Shining a Light on

Name_____

Date _____

Guided Inquiry

Question: How will the number of rays on the paper sun affect the time it takes for it to open up if the perimeter of the center of the sun remains the same?

Shape of Center	# of Sided	Length of Sides	Perimeter
Square	4	3.75	15
Pentagon	5	3	15
Hexagon	6	2.5	15

What is changed? (manipulated)	What will you measure? (responding)	What is kept the same? (controlled)

Hypothesis: (An "If. . . . .then" Statement)_____

_____

_____

Materials:

- 4 paper suns – cut out
- A container of water
- A stop watch

Procedure:

Write your procedure on the back of this paper.

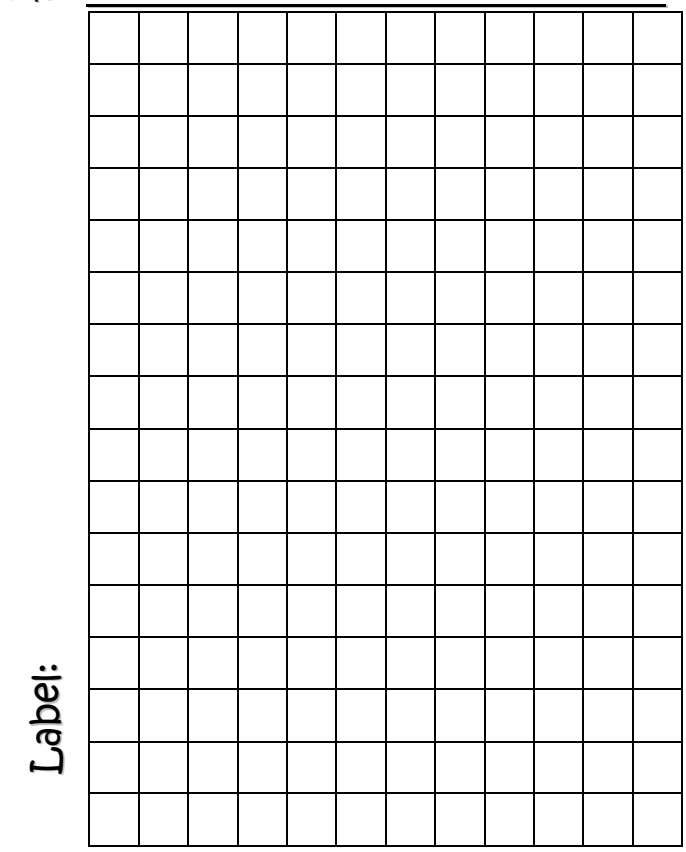
Data Collection

Create a chart or table of your data.

Organize your data into a graph for analysis.

Data Analysis:

Title: _____

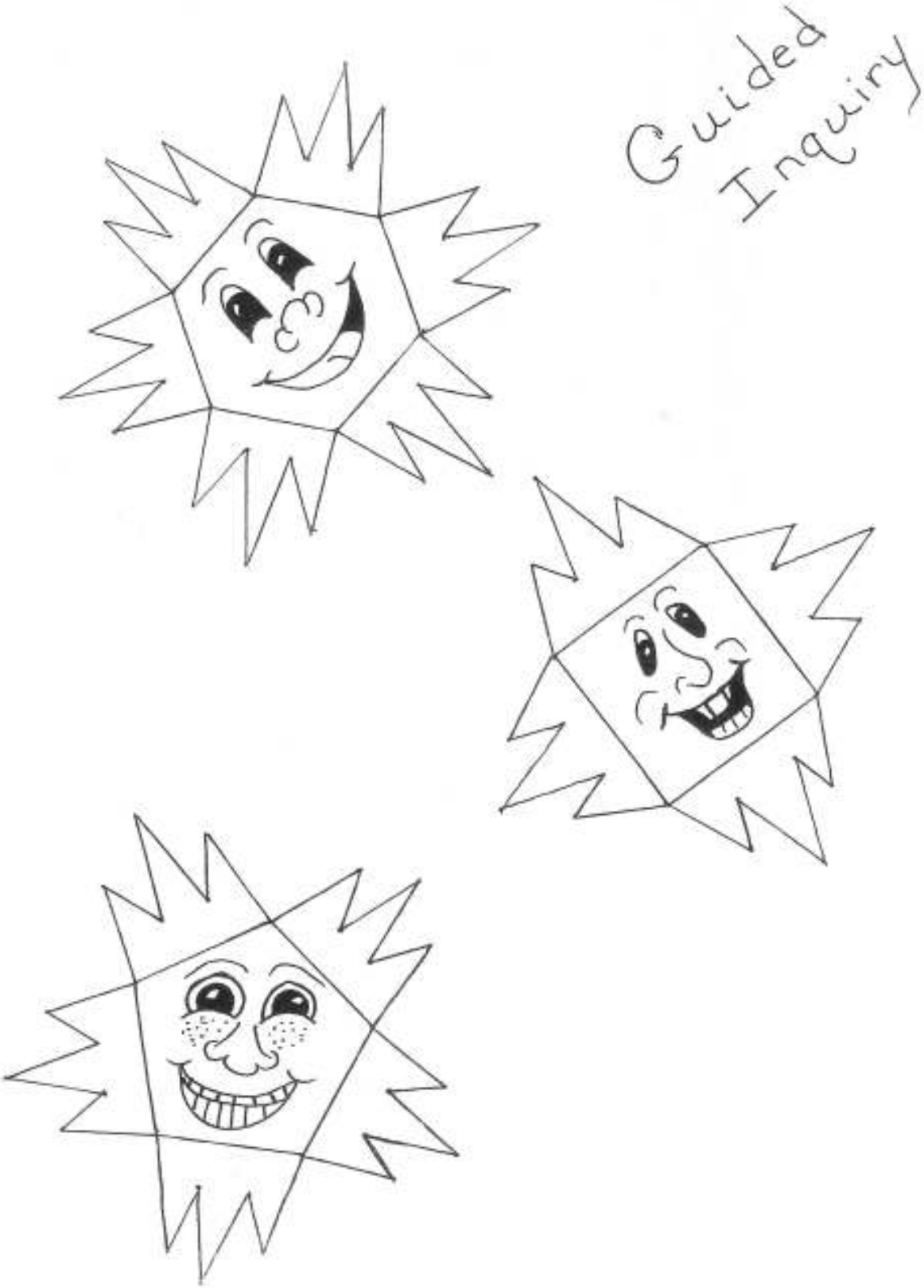


Label:

Results:
What does the data show you about the time it takes for a paper sun to show its' rays?

Conclusions:
What did you learn about the time it takes for a paper sun to show its rays?

NOTES:


Guided
Inquiry

Guided Inquiry Rubric

CATEGORY	1	3	5	Comments
Independent Variable	Listed more than one independent variable	Listed one independent variable.	Listed one independent variable that is testable.	
Dependent Variable	Listed more than one dependent variable	Listed one dependent variable.	Listed one dependent variable and it will give the necessary quantities data.	
Hypothesis	Is an "if...then" statement but isn't closely related to the activity.	Is an "if...then" statement that states either the independent or the dependent variable correctly.	Is an "if...then" statement that states both the independent and the dependent variable correctly.	
Procedure	Has a procedure written.	Has a procedure but some of the steps are missing or may be out of order.	Has a procedure written that leads the student through logical steps to complete the experiment?	
Data Collection	Created a chart or table that matches the experiment.	Created a chart or table that matches the experiment. Recorded some of the trials correctly.	Created a chart or table that matches the experiment. Recorded all of the trials correctly.	
Data Analysis	Filled out the graph labels and titles correctly.	Filled out the graph labels and titles correctly. Transferred some of the information from the chart/table to the graph correctly.	Filled out the graph labels and titles correctly. Transferred the information from the chart/table to the graph correctly.	
Results	Wrote at least one statement but it doesn't show a true understanding of what the graph shows.	Wrote a statement that demonstrates a simple understanding of what the graph shows.	Wrote a statement that demonstrates a deep understanding of what the graph shows.	
Conclusions	Wrote a sentence or two but it does not demonstrate a deep understanding of what occurred.	Wrote more than a sentence or two that demonstrates a simple understanding of what occurred.	Wrote more than a sentence or two that demonstrates a deep understanding of what occurred.	