Authentic Data Integration

a. Data Source: NFL Football and Newton's Three Laws of Motion
   1st Law: https://youtu.be/08BFCZJDn9w
   2nd Law: https://youtu.be/qu_P4lbmV_I
   3rd Law: https://youtu.be/e1lzB36aHD4
   https://www.nsf.gov/news/mmg/index.jsp?series_name=Science%20of%20NFL%20Football

b. This data source as provided through the National Science Foundation really compliments my 3rd grade physics unit about Newton's Laws of Motion. Within each video the comparison between each law of motion and football helps my students better understand each law. I like how each video is data heavy in regards to explaining each equation that is affiliated with each law and how it relates to football. In addition, each part of the equation is explained such as the fact that F is equal to force within Newton's second law of motion equation W=F*D. I really like the real world application that has been included in this video series especially since most kids can relate to football and understand the game.

c. This data can be used to create various lessons that are interdisciplinary. The data that is included in this video series can help students get a better understanding of Newton's three laws of motion. Using this information students can be provided with other opportunities to apply their knowledge of each law to something such as engineering. Students could then come up with an investigation in engineering which allows them to apply what they know of Newton's laws. Technology is already being used by allowing students to research other real world applications in which Newton's laws are demonstrated and explained. Finally, students can demonstrate their mathematical skills through the solving of Newton's laws equations. In general, this can answer several questions and situations that students may have to answer. An example would be: In what ways can Newton's three laws of motion be proven?