Stress test (2-Way ANOVA and ANCOVA)

1. If necessary, summarize the given data to produce the following charts (barchart [2-way] and point/error chart [2-way])
2. Look at the structure of the data (i.e. whether variables are continuous, categorical, ordinal, etc.); what kind of analysis (statistical test) would you expect from the given data structure?
3. Are there any variables you would expect to be converted to factors?
4. What would you expect to be the main effects for this analysis?
5. Would you expect any interactions among variables?
6. How would you visually determine whether a significant interaction is expected?
7. What do significant interactions among main effects tell us?
8. What do non-significant interactions tell us?
9. If there are no significant interaction effects among variables, we can then proceed directly to comparing all possible combinations of variables to determine which is best, second-best, worst, etc.
10. Are there pairwise differences among levels of the main effect variables (i.e. are they different at their adjusted [marginal] means)?