

Electric Force - Lesson 2

Objects/Materials can be one of three things:

- 1) Insulator: Do NOT allow e^- to move easily (plastics, styrofoam)
- 2) Conductors: allow e^- to move freely (metal)
- 3) Semi-Conductors: allow e^- to move somewhat (silicon)

Charge - Measure Charge: gain or loose e^-

1 coulomb (C) = gaining or loosing

$$6.25 \times 10^{18} e^- \quad 1,000,000,000,000,000,000 e^-$$

lightening: 5 → 25 C

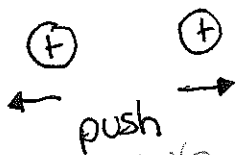
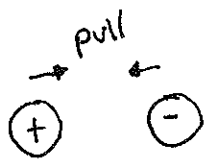
Electric Force

Force: a push or a pull

Contact Force: kicking a soccer ball

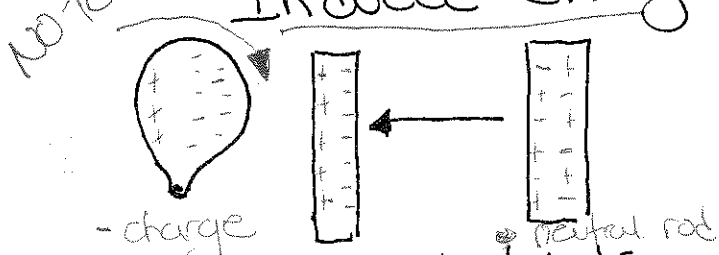
Electric Force: push or pull between charged objects

→ objects do NOT have 2B touching ←



Conduction/Induction

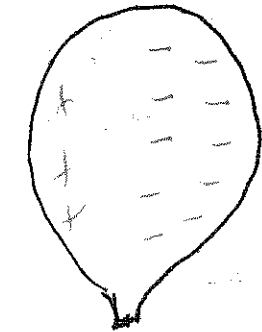
Induced Charge: move or reposition charges on a neutral object by holding a charged object NEAR it. * No e^- transfer *



This is why charged objects * can attract neutral objects *

- Uses the like 'charges repel' action

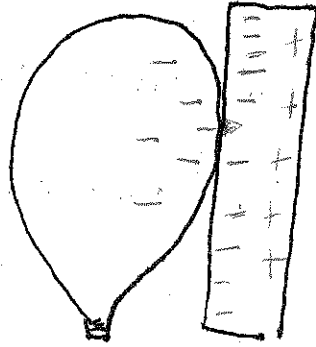
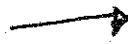
Conduction: charging of a neutral object by TOUCHING it w/ a charged object, and transferring e^-



- charge



neutral



Touching = conduction transferred the electric charge