Lupine Seed Germination Experiment

Note: The following research idea has not been fully developed into an activity but has been tried in some workshops and classrooms. If you try it, let us know how it went by sending a note to epp@mhub.facstaff.wisc.edu.

Instructions

Work in groups of 3-4. Do any experiment you want, with available seeds. Be wild; be creative; investigate a question that is really exciting to you. You can throw seeds off the building or feed them to birds or germinate them. The sky's the limit.

Background information about lupine:

- Lupine grows best on dry sites.
- Fresh seeds germinate readily, but at some point seeds go into dormancy.
- Seeds need moisture to germinate

Questions from past years:

- Do freshly harvested seeds germinate better than seeds dried for 1 wk?
- Results: Unclear, because "dried" seeds weren't really dry.
- Do green seeds germinate as well as fully ripe seeds?
- Results: Green seeds germinate more slowly than ripe seeds, but they do germinate.
- Do seeds germinate better after a fire?
- Results: Unclear. Needs further investigation.

Other unanswered questions:

- What triggers dormancy of lupine seeds?
- What breaks dormancy of lupine seeds?
- (Is some kind of treatment needed? Wet stratification, soaking, pin pricking, sandpaper scarification, bleach, vinegar, heat)
- For how many years do seeds remain viable? 94 and 95 seed available.

Materials needed:

- Seeds
- Petri dishes
- Filter paper
- Distilled water
- Spray bottles
- Plastic containers
- Counting tools
- Collecting bags
- Lupine photo
- Aluminum foil
- Vinegar
- Pins