Conductors and Insulators

HTTPS://WWW.YOUTUBE.COM/WATCH?V=HJDJ4BGX6MW

Conductors

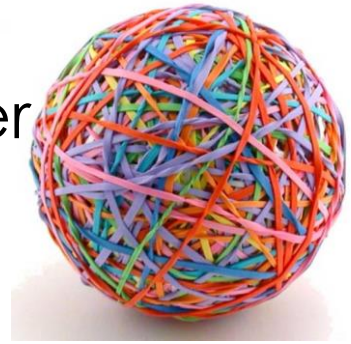
- Allow Movement of Electrons
- Good & fair Materials
- Metals = BEST! Ex. Aluminum, Coper, Steel
- Non-Metals are fair/semi conductors . Ex. Salt Water, Graphite

Steel

Aluminum and Coper

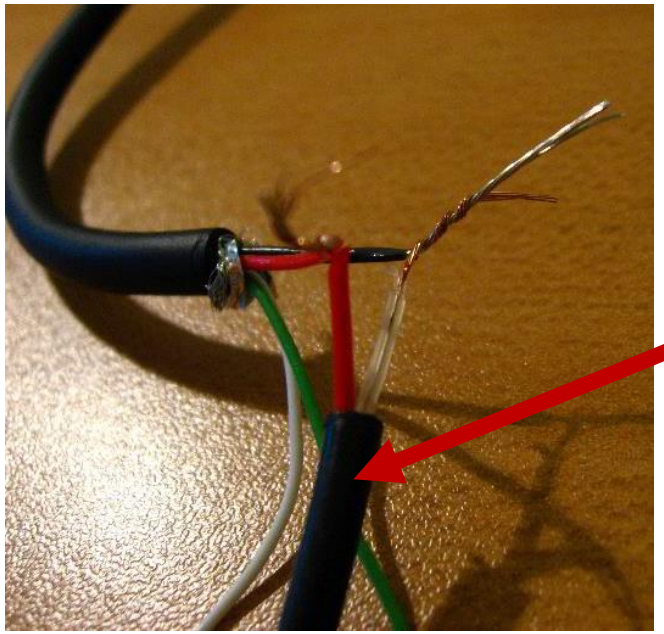
Insulators

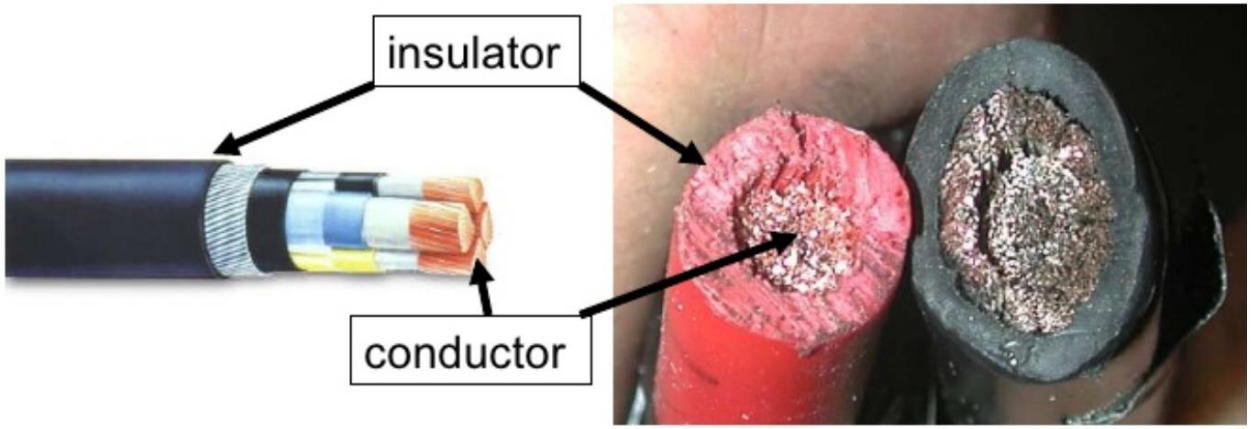
- Reduce/ Limit the movement of electrons
- DON'T allow an electric current to pass through it
- HOLD electrons…Thus these materials HOLD any given Charge



Insulators

- Allow us to use electronics Safely
- Electrons are tightly bound to the atom, (Cant move very far or fast)





Thinking

- With the person beside you think of 3 things that have both conductors and insulators
- Previous ex. Cell phone chargers

Band Theory

- Electrons occupy energy levels called bands
- Conductors implies that the outer electrons of the atom are loosely bound and free to move through materials in the conduction band of an atom
- BUT the electrons need LOTS and LOTS of energy to get to this conduction band
- Metals naturally connect electrons to this conduction band, so they require less energy to get there

HOMEWORK

http://coolsciencelab.com/conductors_and_insulators.htm