SNC 1D
J. Kropac

Measuring the Impacts of Biotic and Abiotic Factors on Growth

Grass is a typical feature seen in many ecosystems across North America. They are typically seen as easy plants to grow, with very few requirements. With just the simple ingredients of sunlight, soil, water, and seeds, you can typically see growth within 3-4 days of first planting a grass seed.

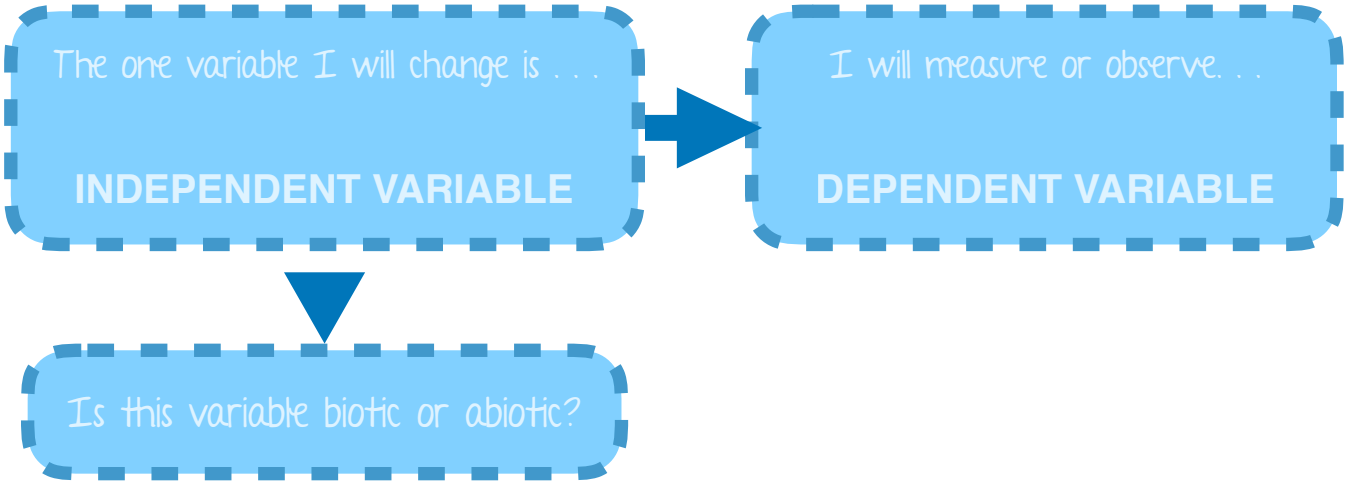
However, there are several abiotic and biotic factors that may affect how quickly a plant my grow. Some of these biotic and abiotic factors may include:

Nutrients Available	Pests
Amount of Water	Competition for Nutrients
Amount of Light	Acidity of Soil

In this lab you will be choosing either a BIOTIC or ABIOTIC factor to manipulate in order to test it's effects on bean growth. You may choose from the factors above, or pick a novel abiotic/biotic factor to study.

You will then design your own experiment in which you will test your factor's growth. This experiment may be completed either in class or at home. You will be provided with basic supplies in the classroom, but may need to bring in your own supplies depending on what factors you choose to manipulate. If you choose the execute the experiment at home, you will also need to provide photo evidence of your progress.

Planning the Experiment



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Purpose

The purpose of this study is to see how _____.

Hypothesis

If _____ then the _____ will _____.
change to independent variable | dependent variable being measured | expected change

This will happen because . . .

Materials

Materials need to complete this lab include:

Procedure

Remember to write your procedure using a numbered list. Write in third person.

Observations

Time	Measurement
Day 1	
Day 2	
Day 3	
Day 4	
Day 5	
Day 6	
Day 7	
Day 8	
Day 9	
Day 10	

Results

Some form of graph must also be included. Choose your type of graph carefully. Be sure that your style of graph best conveys your data. You may choose a:

Bar Graph
Line Graph
Pie Chart
Scatter Plot

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CONCLUSIONS

The hypothesis was _____. The observations show that when
(Correct/ Incorrect)

_____ was changed the _____. This can be
(Independent variable) (What happened to dependent variable)

seen in the data by _____. Errors that could have changed the
(provide data that supports this)

results included _____. One way this experiment could be improved is by

_____.

LAB REPORT CHECKLIST

You are to design a lab report outlining your experiment.

Your lab report must include:
- Title Page
- Purpose
- Hypothesis
- Materials
- Procedure
- Results (Data Table and One Graph)
- Conclusions
  - Did you prove or disprove your hypothesis.
  - What data shows this?
  - Sources of error you may have encountered.
  - Possible future experiments.

USE THE ATTACHED RUBRIC AS A GRADING OUTLINE FOR YOUR LAB REPORT.