

Warm Up

Electrostatics

1. What is the study of static electricity called?
2. If you rubbed each of the following together which would be positive and which would be negative?

a. cotton and silk

b. rubber and human hair



(+)

Weak hold on electrons

human hair (+)

silk (+)

cotton (-)

rubber (-)

(-)

Strong hold on electrons

Homework

Wool \oplus

Silk \ominus

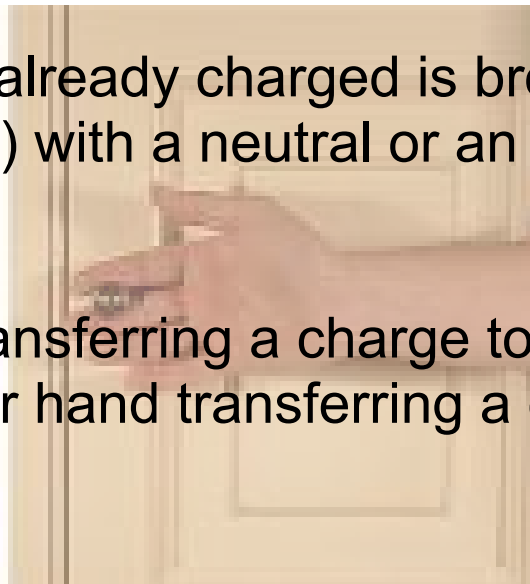


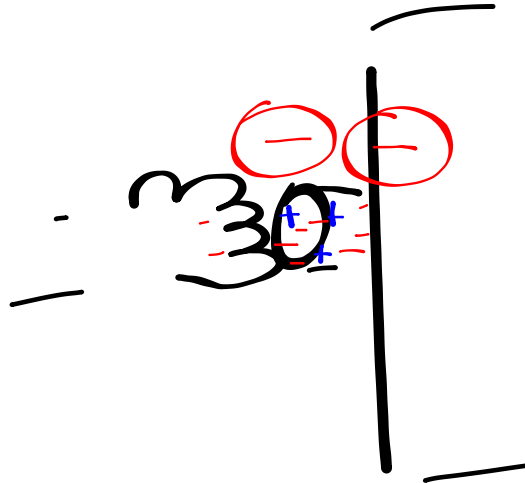
Charging by Contact

Transferring Charge by Contact

an object that is already charged is brought into contact (touched) with a neutral or an object with a different charge.

Ex. your hand transferring a charge to a doorknob very quickly, your hand transferring a charge to the gas pump etc.





Charging by Contact Why/How?

If you have been walking on carpet you have gained a negative charge. The doorknob is usually uncharged.

When you touch it, you transfer extra electrons to the doorknob. Therefore the doorknob and you share a negative charge.

What happens?

Induction

There is a third way in which objects can become charged, **charging by induction**. When the term induction is used in physics it means that something happens without direct contact.



i.e. dust being attracted to your tv or computer screen, talking on your cell phone, listening to the radio all occur through induction

<http://www.physics.mun.ca/~jjerrett/induction/induction.html>



Homework

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