

# THE HEATING POWER OF THE SUN

NAME \_\_\_\_\_ hr \_\_\_\_\_

## SCIENTIFIC QUESTION:

What Earth material does the sun heat faster-- land or water?

**A] HYPOTHESIS:** (What is your guess?) *I think* \_\_\_\_\_

## B] PROCEDURE/EXPERIMENT:

Design and carry out an experiment to determine if the sun heats land or water faster. Write out your steps below. You may or may not need all 5 steps below. Add any if needed on a separate sheet of paper.

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

**C] RESULTS/ DATA:** Make a data table for your experiment. (5 pts)

**D] ARGUMENT:** Make a claim about what you have found. What Earth material does the sun heat faster-- land or water? Create a statement of truth that is supported by **evidence** you found in this lab. (2pts)

\_\_\_\_\_  
\_\_\_\_\_

**E]** What parts of this experiment were the controlled variables? (3pts)

\_\_\_\_\_

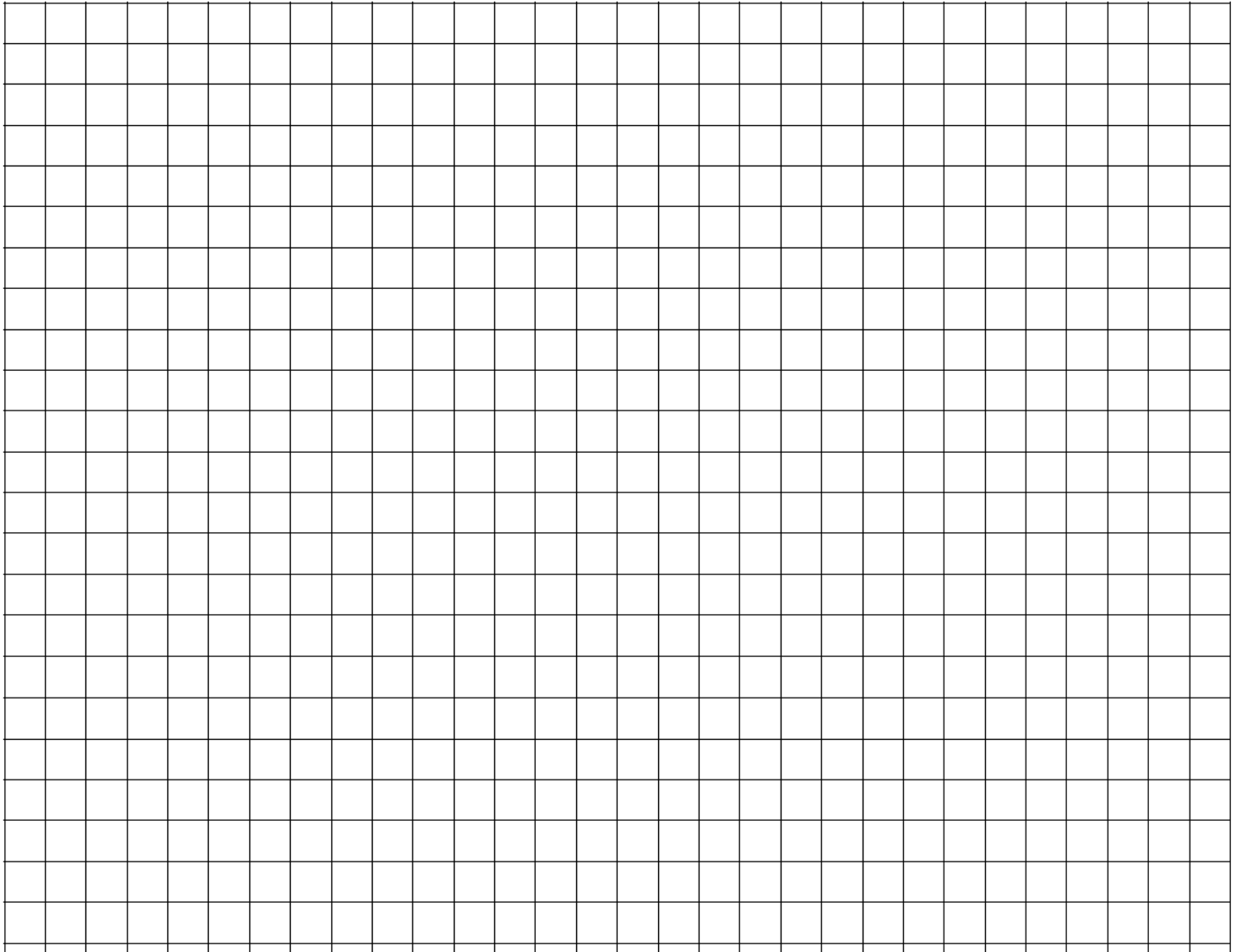
**F]** What was the independent variable? \_\_\_\_\_

**G]** What was the dependent variable? \_\_\_\_\_

**H]** What experimental errors could have occurred during this experiment? Name at least 2. (2pts)

\_\_\_\_\_

**I]** Make a line graph of your data below. Be sure to label the x axis (2pts), the y axis (2pts), make a key to distinguish between the two lines (2pts), complete the lines of data (1pt), and give the graph a good title (2pts)



**J]** If land heats up faster than water, what will the beach feel like when the sun's waves are hitting it during the day? What will the water feel like? \_\_\_\_\_

**K]** Which air would be hotter—air above the beach or air above the water?

**L]** If an air mass is hot, how does it behave? If an air mass is cold, how does it behave?

**M]** When cold and warm air collide, what do we get?

**N]** Will the air masses on Earth ever get mixed completely and become the same temperature? Why or why not?

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