

Appendix 1 – Student Worksheet for Solar Energy and Ozone Layer Experiment

**Solar Energy, Climate and Ozone**

Name \_\_\_\_\_

**Need:**

Globe, infrared thermometer, “GE Reveal” halogen lamp, clip-on work lamp, acetate sheet

Set the light so that it is approximately 18 inches from the globe, and so that the light will be focused on the equator. Take initial temperature readings from the light, globe and space between the globe and light as demonstrated by your teacher. Use this demonstration to fill in the chart and answer the following questions about solar energy.

Temperature/time	Prediction	Actual
0 seconds: globe		
0 seconds: “sun”		
0 seconds: space between		
60 seconds: globe		
60 seconds: “sun”		
60 seconds: space between		
120 seconds: globe		
120 seconds: “sun”		
120 seconds: space between		
240 seconds: globe		
240 seconds: “sun”		
240 seconds: space between		

1. What happens with the temperature in the space between the earth and the sun?  
Explain these results.
2. What happens at the point on earth that gets the direct sunlight? How might this effect climate?
3. Explain why the equator is always very warm