

Name _____

Your World is Tilted!

1. In which hemisphere is each of the countries we have on our Earth models (United States, Brazil, China, and Australia)? How can you prove it? Draw a picture if it helps.

2. If you were standing on the North or South Pole looking directly overhead, would you see the sun? Where would you have to look to see the sun? What would you see if you looked up from the equator at midday?

3. Point the North Pole on your Earth model directly at the “sun” and spin your model. What would happen if this was the direction of Earth’s axis?

4. Demonstrate the idea that the Earth’s axis could be oriented differently. Show an exaggerated tilt of 90° with the North Pole facing the sun. Draw a picture of what this looks like and describe what would happen if this was the direction of Earth’s axis.

5. As you spin your Earth model, do both hemispheres receive the same amount of light all the time? How is the amount of light changing for each hemisphere and their poles?

6. Move your golf-tee people around to different locations and compare the amount of sunlight falling on them during one spin cycle or day. Look carefully, and then draw and explain what you believe is happening.

7. Experiment and discover what happens if you keep the tilt the same but point your North Pole in different directions — not just towards the North Star. Draw how different amounts of sunlight fall on different locations as you point your North Pole toward different directions. What happens at the equator?

8. How does Earth's shape affect how much light shines near the equator? How do you think this affects the temperature?

9. What happens at the poles to the length of daylight hours and darkness? Experiment by moving your golf-tee people onto the North and South Pole. Draw and write explanations about the difference between the sunlight and temperature at the equator and at the poles.
