

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_ Grade: \_\_\_\_\_

Chapter7 Investigation	Complete (20 points)	Substantial (15 points)	Developing (10 points)	Minimal (5 points)	Total points
<b>Introduction and Data Collection</b>	<ul style="list-style-type: none"> <li>✓ Describes the context of the research (sport, player, team, year, etc.) and includes reasons for variable choice.</li> <li>✓ Has a clearly stated question of interest, including formal hypotheses</li> <li>✓ Specifically describes how the data was collected (including source)</li> <li>✓ Uses appropriate data to answer the question of interest and includes raw data.</li> </ul>	<ul style="list-style-type: none"> <li>✓ 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.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Has a question of interest and uses appropriate data, but has several other problems.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Has a question of interest.</li> </ul>	
<b>Graphs and Summary Statistics</b>	<ul style="list-style-type: none"> <li>✓ Includes appropriate types of graphs for raw data</li> <li>✓ Graphs are clearly labeled and easy to compare</li> <li>✓ Graphs are discussed/compared correctly.</li> <li>✓ Appropriate summary statistics are calculated and discussed</li> </ul>	<ul style="list-style-type: none"> <li>✓ Appropriate graphs and summary statistics are included, but graphs are not well done, graphs are not compared, or summary statistics are not discussed.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Includes appropriate graphs and summary statistics, but there are several problems (e.g. graphs or statistics are incorrect or have other major problems)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Some graphs are included or some summary statistics are calculated</li> </ul>	
<b>Analysis /Simulation</b>	<ul style="list-style-type: none"> <li>✓ Test statistic is clearly identified and correctly calculated</li> <li>✓ Clearly describes method for performing a simulation and includes an adequate number of trials</li> <li>✓ Displays results of simulation in a clear, well labeled dotplot</li> <li>✓ Estimates p-value correctly</li> </ul>	<ul style="list-style-type: none"> <li>✓ 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</li> </ul>	<ul style="list-style-type: none"> <li>✓ Attempts a simulation/calculation to estimate p-value</li> </ul>	<ul style="list-style-type: none"> <li>✓ Attempts to analyze the data</li> </ul>	
<b>Conclusions</b>	<ul style="list-style-type: none"> <li>✓ Correctly interprets p-value in context</li> <li>✓ Correctly uses the results of the simulation to draw an appropriate conclusion about the question of interest</li> <li>✓ Shows evidence of critical reflection (discusses possible errors, shortcomings, limitations, alternate explanations, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Makes the correct conclusion based on the p-value/simulation</li> <li>✓ Shows some evidence of critical reflection</li> </ul>	<ul style="list-style-type: none"> <li>✓ Makes a partially correct conclusion based on simulation/p-value (e.g. supports null)</li> <li>✓ Little evidence of critical reflection</li> </ul>	<ul style="list-style-type: none"> <li>✓ Makes a conclusion</li> </ul>	
<b>Overall Presentation/Communication</b>	<ul style="list-style-type: none"> <li>✓ Clear holistic picture of the investigation as a two-step process (e.g. includes preliminary and final conclusions)</li> <li>✓ Investigation is well organized, neat and easy to read</li> <li>✓ Ideas are well communicated, including appropriate transitions between sections.</li> <li>✓ Clearly contrasts the concepts of true SD and observed SD in context.</li> </ul>	<ul style="list-style-type: none"> <li>✓ 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 true SD and observed SD.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Investigation is somewhat organized, but has several major problems.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Communication and organization are poor.</li> </ul>	