

Item #: _____

Light Intensity Investigation

Name: _____

Light Source	Distance to wall (cm)	Size of Illuminated Circle (Small, Medium, Large)	Intensity Rating for current station (seen on wall/paper) (1-10)
Flashlight	25		
	50		
	100		
25-Watt Bulb	25		
	50		
	100		
60-Watt Bulb	25		
	50		
	100		

— Complete after investigation —

Using your data, complete the bar graphs below:

Distance from light/Size of Illuminated Circle (by light source)

Brightness (light source)/Intensity of Light (on wall) at 50cm

Size of illumination circle
 Large
 Med
 Small

Intensity
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

25 50 100 | 25 50 100 | 25 50 100
 Flashlight 25w 60w

Flashlight
 25w
 60w
 Brightness (Light source) at 50cm

Key
 - Flashlight - 25w - 60w

Analyze Your Data

- 1) Based on the graphs, develop a statement about the relationship between the DISTANCE from the light source and the SIZE of the illuminated circle. State the relationship this way: As distance [increases/decreases] the size of the illuminated circle [increases, decreases, stays the same].

- 2) Based on the graphs, develop a statement about the relationship between the BRIGHTNESS of the light source and the INTENSITY of the light at the paper/wall. State the relationship this way: When the brightness of the light [increases/decreases] the intensity of the light on the wall [increases, decreases, stays the same].

- 3) Develop a statement about the relationship between the amount of the illuminated circle and the intensity of the light at the paper/wall.

- 4) What are two factors that determine the available amount of light energy?

- 5) Make a claim about each factor you identified from #8. Write EACH claim this way: When [one factor] [increases/decreases], light energy [increases, decreases, stays the same].
 - a.

 - b.

- 6) Do you think light energy is a type of kinetic energy or potential energy? Why?