DO TEAMS THAT SPEND A LOT WIN A LOT?

We often hear about teams that spend a lot of money to bring talented players to their team. It makes us wonder, does a large payroll equal more wins? In this activity, you will compare the payroll of sports teams with the team’s total wins for the regular season.

1. Choose a professional sport league to look at the relationship between payroll and number of wins. Circle the one you choose below.
   - NBA
   - NFL
   - NHL
   - MLB

2. Round each payroll amount to the nearest million dollars. Write these amounts in the table. Use the rounded payroll from now on.

3. Identify the independent variable. ______________________________

4. Identify the dependent variable. ______________________________

5. Create a scatterplot of the data on Desmos by following the directions below.
   a. Open the Desmos App.
   b. Click on the + in the upper left corner. Choose table.
   c. Enter the data for each team in the two columns; \( x_1 \) = independent variable, \( y_1 \) = dependent variable. Note: You will NOT use the team name.
   d. When the scatterplot is complete, take a screenshot.
   e. Show the scatterplot to your teacher and have them initial here: __________

6. Does there appear to be an association between the team’s payroll and total team wins?
   If so, describe the relationship between the data by circling the correct word in each pair.
   - Positive
   - Negative
   - Linear
   - Nonlinear

7. Are there any data points that appear to be outliers? If so, which teams?

8. Do you see any clusters of data in your scatterplot? If so, describe the clusters.

9. Based on your scatterplot, would you say that there is a relationship between payroll and wins in the sporting world? Explain your reasoning.