

Name: \_\_\_\_\_

## **Lab Sheet**

### **Stratification, Will it Help?**

**INTRODUCTION:** Many seeds require special treatments before germination can occur. The causes of seed dormancy are varied and include such things as a hard seed coat, an undeveloped embryo, requirement of a particular environmental factor, or the presence of an inhibitor.

**PURPOSE:** For you to use the scientific method is researching the process how pre-treating seeds in a cold and moist environmental condition can help break down seed dormancy.

**MATERIAL:**

- Cooler
- 5 Sandwich bags
- Marker
- 606 plug tray and insert
- Potting soil
- 6 labels
- Seeds
- Paper and pen

**PROCESS:**

1. Lay out the steps of the scientific method. The scientific method is a way you can ask and answer scientific questions by making observations and doing experiments.
  - Question
  - Background information
  - Hypothesis
  - Experimental design
    - Independent and dependent variables
    - Observation
    - Collect and analyze data
  - Procedure
  - Results
  - Conclusion
  - Application
2. Gather up all your materials and supplies to conduct your experiment.
3. Take your five sandwich bags and label each with a number 1 through 5, with your name, and the name of the seed, and date.
4. Count out 30 seeds and place 6 seeds in each sandwich bag

5. Take your sandwich bag and place a hand full of soilless media in the bag, then seal, and mix seeds around in soilless media.
6. Place your sandwich bag with seeds and soilless media in the cooler
7. Set up your controlled in the greenhouse, by taking your 606 plug tray with insert and filling only one cell pack with soilless media
8. Plant one seed in each cell and then place in designated area
9. Label the cell pack with your name, name of seed, and date.
10. Write down all this information in your binder, recording the date, temperature in the cooler, and greenhouse.
11. Check experiment each class period writing down all observations, such as germination, temperature, and the date.
12. In the next four to five months, indicated by your instructor, you will plant each one of your bags at different times, to see if stratifying the seeds will break down seed dormancy and speed up germination.
13. First, start with bag #1, then, #2, and so forth, until you plant all five.
14. Each time you plant your bag of seeds, fill the 606-cell pack with fresh soilless media, with one seed per plug.
15. Label each cell pack with the number on the bag, the date, and the name of the seed.
16. Once the experiment is completed, analyze your data and record your results
17. Report your findings