**Activity Description: NLL and PLL Lacrosse Statistics Worksheet**

**Introduction:**

In the world of NASCAR, driver performance is influenced by a multitude of factors. Among these, the driver's starting position has long been believed to play a significant role in determining their success on the track. In this worksheet, we embark on a journey of analysis using the powerful tool of simple linear regression to delve into the relationship between a driver's average start position and their driver rating. The dataset at our disposal comprises comprehensive season statistics spanning from 2007 to 2022, providing a rich pool of information for our investigation. By constructing and evaluating a predictive model, we seek to uncover valuable insights into the extent to which a driver's average start position can influence their overall rating. Through this process, we hope to gain a deeper understanding of the complex dynamics that drive success in NASCAR and uncover key patterns that contribute to a driver's rating on the racing circuit.

**Learning Objectives:**

By the end of this activity, you will be able to:

1. Fit a simple linear regression model for predicting driver rating from average start position.

2. Interpret the variability of the response variable accounted for by the model

3. Understand the model assumptions necessary for simple linear regression.

**Methods:**

1. Understand the concept of simple linear regression and its application in statistical analysis.

2. Identify the predictor (independent) and response (dependent) variables in a regression analysis.

3. Interpret the regression output, including the coefficient estimates, residuals, and R-squared value.

4. Make predictions based on the regression model and evaluate the accuracy of the predictions.

5. Understand model assumptions