Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period \_\_\_\_\_\_\_\_

**B Assignment Does a Plastic Bag Trap Heat?**

|  |  |  |
| --- | --- | --- |
| **QUESTION/PURPOSE:** **Manipulated Variable (MV)** **Responding Variable(RV)**  What will happen to the temperature inside a plastic bag when placed in the sun? | | |
| **HYPOTHESIS (IF, THEN, BECAUSE)** **:** **Manipulated Variable (MV)** **Scientific Reason (WHY)**  **Responding Variable (RV)** | | |
| **Manipulated Variable Units** | **Responding Variable Units** | **Controlled Variable(s) Units** |
| **PROCEDURES: Manipulated Variable (MV)**  **Responding Variable (RV)**  **Controlled Variable(s)**  **Repeated Trials**  **Logical Steps**     1. Record the initial temperature on 2 thermometers in the table. (They should be the same) 2. Place one thermometer in a plastic bag. 3. Put a small piece of paper in the bag so it shades the bulb of the thermometer. Seal the bag. 4. Place both thermometers on a sunny window. 5. Cover the bulb of the second thermometer with a small piece of paper. 6. Wait 5 minutes than record the temperatures on the two thermometers. 7. Repeat steps 1-6 two more times. (Make sure your thermometer cools back down to room temperature) | | **MATERIALS Measuring Device**   1. 2 thermometers 2. Plastic bag 3. Sunny window 4. 2 pieces of paper 5. Timer |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DATA TABLE**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Thermometer with or without a plastic bag | Temperature (°F) | | | | | |  | T1 | T2 | T3 | Average | | Thermometer inside a plastic bag | Initial Temperature |  |  |  | X | | Temperature after 5 minutes |  |  |  | X | | Temperature (difference) |  |  |  |  | | Thermometer without a plastic bag | Initial Temperature |  |  |  | X | | Temperature after 5 minutes |  |  |  | X | | Temperature (difference) |  |  |  |  | |
|  |
| **CONCLUSION: Answered Questions Explanatory**  **Cite High Data Cite Low Data**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |

**Directions:**

1. Complete the front of the lab sheet (hypothesis and variables). Set up and do the experiment.
2. Record the data on the data table on the back of the lab sheet.
3. Write a 5 point conclusion for the experiment.
4. Answer the analysis questions.

**Analysis:**  
1. Were the two temperature changes the same or different?

2. How can you explain the difference between the two temperatures using vocabulary from the Weather Factor Unit?

3. What phenomenon on Earth does this lab model?