**THE GREEN PLANET (D224P9) --- 2019**

**PRACTICAL**

**Stomatal responses to carbon dioxide and water.**

**GUIDELINES FOR REPORT**

*The data for your report is available as an excel file (Stomatal Data) on the moodle page. It has been converted from your raw data values into stomatal density per mm2.*

**Over and above this, follow the guidelines in the lab sheet,**

In your report also address the following points:

1. Calculate the mean stomatal density, the standard deviation and standard error for each treatment and each leaf surface.
2. Carry out a statistical analysis to test for differences between treatments. I would suggest comparing via One Way Analysis of Variance (One Way Anova) or if the data aren’t normally distributed a Kruskal-Wallis One Way Analysis of Variance on Ranks could be used.
3. Use these data to test the following hypothesises (below) and use these findings to discuss the relationship between stomatal numbers, atmospheric CO2 and water availability.

**Hyp. 1** Stomatal density is negatively correlated to atmospheric CO2.

**Hyp. 2** Plants from the drought treatment will have more stomata regardless of CO2 treatment

Your report should be written in the style of a fully referenced scientific paper and be no more than 1000 words in length and contain no more than three display items (figures and or tables). Figures can be multi-panel and should be to publication standard rather than use default settings in excel. Please note the word limit **does not** include the abstract, legends for graphs and or tables or your reference. Your results, discussion and conclusion should be presents as separate sections within your report. Information on the structure of your report is given in the in the lab sheet.