A Hot Hand

You will measure the temperature of the palm of your hand and the palm temperatures of your teammates in this experiment. In the process, you will learn how to use the data-collection equipment you will be using throughout the school year. You will also get to know your teammates better.

OBJECTIVES

- Use a Temperature Probe to measure temperature.
- Calculate temperature averages.
- Compare results.

MATERIALS

Chromebook, computer, **or** mobile device
Graphical Analysis 4 app
Go Direct Temperature
beaker
water
paper towel

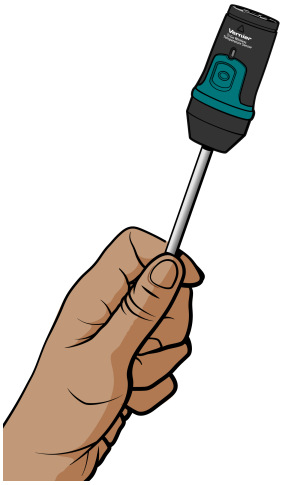

Figure 1

PROCEDURE

1. Launch Graphical Analysis. Connect the Temperature Probe to your Chromebook, computer, or mobile device.

2. Click or tap Mode to open Data Collection Settings. Set End Collection to 60 s. Click or tap Done.

3. Measure the temperature of the palm of your hand.
   a. Click or tap Collect to start data collection.
   b. Pick up the Temperature Probe and hold its tip in the palm of your hand as shown in Figure 1. Data collection will end when 60 seconds have gone by.

4. Record your highest temperature.
   a. When data collection is complete, a graph of temperature *vs*. time will be displayed. To examine the data pairs on the displayed graph, click or tap any data point. As you tap each data point, the time and temperature values of the point are displayed. **Note**: You can also adjust the Examine line by dragging the line.
   b. Record your highest temperature.

5. Prepare the Temperature Probe for the next run.
   a. Cool the Temperature Probe by placing it into a beaker of room-temperature water until its temperature reaches the temperature of the water. The temperature of the probe is displayed in a meter on the screen.
   b. Use a paper towel to dry the probe. Be careful not to warm the probe as you dry it.
6. Repeat Steps 3–5 for each person in your team.

DATA

Student name	Maximum temperature (°C)
Team average	

PROCESSING THE DATA

1. Calculate the team average for the highest temperatures. Record the result in the data table.
2. How did the maximum temperatures of your teammates compare?
3. Who had the "hottest hand"?

EXTENSION

Determine the class average for maximum temperature.