

# ANGLE OF SUNLIGHT LAB

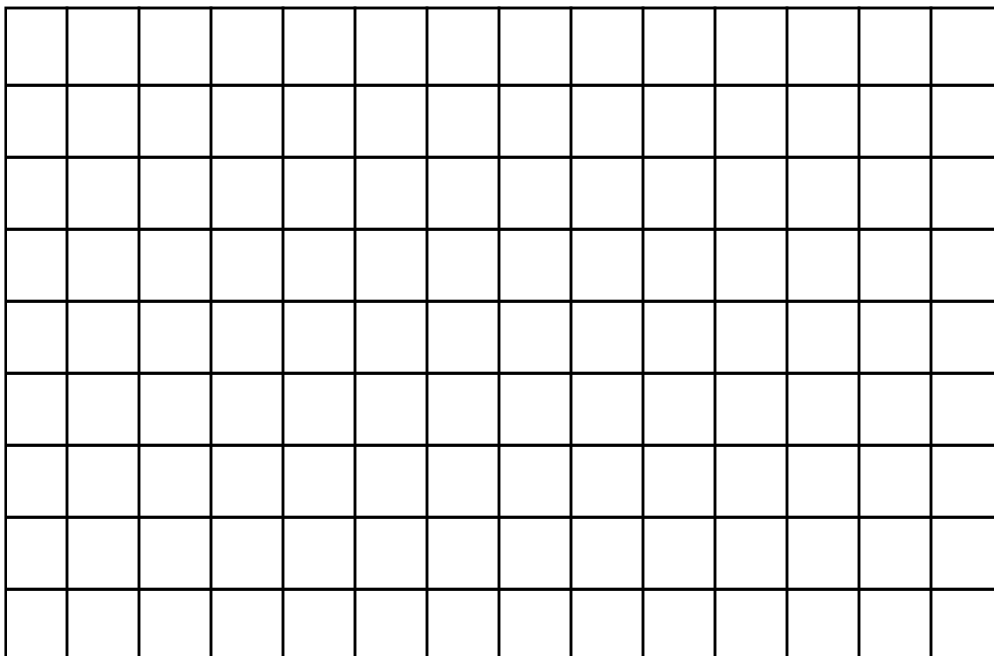


Name \_\_\_\_\_ Class \_\_\_\_\_

## Directions:

1. Shine the flashlight directly at the grid on this page, at right angles, from a height of about 15 cm. Trace the lighted area with a pencil. Label #1.
2. Change the angle of the flashlight to about 30°. Hold the flashlight at about 15 cm above the paper. Trace the area. Label #2.

## Observations:



### 1a:

Number of full blocks + Half the Number of Partial Blocks = Approximate Area  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

### 1b:

Number of Beans X 40 °C / Approx. Area (from Step 1a) = Temp. of One Block oC  
 \_\_\_\_\_ X 40 °C \* / \_\_\_\_\_ = \_\_\_\_\_ °C

(\*The amount of heat absorbed by one "bean.")

### 2a:

Number of full blocks + Half the Number of Partial Blocks = Approximate Area  
 \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

### 2b:

Number of Beans X 40 °C / Approx. Area (from Step 2a) = Temp. of One Block oC  
 \_\_\_\_\_ X 40 °C \* / \_\_\_\_\_ = \_\_\_\_\_ °C

### ANGLE OF SUNLIGHT Summary Questions:

1. If the flashlight were sunlight, which angle would heat the paper the **most**?
2. In general, where would the world have higher temperatures?  
Why?
3. Refer to a world map and list at least 6 different countries you think would have the highest temperatures on the planet:
- 4.. If the flashlight were sunlight, which angle would heat the paper the **least**?
5. In general, where would the world have lower temperatures?  
Why?
6. Refer to a world map and list at least 6 difference countries you think would have the coldest temperatures on the planet:
7. How would the angle of sunlight affect the temperature of the lighted area?  
As the angle of the sunlight increases,  
the temperature of the lighted area \_\_\_\_\_.
8. Which lighted area ( $90^{\circ}$  or  $30^{\circ}$ ) would be called direct sunlight? \_\_\_\_\_  
Indirect sunlight? \_\_\_\_\_
9. Compare Jefferson City to Miami, Florida, using what you've learned in this lab.
10. Compare Jefferson City to Toronto, Canada, using what you've learned in this lab.