Build a Mini Terrarium

Hands-on activity

Get your hands dirty and build your own mini terrarium to learn more about climate change. A terrarium has a mini climate and is just like a greenhouse. To see how it works, try out this activity!

SCHOOL FOOD GARDENS
WATERLOO REGION

Overview

A terrarium is a miniature garden housed inside its own little world – a glass container. You can easily build a terrarium at home!

The Best Plants

First, you want all the plants in your terrarium to perform well in the same environment.

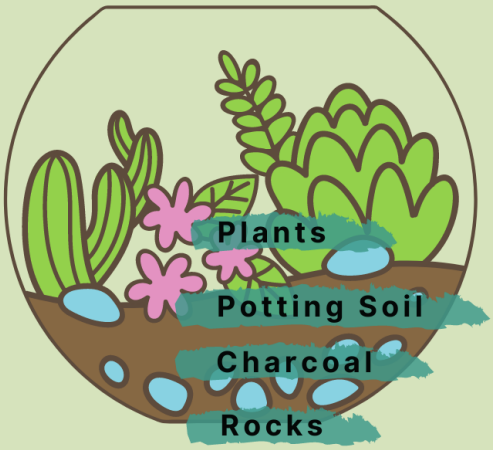
For example, only succulents could be planted into your container because they need little water. Or, only ferns could be planted because they prefer it moist. You could plant ferns with moss since they both like it moist. If a fern is planted with cactus, one might not do well (the fern gets too dry, the cactus gets too wet).

Your Plants' Home

Any glass container really works to hold a terrarium. Either an open or closed container can be used. An open container is best for succulents and cacti because they like air. A closed container with a lid is best for ferns, ivies, and begonias because they like humidity.

Approximate Time: 30 minutes to 1 hour

Season: all seasons



Materials

To build any terrarium, you will need:

- A clear glass container
- Pea gravel or small rocks
- Potting soil
- Small plants

Optional:

- Charcoal
- Decor like small pinecones, tiny animal figurines, small bridges

Instructions

1. Find a suitable container. Fishbowls, glass jars, and vases with a wide base could all work. A rule of thumb: make sure there is enough room to reach your hands into the container for building and maintenance.

2. Clean your selected glass container with soapy water and dry it completely.

3. Start by covering the bottom of your container with ½ an inch (for a small container) to 1-½ inch (for a large container), with pea gravel or small rocks. This will allow soil drainage and act like the bedrock under our soils.

4. You can add some granules of filtering charcoal above the rocks to help reduce odors. This is optional and not needed to maintain the moisture levels in the terrarium.

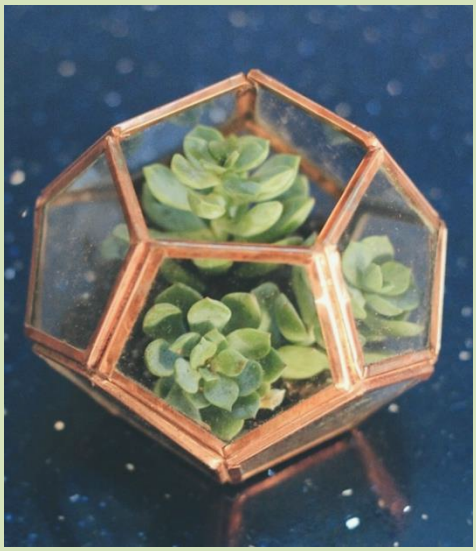
5. Next, fill the container about ⅓ to ½ full of potting soil. The amount of soil used depends on your container size. There should be enough room for plant roots.

6. Add in your plants by arranging them nicely in the terrarium. Leave room for them to grow and pat down the soil so they are not uprooted.

7. Add in decorative rocks, pinecones, tiny animal figurines, or whichever objects you like to form your mini terrarium's landscape.

8. Water your plants, but not a heavy amount.

9. Place the terrarium in indirect light.



MINI TERRARIUM INSPIRATION!

Post-Maintenance

Check your terrarium for the first few days to see its moisture levels. If there is no moisture along the container sides, you likely need to add water. If the container sides are always wet, and it is hard to see the plants, there is too much moisture. The top should be removed for a few hours to allow some water to evaporate.

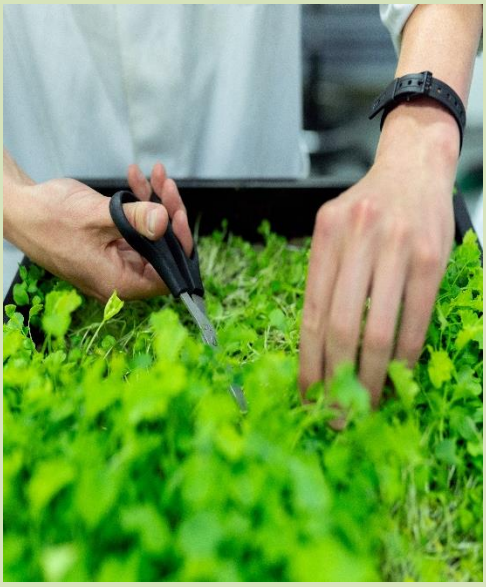
The terrarium will not need much attention once the moisture level is balanced. Occasionally, see if large plants need to be trimmed or removed.

Climate Connection

A terrarium has a mini climate. The container has a small opening or lid, which closes it off.

When a terrarium is used to grow plants, it is just like a greenhouse. A greenhouse is a clear glass structure used to grow and protect plants from cold conditions. The sun's rays pass through the glass and warm the air, soil, and plants. Some warmth is held within the glass.

On Earth, the sunlight passes through the atmosphere. Some heat is trapped by greenhouse gases in the atmosphere, and some is released back into space.



Greenhouses in action!

References to Explore

This activity is adapted from Nasa Climate Kids and Kids Gardening. Check out their resources here:

- https://climatekids.nasa.gov/mini-garden/
- https://kidsgardening.org/garden-activities-building-a-terrarium/