a device called a versorium to test an object's charge. You can make a similar device to see static electricity at work.

- 1 Flip the jar over onto the cardboard. Use your pencil to trace around the top. Cut the circle out. This will be your jar's lid.
- 2 Open up and straighten the paperclip until it looks like the letter L.
- 3 Carefully poke the paperclip into the lid and slide it through until about 1½ inches (3½ centimeters) of the top of the L is above the lid. The part with the right angle will be on the bottom.
- 4 Use a small piece of modeling clay on top of the lid to keep the wire in place.
- 5 Crumble a piece of aluminum foil into a ball that's a little bit smaller than a golf ball. Push it onto the wire that's above the lid. Be careful not to let the ball touch the cardboard.
- 6 Cut a piece of foil that is 3½ by ½ inches (about 9 by 1 centimeters). Fold it in half and drape it over the bent part of the wire so that it hangs below the lid. Use a small drop of glue under the fold to hold the foil in place.

- ≧ medium glass jar
- ≧ cardboard
- ≧ pencil
- ≧ scissors
- ≧ large, metal paperclip
- ≧ modeling clay
- ≧ aluminum foil
- ≧ ruler
- ≧ white glue
- ≧ tape
- ≧ balloon
- ≧ wool blanket
- ≧ science journal

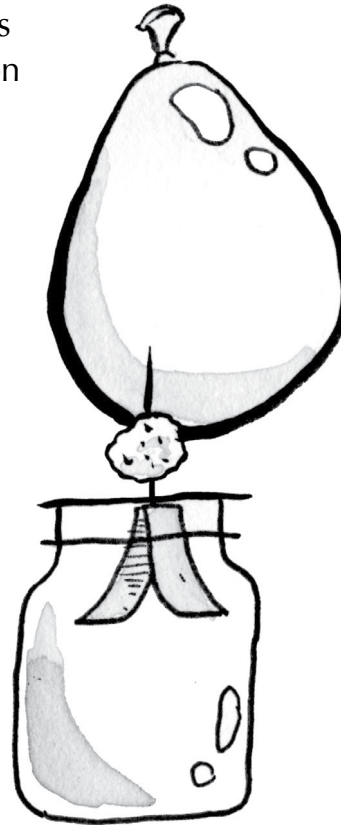


ACTIVITY!

7 Carefully place the lid on the jar. The foil flaps should be inside the jar. The foil ball should be on the outside. Use tape to attach the lid to the jar.

8 Now you're ready to try out your electroscope! Blow up the balloon and rub it on the wool blanket for about 30 seconds. Hold the balloon close to the foil ball. What happens to the foil flaps inside the jar?

9 Create a scientific method worksheet with a list of other things in your house that might have an electric charge. Test them out with your electroscope. Record your data in a chart like the one below. List the item in the first column and then check the appropriate box.



WHAT'S HAPPENING? The aluminum flaps should move apart. This is because the static electricity is moving from the balloon into the foil ball, down the wire, and into the foil flaps. The flaps have the same charge, so they are trying to move away from each other.

ITEM	CHARGE	NO CHARGE

