

Unit 4 Handout 112

Lesson 4: Investigating the Temperature of Air

**Purpose:** Investigate the effect of surface temperature on the temperature of air above the surface and its resulting movement.

**Guiding Questions:** How do surface temperatures on the earth affect the temperature of the air above it and the way air moves?

**Directions.** Read the procedure on pages 61-63. Then, answer the following questions about the procedure.

1. How will you determine the correct temperature of the air in the cylinder using the thermometer?
  
2. How often and for what time will you record data?
  
3. How and what data will you collect of the hot water and crushed ice?

**Directions.** Start with step 5 on page 61. Complete all steps (5-12) as instructed. Record your data in the table below.

Table 1 Temperature Changes

|                | Cold Convection Tube                          |   | Hot Convection Tube                         |   |
|----------------|---|---|---|---|
|                | Container of Crushed Ice:<br>Temperature (°C) |   | Container of Hot Water:<br>Temperature (°C) |   |
| Time (minutes) | Temperature (°C)<br>Thermometer A<br>(top)    | Temperature (°C)<br>Thermometer B<br>(bottom) | Temperature (°C)<br>Thermometer A<br>(top)  | Temperature (°C)<br>Thermometer B<br>(bottom) |
| 0:00           |   |   |   |   |
| 1:00           |   |   |   |   |
| 2:00           |   |   |   |   |
| 3:00           |   |   |   |   |