

# BEND WATER WITH STATIC ELECTRICITY!

## YOU WILL NEED:

- A dry plastic comb
- An indoor faucet
- A head full of clean dry hair

## WHAT TO DO

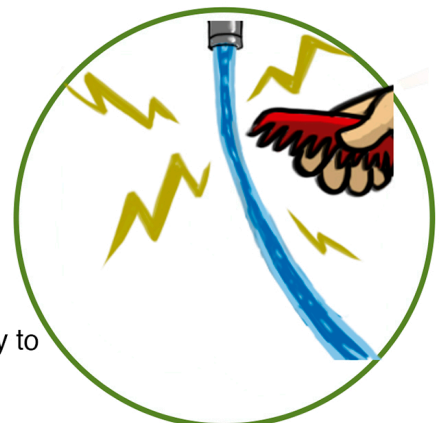
1. Turn on the faucet and slowly turn down the water until you have a VERY thin stream of water flowing.
2. Take the plastic comb and brush it through your hair ten times.
3. Now slowly bring the comb close to the flowing water, (without actually touching the water.) If all goes well, the stream of water should bend towards the comb! Magic you ask? Not really.



## HOW DOES IT WORK?

When you brushed the comb through your hair, tiny parts of the atoms in your hair, called ELECTRONS, collected on the comb. These electrons have a NEGATIVE charge. Remember that, it's important. Now that the comb has a negative charge, it is attracted to things that have a POSITIVE charge. It is similar to the way some magnets are attracted to certain metals.

When you bring the negatively charged comb near the faucet, it is attracted to the POSITIVE force of the water. The attraction is strong enough to actually pull the water towards the comb as it is flowing! If you want to try another experiment with your comb, tear up pieces of tissue until they are as small as you can get them...I mean really small! Then charge your comb again by brushing it through your hair, and bring it close to the tiny pieces of tissue. If the pieces are small enough they will jump off the table to the comb the same way that the water was pulled to the comb. It is all thanks to the wonders of static electricity.



## MAKE IT AN EXPERIMENT:

The above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. Does water temperature affect how much the water bends?
2. Does the size of the comb affect the static power?
3. Does the amount of moisture in the air affect the static power? Try it after someone has taken a shower in the room.
4. Does the material that the comb is made of affect the static power?