

JARDENING

TINY WORLDS IN JARS

A Tiny Water Cycle

Water inside your jar **evaporates** and **condensates** on the glass of your jar. This creates mini "rain storms" inside your jar where water collects on the glass and falls onto the moss.

Vocabulary

Terrarium - An enclosed space where plants are grown. Contains a tiny ecosystem.

Drainage Layer - The area of a terrarium where water collects on the bottom.

False Bottom - A divider that keeps dirt out of the Drainage Layer.

Substrate - A fancy terrarium term meaning "dirt"

Rhizoids - Body part Moss uses to stick to things

Hardscape - Any non-living decorations in your terrarium.

Building our Terrarium

Supplies:

- 1 jar
- Screen
- Pebbles or sand
- Moss
- Decorations
- Water



Directions:

Fill the bottom of your jar with gravel, sand, or small rocks. Put in just enough to cover the bottom, it shouldn't be taller than a half inch at most. This layer is called your **Drainage Layer**.

Next add your screen on top of the **Drainage Layer**. This is called a **False Bottom**. It keeps dirt, mold, and germs from getting into your drainage layer.

After that, add some dirt, also called **Substrate**! You will want to slope your dirt towards the back of your jar to increase the surface area you can add decorations to.

The next step is to add the moss. Moss doesn't have roots. Instead it absorbs water and nutrients directly through its body and uses special parts called **Rhizoids** to stick to surfaces. This is why you may see moss growing in places with no dirt!

Once your moss is in place add some decorations. These decorations are called **Hardscape**. Hardscape refers to anything non-living that you add to your terrarium. Some examples of hardscape could be sticks leaves or rocks, toys or action figures, pictures, photos, or even drawings!

The final step is adding water. Just five or six tablespoons is all you need!

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Maintaining our Terrarium

Directions:

Once you've built your terrarium all you have to do is keep it alive! Here are some tips to ensure your garden sticks around.

Sunlight... but not too much: Moss needs sunlight to survive and can actually do well with a lot of sun given the correct amount of moisture. Because our jars are made of glass, though, too much direct sunlight will heat it up and cook our plants alive! If you leave your terrarium in a window make sure it only gets a few hours of sun a day! You can also leave it outside somewhere shady like near a bush in a garden or under a tree.

Watch that water: If you notice there is a lot of water on the glass every time you look at your terrarium you may have too much water in it. To fix this, simply leave your lid open for a few hours and replace it. If your jar looks too dry, try adding another tablespoon of water.

The smell test: Open up your terrarium after a few weeks and take a sniff. Does it smell like the woods? If it does your terrarium was a success! If it smells nasty you can just take it apart and try again!



Make Your Own!

Making terrariums from materials at home is easy and fun! Here are some common materials you can use in place of the ones found in the kit.

Jar - Any sealable container will work for this project. It doesn't even need to be glass! Just make sure if you use a plastic bottle you use a clear one instead of a colored one. The colored light that comes through won't help the plants.

Screen - Any mesh, cloth, or other material that allows water but not dirt to pass through. You can even re-use a plastic bag and poke holes in it with scissors or a thumb tack.

Moss - You can find moss growing nearly anywhere outside! Make sure you don't take moss from a hiking trail or private property. You can find plenty on sidewalks, sides of buildings, and your own neighborhood. Also, make sure you thoroughly wash off your moss *outside* using a hose or container full of water. You don't want to bring whatever may be living in it into your home!

Hardscape, Pebbles, and Rocks - Look around outside for items that inspire you! Make sure you rinse off whatever you choose to add before adding it to your terrarium.

Share your Creation!

Email us a picture of your terrarium (or bring it into the library) and we will display your art in the Nature Corner! Send pictures to Mr. Josh at jleblanc@wallingfordlibrary.org