

Drink It Up

Concepts

- Plants need water to live.
- Flowers take up water through their stems.
- Flowers have veins throughout their stems, leaves, and petals.

Materials

flowers (For best effect, experiment with a variety of flowers. The best for deep color are those with many tiny petals, such as Queen Anne's lace or bridal wreath spirea, but the experiment will work with most white flowers. One of the most dramatic flowers for observing veins in the petals is lily of the valley. However, if you choose to use this flower, close teacher supervision is necessary at all times, since it is poisonous.)

clear vases or other containers (liter soda bottles with the tops cut off work well and won't break)

water

food coloring

knife or scissors for cutting stems



Description

- 1 Fill the vase or other container with water. Add a few drops of food coloring to the water.
- 2 Make a fresh cut on the stems of the flowers. If the stems are soft, you can cut them with scissors, but if they are woody, make a diagonal cut with a knife for best results.
- 3 Place the flowers in the colored water and observe. Within a few hours, you should start to see the color from the water in the petals of the flowers.
- 4 With the children, study the petals carefully. A magnifying glass will help in seeing the individual veins of the petals.

Extensions

- Before placing the flowers in the water, leave some of them out of water for a while. Don't cut the stems of these immediately before placing the flowers in the colored water. Use two separate vases so you can compare the absorption rates of flowers with freshly cut stems to the rates of those that have been left out of the water.
- Split the stem lengthwise. Put half in one color of water and the other half in another color. (You will have to place two vases side by side to do this. It will be easiest if you use thin vases, such as water bottles. To avoid having to cut the stems too high, you can cut the water bottles to a few inches high. You may need to tape the flowers to hold them in place.) Observe what happens.
- Use several varieties of flowers, and compare the results.

Safety

Considerations

Only the teacher should use a sharp knife. Children may be able to cut with table knives if the stems are not too hard.