

UC Santa Barbara

Educational Materials

Title

Native Plant Bookmark Lesson

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KIN Native Plant Bookmark Station

Next Generation Science Standards

2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats. [Clarification Statement: Emphasis is on the diversity of living things in each of a variety of different habitats.] [Assessment Boundary: Assessment does not include specific animal and plant names in specific habitats.]

3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. [Clarification Statement: Patterns are the similarities and differences in traits shared between offspring and their parents, or among siblings. Emphasis is on organisms other than humans.] [Assessment Boundary: Assessment does not include genetic mechanisms of inheritance and prediction of traits. Assessment is limited to non-human examples.]

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.] [Assessment Boundary: Assessment is limited to macroscopic structures within plant and animal systems.]

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.]

Lesson Plan: Bookmark station

Aim: To learn about the significance of preserving plant species over time and create their own preserved plant bookmark.

Objectives:

- Students learn about the importance of herbaria and the various scientific disciplines that use preserved plant specimens.
- Students will create their own native plant bookmarks to reinforce the lesson.
- Students will develop a greater understanding of the many ways nature affects our daily lives.

Materials:

Pressed native flowers
Bookmarks
Laminating pouches
Laminator
Cards with description of each plant species

Preparation: Place a selection of 2 to 3 species of dried pressed plants on the trays along with the species description cards and spread the trays along the 3 long black tables at the back of the classroom. Put the laminator, laminating supplies and bookmarks on the other row of 3 black tables. The laminator needs to be plugged in and switched on so that it is warm and ready to go.

Introduction:

Plants are used for food, medicine, furniture, houses, buildings, clothing, musical instruments, and other ways. Scientists use plants all the time. A herbarium is a research facility and a library of data where scientists and students study plant biology, physiology, ecology, phenology, diversity, and even evolution.

Dried and pressed plant specimens can be preserved for hundreds of years, enabling scientists to study plant specimens spanning large time periods, tracking changes that might occur in anatomy, habitat, community, or seasonal events like flowering, fruiting, leaves changing color, or new growth. Tell the students that we are going to keep a record of the plants collected at UCSB in these bookmarks and that this is the type of information scientists collect to accompany dried specimens.

Procedure

Show the students a finished example of a pressed flower bookmark and go through the details they need to include on the book mark, including the common and scientific name of the species they chose. Ask the students to try to remember both of the names of their plant species and maybe some distinguishing feature.

Students should select one of the dried, pressed flower/plant specimens from one of the trays and set it aside.

Ask the students to fill in the written details on the back of the bookmark and once this is completed, they should take the flower/plant they have selected and lay it on the front of the bookmark in an attractive way.

The bookmarks will be laminated and returned to the students at the end of the activities.

Conclusion

Students will have an introduction to how plants are preserved and catalogued in an herbarium. Ask the students to think about how we might use dried plant specimens.

- Investigations
- Evidence for a species being present in a particular area
- Global warming and other environmental changes