Misleading graphs

Misleading Graphs Team C Introduction to Statistics–QNT/273 February 7, 2011 Jeffrey McDonough Misleading Graphs “ Graphs give a visual representation that enables readers to analyze and interpret data more easily than they could simply by looking at numbers. However, inappropriately drawn graphs can misrepresent the data and lead the reader to false conclusions" (Bluman, 2009, p. 76). Some methods used by graph makers to mislead consumers are truncated axis starting points and using two dimensional pictures rather than simple bars or lines. Problems The graph we chose as our project is flawed in many ways. The chart has no title, no scale on the vertical axis, and no labels for the horizontal axis. There is no way to determine what type of data is being represented other than “ singles" of some kind being sold. Whether these are single units of something, single rooms rented, Kraft singles cheese slices, or something else entirely is uncertain. The missing labels on the horizontal axis also deprive the viewer from knowing exactly how the data is being tracked. The columns certainly look like they represent years but it could be something else entirely. Another large issue with this graph is that the two dimensional viewpoint makes it seem as if the 1995 column is far taller than the rest of the data when in fact it is the same height as the 1997 column. Effect on Users When the graph is misleading, it becomes hard for the reader to accurately understand what the graph is trying to show. The largest problem with this graph is the lack of information provided about what is being studied. There is no title provided to give the reader a general idea of what information is being shown. The graph fails to show the frequency amount of the “ number of singles being sold", or even what the single is exactly. The fact that there is little labeling on the vertical axis and none on the horizontal

axis can be misleading and could cause the users to think that the graph is representing something different than it really is. The graph can also be misleading to it users because of the fact that it is set up as a two dimensional graph. When looking at the graph the closer the bars are the larger they are made to appear. So while it looks like the first bar is the tallest it is no taller than the third bar. Corrections To correct our chosen graph we first start by appointing an appropriate product for the “ number of singles sold, " and in choosing our product it will also help us to decide our chart title which is “ Annual CD singles sales. " The scale on the vertical axis contains the year of sales, and the horizontal axis contains the amount of sales or the number of CD singles sold. And the graph has changed to a simple bar graph for better reader understanding. These corrections make the graph more informational and contain a better frequency than before. And the labeling of both the horizontal and vertical axis helps the graph to better represent the product to the user. And changing to the bar graph will show the graph’s strongest and weakest years of sales. References Bluman, A. G. (2009). Elementary statistics: A step by step approach, (7th ed.). New York, NY: McGraw-Hill. Retrieved from University of Phoenix e-Book collection. Mann, P. S. (2010). Introductory statistics, (7th ed.). Hoboken, NJ: Wiley. Retrieved from University of Phoenix e-Book collection.