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 ^{o}C /	Approx. Area (from Step 1a)	=	Temp. of One Block oC
____	X 40 ^{o}C * /	____	=	_____ **^{o}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 ^{o}C /	Approx. Area (from Step 2a)	=	Temp. of One Block oC
____	X 40 ^{o}C * /	____	=	_____ **^{o}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° or 30°) would be called <u>direct</u> sunlight? _____

   <u>Indirect</u> sunlight? _____

9. Compare <u>Jefferson City</u> to <u>Miami, Florida</u>, using what you've learned in this lab.

10. Compare <u>Jefferson City</u> to <u>Toronto, Canada</u>, using what you've learned in this lab.