

Biology in a Box: Take Home Biology Activity

Title: Growth of Bean Seeds: Qualitative and Quantitative Observations

Purpose:

- to observe the change in appearance and growth of bean seeds
- to chart the growth of bean seeds
- to comment on factors associated with changes that occur when a seed grows into a plant

Background information on the transformation of seeds into plants may be found:

- in your textbook, on the textbook website
- <http://www.jdenuno.com/Bio%7ESeeds.htm>

Materials:

- pinto bean seeds
- paper towels
- plastic cups
- water

Procedure:

- (photographs showing the seed setup may be found at <http://www.jdenuno.com/Bio%7ESeeds.htm>)
1. Place folded paper towel in plastic cup
 2. Place 5 beans in between the paper towel and the wall of the cup
 3. Number each bean on the outside of the cup with marking pen or stickers
 4. Add sufficient water to moisten the paper towel, but not to allow liquid to stand in the bottom of the cup
 5. Prepare data charts for your observations (design is up to you)
 6. Record observations daily for 3 weeks. You must decide how to record your observations!
 7. Chart the growth of the seeds. Decide how to represent the overall change from seed to plant using your data!

Data: You must decide how to record your daily observations. You must record observations DAILY!

Results: This will be your data charts and summary chart/graph or method you choose to display your results

Analysis & Discussion: (MUST BE TYPED)

- Summarize what you did
- Describe the transformation from seed to bean plant (Use drawings etc)
- Develop a hypothesis about the transformation of bean seeds to bean plant
- Suggest improvements in the set up, record-keeping, etc

Conclusion: a one sentence testable statement (10 words maximum)

Reflection: This will be your personal statement

Resources

- <http://www.usda.gov/>
- <http://www.hort.purdue.edu/newcrop/1492/beans.html>
- <http://www.gov.mb.ca/agriculture/crops/pulsecrops/bhd03s01.html>

