Scatter Plot Scavenger Hunt

**Data Management**

**Unit 1 Line Master 16a**

Are you ready for an adventure that involves math and detective work?
Here’s your mission, should you choose to accept it.

**Step 1: Choose Your Variables and Make a Prediction**

Think about two things you can count or measure, around school or on people,
that might be related. Here are some ideas to get you thinking:

* Height vs. Shoe Size: Is it true that taller people have bigger feet?
* Backpack Weight vs. Number of Books: Do heavier backpacks really mean
more books?
* Arm Span vs. Height: Is it true that the greater a person’s arm span,
the taller they are?

The two variables we will measure are:

1.

2.

We predict that the relationship between these two variables is:

**Step 2: Gather Your Data**

Time to become a data detective! Measure *at least* 10 pairs of data points
for your two variables. **For example**, if you’re measuring height and shoe size,
you’ll need both measures for at least 10 people. Be precise in measuring.

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| **Variable 1**  | **Variable 2** |
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 **Scatter Plot Scavenger Hunt** (cont’d)

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**Unit 1 Line Master 16b**

**Step 3: Plot Your Points**

Now, it’s time to create your scatter plot. Be sure to include a title and to label the axes.

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**Step 4: Draw the Line of Best Fit**

Use technology (e.g., the *Sample Excel Sheet with Formulas*) to generate a line of best fit.
What do you notice about your line?

**Step 5: Determine the Correlation**

Based on the trend of your data, the slope of the line of best fit, and your intuition,
does there appear to be a correlation between the two variables?

Use technology to calculate the correlation coefficient (from the *Sample Excel Sheet*).
Does this value match your prediction?

Describe the relationship in words. Why do you think this relationship might exist?
What connects the variables?