# Exercise I

## Complete the table below and create a Quick Facts guide to your protocol.

|  |  |
| --- | --- |
| Null Hypothesis: |  |
| Alternative Hypothesis: |  |
| Dependent Variable (DV): |  |
| Independent Variable (IV): |  |
| Confounding variables: |  |
| Timing: |  |
| Number of trials? |  |
| How will you measure a “control” for comparison? |  |
| Statistics to use: |  |
| Graph to make:  |  |

## Write a brief summary of your protocol (methods)

use your proposal and the table above…

# Exercise II.

Insert (copy/paste) your individual data table from excel.

## **[here]**

Insert (copy/paste) your class data table from excel.

## **[here]**

# Exercise III.

Describe your complete t-test results (means of each group, standard error, t-value, degrees of freedom, p-value)

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## Copy/paste your bar graph from Excel.

## **[here]**

## Answer the following questions

1. Did you accept or reject your null hypothesis? Why or why not?
2. Was there support for your alternative hypothesis?
3. Do you think these results are valid and reliable? How could this experiment have been improved?
4. How can you link your results to the cellular process of photosynthesis?
5. Why was the DIP buffer used in this experiment?
6. Why was the spectrometer used in this experiment?
7. Construct a flow chart illustrating the relationship among these variables: amount of DIP remaining after photosynthesis, absorbance, concentration of color, the light reactions, the rate of photosynthesis