

Static Electricity and Inertia Tricks

The Trick			
Floating Orb	Coin and card trick		
How to do the tricks			
<u>Floating Orb</u>			
1.	Arrange 6 strands of tinsel together and tie them together in a knot at one end.		
2.	Tie them together again about 6 inches from the first knot.		
3.	Cut the loose tinsel strands off just past each knot.		
4.	Charge the PVC pipe by rubbing it back and forth through your hair for about 10 seconds.		
5.	Hold the tinsel by the knot above the pipe and let it drop and touch the pipe.		
<u>Coin and Card Trick</u>			
1.	Balance a playing card on the tip of your index finger on your non-dominant hand.		
2.	Carefully put a quarter on center of the card.		
3.	Quickly flick the card with your other hand.		
The Science			
We have _____ to thank for the floating orb trick. Static electricity is the build-up of an electrical charge on the surface of an object. A static charge happens when two surfaces touch each other and the electrons move from one object to another. One of the objects will have a positive charge and the other a negative charge.			
_____ is the resistance of an object to any change in its motion, including a change in direction. An object will stay still or keep moving at the same speed and in a straight line, unless it is acted upon by an outside force. Inertia is also called Sir Isaac Newton's First Law of Motion.			
Questions			
1.	What charge does the tinsel have before it touches the pipe?	positive	negative
2.	After the tinsel touches the pipe, what charge does it have?	positive	negative
3.	Why does the tinsel take the shape of an orb?		
4.	Why does the quarter stay on your finger when you flick the card away?		