SNC1 *3.3 Investigation: Charging By Contact*

Date:_____ Name:_____

In this experiment you will use a pith ball apparatus to determine the kind of charge transferred from one object to another.

Question: How can we determine the kind of charge transferred to a neutral object when a charged object touches it?

Prediction: Use the law of electric charges to predict what kind of charge is transferred from each object to the pith ball.

(a) If touched by an object with a negative charge (ie) _____
the pithball will become _____charged.
If touched by an object with a positive charge (ie) _____
the pithball will become _____ charged.

Observations: Observations may include: attracted, repelled, no reaction.
(b)-(d)

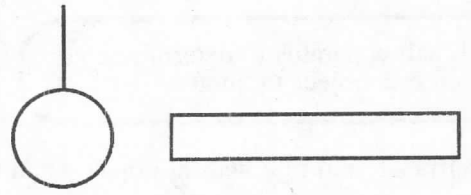
Action	Observation
charged polyethylene rod brought close to pith ball but does not touch.	
charged polyethylene rod touches the pith ball and is then brought close.	
charged acetate rod brought close to pith ball but does not touch.	
charged acetate rod touches the pith ball and is then brought close.	

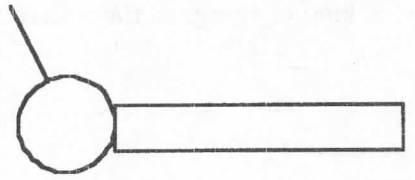
Analysis and Conclusion:

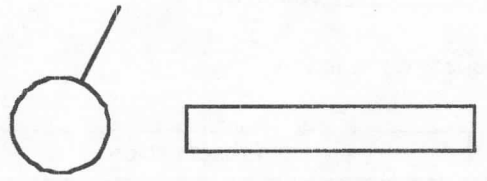
(e) When a pith ball is touched by a negatively charged object, it will become _____ charged. I know this because :_____

When a pith ball is touched by a positively charged object, it will become _____ charged. I know this because :_____

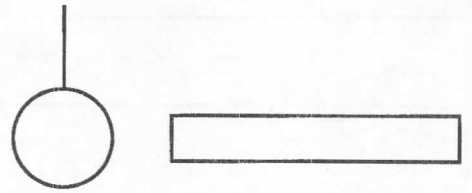
(f) Why was the pith ball repelled by the charged polyethylene after being touched?

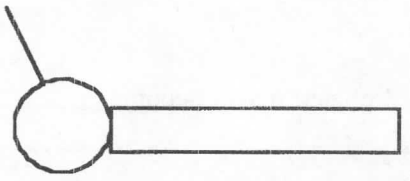


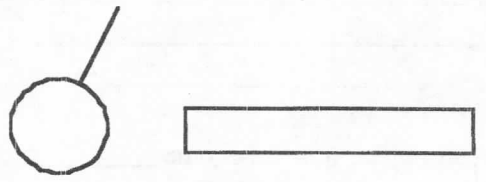




(g) Why was the pith ball repelled by the charged acetate after being touched?







(h) The type of charge transferred by contact is always _____ as the charge found on the charged object.