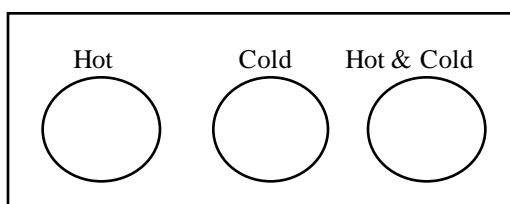


Predicting Temperature

The children have learned how to read a thermometer in school. This activity provides an opportunity for you and your child to apply this skill to a practical situation at home.

WHAT YOU NEED:

- 1 thermometer
- 2 small plastic cups
- cold tap water
- hot tap water
- 1 placemat marked hot, cold, and hot and cold.
- 1 large cup



WHAT TO DO:

1. Fill one cup with hot water. Place the cup on the "hot" circle of the mat. Predict the temperature of the water. Record your prediction on the chart.

SAFETY NOTE: Work with your child when using hot water.

2. Using the thermometer, measure the temperature of the hot water and record it on the chart.

3. Fill the second cup with cold water. Place the cup on the "cold" circle of the mat. Predict the temperature of the water. Record your prediction on the chart.

4. Using the thermometer, measure the temperature of the cold water and record it on chart.

5. Ask your child to predict what the temperature will be when the hot and cold water are mixed. Record your prediction on the chart.

6. Combine the water from the two cups into the large cup. Place it on the "hot and cold" circle on the mat. Predict the temperature of the water. Record your prediction on the chart.

7. Measure the temperature of the water and record it on the chart.

8. Discuss the predictions and compare them to the actual results. Ask: "What did you learn about mixing hot and cold water?"

RECORD CHART

CUPS	TEMPERATURE	
	Prediction	Actual
hot	____°C	____°C
cold	____°C	____°C
hot and cold	____°C	____°C

SUMMARY: Children will understand that the temperature on a thermometer will go up when the liquid is hot and go down when the liquid is cold. When hot and cold water are mixed, the resulting temperature will lie between the high and low readings.

EXTENSIONS:

Further Investigation:

- Encourage students to experiment further by altering the amount of hot and cold water that is mixed. For example, students can find out what happens when two parts hot water are mixed with one part cold water.

- Find the temperature of ice water. What happens to the temperature of the water as the ice cube melts?

Literary Connections:

- Hewitt, Sally. *Hot and Cold*. School & Library Binding, 2000.
- Gardner, Robert. *Science Projects About Temperature and Heat*. Library Binding, 1994.
- Maestro, Betsy and Giulio. *Temperature and You*. Lodestar Books, 1990.

Related Web Sites:

- <http://www.beakman.com/interact/pole.html>
- <http://www.eecs.umich.edu/mathscience/funexperiments/agesubject/lessons/caps/thermometer.html>