Linear Relationships
Teacher Notes

Prerequisite Knowledge: Making a list on the calculator, and graphing a scatter plot, writing equations of a line.

Objective: Students will use the graphing calculator to determine if data has a linear relationship. They will then discuss line of best fit and writing the equation for the line that represents their data.

Warm Up:

1. Write the equation for the line passing through the points (-3, 1) and (6, 2)

Procedure: Students will measure the length of their forearm and the length of their feet in centimeters. They will enter the class data in their calculator and graph the scatter plot. They will then find things to measure, weigh, or time (or any measurement of their choice) at home and make a scatter plot of their data to see if there is a linear relationship.

Materials Needed: Students will need an activity sheet, ruler, scale, timepiece and a graphing calculator.

Name _____

Algebra 1
Graphing Data

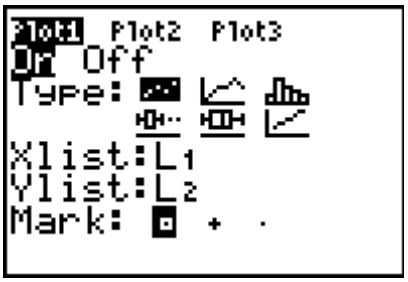
Measure one of your feet and forearms in cm. Foot _____ Forearm _____

Write down the data from the rest of the class.

Forearm	Foot	Forearm	Foot

1. Enter the forearm data into list one and the foot length data into list 2. (List > edit> enter data).

2. Then graph the scatter plot. (Stat plot > enter) your screen should look like this:



3. Use zoomstat to look at your graph. Could this data be represented by a line?

4. Tonight find something at home you can measure and compare. This can include, time, temperature, weight, height, and length. You will need at least 8 data points. Write down your data in the table provided.

Put your data into list one and list two and make the scatter plot. Does the data look linear?

5. In class, we will look at graphs from other students.

Discussion: If the data looks like it could be represented by a line, how would we find the equation for the line?

What do we need to find first?

Will everyone get the same equation? Why or why not?