

MATERIALS LIST:

- Balloon
- Someone or something to inflate the balloon
- Empty pop can
- A clean, dry towel



A SHOCKING SITUATION

On the surface of materials, you have positive and negative particles—protons and electrons! Normally, they cancel each other out but sometimes, there is an imbalance in these particles. When there is a build up of electrons, we get *static electricity*. When they are transferred from object to object to balance out again, that's when you get a shock!

Some instances where one may see static electricity include:

- Slides
- Balloons
- Lightning
- “Static cling”
- Petting your cat or another furry animal

Static Electricity Racers

PROCEDURE:

Have science fun as a family! Complete activities with parental supervision.

1. Place the can on its side on a flat smooth surface like a table or a smooth floor.
2. Rub the blown up balloon back and forth through across the towel. Don't push too hard on the balloon— you don't want it to pop!
3. Now the fun part – Hold the balloon close to the can without actually touching the can. The can will start to roll towards the balloon without you even touching it!
4. Be sure to take a picture or video to share in the Facebook comments on the Buffalo Museum of Science or Tifft Nature Preserve pages!



TRY THIS!

- ⇒ Can you make any modifications to your can to make it go faster?
- ⇒ Try rubbing the balloon against other objects like fuzzy blankets or sweaters or even your hair! Does that change how well your static racer works?
- ⇒ Does the size of the balloon change the power of the pull?
- ⇒ How much water can you put in the can until the balloon can't pull it anymore?
- ⇒ Are there other things that you can move with static electricity? Do other cans (soup cans, coffee cans, etc) also work?
- ⇒ Make it a race! If you have more than one set up, get someone in your household to race cans using the power of static!