

Plants and Youth: Designing and Building a Terrarium¹

Kathleen C. Ruppert, Robert J. Black, and Sydney Park Brown²

A terrarium is a collection of small plants growing in a clear, usually enclosed, container. A terrarium container can be purchased, however many household items are suitable. Try a fish bowl, aquarium, or a large bottle or vase. Select a clean container big enough to hold 2 or more plants (Figure 1). Containers with small openings can be used but are more difficult to plant.



Figure 1.

Line the bottom and about 1/5 of the side walls of the container with pea-size gravel to provide drainage for excess water (Figure 2). The size and shape of the container will determine the amount of gravel that should be used. A 1/2-inch (1.3-cm) layer is about the minimum and 1 1/2 inches (3.8 cm)

should be enough for large containers. Place a piece of synthetic fabric over the drainage layer to prevent soil from settling into it and destroying its ability to drain (Figure 3). Materials such as window screen, weed cloth, nylon hosiery or discarded curtains are good choices because they are porous enough to allow water to pass through yet fine enough to hold soil particles, and they will not decompose rapidly.



Figure 2.

Next, add enough sterilized potting soil to fill approximately 1/5 of the container. Try to keep the soil off the inside walls of the container (Figure 4).

The soil can be leveled or molded into contours and valleys with a spoon or any other blunt instrument

-
1. This document is ENH121, one of a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date June 1996. Reviewed October 2003 and November 2010. Revised October 2007. Visit the EDIS Web Site at <http://edis.ifas.ufl.edu>.
 2. Kathleen C. Ruppert, former assistant professor; Robert J. Black, retired Emeritus professor, Sydney Park Brown, associate professor. Environmental Horticulture Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.



Figure 3.



Figure 4.

After the soil has been arranged in the container, plants can be selected, arranged and planted. Most garden centers sell foliage plants in 2- to 4-inch pots. Choose the smallest available and make sure they have similar light and moisture requirements. It may be helpful to work out the arrangement of the plants before planting them in your terrarium (Figure 5).



Figure 5.

If the terrarium is to be viewed from all sides, the largest plant should be planted near the center (Figure 6). If the terrarium is to be seen only from 2 or 3 sides, the tallest plant should be placed in the background. Place accessories such as stones, figurines, sand and driftwood at the desired location in the terrarium (Figure 7). Use a dry, soft paintbrush

to gently sweep off any soil clinging to the sides of the container. Water plants sparingly since excess water will saturate the soil and kill the plant roots (Figure 8).



Figure 6.



Figure 7.



Figure 8.

Cover and place the terrarium where it is exposed to bright indirect light usually in a northeast or north window (Figure 9). Avoid direct sunlight, because it will heat the terrarium and burn the plants. If water condenses and fogs the sides of the container, remove the lid until all condensation evaporates, then replace the lid.

Terrariums should only be watered when the soil is almost dry. Since the container has no drainage,



Figure 9.

add only enough water to moisten the soil. Too much water will rot the plant roots.

You can use a water-soluble houseplant fertilizer (mixed at 1/4 the recommended rate) if your plants begin to yellow, but add fertilizer sparingly. Overfertilizing your plants will kill them.

Definition of Terms

Condensation - the change of water from its gaseous form (water vapor) into liquid water.

Contours - Furrows or ridges on the soil surface.

Foliage plants - Plants grown primarily for the beauty of their leaves and stems. Foliage plants are susceptible to cold injury, so they are usually grown indoors.

Indirect light - Light that is reflected from one surface to another.

Porous - Having pores or small holes that allow liquid to pass through.

Sterilized soil - Soil that has been heated to kill diseases.