Hot hand lab

Question: What is the effect of friction on hand temperature?

Hypothesis: If _____ then
_____ because _____.

PROCEDURE

1. Turn on the calculator and make sure it is on the home screen. Connect the Temperature Probe to the calculator. (This may require the use of a data-collection interface.)
2. Follow these steps to setup the EasyData application.
a. If EasyData is not already running, press . Use to move down the list to EasyData and press .
b. You are now at the Main screen of the application. Select from the Main screen, and then select New to reset the application.
3. Set up EasyData for data collection.
a. Select from the Main screen, then select Time Graph…
b. Select on the Time Graph Settings screen.
c. Enter 1 as the time between samples in seconds.
d. Select .
e. Enter 60 as the number of samples and select . Data collection will last 60 seconds.
f. Select to return to the Main screen.
4. Measure the temperature of the palm of your hand.
a. Select to begin 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.
5. Record your highest temperature.
a. When data collection is complete, a graph of temperature vs. time will be displayed. Use and to examine data points along the curve. As you move the cursor right or left, the time (X) and temperature (Y) values of each data point are displayed above the graph.
b. In your data table, record your highest temperature (to the nearest 0.1°C).
c. Select to return to the Main screen.
6. 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 at the top of the Main screen.
b. Use a paper towel to dry the probe. Be careful not to warm the probe as you dry it.
7. Repeat Steps 4–6 for each person in your team.

Data Table:

Name	Final Temp. after friction	Initall Temp. before friction	Temperature change
Station average			
Class average			

Answer these questions below your data table.

1. Who had the hottest *initial* hand temp. at your station?
2. Who had the hottest *final* hand temperature at your station?
3. What was the effect of friction on hand temperature?
4. Did your results support your hypothesis? Explain why or why not.