# Scatter Plots Assessment Project

**Step 1: Pick a topic**

Choose two variables with numerical data that you think will have an association. See mrsvolke.weebly.com for a list of ideas. **Mrs. Volke must approve your variables before you move on.**

**Step 2: Prediction**

Write a one sentence **prediction** about the relationship between your two variables.

**Step 3: Collect data**

Collect **AT LEAST 20 data points** for your two variables. You may collect personal data (ask people) or research your information on the internet. Make a clearly labeled table with your information.

**Step 4: Make a scatter plot**

Create a clearly labeled scatter plot on graph paper and plot your 20 data points. Be sure to do the following:

_____ pick an appropriate scale

_____ count consistently on each axis

_____ label each axis, including units if necessary

_____ accurately plot each data point

_____ title for your graph

**Step 5: Patterns in data**

Write complete sentences about patterns in your data shown on your scatter plot. Be sure to write about each of the following:

_____ association

_____ clusters

_____ outliers

_____ linear or non-linear

**Step 6: Trend line**

Determine whether or not your data can be modeled with a trend line (line of best fit).

| If a trend line fits your data: | If a trend line DOES NOT fit your data: |
|---|---|
| • Draw a trend line on your scatter plot.<br>• Write an equation for your trend line.<br>• Interpret the meaning of the slope.<br>• Interpret the meaning of the y-intercept | • Write complete sentences explaining why it does not make sense to draw a trend line.<br>• See Mrs. Volke for a different graph.<br>    o Draw a trend line for this graph.<br>    o Write an equation for this trend line.<br>    o Interpret the meaning of the slope.<br>    o Interpret the meaning of the y-intercept |

**Step 7: Predictions**

Write at least 3 predictions you can make using the trend line on your scatter plot.