

This week's lessons

a. Know & Show Sombrero 45 minutes

b. 5 Senses Food 30 minutes

Weekly features

Fresh Food Exposure (pages 132–137)

Garden Kitchen Recipe Demo
(pages 138–139)

Quick Classroom Exercise (page 161)



Tip of the Week

The 5 Senses Food lesson has the students evaluating fresh carrots. This is the first of what could be a weekly sampling and evaluation of a new vegetable. See page 5 for suggestions on how to find helpers to prepare and provide these samples for your students.

a. Know & Show Sombrero 45 minutes



Objective

Analyze what plants need and how they support people and animals.



Supplies

1 assembled and decorated Know & Show Sombrero

Dry-erase board or poster

1 marker

Miscellaneous craft materials such as construction paper, balloons, feathers, and pipe cleaners

For each student: 2 large, square sheets of newspaper; 1 pen or pencil;
1 sheet of paper

For each group of 3 students: 1 roll of packing tape

Walk into the classroom wearing your Know & Show Sombrero. When the students ask about it, tell them that they will find out soon and will make one of their own. But first they must answer a few questions.

Begin a discussion about what people must have to be able to live. As the students call out needs, create a list on a dry-erase board or poster in front of the class. Include the five basic needs that all people share: Air, clothing, food, shelter, and water.

Ask a student to circle the items that the group says plants must have in order to live.

Next ask: **Is there anything that plants need that people do not?** *Plants do not need clothing; most need no shelter unless they have been moved from their natural homes.*



Have each student make a list of three to five plant needs.

Divide the students into teams of three. Tell them that they will work together to create newspaper hats that will become wearable art. Follow the steps below to demonstrate how to create the hats:

1. Place the middle of two large, square sheets of newspaper on top of a student's head.
2. Bend down the outer edges of the paper flat against the sides of the student's head. Cut a long strip of tape.
3. Tape the newspaper around the student's head, starting over an ear. Continue wrapping until the tape encircles the head.
4. Curl up the edges of the newspaper to form the brim of the hat.

Tell the students that their assignment is to each create a hat from newspaper and tape. Let the team members help each other. Circulate around the room, assisting the teams as needed. If a few students are especially good at making hats, solicit their help with other teams.

Next, have them decorate the hats using the craft materials. Each decoration must represent a plant need. The students' job is to symbolize all the plant needs on their hats. The only rule is that they can't use words. Instead, they may use images, graphics, symbols, and other visual aids.

Give the students 20 to 25 minutes to decorate the hats.

Then ask three or four volunteers to point out the symbols on their hats and explain how each represents a plant need. Encourage the class to ask clarifying questions, and allow time for feedback or constructive comments.



Tell the class that there's an easy way to remember the basic needs of plants. On the left side of the board or a poster, list each letter of the word *PLANTS* on a separate line, and tell the gardeners that clues to everything a plant needs are in that word.

Complete the chart as shown below, and challenge the students to recall the plant needs without looking at the list.

- P** Place: In a container or garden
- L** Light: Sun or artificial light
- A** Air: Oxygen and carbon dioxide
- N** Nutrients: Nitrogen, phosphorus, potassium
- T** Thirsty: Like all living things, plants need water
- S** Soil: Or other media (sand, gravel, water) for growing roots



Ask the class if the volunteers shared an idea about a plant need that they forgot to add to their hats. Give the students another 10 minutes to add items to the hats to represent the missing plant needs.

Optional extension: Growing further...

- ★ What are the basic things that all people need?
- ★ Work with your team to come up with an example of how people depend on plants for air, clothing, food, shelter, and water. Some possibilities:
 - **Air:** Oxygen from the water that plants use to make food
 - **Clothing:** Cotton, flax, and hemp for clothes; grass for skirts in Hawaii; wood from trees for buttons; flowers for decorations
 - **Food:** Fruit such as apples and grapes, vegetables such as potatoes and green beans, grains such as wheat for bread and rice for cereal
 - **Shelter:** Lumber and wallpaper from trees, cotton for tents, straw or palm leaves for roofs in some countries, bamboo for houses in other countries
 - **Water:** Watermelons and cucumbers, which are more than 90 percent water
- ★ What is an example of how animals in nature depend on plants for air, food, shelter, or water? Examples: All animals need oxygen; cows eat grass; birds live in trees and make their nests from twigs and grasses, and lizards and other reptiles in deserts get their water from cacti
- ★ When all of their needs are met, plants use the energy from sunlight to grow. As they grow, the plants produce a source food for other living things. Other living organisms have to consume the food that plants produce. If plants are called *producers* because they *produce* food for other living things, what do we call the rest of us who *consume* that food? Consumers

