

Botanical Activities for Kids



CALIFORNIA
NATIVE PLANT
SOCIETY

Tools of a Botanist Table

Keen Observer Game

Fruits and Nuts Activities

Plant Sale Scavenger Hunt

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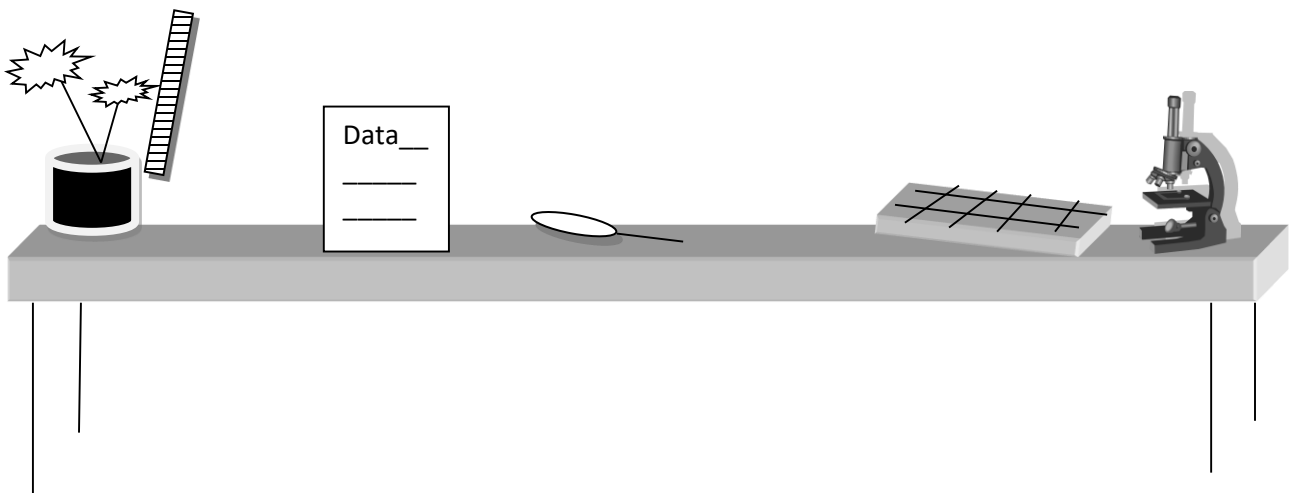
TOOLS OF A BOTANIST ACTIVITY

The goal of the exercise is to let the kids have some fun dressing up as a botanist and handling some of the cool tools, and also, if they stay they can try to “key” out a plant using a simple key to the plants on the table. Add whatever you can to the list or activity. Share with us what worked and what didn’t.

INSTRUCTIONS

- Set up a discovery table for kids with a supervisor or two on hand at all times.
- Have on hand- 1-4 plants on the table. Each station has them do something a botanist would do to “key” it out. You may want to label the plants Mystery plant 1, 2, 3, & 4. Children pick one of the plants to identify and follow the steps through the stations and the key.
- The first step will ask them to measure something so they can move through the first step of the key. Then they could look for hair on the leaves or spots or glandular drops or some other feature that could be seen with a hand lens or magnifying glass. Kids can keep track of what they measure by writing it on their data sheet.
- Beforehand, prepare a slide for each of those plants 1-4 that can be set in the scope when you know which of the plants the child has chosen to identify. Help them use the scope to see an easy feature of the flower that may or may not be in the key. This should be an “Oh wow!” moment-choose beautiful flowers!

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TOOLS OF A BOTANIST ACTIVITY

INSTRUCTIONS

- Make keys simple enough to get through in a few steps perhaps with a couple of harder ones. Give harder ones to older kids and easier ones to younger kids. Or keep it simple.
- Have stations along the table with whatever “tools” you have access to, among the following suggestions:
 - **The Botanists outfit**- Some big hats, sunscreen, and a water bottle
 - **Clipboards and data sheets** (You will need to make this up –example provided) with pencils
 - A pictorial **key** to the plant(s) on the table (you will have to create this)
 - **Ruler** with centimeters and ask them to measure something and write down the measurement on the data sheet- data sheet should ask for length of something there.
 - A couple of **magnifying glasses and a large hand lens** (easy to use) and some things to look at with it and a question about what they see that can be added to the data sheet
 - **A Dissecting Microscope!** Also with some beautiful feature of a flower of the plant on display- wow them! Show them how to use the scope- have 3 or more things for them to view.
 - **Field Guides with photos** – have the mystery plants marked so the kids can see the name of their plant in the field guide and check to see if they have the right name.
 - **A compass** (Google “How to use a compass” and find several printable instructions that you could hand out) If you have time and space you could set up a small treasure hunt for kids using a compass. This can be fun! Make sure you have a little treasure on hand.
 - **A GPS unit?** for older kids (have them Mark where they are at the booth) and see where they are on a map if it has that feature. Someone will need to be on hand to teach how to use this.
 - **Plant press** – with newspaper, and blotters so kids can press and label a plant with date, location, and name of plant and the “botanist” who identified it.



TOOLS OF A BOTANIST ACTIVITY

Botanist's Data Sheet

*You will need to change this to match what you set up.

Name _____

Date _____

Location _____

Brief description of the plant:

How long is the lowest leaf? _____centimeters

How tall is the plant from the soil up to the tip? _____centimeters

What do you notice when you look through the magnifying lens or handlens? (Or ask specific question, based on plant supplied).

What do you notice when you look through the microscope? (Or ask specific question, based on plant supplied.)

What is the scientific name of your plant? _____

What is the common name _____

Can you find your plant in the field guide provided? Does it look like you have the same plant? _____

Did you make a collection of the plant in the plant press? _____





KEEN OBSERVER GAME

HOW TO PLAY

- 4-5 similar looking but different species of plants are hidden from the group behind a tent or hanging curtain.
- Groups break into teams of two. One person will be the Observer and the other will be the Chooser (they can switch roles and do it again if they want to).
- The Game Presenter picks one plant for each group and shows it to the Observers. The Observer must write down as many things as possible in two minutes about that plant that would help identify it.
- The observer shows her/his team member, the Chooser, what those things are and the Chooser has to pick it out of the group of several plants.

INSTRUCTIONS

The Game Presenter needs to find 5 potted plants with some similarities to at least one of the other plants but all must be different species (do not need to be in the same genus).

First they hide the plants behind a hanging curtain/tent or blanket. Then, the Game Presenter takes the Observers to show the Observers “their plant”. Choosers do not get to see any of the plants while this is happening. And Observers only see their plant. Plant names should be covered up.

Each kid gets 2 minutes to write down as many things about their plant as possible so the Choosers will be able to pick it out of the line-up. After each Observer has had their 2 minutes, the Presenter brings all the plants out from behind the curtain, even ones that were not used by Observers and puts them in a group in front of the Choosers. The Choosers now have to pick out the plant that their observer described for them. Then, have kids switch roles if they want to try again.

You could give the Observers hints about what sorts of things they should notice- such as the shape and texture of leaves. Details of flowers if there are flowers. Write down the approximate size of plant and/or some of its parts. Is the stem woody or soft and green?

Alternatively, if you have a natural area with wildflowers or weeds, the Observers could venture out into the field and find “their plant”. Then the Observer takes a few minutes to draw that plant and describe it in a way that the Chooser could find that individual. After they have written and drawn that plant, they give the description and drawing to the Chooser and let them try to find the exact same plant.





FRUIT AND NUTS ACTIVITIES

Trees, Leaves, and Fruits

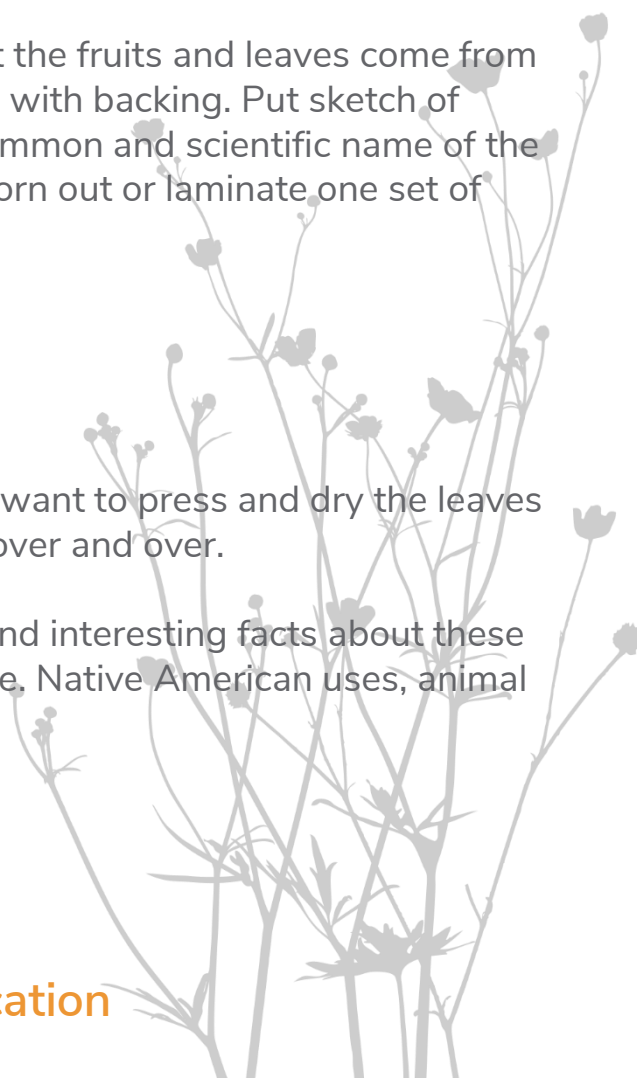
Match the leaves and fruits with the correct tree

INSTRUCTIONS

- Collect leaves, fruits, and cones from 3-5 common trees from your region. Include really large and very small or interesting fruits or leaves for contrast- for instance cones from a sugar pine and a redwood or cones from pinyon and Coulter pines. Maple samaras or ash, acorns, alder fruits, buckeyes are all interesting.
- Make copies of photos or drawings of the trees that the fruits and leaves come from and mount on heavier paper or laminate and mount with backing. Put sketch of correct leaf and fruit on the back of the tree with common and scientific name of the tree. Have several sets of leaves in case they get worn out or laminate one set of each.

MORE IDEAS

- If you have ample time to prepare for this, you may want to press and dry the leaves first and laminate them so that they could be used over and over.
- If you want to take it a step further, add some fun and interesting facts about these trees on the back of the photo or drawing of the tree. Native American uses, animal uses, habitat facts are interesting and easy to find.





FRUIT AND NUTS ACTIVITIES

Seed Dispersal Strategies

Match the type of dispersal for each fruit/seed

- **Wind sailing** (samaras, Asteraceae with pappus, pine seeds with wings attached, etc.)
- **Hitchhikers** (stickers)
- **Eaten by Animals**- including humans (eatable fruits like berries, acorns, nuts, asteraceae seeds without pappus, etc.)
- **Can you think of other ways that fruits and seeds get around?** Put your ideas in the box.

PREP WORK

- Have a placard that explains how and why it is important for plants to get their seeds out to new territory and there are several ways of doing this.
 - Use the **wind** to carry seeds away from the plant.
 - Have **stickers** on the seed that stick to fur of animals or socks of humans so they walk away with the animal to a new place or have the seeds be very sticky and gooey.
 - Get **eaten** by animals. Some seeds need to go through the gut of an animal before they can sprout. Think of different foods that are seeds or that have little seeds in them that you, birds, bears, mice, and raccoons like to eat. Seeds have lots of protein for animals and fruits with seeds often have lots of sugar or carbohydrates for animals.
 - **Exploding** seed capsules- seeds burst out of their containers when the capsules get hot and dry.
 - **Shakers**- seeds are shaken out of holes or openings in a container (fruit) that holds many seeds.
- Find many types of seeds dispersed in at least 3 of the ways above.

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FRUIT AND NUTS ACTIVITIES

Seed Dispersal Strategies (continued)

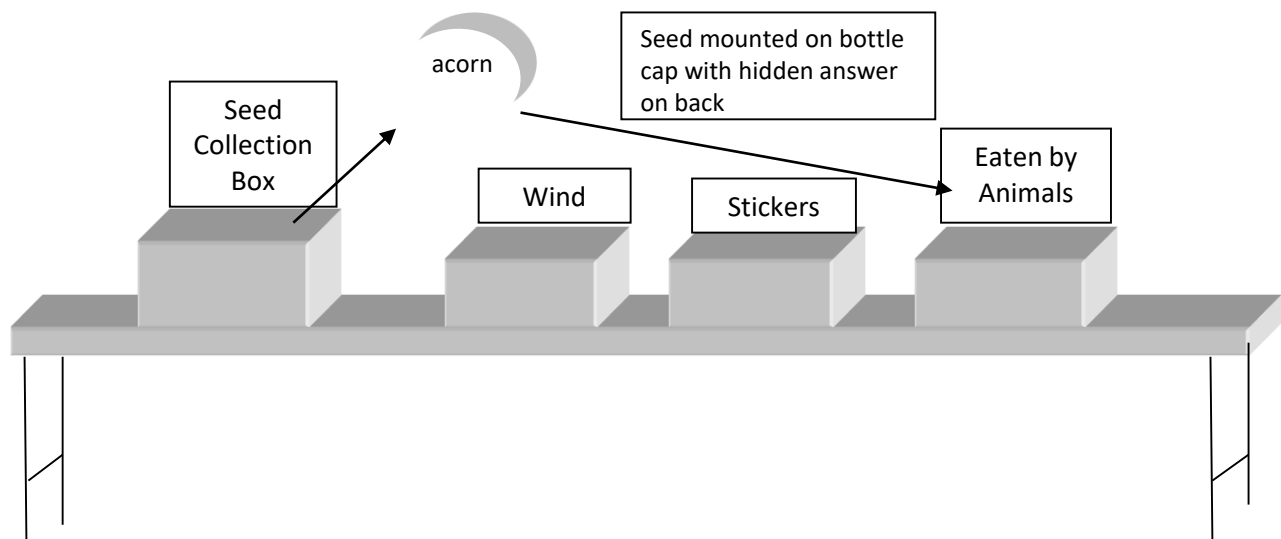
PREP WORK

- Make 3-5 placards with the type of dispersal written in large letters and place upright and readable in 3-5 boxes on the table.
- Have all seeds in a separate box. Glue seeds to small pieces of stiff paper or bottle caps and write the correct answer on the bottom of the paper/cap so that it can be seen when turned over.
- Participants place seeds in the boxes with the type of dispersal they think is used by the plant and seed. Answers can be checked afterwards. Try to use native plants but really all types of fruit/seeds are instructive.

*If you have time, write up some interesting facts about seed dispersal from plants in your area, for wrapping up the exercise. Be on hand to answer questions about seed dispersal. Some seeds are dispersed in more than one way – pine seeds can fly to the ground and/or be eaten by animals.

HOW TO PLAY

- Can you figure out how these seeds get around? Put each seed in the box that has the name of the type of **dispersal** (way that a plant **disperses** its seeds to a new place) that you think the plant and seed uses.





PLANT SALE SCAVENGER HUNT

Find these plants!

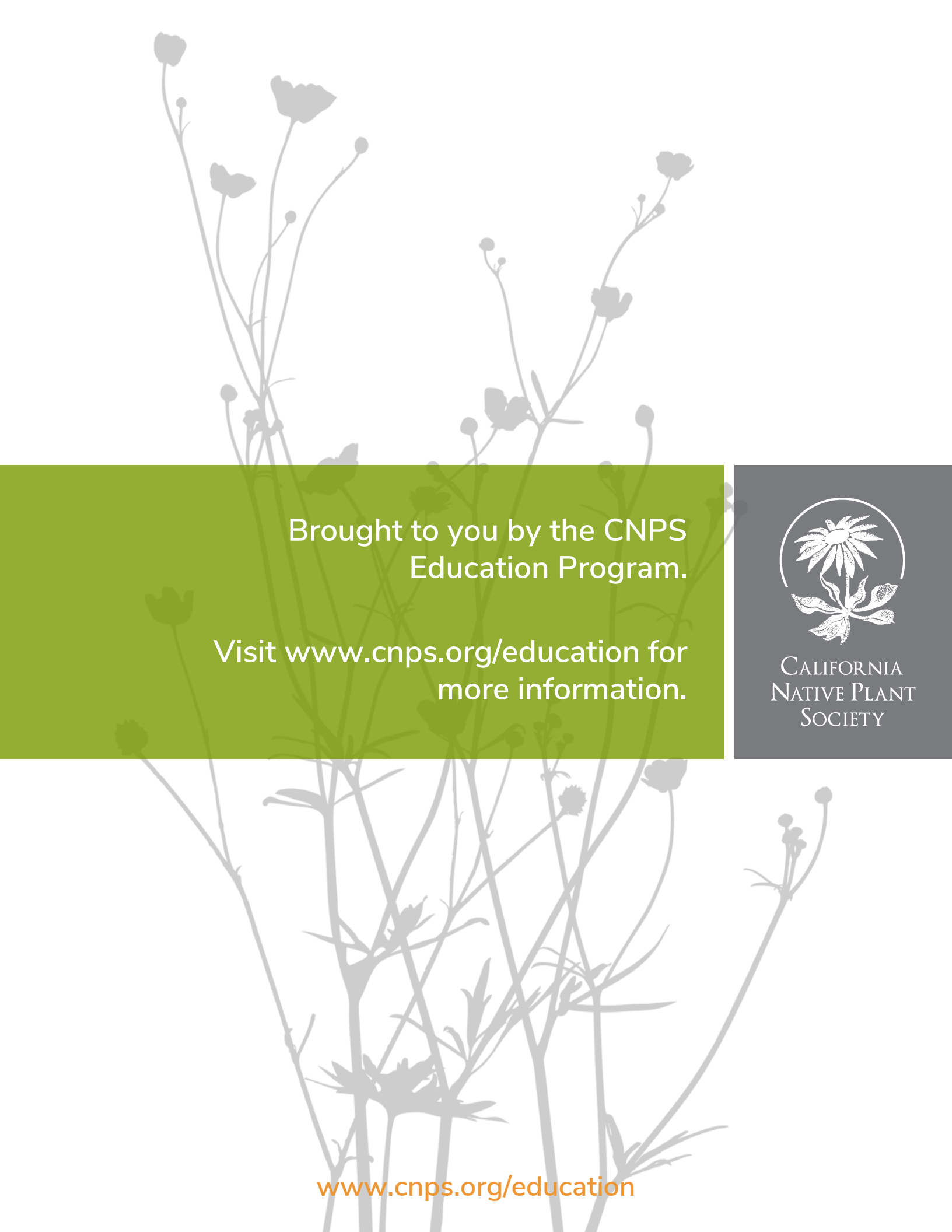
Use your eyes, nose, finger tips, and brain to find these plants

INSTRUCTIONS

Write the name of each plant under the sentence where it belongs. Hint: Look on the container of the plant for the name. **Write the scientific name** if you can find it! Ask an expert if you don't know where to find the name. Each scientific name has two parts: first the **genus** name and then the **species** name. Notice that the genus is always capitalized and the species is not (unless it is someone's name).

1. A plant with some part of it that is your favorite color.
2. A plant with a smell you like (smell flowers or gently rub leaves with your finger tips, then smell your fingers).
3. A plant that you think is stinky (leaves or flowers).
4. A tree whose leaves are OPPOSITE each other on the stem.
5. A shrub whose leaves alternate along the stem.
6. A plant with VERY HARIY leaves.
7. A plant with prickles.
8. Find a plant that could provide food for a bird.
9. Find a plant that has some part of it you could use for food or housing.
10. Find a leaf where an insect has taken a bite or two!





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