

Activity: Plant Presses

Natural history collections are the physical record of Earth's life forms. Collections can show us where things are today, where they used to live and grow, and how they change over time.

Scientists use various techniques to preserve the specimens they collect. Botanists use a *plant press* to flatten and dry plants so they can be stored.

Main Ideas

- 1) Collections teach us about our environment.
- 2) Botanists use plant presses to flatten and dry the plant material they collect. Each specimen is labeled with the plant's name, where and when it was collected, and who collected it.

Learning Objectives

Students will:

- Explain why scientists collect natural history specimens and the importance of documentation.
- Practice field collecting by making and using a plant press.

Learning Standards

Alaska Science Content Standards: C.2. Develop an understanding of the structure, function, behavior, development, life cycles, and diversity of living organisms.

Alaska Geography Content Standards: C.3. Recognize the concepts used in studying environments and recognize the diversity and productivity of different regional environments.

Additional Resources

Instructions for Plant Collecting: www.uaf.edu/museum/collections/herb/projects/reports/instructions-for-plant-co/

Time Needed: 30 minutes - 1 hour

Materials

- Cardboard squares, 4 in. x 4 in. [3 or more for each student]
- Squares of blank newsprint or other absorbent paper, 4 in. x 4 in. [4 or more for each student]
- Popsicle sticks (optional)
- Markers
- Rubber bands [two for each student]
- Glue (liquid glue works best)
- *How to Use Your Plant Press* handout



A homemade plant press.
UAMN photo.



A plant press, University of Florida Herbarium.
www.floridamuseum.ufl.edu/herbarium/voucher.htm

Activity: Plant Presses

Directions

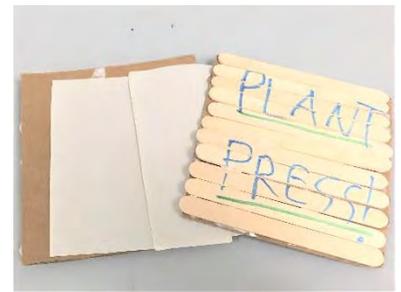
- Ask students if any of them collect objects from nature (rocks, insects, shells, etc.). Invite students to briefly explain what they collect and why.
 - Tell students that scientists also collect objects from nature and these collections are often placed in museums. Discuss what scientists can learn from natural history collections (where species live, where they used to live, how they change over time).
- Explain that when scientists collect plants, they use a plant press to dry the specimen. Lead students in making their own plant presses.
 - Give two cardboard squares to each student. Have them glue popsicle sticks in a solid row to one side of each square. These will be the covers. [If popsicle sticks are not available, the covers can be plain cardboard.]
 - Decorate the covers with markers.
 - Put the plant press together: Lay one cover on the table, decorated side down. Add two pieces of newsprint, then a cardboard square, then two more pieces of newsprint. Top with the other cover, decorated side up.
 - *Optional:* Students can add more layers of newsprint and cardboard squares if desired.
 - Wrap two rubber bands around the plant press to hold it together.
- Pass out *How to Use Your Plant Press* handout. Go over the information, and discuss the importance of labeling specimens. Why is it important to know where and when a specimen was collected? What can scientists learn from this information? If a specimen has no label, how useful do you think it will be to researchers?
- *Optional:* Take students outside to practice collecting plants.
 - Go over the principles of responsible collecting: take only one of each plant, don't take a plant if it is the only one there, and be aware of your impact on the environment.
 - Have student write labels, then place their specimens in their plant press to dry.
- *Wrap Up:* Discuss the following questions with your students:
 - Why do scientists collect objects from nature?
 - What could we learn from a plant collection?
 - What information should you write on a plant label? Why?
 - Would you like to start a natural history collection? If so, what would you collect?



Decorating a plant press.
UAMN photo.



Student making a plant press.
UAMN photo.



Cardboard and newsprint layers.
UAMN photo.

How to Use Your Plant Press

- Place a leaf, flower, or other plant material in between layers of newsprint.
- Write a label for your specimen. The information on the label often determines how useful a specimen is!
 - Include the name of the plant (common and scientific), where and when it was collected, and who collected it.
- Wrap the rubber bands around the covers.
- Let the specimen dry for about a week.

Plant Label

Name of Plant:

Date Collected:

Where Collected:

Name of Collector and Number:

(Example: "J. Smith 1" is the first plant J. Smith collected.)

How to Use Your Plant Press

- Place a leaf, flower, or other plant material in between layers of newsprint.
- Write a label for your specimen. The information on the label often determines how useful a specimen is!
 - Include the name of the plant (common and scientific), where and when it was collected, and who collected it.
- Wrap the rubber bands around the covers.
- Let the specimen dry for about a week.

Plant Label

Name of Plant:

Date Collected:

Where Collected:

Name of Collector and Number:

(Example: "J. Smith 1" is the first plant J. Smith collected.)