



Compare Data

Name: _____ Teacher: _____

1. Using your calibrated temperature sensor created in the *Module 2: Programming a calibrated temperature sensor*, take the temperature of the water given to you by your teacher.
2. Each student group should take the temperature of the same water sample provided by the teacher. Take three measurements and report the temperature readings your sensor measures to the teacher.

Example Data:

Group #	#1	#2	#3
1	58 C	59 C	57 C
2	54 C	54 C	55 C
3	56 C	56 C	56 C
4	55 C	61 C	75 C

3. Create a scatter plot of all the groups' data points and draw a trend line (line of best fit).
4. Write an equation for the line of best fit. What is the correlation coefficient (r)?
5. Where does your group's data point fall on the plot? Above, below, on the line of best fit?
6. How accurate was your sensor?
7. How precise (repeatable) was your sensor?
8. What was the actual temperature of the water (teacher will report)? Calculate the absolute error.