

Name: _____

Science 9 Electroscope Lab

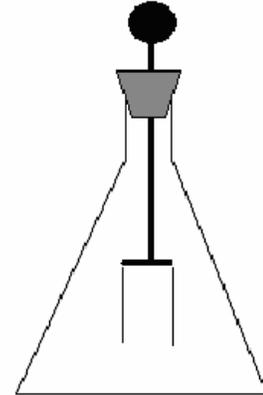
Charging an electroscope:

Procedure:

Part A:

CHARGE SEPARATION:

1. Look at the sketch of how the leaves in the electroscope look before you do any charging. Your electroscope should look similar the one that is labeled "DIAGRAM A."
2. Charge the black ebonite rod as usual and **without touching it to the ball** bring the rod close to the ball on the top of the electroscope and observe what happens to the leaves. Draw a sketch of the leaves while the rod is held near **but not touching** the ball on the electroscope. Label this "DIAGRAM B."
3. Move the rod away and draw what happens to the leaves. Label this "DIAGRAM C."



CHARGING BY CONDUCTION:

4. Look at the sketch of how the leaves in the electroscope look before you do any charging. Your electroscope should look similar to the one labeled "DIAGRAM D."
5. Charge the black rod again and bring it near and then touch it to the ball on the electroscope. After touching the rod to the ball on the electroscope, move the rod away from the electroscope. Draw before (before bringing the rod towards and touching) and after (after the rod has touched and then been removed) pictures of what happens to the leaves. Label these "DIAGRAM E" and "DIAGRAM F."
6. Touch the ball on the electroscope with your hand and get the leaves to return to normal (no charge).

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CHARGING BY INDUCTION:

7. Look at the sketch of how the leaves in the electroscope look before you do any charging. Your electroscope should look similar the one labeled "**DIAGRAM G.**"
8. Have one of your partners place their finger on the ball of the electroscope. Charge the black rod as usual and **without touching it to the ball** bring it close to the electroscope and hold it there. Observe what happens to the leaves. Draw a sketch of the leaves while the rod is held near **but not touching** the ball on the electroscope while the finger is touching the ball on the electroscope. Label this "**DIAGRAM H.**"
9. Now remove the finger from the ball.
10. Now move the rod away. Draw what the leaves look like after this procedure. Label this "**DIAGRAM I.**"

Part B:

Now go back to your diagrams and write **a paragraph** for each "Diagrams A-I" predicting why you think the electroscope behaved the way it did. Later you will work through a computer simulation to check your predictions. After the computer simulation you will then go back to your predictions and write **a revised paragraph**.