

# PRIMARY EXPLORATION: How Does A Thermometer Work?

BACKGROUND: We use a thermometer to measure how hot or cold an object is.

QUESTION: How does a thermometer work?

PURPOSE: To make a thermometer.

MATERIALS: 1 clear straw Cold, room temperature, and very warm water  
1 glass bottle Dark (blue or green) food coloring  
2 large containers Clay

PREDICTION: Read the procedure. Write what you think will happen when the bottle is placed in hot water and cold water.

- PROCEDURE:
1. Fill the glass bottle with 400 ml. of room temperature water. Add 10 drops of dark food coloring to the water in the bottle.
  2. Hold the straw in the bottle so that its end is in the water. Mold the clay around the top of the bottle to hold the straw. Make a tight seal.
  3. Put the bottle into a container. Pour in hot water until it is almost full. Observe the water in the straw for three minutes.
  4. Put the bottle in the other container and fill it with cold water. Observe the straw for five minutes.

DATA: Record your observations.

CONCLUSION: Write how you think the thermometer works.

