

Season Globes Data Sheet

Name _____

Circle your hypothesis:

Seasons are caused by Earth's CHANGING DISTANCE from the Sun

OR

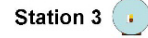
Seasons are caused by Earth's TILT.



Station 2



Part 1: Distance



Directions: Answer all questions. Record maximum voltage. Do this for only Utah in only one station.

1. What is the distance from the globe to the light?
2. How big is the change in distance?
3. What is the % change in distance? (See equation in Part 3.)

	Voltage maximum
Near:	
Far:	
Difference (%):	

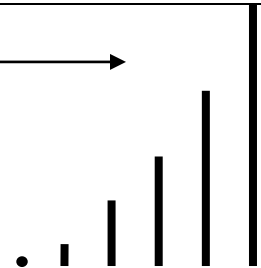
Station 1

Part 2: Tilt

Directions: Answer all questions. Record maximum voltage.

4. Is Utah in daylight for: half a rotation, less than half, or more than half? (Circle one.)
5. How long is the shadow of the peg near New York (at its shortest)? (Circle the shadow.) _____
6. When the shadow is at its shortest for this station, is the Sun's position in the sky: high, medium, or low? (Circle one.)

	Voltage maximum
Utah:	
Argentina	

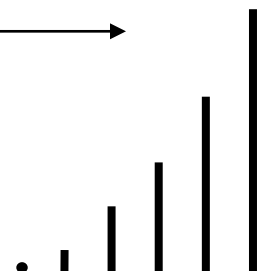


Station 2

Directions: Answer all questions. Record maximum voltage.

7. Is Utah in daylight for: half a rotation, less than half, or more than half? (Circle one.)
8. How long is the shadow of the peg near New York (at its shortest)? (Circle the shadow.) _____
9. When the shadow is at its shortest for this station, is the Sun's position in the sky: high, medium, or low? (Circle one.)

	Voltage maximum
Utah:	
Argentina	



Station 3

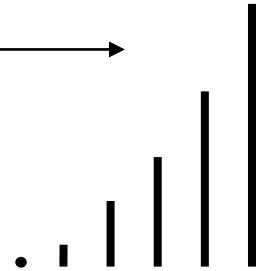
Directions: Answer all questions. Record maximum voltage.

10. Is Utah in daylight for: half a rotation, less than half, or more than half? (Circle one.)

11. How long is the shadow of the peg near New York (at its shortest)? (Circle the shadow.) _____

12. When the shadow is at its shortest for this station, is the Sun's position in the sky: high, medium, or low? (Circle one.)

	Voltage maximum
Utah:	
Argentina	



Station 4

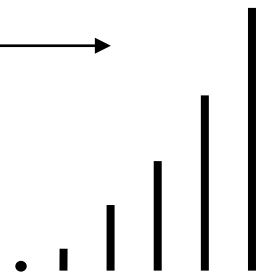
Directions: Answer all questions. Record maximum voltage.

13. Is Utah in daylight for: half a rotation, less than half, or more than half? (Circle one.)

14. How long is the shadow of the peg near New York (at its shortest)? (Circle the shadow.) _____

15. When the shadow is at its shortest for this station, is the Sun's position in the sky: high, medium, or low? (Circle one.)

	Voltage maximum
Utah:	
Argentina	

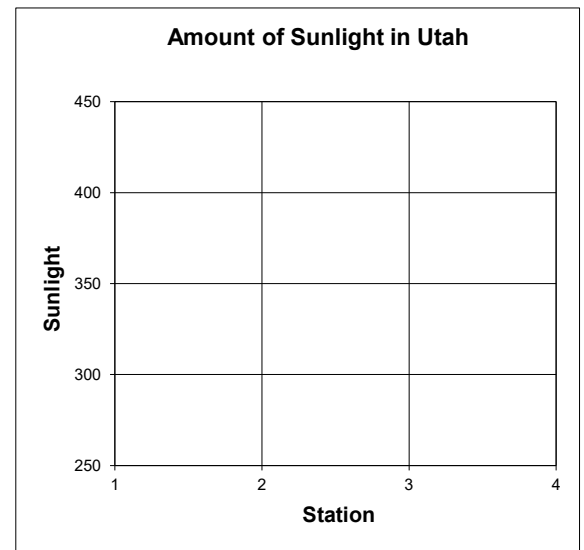


Part 3: Data Analysis

Directions: Plot data from part 2 on the graph. Answer all questions.

- Which station represents Utah's summer? How do you know?
- Which season has the longest shadows? Which season has the shortest? Why?
- Which has a greater effect: distance or tilt? (Circle one.)

Distance Effect	Tilt Effect



$$\text{Percent Change} = \frac{\text{Larger number} - \text{Smaller number}}{\text{Smaller number}} * 100$$