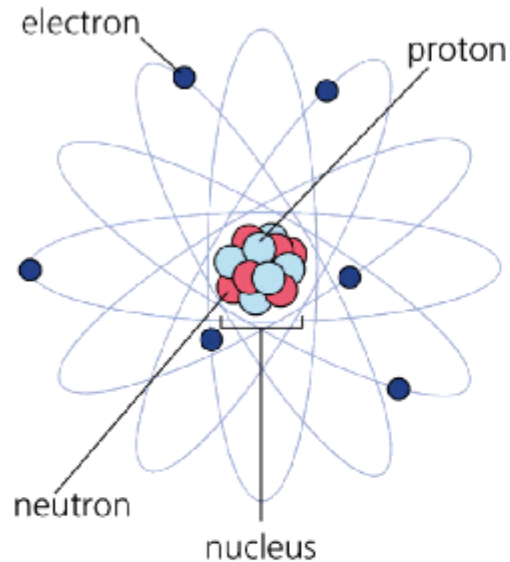


Charge

& Electronegativity

Electricity - A continuous flow of charge.

Static Electricity - where charges build up somewhere and are not continually moving.



The protons and Neutrons are bound tightly in the nucleus and DO NOT MOVE.

Electrons are bound less tightly. These are the particles that can "charge" an object.

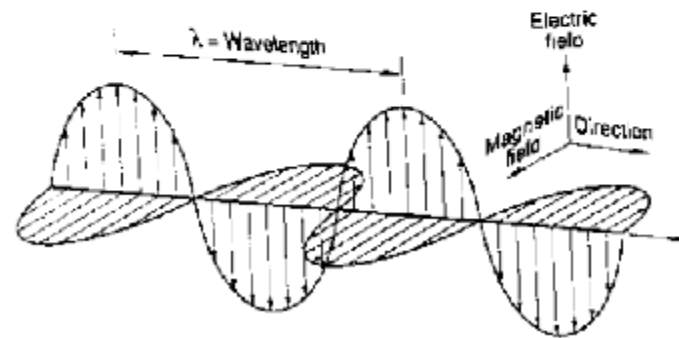
Conservation of Charge

Charge is not created or destroyed, it only moves from one place to another.

1. Gravitational Force
2. The "Weak" Force
3. The "Strong" Force
4. Electromagnetic Force

$$\vec{F} = q\vec{E} + q\vec{v} \times \vec{B}$$

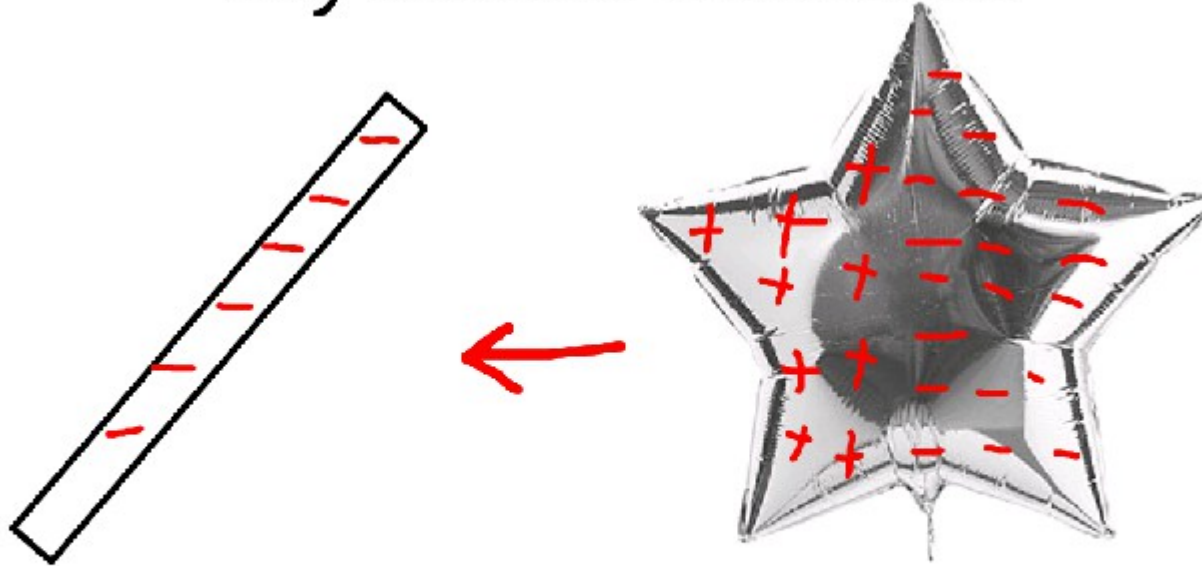
Electric force *Magnetic force*



Electronegativity

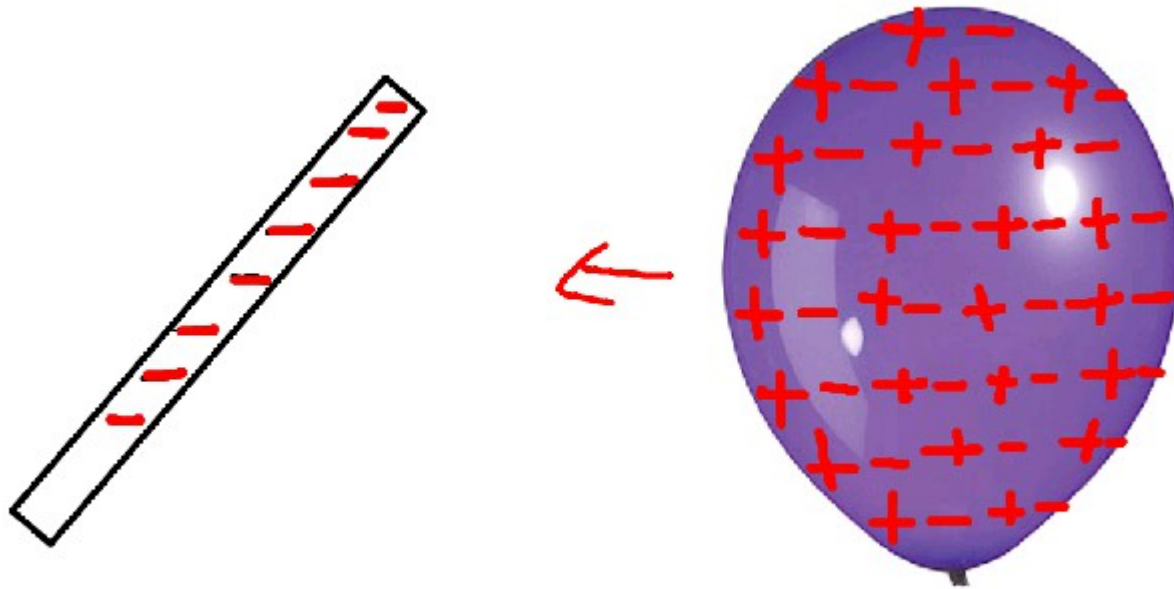
Electron Donors	Glass	If you rub two objects with very different electronegativities together, you will charge the objects.
	Human Hair	
	Polyester	
	Silk	
	Fur	
	..	
	Rubber	
Electron Acceptors	Copper	
	PVC	

Why does the foil attract?



The rod causes electrons (negative charges) to move in the foil because opposite charges attract and like (similar) charges repel.

Why does the balloon attract?



The rod causes electrons to spend more time on one side of the atom than the other.

Types of Charge Transfer

Friction

"Stripping" away electrons.

Types of Charge Transfer

Conduction

Transfer of electrons
by just touching.

Types of Charge Transfer

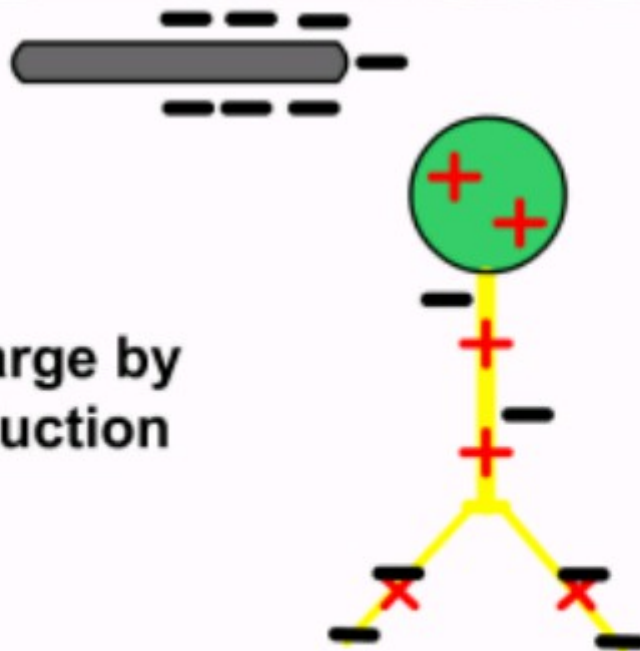
Induction

Charged object comes close to electroscope (does not touch)

Electroscope is grounded (touched with finger)

Remove finger and take away charged object.

Charge by
Induction



↑ menu

⏮ rew

⏪ step

▶ play

⏹ stop

⏩ step



Why does this happen?
What should she have done differently?

