

Creating a terrarium is easy and fun, and a properly designed terrarium is easy to maintain. Since it is a self-contained environment, it creates its own mini-climate. There are two main types of terrariums: open and closed. Open terrariums are best for sun- and heat-loving plants that you plan to grow in some direct sunlight, for example cacti and succulents. Closed terrariums are best for humidity-loving plants, and they must be placed where they receive bright light but not direct sunlight. (Direct sunlight on a closed terrarium can raise the temperature so high that it can cook the plants—think of a sealed car in August.)

Before choosing your container, think about what you wish to grow. Remember that all the plants should have similar light, moisture, and heat needs. Once you've decided between open and closed containers, choose a glass (or light and UV-admitting plastic) container with an opening large enough to allow you to place your plants. Clean it thoroughly to prevent bacteria from growing, and follow these easy steps.

### **Step One: Drainage**

Since a terrarium does not have drainage holes, you must provide a drainage layer to prevent root rot. Small gravel works well, and you can use decorative colors that will be visible from the side. You will use one to four inches, depending on the size of your terrarium. Generally, the total depth of gravel, charcoal, and soil should equal about one-third the height of the container.

### **Step Two: Charcoal**

On top of the gravel, place a thin layer of charcoal to help keep the soil fresh.

### **Step Three: Soil**

The soil you use depends on the plants you're growing. If you're planting cactus or succulents, use a soil mix designed for them. Most other plants prefer a standard commercial potting soil. Use enough soil so that you can dig a "hole" sufficient for the root ball of the plants you're using. For example, if you're planting a fern with a 4" root ball, you'd need at least 4" of potting soil in your terrarium.

### **Step Four: Landscaping and Planting**

Remember, plants grow. We recommend using slow-growing plants and not overplanting. Prune the plants if necessary before placing them, and make sure all plants you add are free from insects and diseases. Start with the largest plants first, then go on to the smaller ones, and then groundcovers. Remember, you're making your own miniature landscape—consult your own taste. If you want to add a bonsai bridge or fairy garden or miniature railroad accessories, have fun!

**Plants Recommended for Low-Light, Closed Terrariums:** Ferns, mosses, baby's tears, polka dot plant, fittonia, peperomia, schefflera, and ivy.

**Plants Recommended for High-Light, Open Terrariums:** Cacti, jade, aloe, echeveria, sedum, haworthia, burro's tail, living stones, and other succulents.

### **Maintaining Your Terrarium and Troubleshooting:**

**Heat:** Closed glass containers trap and hold heat; excessive heat is probably the main cause of death in terrariums. Do not place closed terrariums above radiators or in direct sunlight. Open terrariums do not build up heat as much, but leaves touching the glass container may still burn.

**Light:** Place your newly planted terrarium in shade for about a week. Then adjust the light according to the needs of your plants. Most terrariums will do better in diffused or filtered light. You may also use artificial light.

Too much light: Leaves wilt and/or develop burned spots.  
Solution: Move your terrarium to a shadier spot.

Too little light: Plants develop tall, thin, weak stems and lean towards the light source. Leaves are pale and fragile.  
Solution: Slowly increase the amount of light (too quick, and they'll burn).

**Water:** Test soil before watering. For plants that like moist soil, the top earth should feel barely moist before you water. For cacti and succulents, touch below the surface layer. The top soil should be completely dry, and the lower soil only slightly damp. Closed terrariums should rarely if ever need water.

Too dry: Leaves wilt and look pale. Moss turns brown or fades.  
Solution: Add a little water and mist leaves.

Too wet: Too much water encourages mold growth and can cause plant decay. Terrarium walls should not show more than 25% condensation or more than occasional clouding.  
Solution: Remove the cover until walls clear. You may need to do this more than once.

**Plant Growth:** Plants should be scaled to the size of the container; remember that plants grow. Prune back those that show signs of overcrowding. Clip and remove dead leaves. Remove dead plants, or those that have outgrown your container.

**Mold or mildew on Plants:** Indicates that your terrarium is too wet, that you have poor air circulation (overplanting could be a factor), or that you're using plants poorly adapted to your conditions. Remove infected plant(s) immediately and correct the environment by letting the terrarium dry out and/or improving air circulation.

**Insects or Pests:** Cut out infected areas; spray with insecticide as needed.

**Cleanliness:** Keep container clean. Remove moisture or dust from the glass. If algae starts growing (green film on glass), clean off. Clean leaves as needed; remove dead leaves and flowers promptly to prevent the growth of fungi.