

APQT Flash Cards for Electrostatics

Use the UNIT TOPIC as the title (1)

This represents ONE card to fill out.
Use pictures, diagrams & labels.

Keep the heading title appropriate (3)

Insert your desired text here.
Use pictures, diagrams & labels .

Some students number their cards → (2)

Insert your desired text here.
Use pictures, diagrams & labels.

These titles will keep your units in an orderly fashion (4)

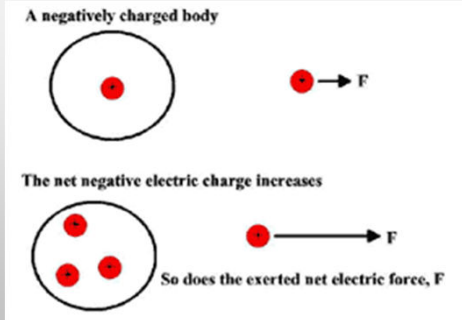
Insert your desired text here.
Use pictures, diagrams & labels.

APQT Flash Cards – Electrostatics

Coulomb's Law (1)

Charged objects exert forces on one another. This is very similar to what happens with gravity between two objects that have mass.

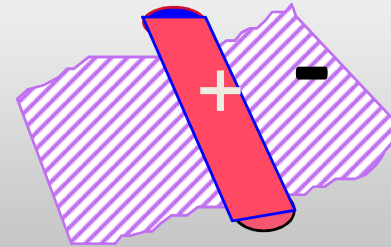
Coulomb's law is similar and can be used to calculate the force between two objects that have charge.



Transfer of Charges (2)

The Transfer of Charge

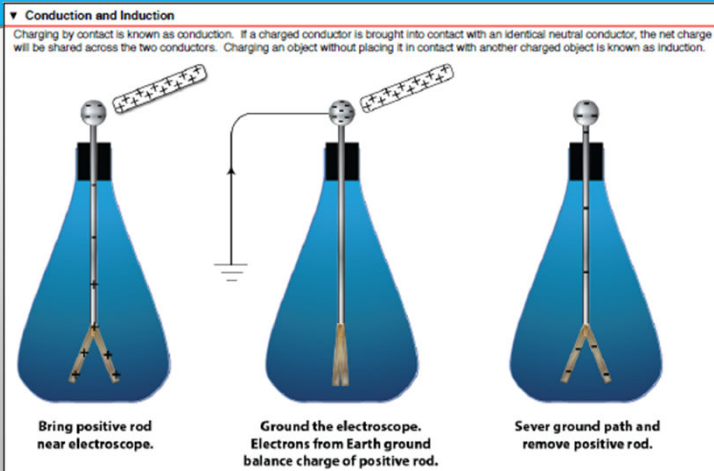
Some materials attract electrons more than others.



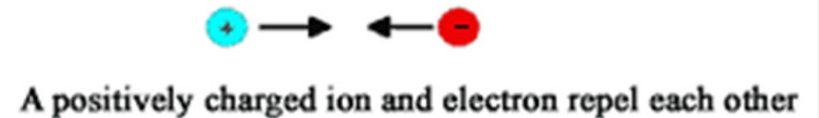
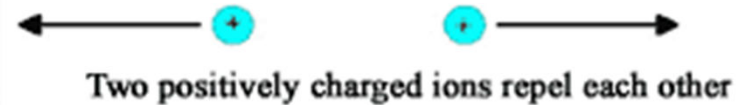
Glass Rod

[See Slides further down for a more detailed example!]

Electrostatics & Electroscopes (3)



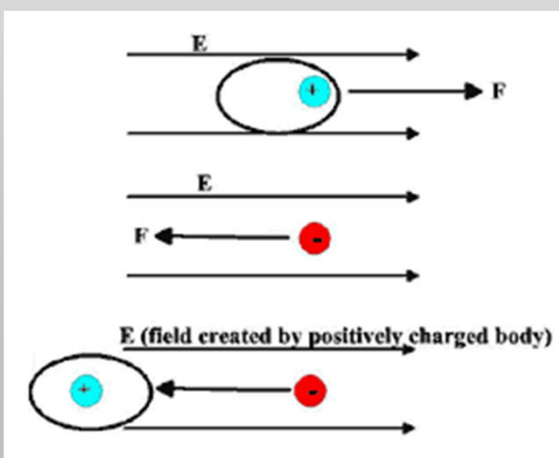
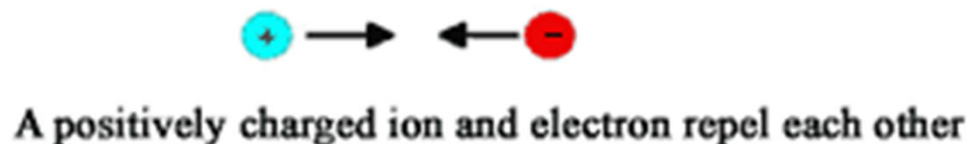
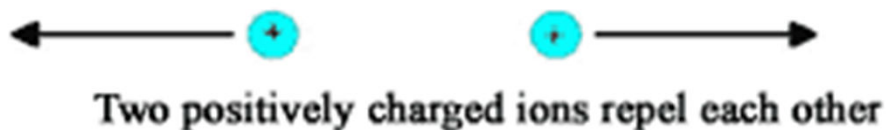
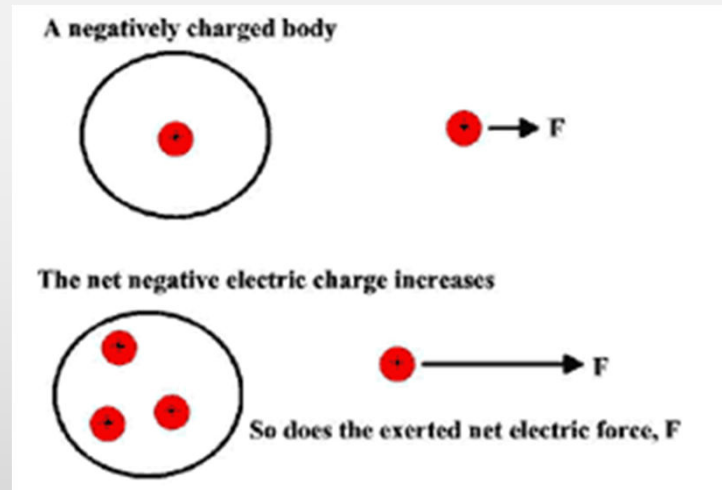
Charges and Repulsion (4)



Coulomb's Law

Charged objects exert forces on one another. This is very similar to what happens with gravity between two objects that have mass.

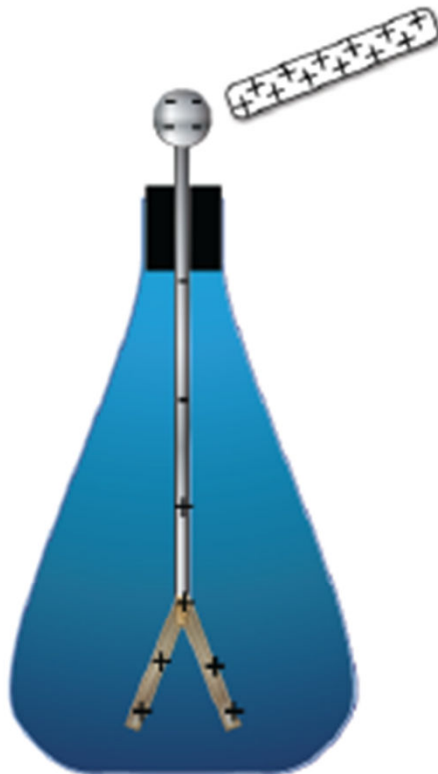
Coulomb's law is similar and can be used to calculate the force between two objects that have charge.



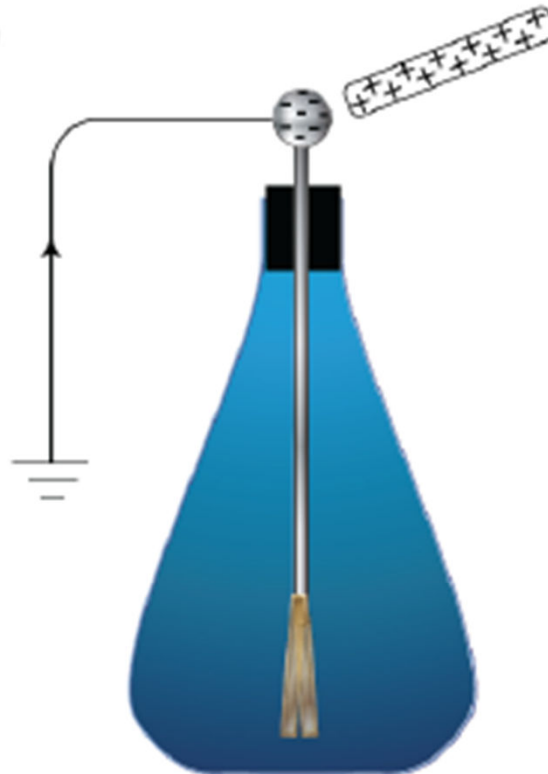
Electrostatics and Electroscopes!

▼ Conduction and Induction

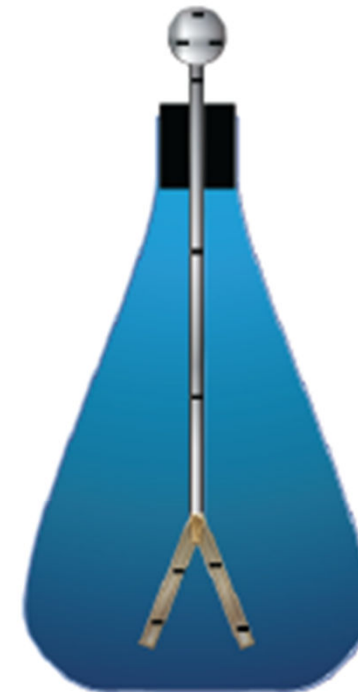
Charging by contact is known as conduction. If a charged conductor is brought into contact with an identical neutral conductor, the net charge will be shared across the two conductors. Charging an object without placing it in contact with another charged object is known as induction.



Bring positive rod near electroscope.



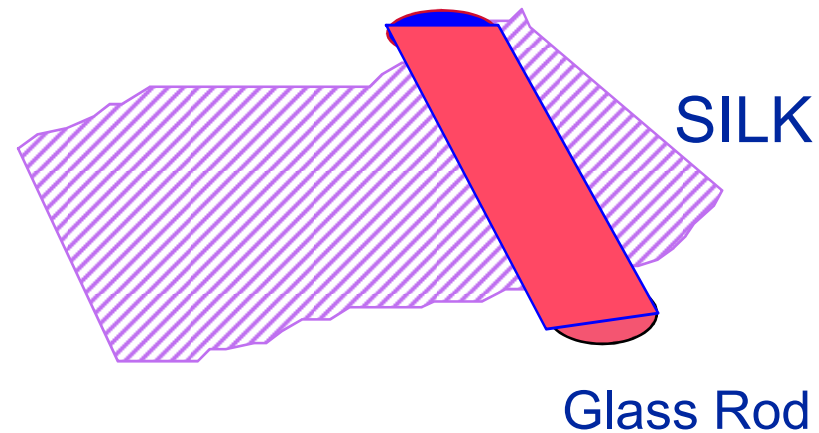
Ground the electroscope.
Electrons from Earth ground balance charge of positive rod.



Sever ground path and remove positive rod.

Electric Charge

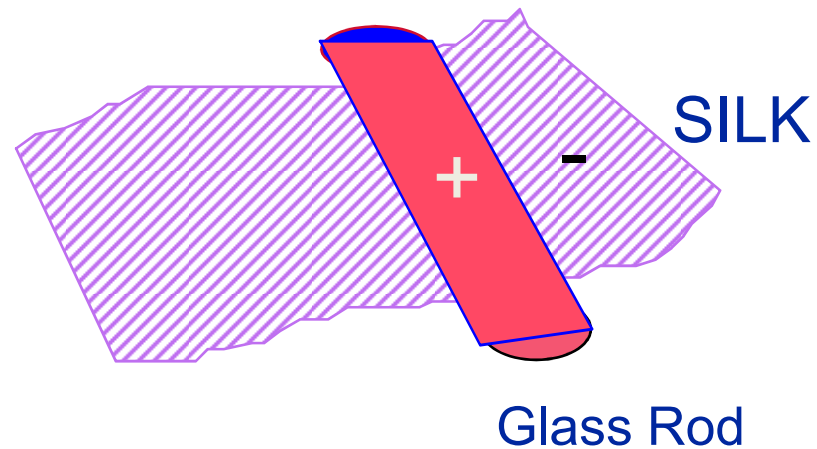
The Transfer of Charge



Some materials attract electrons more than others.

Electric Charge

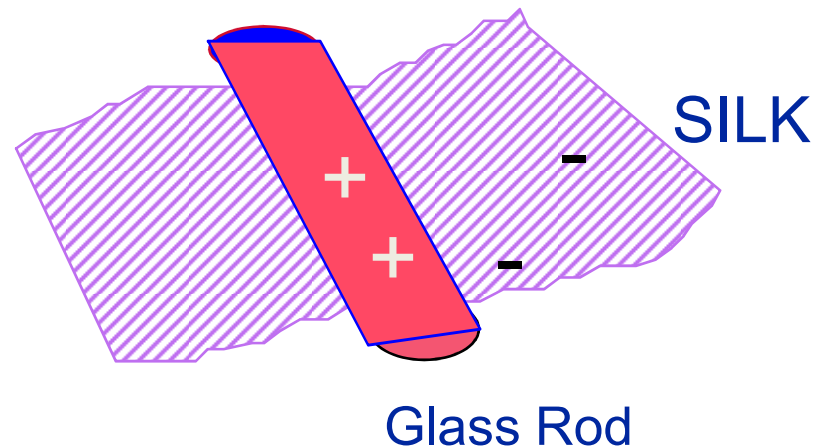
The Transfer of Charge



As the glass rod is rubbed against silk, electrons are pulled off the glass onto the silk.

Electric Charge

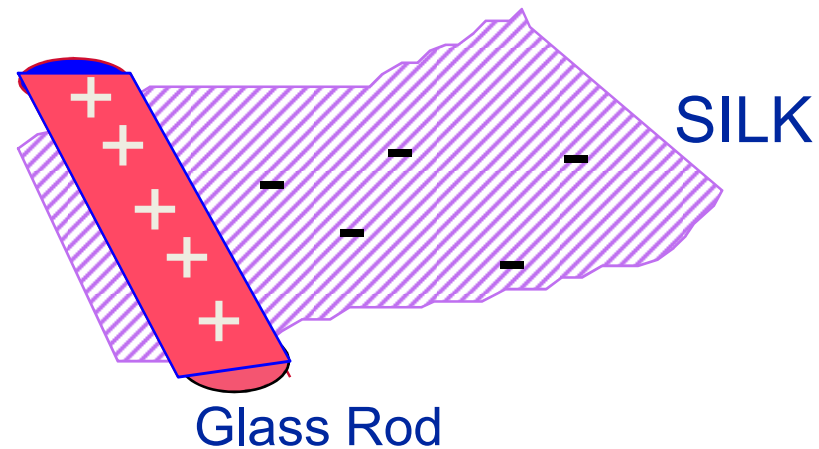
The Transfer of Charge



Usually matter is charge neutral, because the number of electrons and protons are equal. But here the silk has an excess of electrons and the rod a deficit.

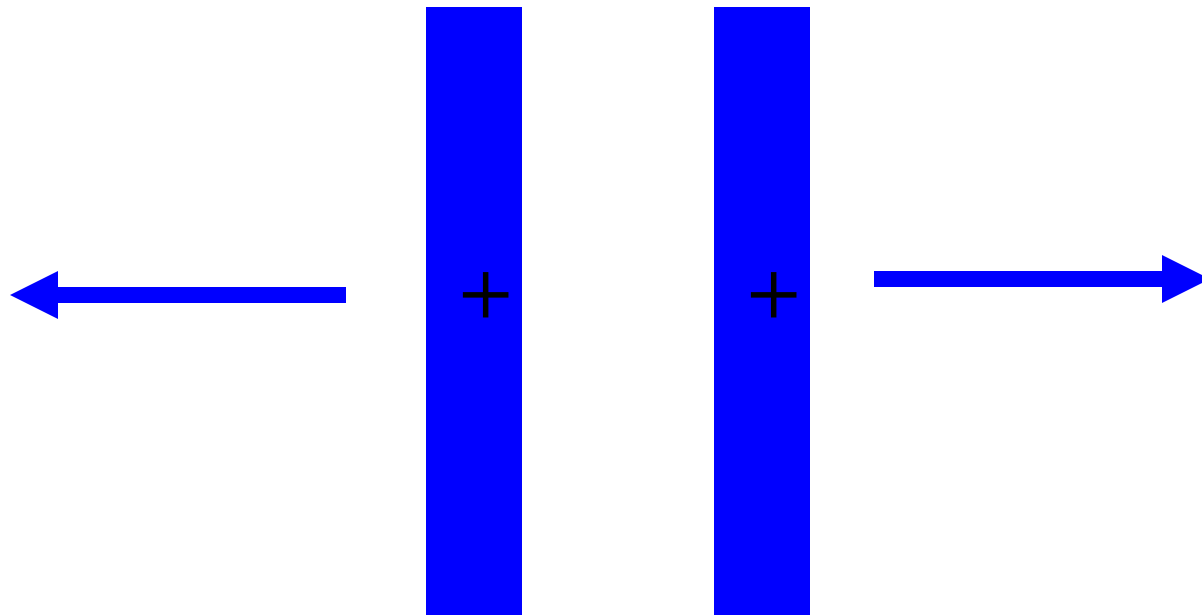
Electric Charge

The Transfer of Charge



Glass and silk are insulators:
charges stuck on them stay put.

Electric Charge



**Two positively charged rods
repel each other.**