

Lesson Title: Preserving Plant Specimens

Grade levels: Appropriate for all grades K-5

Applicable SOL: Science

Investigations: K.1, 1.1, 2.1, 3.1, 4.1, 5.1

1.4 (plant parts)

4.4 (plant structure)

Materials:

- Newsprint, or newspaper (cut into same size as cardboard)
- Cardboard (5 to 6 pieces per group, cut into equal pieces, about paper sized)
- Heavy-duty rubber bands
- Clear sheet protectors
- Index cards
- Journals, pencils
- “Art and Science” document
- Trowels and spoons

Procedure:

Building Supporting Knowledge: (15 minutes)

1. Show some of plant specimens from herbariums in the “Art and Science” document. Discuss why a botanist would want to keep a plant specimen.

2. Questions:

- If we create a classroom herbarium, why should everyone not take a plant specimen?
- What kinds of information should we put on a specimen? (size, where found, date, anything noticed about surroundings, how many were in the area, etc.)

Main Lesson: (30 to 45 minutes)

1. Split the class into groups, or for younger students, you may do a demonstration, and work as a whole group. The number of groups determines the number of plant specimens you will gather.
2. Go outside and determine which plants to take as a sample. Groups should *carefully* dig up the sample, attempting to keep it intact, including the roots.
3. As they are digging, some in the group should also be taking notes about the location, date, surroundings, etc.
4. When samples are collected take them inside to preserve using a simple press.

5. Alternate cardboard pieces with several pieces of newsprint for the press. Gently place the plant samples between newsprint layers. If plant has come apart, be sure to put each part within the press. (They will be in the presses for extended period so careful notes about how they go together, if they have come apart, will be necessary.)
6. Finally put rubber bands around the press to hold them together tightly. Place them on a shelf, out of the way for 4 to 6 weeks. (If they are smaller, leafy plants without flowers, check on them after 2 to 3 weeks).
7. Have students write the information for their specimen on an index card and place in the rubber band.

Follow-up: (30 minutes)

1. After specimens are dry and pressed, attach them to a piece of cardboard and add the index card, along with any other details they wish to include. Display your classroom herbarium!
2. Students should be given the opportunity to reflect on the process, through discourse and writing.

Assessment Opportunities:

- Students can be informally assessed for their cooperative skills in group work, as well as for the finished product.
- This lesson offers many opportunities for writing activities as well.