Science Project, Wk. 16 -- Stretch (#130)

Name: _____

Purpose: To demonstrate the effect of **tension force**.

"And, behold, there was a great earthquake: for the angel of the Lord descended from heaven, and came and rolled back the stone from the door, and sat upon it." Matthew 28:2

Materials: balloon, marking pen

Procedure:

- Draw a square on a deflated balloon.
- Divide the square into three sections.
- Use the marking pen to color the two outer sections on the square.
- Inflate the balloon and observe the markings.
- Deflate the balloon and observe the markings again.
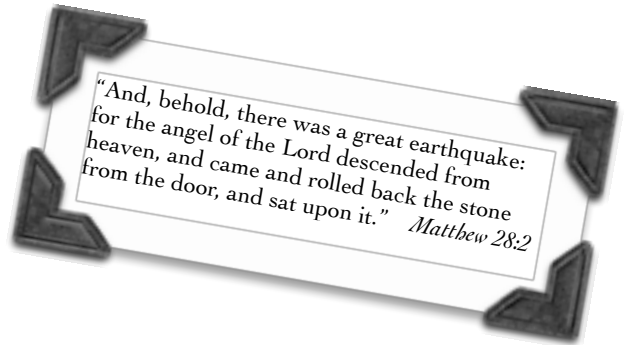
Hypothesis (CIRCLE):

The square on the inflated balloon	WILL WILL NOT	spread out in all directions.
After letting the air out, the square	WILL WILL NOT	look like the original square.

Result (CIRCLE):

The square on the inflated balloon	DID DID NOT	spread out in all directions.
After letting the air out, the square	DID DID NOT	look like the original square.

Conclusion:

      The rubber molecules of the balloon are being pulled apart by the pressure of the air inside. Parts of the balloon stretch more than others, causing a change in the shape of the diagram drawn on the rubber.

      Tension is a stretching or pulling-apart force. If the force is not too great, rocks with elastic properties like the balloon will recover their original shape and size when the force is removed. If the force is too strong, the rocks cannot remain together, and they break apart--as the balloon would if you continued to inflate it with air. When there is an earthquake, the rocks in the Earth's crust are pushed apart by this force.

Sketch: