962-E1-17   **Murray H. Siegel*** (`mth_mhs@shsu.edu`), SHSU, MathematicsComputer Science and Statistics, P.O. Box 2206, Huntsville, TX 77341. *Using the Graphing Calculator to Enhance Conceptual Development in Linear Regression.*

The TI-83+ view screen is used to allow students to understand the use of a linear equation to model the relationship between variables, the importance of evaluating a model's fit, the meaning of a residual and the use of the residuals to assess a model A scatterplot is presented. The usefulness of a model is discussed. This leads to a realization that a model can be helpful in making predictions. The calculator's regression menu is used to determine a linear model. A discussion of slope and intercepts follows that determination. The graph of the model and scatterplot is shown. The fit is assessed visually. The meaning and potential causes of points being above/below the line are discussed. The computation and "visual" meaning of the residual is covered. A scatter plot of the x-variable vs. the residuals is graphed on the view screen. Students can "see" the importance of a pattern in this plot or a pattern in the variation of the plot, in terms of assessing the linear model. Other sets of data are presented to allow students to see a model with a negative slope and to see where a linear model is inappropriate. A set of data is shown that demonstrates how an "influential" point can drastically affect the correlation coefficient. (Received May 26, 2000)