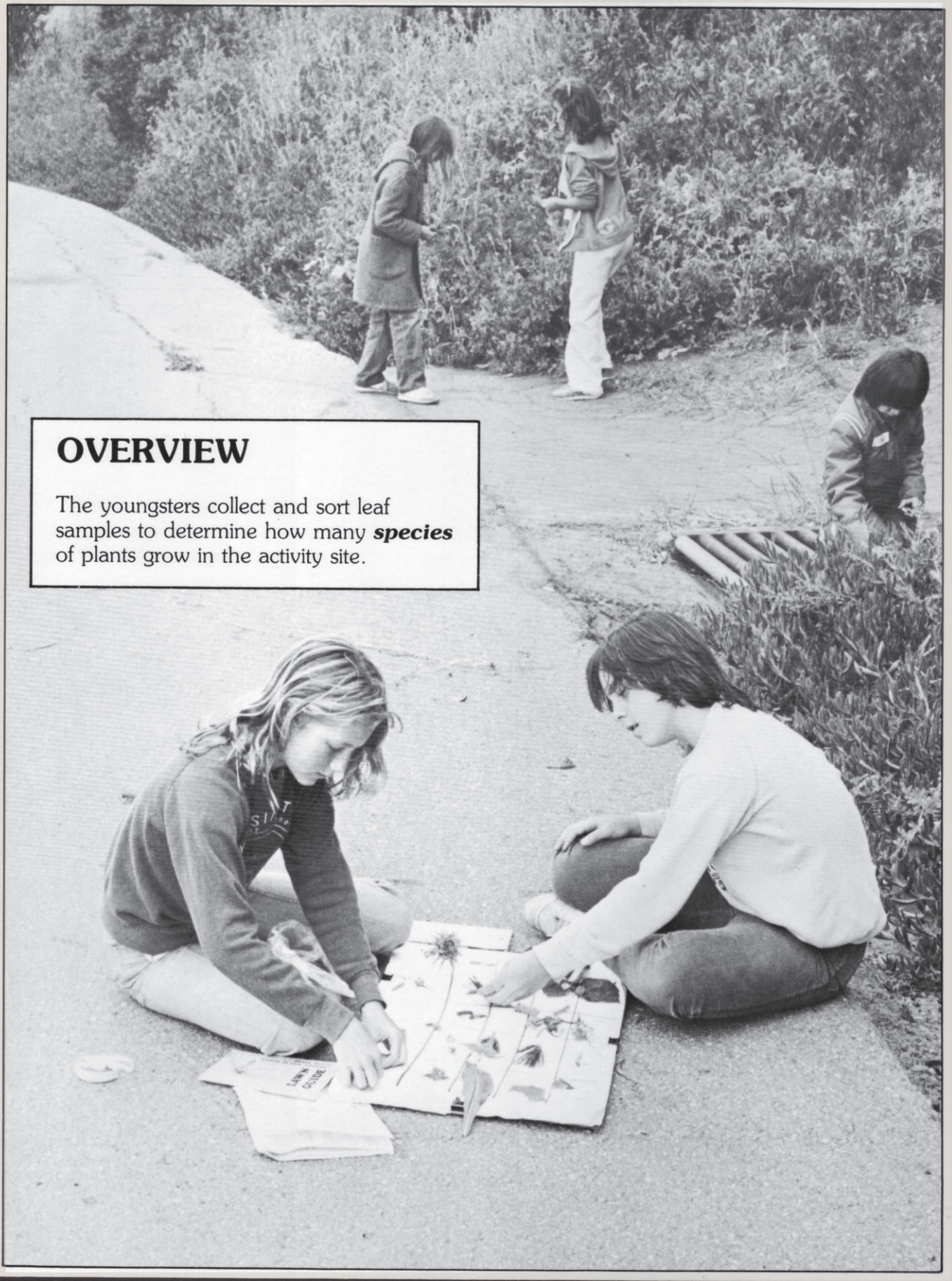
# PLANT HUNT

BIO KEY

Plant Investigation
Observation Game
Species



## OVERVIEW

The youngsters collect and sort leaf samples to determine how many ***species*** of plants grow in the activity site.

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# BACKGROUND

Plants grow all around us. A casual glance informs us that the plants are not all the same, and a closer look reveals the distinctive features of the plants that allow us to tell them apart. We can distinguish plants from one another by considering such differences as size, shape, color, texture, and odor. Plants and animals of the same kind have characteristics that distinguish them from all other plants and animals. A group of organisms that is different from all other kinds of organisms is a ***species***. Thus, coast redwoods make up one species of tree, while American white oaks make up another. Common dandelions and Kentucky bluegrass are two species of plants often found in lawns.

In this activity, the youngsters have an opportunity to closely observe the similarities and differences of the plants that grow in the activity site.


**CHALLENGE: TAKE A LEAF SAMPLE FROM AS MANY DIFFERENT PLANTS AS YOU CAN FIND IN THE ACTIVITY SITE.**

# MATERIALS

**For each team of two to four youngsters:**
1 plastic bag*
1 hand lens*

**For the group:**
4 marker flags*
2 data boards*
1 marking pen*
1 roll of transparent tape*

**Optional:**
crayons* and paper
*OBIS Lawn Guide** or other plant guides

* Available from Delta Education.

# PREPARATION

**Group Size.** This activity is suitable for both small and large groups.

**Time.** Plan on forty to fifty minutes for this activity.

**Site.** Pick a site with a variety of plants. This activity is designed for vacant lots, weedy lawns, or fields where the taking of leaf samples is not a problem. A picnic table or other level surface is handy for sorting the leaves and for playing the leaf-characteristic game. Clearly mark the boundaries of the plant hunt area with the marker flags before the hunt.

**Data Boards.** Draw a grid pattern of eight to twelve "leaf squares" on each data board.

# ACTION

### The Leaf Hunt

**1.** If your group numbers fifteen or less, form teams of two or three; if larger, form teams of three or four. Point out the flags that mark the boundaries of the activity site.

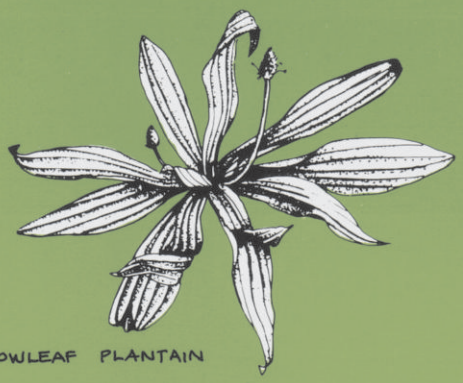
**2.** Tell each team to take one leaf sample from as many different kinds of plants as they can. Emphasize that each team should take *only one leaf* (or a small sprig) from each different kind of plant.

COMMON CHICKWEED

**3.** Give each team a plastic bag to hold the leaves, and let the plant hunt begin. Circulate among the teams, and join the hunt yourself.

**4.** After ten to fifteen minutes, bring the teams to the area you selected for the leaf sorting.

**5.** Lay out the two data boards. Have one team open its bag of leaves and place each different kind of leaf in a separate leaf square. Make sure each square contains a sample from only one kind of plant. If it is windy, tape the leaves down.



NARROWLEAF PLANTAIN

**6.** Ask the other teams to look over the leaves in the squares. If any team has a leaf that is the same as a leaf in one of the squares, that team should place the leaf in the same square. If any team has a leaf that is different from all the leaves already in squares, that team should hold the leaf up so that everyone sees it, and then start a new square.

**7.** Invite the group to look over the leaf squares and discuss whether each square contains leaves from only *one* kind of plant. If disagreements arise, encourage the group to closely compare the leaves in question. Suggest using hand lenses. Also suggest that the teams compare other features of the leaves, such as odor and texture. The teams may want to go back and compare the plants from which the leaf samples were taken.

FOXTAIL BARLEY

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**8.** After all the leaf samples have been sorted, ask the teams how they distinguished one kind of leaf from the others. Ask what differences they found. List on the data board the differences that they mention, e.g. size, shape, pattern of veining, color, odor, texture, and appearance of the surface. Tell the kids that they have made a list of the ***key characteristics*** or distinguishing features of leaves.

**9.** Introduce the term ***species***. Explain that biologists use this word to refer to a group of organisms that is different from all other kinds of organisms. Point to two different kinds of trees or weeds as examples of two species of plants. Ask the group how many plant species are represented by the leaf samples they collected.

CLOVER

### The Leaf Characteristic Game

**Note:** If your group numbers more than sixteen, form two smaller groups. Give each group a data board of leaves to use in playing the following game.

**1.** Read the youngsters these rules:

a. One youngster is the "key witness." He secretly picks a leaf from among those on the data board. He should not touch or in any way indicate the secret leaf he picks.

b. The key witness mentions one of the secret leaf's key characteristics, for example, pointed leaf edges.

c. The members of the group get two chances to guess the secret leaf.

d. If the two guesses are incorrect, the key witness mentions a second key characteristic and the group gets two more guesses.

e. When someone identifies the secret leaf, that person becomes the key witness in another round.

**2.** Serve as the key witness in the first round to get the game started.

**3.** Let the group (or groups) play as long as they are interested or until the activity period ends.

THISTLE

## BRANCHING OUT

**1.** Challenge the teams to sort a few leaves with their eyes closed. Ask them what characteristics they used to sort the leaves.

**2.** Make a permanent collection of the leaves by:

- Pressing them between two sheets of tissue paper placed in large books. Let the leaves dry out for several weeks.
- Making crayon rubbings from the leaves.
- Making sun prints of the leaves. (See the activity *Environmental Sun Prints* in the Pavement and Parks Module.)

**3.** Conduct the activity at a different site, and compare your pressed leaves or crayon rubbings from the first site with the leaves from the second site.

**4.** Use the *OBIS Lawn Guide* or a local plant guide to identify the plants in the activity site.