Name:_____ Date:_____ Period: _____ Grade:_____

Chapter 11 Investigation	Complete (20 points)	Substantial (15 points)	Developing (10 points)	Minimal (5 points)	Total points
Introduction and Data Collection	✓ Describes the context of the research (sport, player, team, year, etc.) ✓ Has clearly stated question of interest ✓ Specifically describes how the data was collected (including source, if appropriate) ✓ Uses appropriate data to answer the question of interest and includes raw data	✓ Has a specific question of interest, but doesn't include raw data, adequately introduce the context, or describe how the data was collected.	✓ Has a question of interest and uses appropriate data, but has several other problems.	✓ Has a question of interest or raw data	
Graphs and Summary Statistics	✓ Includes two well-labeled scatterplots, one for each explanatory variable ✓ Least-squares regression lines are correctly calculated for each association ✓ Correctly interprets the slopes and standard deviations of the residuals for each association ✓ Includes a preliminary answer to the question of interest	✓ Both scatterplots are included, but graphs are not well done, calculations are incorrect, interpretations are incorrect, or no answer is provided to the question of interest.	✓ Both scatterplots are included but there are several problems or only one scatterplot is included, but the related calculations and interpretations are correct	✓ A scatterplot is included	
Analysis/Simulation	✓ Formal hypotheses are stated for a test of the slope (using the association with the smaller SD) ✓ Clearly describes method for performing a simulation and includes an adequate number of trials ✓ Displays results of simulation in a clear, well labeled dotplot ✓ Estimates p-value correctly	✓ Conducts a reasonable simulation/calculation to estimate the p-value, but there is a small error in the method or p-value calculation, the method is not clearly described, or the hypotheses are not correctly stated.	✓ Attempts a simulation/calculation to estimate p-value	✓ Attempts to analyze the data	
Conclusion	✓ Correctly interprets p-value in context ✓ Correctly uses the results of the simulation to draw an appropriate conclusion ✓ Shows evidence of critical reflection (discusses possible errors, shortcomings, limitations, alternate explanations, etc.)	✓ Makes the correct conclusion based on simulation/p-value ✓ Shows some evidence of critical reflection	✓ Makes a partially correct conclusion based on simulation/p-value (e.g. accepts null) ✓ Little evidence of critical reflection	✓ Makes a conclusion	
Overall Presentation/ Communication	✓ Clear, holistic picture of the investigation as a two-step process (e.g. includes preliminary and final conclusions) ✓ Investigation is well organized, neat and easy to read ✓ Ideas are well communicated, including appropriate transitions between sections. ✓ Clearly contrasts the concepts of observed slope and true slope	✓ Investigation is organized and easy to read, and has appropriate transitions, but lacks clear communication, a holistic picture of the investigation, or does not clearly contrast the concepts of observed slope and true slope.	✓ Investigation is somewhat organized, but has several major problems	✓ Communication and organization are poor	