



BUILD YOUR OWN TERRARIUM

Build a terrarium to learn about plant care and ways to take care of the Earth's environment.

*Age level: 12 years and up *Estimated time to complete project: 30-60 minutes

01

MATERIALS NEEDED

- ★ An enclosed container
- ★ Pea gravel or small rocks
- ★ Potting soil (available at most gardening centers)
- ★ Small indoor or tropical plants
- ★ Charcoal (optional)



02

STEP BY STEP INSTRUCTIONS - PART 1

1. Find a good container. Glass jars, fish bowls and tanks, clear plastic bottles, and food containers all work! Just make sure there is enough room to reach your hand into your container.
2. Cut off the top of your container (if needed), leaving it around 8 inches tall. After planting in the container, you can either tape the top back on or cover it tightly with plastic.

3. Clean the container using soapy water and rinse well. Dry completely. Cover the bottom of the container with $\frac{1}{2}$ inch (for small containers) to 1 and a $\frac{1}{2}$ inches (for large containers) of pea gravel or small rocks. This is similar to bedrock found under our soils and allows access water to drain from the soil.

*Optional: You can also add a few granules of filtering charcoal (not the type used for barbecuing) to the top of the gravel to help remove odors. The charcoal is not needed if your terrarium has good moisture levels.

4. Next, fill the container to approximately $\frac{1}{3}$ to $\frac{1}{2}$ full with moist potting mix. The amount of soil you put in will depend on the size of the container (you need to have enough room for plant roots). You should use a sterilized potting soil mix to avoid molds and fungi.

5. Pour the soil into a bowl or tub and mix with water until the soil is moist enough to cling together in a ball when pressed into the hand. If water drips from the soil when pressed into a ball, then it is too wet and you should add more dry potting soil to your mixture. Once you find the perfect balance, place the soil in your container. Try to avoid getting soil particles stuck on the sides of the container above the soil level.



6. Many potting mixes contain slow release fertilizers. If the soil you purchased does not contain any fertilizer you may want to add a small number of slow release fertilizer pellets or some organic fertilizer like worm castings to your mix before planting. You want your plants to stay small and grow slowly, so you do not need much.
7. Next add your plants. You need to look for plants that are small, slow-growing, and live well in humid environments. How you arrange the plants will depend on the size and location of the terrarium. If you will be viewing the terrarium from one side, then place the tallest plants in the back and shortest plants in the front. If your terrarium will be viewed from all sides or you plan to rotate it, plant the tallest plants in the middle and the shorter plants along the outside. There are many plants to choose from. Most garden centers have an area reserved for indoor plants and you can usually find a variety of plants in 2 to 4 inch pots.
8. You can also be creative and add other objects to create mini-landscape scenes. For instance, you may want to add decorative rocks, small animal figurines, small bridges or mirrors to look like mini ponds.



9. After planting, put the container lid or cover the top with plastic. Place the terrarium next to a window with indirect lighting or under grow lights. Do not place it in strong direct sunlight, or else water will evaporate too quickly and plants may scorch.

10. Observe your terrarium closely for the first few days to make sure you have the proper moisture level. You'll know that the terrarium contains the right amount of water if the sides and top have water droplets when in bright light. If there is no moisture along the sides, then you need to add some more water. If the sides are always very wet and it is hard to see the plants, then there's too much water and you should remove the top for a few hours and allow some of the excess water to evaporate. Once you achieve the perfect balance, it will not need frequent attention.

11. Check on your terrarium often. Cut or remove plants with excessive growth. You want to avoid plant leaves touching the sides of the container as much as possible to prevent constant water sitting on the plants. Check on the moisture levels as some water may be lost over time.





- In the next couple of days, observe your terrarium. What changes are you noticing?
- How are you taking care of your terrarium? What do the plants inside the terrarium need?
- What do you think would happen if you stop taking care of your terrarium?
- Do you think it is important to take care of the earth's environment (ex. park, neighborhood, beach)? Why?
- What can you do to help care for the environment?