# Student page Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Title: How Hot?**

**Purpose:** You can burn your feet at the beach and cool them in the water. Why do the water and sand feel so different? Does soil or water absorb radiation faster? How does the temperature of air above each surface change? You will design an experiment to find the answers to these questions.

**Hypothesis:**

**Materials:** ring stand, soil, metric ruler, boxes, thermometers (4), overhead light with reflector or sun, water, tape, colored pencils, graph paper

**Procedure:**

Write the steps down that you will take:

1.

2.

3.

4.

5.

6.

**Data:**

**Graph (on graph paper)**

**Questions:**

1. When the light was on, which heated up faster, the soil or water?

2. When the light was on, which heated up faster, the air above the water or the air above the soil? Why?

3. When the light was off, infer from your graph which lost heat faster, the water or the soil. Why?

1. Was your hypothesis supported by your data? Explain

5. Predict how your data would be different if you placed a clear lid on the boxes.

**Conclusion:**