PHY **Charging Techniques** Name:_____

1. You are to instruct Mr. Killorn on how to charge the electroscope using different methods. You are to list the appropriate steps in the appropriate order.

A Rub the ebonite rod with fur.
B Rub the acrylic rod with wool.
C Hold the ebonite rod close to but not touching the knob of the electroscope.
D Hold the acrylic rod close to but not touching the knob of the electroscope.
E Touch the knob of the electroscope with your finger.
F Touch the ebonite rod to the knob of the electroscope.
G Touch the acrylic rod to the knob of the electroscope.
H Remove the rod.
I Remove your finger.

In each case, when you start, the electroscope is to be considered neutral.
Mr. Killorn does **not** need to neutralize the electroscope.

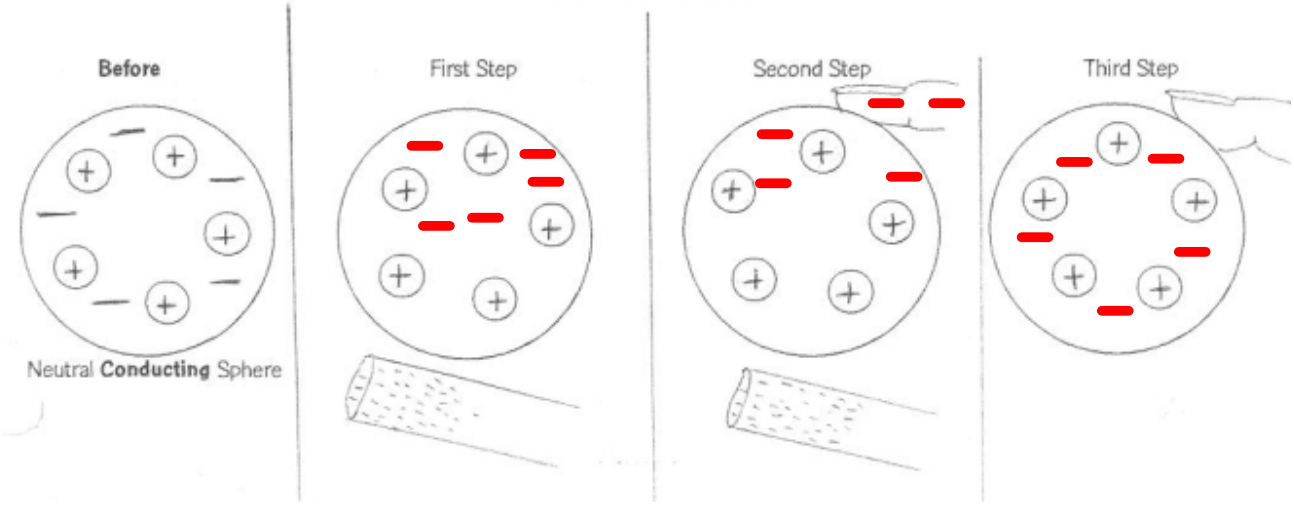
Just write the letters in order in the vertical columns. Not all lines will be used in each column.

Charge the electroscope by contact giving it a positive charge.	Charge the electroscope by induction giving it a positive charge.	Charge the electroscope by induction giving it a negative charge.	Charge the electroscope by contact giving it a negative charge.
B	A	B	A
G	C	D	F
H	E	E	H
	I	I	
	H	H	

2. Complete the drawings below.

The symbol ⊕ represents positive atom cores.

The symbol ⊖ represents electrons.



3. The following table is only partially filled in. You are to complete the table in the same style.

It is explaining the process of charging by induction. You want to give a neutral electroscope a negative charge.

	The step-by-step play only.	The reason behind the step.
1.	Rub acrylic rod with fur	Electrons will move from the acrylic rod to the fur. This gives the acrylic rod a positive charge and the fur a negative charge.
2.	Bring the rod closer (no touching) to the electroscope	This causes induced charge separation to occur. The free valence electrons in the electroscope will move from the leaves at the bottom to knob at top. The top of the electroscope will have a negative charge while the bottom of the electroscope will have a positive charge.
3.	Touch the knob of the electroscope with your finger.	This allows the free valence electrons to move from your finger to the knob of the electroscope. This give the electroscope a negative charge.
4.	Remove your finger.	This breaks the grounding process thus trapping the excess electrons in the electroscope
5.	Remove the rod	The leaves will open up because the excess electrons evenly distribute throughout the electroscope, including the leaves

Attachments

balloons_en.jar

travoltage_en.jar