

Warm Up

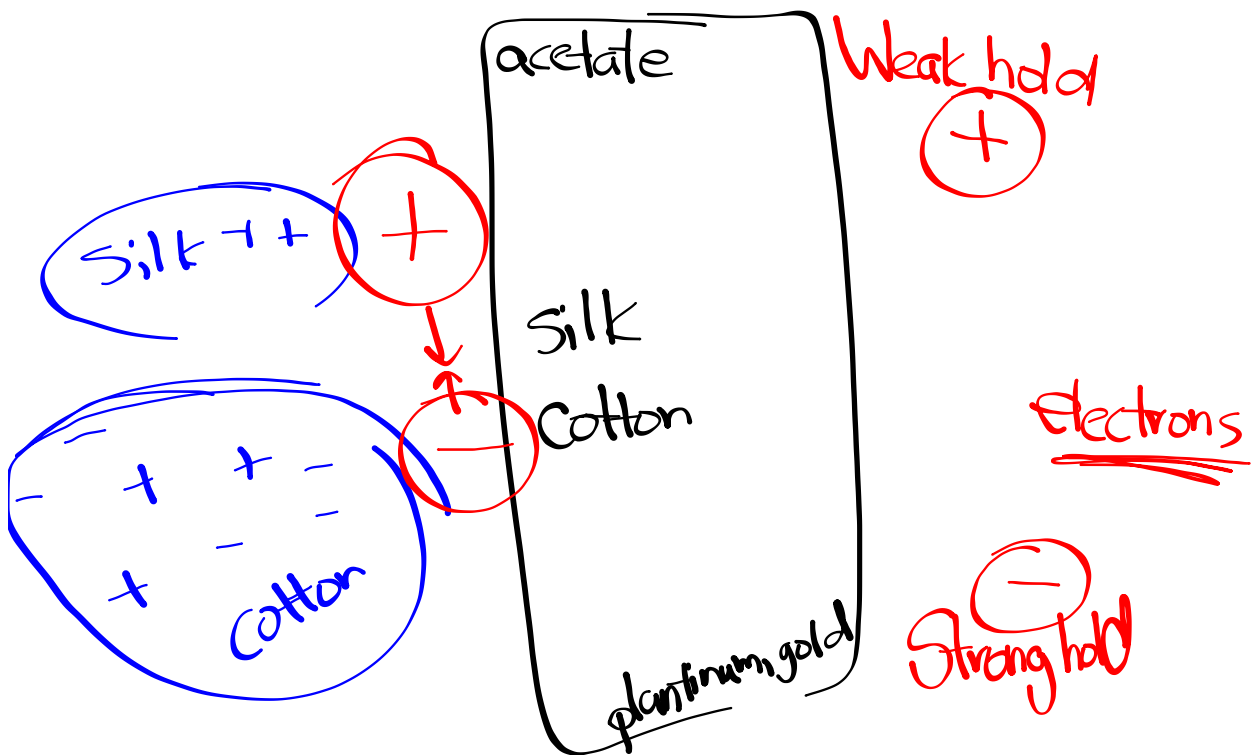
ELECTROSTATICS

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. \ominus cotton and \oplus silk

b. \ominus rubber and \oplus human hair



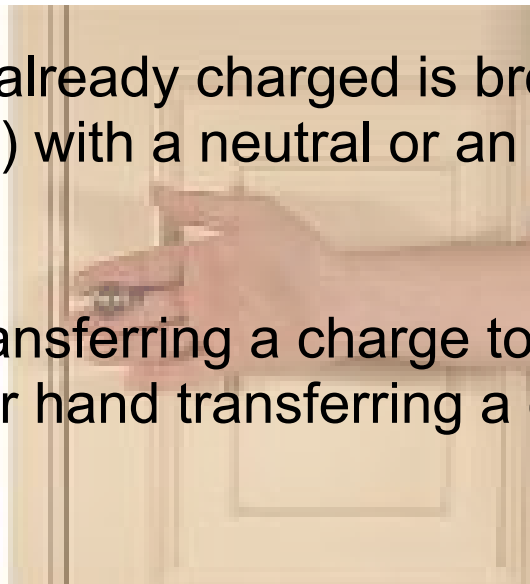


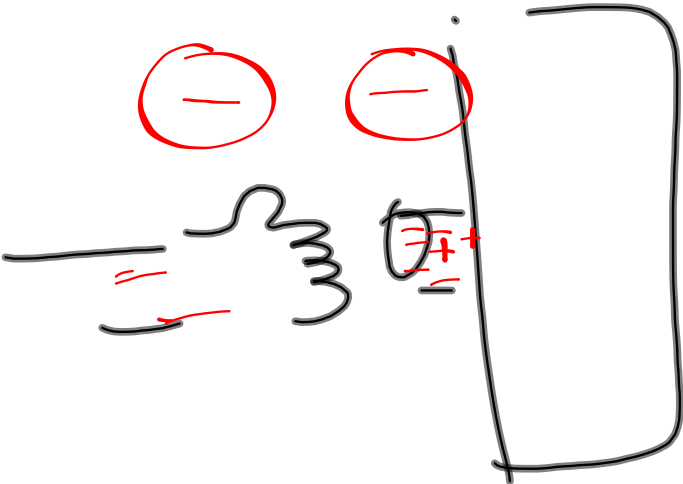
Charging by Contact

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.

This happens really fast and this is when you get a shock and sparks can be seen.

If you walk across carpet in the dark and then touch the light switch, you can often see the sparks before you ever touch the switch.

Induction

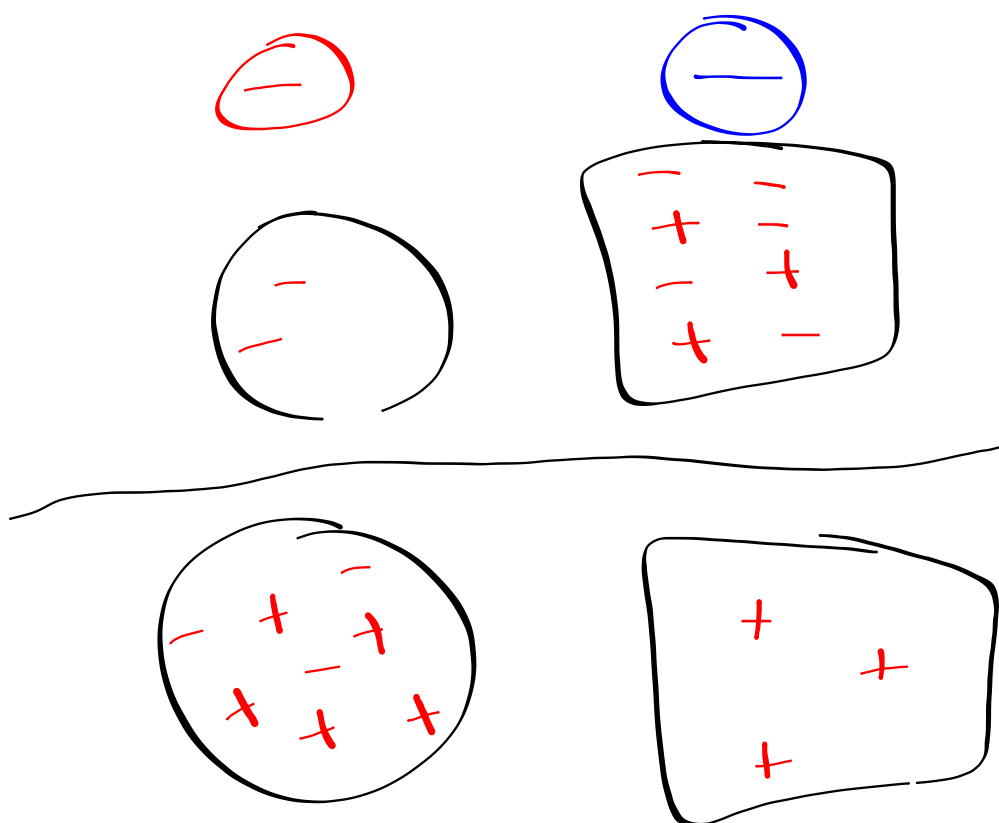
There is a third way in which objects can become charged, **charging by induction**. When the term induction is used in physics it means that something happens without direct contact.



i.e. dust being attracted to your tv or computer screen

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





Homework

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