**Presentation Outline**

1. Statistics can be misleading.
   1. Different representations of the same data show different pictures (give ~3 examples).
   2. Activity: break into groups and analyze 3 additional examples of misleading graphs and such.
   3. Conclusion: we must educate ourselves to read data correctly!
2. ~~Measures of Center~~
   1. ~~Mean, Median, Mode~~
   2. Discussion: when would it be best to use each one?
3. Measures of Spread
   1. Range, Interquartile Range, Outliers (SD!)
   2. Outliers are actually very useful in GWS! Talk about how to deal with that.
   3. Activity: regression lines with and without outliers.
   4. Discussion: advantages/disadvantages of outliers.
4. Measures of Significance
   1. Hypotheses
   2. P-value
   3. Making a conclusion
   4. Extended example
5. There are problems you will encounter, but it’s normal so we can help by pointing you in the right direction
6. GWS: Analyzing data without using one variable as a control.
   1. Discuss the importance of this.
   2. Show concretely how to do this (i.e. tuples vs. traditional analysis)
7. Conclusion
   1. Different ways to look at stats, but they apply to all fields, especially GWS.
   2. Numbers don’t lie, especially when you know how to read them!
   3. They are really helpful and can support your research very well.
   4. Go stats!!! :)