



CHICAGO BOTANIC GARDEN

Plant Propagation

Purpose:

Provide a sensory experience using plant and soil materials. Teach plant propagation by stem cuttings. Develop fine motor skills and discernment by touch. Learn to accommodate another person using common space and supplies.

Description:

This activity teaches participants how to make a stem cutting using a zip-lock bag as a rooting chamber. A new plant is created when the cutting develops roots. This process is called stem propagation.

Time required: 55 minutes

Materials:

5 flats without holes

Stock plant: geranium and coleus

Soilless potting mix

Scoops or small paper cups to transfer soil

Permanent markers

5 snips

30 plant labels

15 drinking straws

Spray bottles filled with warm water

15 8- x 10-inch zip-lock bags



CHICAGO BOTANIC GARDEN

15 4-inch plastic pots

Instructions:

1. Present the grape ivy plant, identify it by name. Point out the different parts of the plant: the stem, the nodes, the growing point. Have each participant feel each part of the plant as you discuss. Describe the process of taking a cutting and how roots develop from the leaf nodes on the cutting.
2. Place dry soilless potting mix on trays; one tray and one spray bottle per every few participants. (This can be done ahead of time.)
3. Add warm water with spray bottle. Mix with hands until potting mix is moistened but not soaking. The mix should become dark brown and hold together when squeezed. Participants will need to work together to accomplish this step.
4. Fill pot with soil mix to 1/2 inch from the top.
5. Make stem cuttings by measuring 2 inches back from the growing point of the plant. This point is where new leaves emerge from the stem. Help participants as needed to find this spot correctly by feel. Cut with a pair of scissors below a set of leaves. Two to three cuttings are needed per participant. Pinch off the bottom set of leaves from each stem cutting, leaving several inches of bare stem.
6. Make two or three holes in soil by pushing an index finger into soil until the tip of the index finger is about an inch from reaching the bottom of the pot.
7. Place stem cuttings in holes. Firm them in place. Fill in the holes around the cuttings with soil. Water the stem cuttings with a spray bottle so the potting mix settles next to the stem.



CHICAGO BOTANIC GARDEN

8. Participants write their names and the date on the address label. They may use a Braille stylus or a Sharpie marker. Affix label to a zip-lock bag.
9. Fold down plastic bag for ease of placing the planted pot inside the bag. Set the pot in the bag, roll up the bag and zip closed, leaving a 1-inch opening. Blow up bag like a balloon, using straw, and then seal the bag.
10. Discuss plant care for the bagged cuttings. Bags should remain inflated and you should be able to tell that they are staying moist. If too dry, open and give several squirts of warm water with spray bottle. If there is any decaying material, remove it right away so it does not infect other cuttings.
11. Place the cuttings on a bright windowsill. After a few weeks, open the bags and check for root development by gently pulling on cutting. If resistant, then roots have developed and plant may be removed from the bag and placed in a bright location.