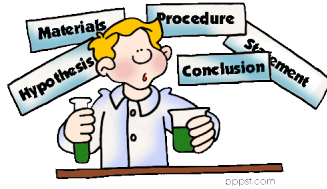


Name _____



Science Experiment: Tilt (#121)
Cycle 1, Week 13

Purpose: To demonstrate the effect of the Earth's _____ on seasons.

Hypothesis: _____

Materials: 2 pencils flashlight
polystyrene ball 3"

Procedure:

- Insert a pencil through the polystyrene ball.
- Use the second pencil to mark the equator line around the center of the polystyrene ball. This line should be halfway between the top and bottom of the ball.
- Position the ball on a table so that the pencil eraser is leaning slightly to the right.
- In a darkened room, place the flashlight about 6 inches from the left side of the ball.
- Observe where the light strikes the ball.
- Place the light about 6 inches from the right side of the ball.
- Observe where the light strikes the ball.

Draw/Write **Observations** in the box.

Results:

The area _____ the equator receives the most light when the pencil eraser points _____ from the light, and the area _____ the equator is brighter when the pencil eraser points _____ the light.

Why:

The pencil represents the imaginary axis running through the Earth. The Northern Hemisphere, the area _____ the equator, is warmed the most when the Earth's axis points toward the Sun. This is because more direct rays hit the area. The Southern Hemisphere, the area _____ the equator, receives the warming direct light rays when the Earth's axis points away from the Sun. The direction of the Earth's axis changes very slightly during the Earth's movement around the Sun, causing the Southern and Northern Hemispheres to receive different amounts of light rays. This results in a change of _____.