Name: _____

Indoor Albedo Lab Report

Materials:
- Stapler
- Scissors
- Lamp
- Construction Paper
- Thermometers

Directions: Answer the question below before you complete the lab
What is albedo?
- a. Albedo is the percentage of radiant energy produced by the sun.
- b. Albedo is the measure of how much radiant energy from the sun is reflected.
- c. Albedo is the measure of how much radiant energy from the sun is absorbed.

Procedure:
1. Cut two rectangles from each piece of construction paper (4 ¼ inches by 5 ½ inches).
2. Fold each square in half twice.
3. Staple two edges of each square to form a pocket
4. Place the bulb end of the thermometers in the pockets.
5. Place the pockets with the thermometers directly under the lamps so both receive equal amounts of light. The lamp should be pointing straight down.

Hypothesis:
Make a prediction about the temperature of each thermometer. How will the temperature change over time? Which will get warmer? Which will thermometer will have the temperature that rises the fastest?
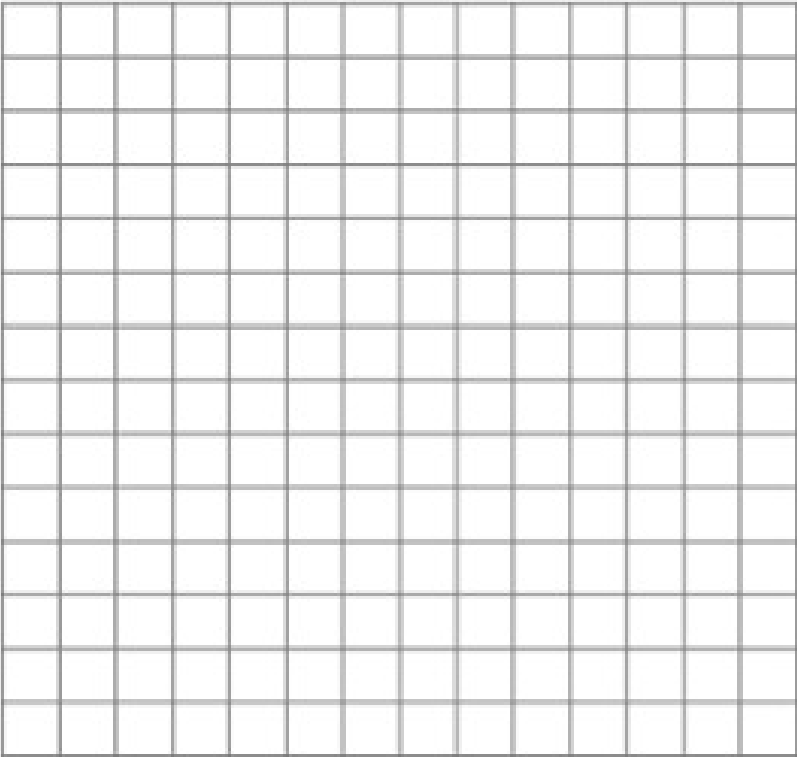_____

_____

_____

Data: Use the table below to collect your data for this investigation.

Paper color	Starting temp	2 min	4 min	6 min	8 min	10 min	12 min	14 min	16 min	18 min	20 min

Calculate the change in temperature for both pieces of paper in the space below
(final temp - initial temp = change in temp)

Paper color	Starting temp	Final Temp	Change in Temp

Make a line graph of the data in the space below. Use a different color for the different colors of paper. Be sure to include a title, a key, and label your axes.

Class data: Use the table below to compile class data.

Group	White	Green	Blue	Black	Grey/Brown
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Analysis: Use the data to answer the questions.

1. Which thermometer had the warmest temperature? _____

2. Which thermometer had the fastest increase in temperature? _____

3. What types of land do each of the colors of paper represent?

   _____

   _____

4. Based on the class data, rank the albedo from highest to lowest.

   _____

   _____

5. How does the albedo of a landscape affect temperature?

   _____

   _____

   _____

6. If a city's population grows, how will this affect the albedo of that area? What will happen to the temperature in that area?

   _____

   _____

   _____

   _____

   _____