



## LESSON 5

# Insulation Investigation

### Question

Are certain materials better for insulating than others?

### Materials

- 2 Radiation cans
- 2 Thermometers
- Insulating material
- Masking tape
- 2 Rubber bands
- Hot water (provided by teacher)

### Hypothesis

### Procedure

1. Remove the tops from the cans.
2. Use the insulating material to insulate one can on the sides only.
3. Ask your teacher to fill both of your cans with hot water. Replace the tops.
4. Suspend a thermometer through the hole in each top, making sure it does not touch the bottom or the sides of the can.
5. In the chart below, record the temperature (°C) of the water in the cans at two-minute intervals for 20 minutes. Your teacher will keep track of the time with a timer. Calculate the overall change in temperature ( $\Delta T$ ) for both cans.
6. Graph the results on the graph below.

### Data Table

TYPE OF INSULATION: \_\_\_\_\_

TIME (MIN)	0	2	4	6	8	10	12	14	16	18	20	$\Delta T$
Insulated temperature												
Uninsulated temperature												

