Linear Regression Activity Worksheet

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| **Group Members:** | 1.  2. |

Put your gathered data here.

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Analysis Questions:

1. What is the independent variable? (We will graph this on the x-axis.)
2. What is the dependent variable? (We will graph this on the y-axis.)
3. Create a scatter plot. Put your scatter plot diagram output below.
4. Does the relationship appear to be linear? Why?
5. Is the relationship increasing or decreasing? How do you know?
6. Whether the relationship appears to be linear or not, perform a linear regression of the form y = mx + b. Write the regression equation below.
7. The value of b represents the y-intercept of the regression equation. What is your b value? Be sure to include units!
8. What does the y-intercept tell you in this situation?
9. What would you expect the y-intercept of your graph to be? What variables could account for this difference in the expected y-intercept and the actual y-intercept of your regression equation?
10. The value of m represents the slope (or rate of change) of the regression equation.
11. What is your m value? Be sure to include units!
12. Use the regression equation to predict an independent variable.