Name:_____ Date:_____Period:_____ Grade:_____

Chapter 5 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.) and includes reasons for variable choice. ✓ Has a clearly stated question of interest, including formal hypotheses ✓ Specifically describes how the data was collected (including source) ✓ Uses appropriate data to answer the question of interest and includes raw data.	✓ Has a specific question of interest and includes raw data, but doesn't adequately introduce the context, describe how the data was collected, or state correct hypotheses.	✓ Has a question of interest and uses appropriate data, but has several other problems.	✓ Has a question of interest.	
Graphs and Summary Statistics	✓ Includes appropriate types of graphs for raw data ✓ Graphs are clearly labeled and easy to compare ✓ Graphs are discussed/compared correctly ✓ Appropriate summary statistics are calculated and discussed	✓ Appropriate graphs and summary statistics are included, but graphs are not well done, graphs are not compared, or summary statistics are not discussed	✓ Includes appropriate graphs and summary statistics, but there are several other problems (e.g. graphs or statistics are incorrect or have other major problems)	✓ Some graphs are included or some summary statistics are calculated	
Analysis /Simulation	✓ Test statistic is clearly identified and correctly calculated ✓ 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, the method is not clearly described, or the test statistic is not clearly identified or calculated	✓ Attempts a simulation/ calculation to estimate p-value	✓ Attempts to analyze the data	
Conclusions	✓ Correctly interprets p-value in context ✓ Correctly uses the results of the simulation to draw an appropriate conclusion about the question of interest ✓ Shows evidence of critical reflection (discusses possible errors, shortcomings, limitations, alternate explanations, etc.)	✓ Makes the correct conclusion based on the p-value/simulation ✓ Shows some evidence of critical reflection	✓ Makes a partially correct conclusion based on simulation/p-value (e.g. supports 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 performance and ability in context.	✓ Investigation is organized, 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 performance and ability.	✓ Investigation is somewhat organized, but has several major problems.	✓ Communication and organization are poor.	