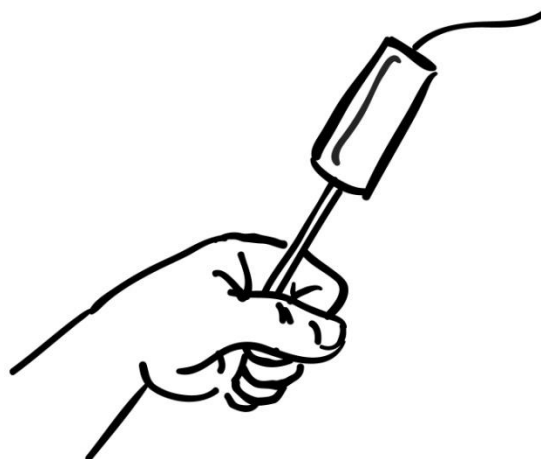


Name:




You should see a graph, a data table, a thermometer, and a meter showing temperature values on the computer screen. The thermometer and meter are showing live temperature readings. Each group member will have a turn to do the experiment, each group member will write all the data on their worksheet.

1. Give the temperature probe to the first group member. They should be ready to hold the tip of the probe as soon as data collection is started. For now, hold onto the plastic part of the probe, so the temperature of the probe does not start to adjust to the temperature of your hand.
2. When everything is ready, start collecting data by clicking the Collect button, .
3. The first group member should now hold the tip of the probe. Watch the temperature on the computer screen.
4. Data collection will last 60 seconds. It is important to hold the tip of the probe for the entire 60 seconds so that it has enough time to adjust to the temperature of your hand.
5. How hot was your hand? You can probably tell from the graph, but to find out exactly, do the following.
 - a. Click the Examine button, , and the Examine box will appear on the screen. As you move the cursor across the graph, the temperature and time values will be displayed in the Examine box.
 - b. Move the cursor around the graph until you find the highest temperature.
 - c. Record this temperature in the Part I Data Table.
 - d. Close the Examine box by clicking the upper-left corner of the box.
6. Store this run by clicking the Store button, .
7. Repeat Steps 1-6 for each group member. Make sure the temperature probe has cooled back down to room temperature between runs by letting sit on the desk for a few minutes.



Part 2 Changing the Temperature of Our Hands

Think of some ways that you could change the temperature of the palm of your hand. How would the temperature change if you rubbed your hands together? What if you placed your hand on the window and held it there for five seconds? What if you placed it near a heater? Each person in your group will try a different way of changing the temperature of his or her hand.

1. Choose the way you will try to change the temperature of your hand.
2. Write your hypothesis about what will happen. For example, a hypothesis about soup would be: "If I put my bowl of hot soup on the porch for five minutes, and then measure the temperature of the soup, I think the temperature will go down a lot"
3. Write the starting temperatures of the members of your group in the column marked "Starting temperature." These temperatures are on the Part I Data Table.
4. Clear the Part I data by choosing "Clear All Data" from the Data menu.
5. The first group member should now:
 - e. Do the action you have planned to change the temperature of your hand.
 - f. Grab the tip of the Go!Temp and click the Collect button, .
 - g. When the data collection is finished, click the Examine button, .
 - h. If you were trying to cool down your hand, use the cursor to find the coldest temperature. If you were trying to heat up your hand, use the cursor to find the warmest temperature. Record this temperature in the "Ending temperature" column of the Part II Data Table.
6. Store this run by clicking the Store button, .
7. Each group member should repeat Steps 5 and 6.

ANALYZE YOUR DATA

1. Subtract the starting and ending temperatures to find out how much the temperature increased or decreased. Write your answer in the last column of the Part II Data Table. If the temperature increased, write a "+" in front of the number. If it decreased, write a "-" in front of the number.
2. Were you able to change the temperature of the palm of your hand? _____
3. Was your hypothesis correct? _____ Why or Why not? _____

4. Which action caused the greatest temperature change? _____

5. If you had a chance to try this experiment again, what action would you take to get an even greater temperature change?

6. Why couldn't you hold the probe for just 10 seconds instead of 60 seconds?

Good job!!