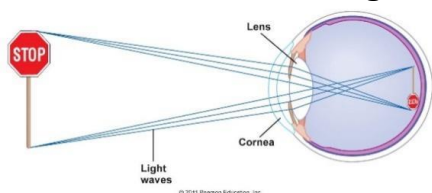


Light Tricks



The Trick		
<ul style="list-style-type: none"> ● Mystery Envelope ● Blacker than black 	<ul style="list-style-type: none"> ● Magic Rods ● Broken chopstick 	<ul style="list-style-type: none"> ● Disappearing coin
How to do the trick		
<p><u>Mystery Envelope</u></p> <ol style="list-style-type: none"> 1. With a black felt-tip pen, write a word in large letters on a white piece of paper. 2. Place the paper in a folded colored piece of paper and insert that into a white envelope. 3. Get a white and black piece of construction paper 4. Roll up the paper into a four-inch-long tube and hold the tube against the envelope to read the word. <p><u>Blacker than Black</u></p> <ol style="list-style-type: none"> 1. Make a small hole in a piece of black paper. 2. Place the paper over a white cup and observe the color of the hole. <p><u>Magic Rods</u></p> <ol style="list-style-type: none"> 1. Write words using uppercase letters that are the same upside down and right side up. 2. Hold the rod over the word (not touching) and observe the effect of the rod. <p><u>Broken Chopstick</u></p> <ol style="list-style-type: none"> 1. Fill a clear plastic cup/glass/jar with water and place the chopstick in the water. 2. Observe the chopstick through the side of the cup. <p><u>Disappearing Coin</u></p> <ol style="list-style-type: none"> 1. Place a penny on a flat surface and put the bottom of the plastic cup/glass/jar over the penny. 2. Observe the penny through the side of the cup. 3. Fill the cup with water as you observe the penny through the side of the cup. 		
The Science		
<p>_____ occurs when light waves hit a surface and bounce off.</p> <p>Light _____ occurs when light is taken in or absorbed by matter and converted into energy.</p> <p>When light passes from one material to another, it can bend or _____.</p>		

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Questions

1. Does the Magic Envelope trick work as well with a white paper tube? Explain.
2. What happens to the light when it enters the hole in the black paper on the cup?
3. What does a black asphalt road do with most of the sunlight that hits it?
reflects absorbs refracts
4. What type of energy is the sunlight change to when it hits the road?
5. The lens in our eye is a biconvex lens similar in shape to the rod. The image that forms on the back of our eye on the retina is:
right side up upside down
6. Why does the chopstick look broken?
7. From what position can you see the coin through the cup and water?