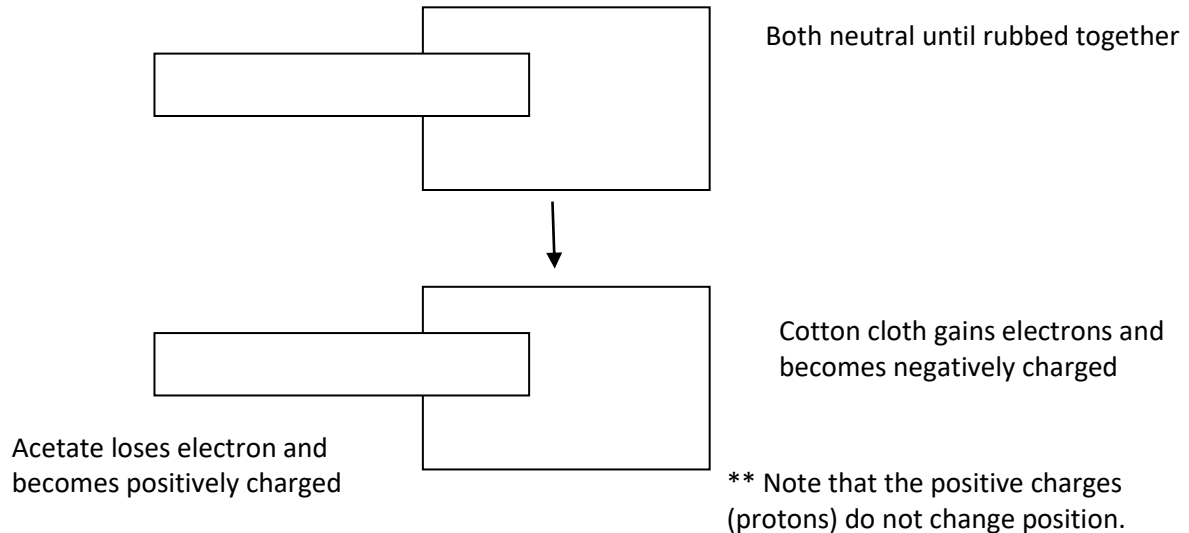


CHARGING BY FRICTION, CONDUCTION & INDUCTION

A static electric charge can be imparted to an object three different ways.

1. Friction

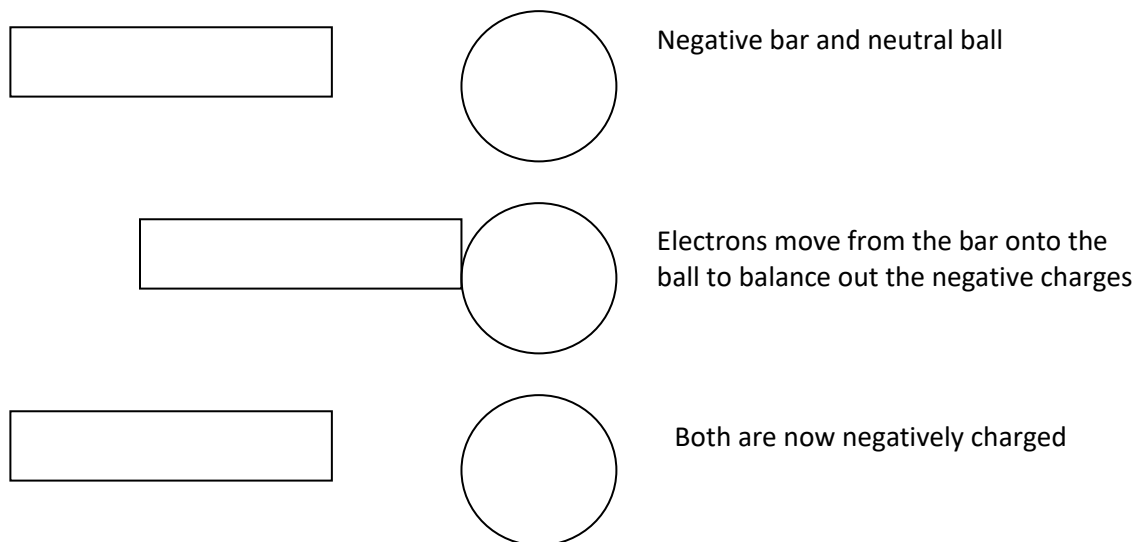
- Occurs when two objects are rubbed together → if one object has a stronger attraction for electrons, it will gain electrons from the other object and become negatively charged
- Example rubbing acetate with cotton



2. Conduction

- Occurs when a charge is transferred by touching a charged object to another object

Demo Place tin pie plates on the Van de Graff generator then turn it on. The negative charge from the sphere is conducted to the pie plates causing them to jump off (repel).



3. Induction

- Occurs when a charged object is brought near another object without touching it and creates a charged surface

Demo *Charge a balloon by rubbing it on hair then stick it to a wall. The negative charge on the balloon repels the electrons in the wall to induce a positively charged wall surface that attracts the balloon.*

- Example** if a negatively charged object is brought near a neutral ball, the electrons on the ball are repelled to the other side → this creates a positively charged surface on the ball

* this is why neutral objects are attracted to a charged object

