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Name	Date	Period	
Nattie	Date	FELIUU	

SOLAR INSOLATION

Solar insulation has to do with the <u>AMOUNT</u> of electromagnetic radiation we get from the sun. Complete the following activity to make some simple observations and to help answer the questions about solar insolation.

Supplies

Flashlight, ruler, and colored pencils

Procedures:

- 1. Turn on your flashlight.
- 2. Hold the flashlight facing directly down (90° angle) on graph #1. Hold it 5cm above the paper (use your ruler!).
- 3. Draw an outline of the lit area on graph #1 using a **yellow** colored pencil.
- 4. Count the number of squares that are inside the circle and record the number in data table below.
- 5. Repeat steps 2 and 3 for graph #2...only this time, hold your flashlight on a small (60°) angle. Be sure the closest edge of your flashlight is 5cm from the paper. Draw an outline of the lit area on graph #2 using a **blue** colored pencil
- 6. Repeat steps 2 and 3 for graph #3, but hold the flashlight on a large (30°) angle. Again, keep the closest part of the flashlight 5cm from your paper. Draw an outline of the lit area on graph #3 using a red colored pencil.

Graph#	# of Squares
(
2	
3	

- 7. Turn off the flashlight and return flashlights and rulers to the supply table
- 8. Count the number of boxes colored in each area. You will need to estimate some of the areas and record the results in the data table

	(Srap	h #1	Yell	OW) -	dire	ctly	dowr)		

Graph #2 Blue - small angle										

		Gr	aph:	#3 F	Red) -	larg	ge an	gle		

Analysis Questions

9.	Did the amount of light coming out of the flashlight ever change?
10.	What area had the most concentrated (brightest) light? How do you know?

11. What area had the least concentrated (dimmest) light? How do you know? _____

12. Solar insolation has to do with the amount of solar radiation areas on Earth's surface receive. Which graph do you predict would create the warmest temperatures? Explain your reasoning.