



Fairchild Challenge 2009-2010
How to Guide for Students
Option 8D: Seed Germination

I. Overview

In this experiment, participants will test various germination methods on native plants. Your teacher will have received a packet of native seeds from the Fairchild Challenge. She/he will supply you with the seeds to do your experiment. To successfully complete this project, you will need to research various germination practices and select a few to test. Outline your experiment using the scientific method to compare the different germination rates of each germination practice.

II. Approaching the Option

1. Before beginning, think of what aspect of seed germination that you would like to test. Keep in mind that you are required to compare germination and growth rates using at least two different seed treatments.
2. Once you have decided what your focus will be, come up with a hypothesis or a prediction of the results.
3. Your teacher will provide you with the necessary seeds. Plant multiple specimens and make sure to label each one with the germination method. Labeling the individual plants will help you record any data and will keep you organized.
4. Conduct your experiment on a group of plants but make sure to keep one group of plants untouched (this will be your control).
5. Controls are important parts to a successful experiment. They help you make comparisons and reach conclusions.
6. Follow the scientific method to carry out the rest of your experiment: http://www.sciencebuddies.org/science-fair-projects/project_scientific_method.shtml
7. The Display
 - Must be a stand alone tri-fold project display board.
 - Include a timeline of photos from the experiment.
 - NOTE: Be sure to include pictures of yourself and the other students conducting the experiment.
 - Include a summary of your experiment.
 - Don't forget to explain how one or more environmental factors affect the germination and growth of the species in its native habitat.

8. The Research project showcase will be at Fairchild Tropical Botanic Garden on Saturday, April 10 at 1:00 p.m.

CHECKLIST

- We have come up with a question about seed germination
- Background research has been done and a hypothesis has been made
- We followed the scientific method
- The plants have all been planted and labeled in separate plots
- There is a different germination practice being tested in each plot.
- One of the separated plots is a control
- Our project is displayed on a stand alone tri-fold project display board
- Pictures are being taken at all stages of seed germination and plant growth
- We have included a picture timeline of the experiment and pictures of the ourselves carrying out the experiment
- We explained how one or more environmental factors affect the germination and growth of the species in its native habitat
- We have included a summary of our experiment
- Our project is ready to review a week before the Research Project Showcase
- We will be at the Research Project showcase at Fairchild Tropical Botanic Garden on Saturday, April 10 at 1:00 p.m.