

Plants and Water Investigation

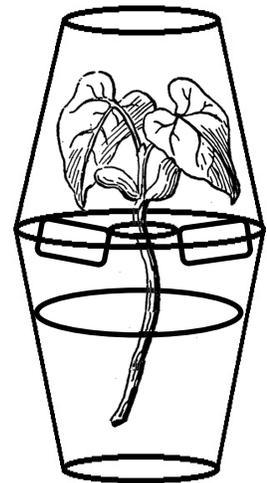
Equipment

- (4) plastic cups (if you don't have plastic cups, you can use (4) glass cups, (2) water bottles and (2) plastic bags, or some other container. Get creative!)
- (2) plastic cup lids (you can also use aluminum foil or cardboard with a hole poked through!)
- (1) roll of tape
- (1) small package of Vaseline (optional)
- (2) plant clippings (can also use a green, leafy vegetable such as celery, kale, or lettuce)
- (1) 1-cup measuring cup or another small container for pouring water

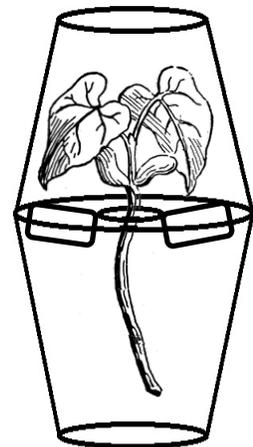
Setting Up the Terrariums

- 1) Collect your two plant clippings immediately before you are going to set up your experiment. Ideally, each clipping should be about the same size, with about the same number of leaves.
- 2) To set up the first terrarium, use the measuring cup to put exactly one cup of water in one of the plastic cups.
- 3) Take a plastic lid. Thread a plant clipping through the opening at the center of the lid. Place this lid on the plastic cup with water inside, making sure that the plant clipping reaches at least an inch into the water.
- 4) If you have Vaseline, put a little bit around the opening at the center of the plastic lid. This will seal the opening.
- 5) Place another cup on top of the plastic cup, completely covering the plant clipping. Use tape to seal it closed.
- 6) In order to set up the second terrarium, **do not** put water inside the bottom cup. Thread the second plant clipping through the opening of the center of the other lid. Place this on an empty plastic cup.
- 7) Put a little Vaseline around the opening at the center of the plastic lid to seal the opening, and then place another cup on top. Use tape to seal the second terrarium closed.

Set the two terrariums near a sunny window and wait to see what happens!



Terrarium #1 with water

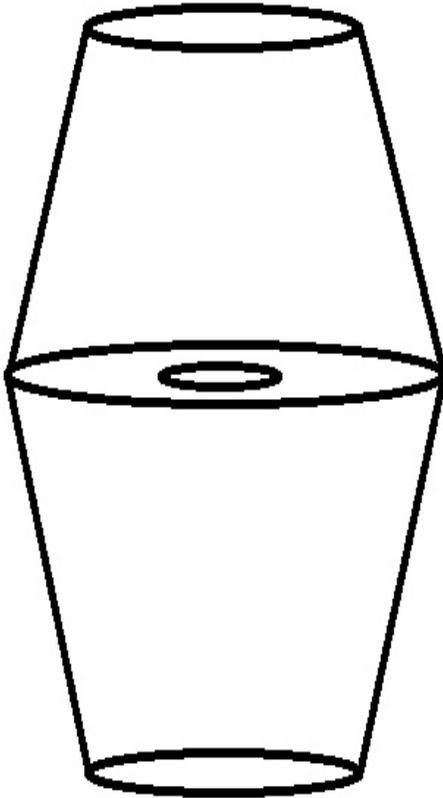


Terrarium #2 without water

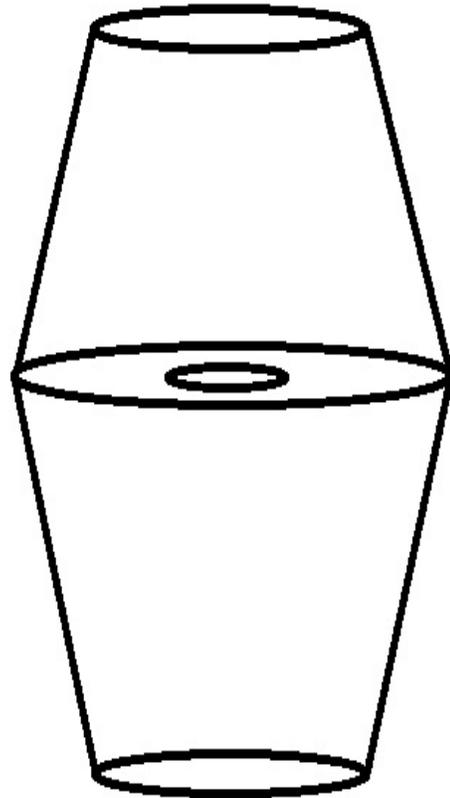
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Make Observations: After waiting about an hour, look at the two terrariums. Sketch what you see happening in each of the terrariums.

Plant Clipping with Water



Plant Clipping without Water



Notes and Observations

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Notes and Observations

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Developing an Explanation

1. Did any water move from the bottom cup to the top cup? Describe your observations.

2. What can you infer about what happened? How do you think that the water moved from the bottom cup to the top cup?

I think that water moved from the bottom cup to the top cup because _____

3. Compare the plant clipping in the cup with water to the plant clipping in the cup without water. How do they look different? Describe your observations.

4. What do you infer might have caused the difference between the two plant clippings? Use evidence from the *Dig Deeper* materials to support your idea.

We think that the clippings look different because _____

5. What do you predict would happen to a seedling in Moro Canyon if it doesn't get enough water? Use your observations of the two terrariums as evidence to support your idea.

If a seedling does not get enough water, then *[what you predict will happen]* _____

because *[why you think it will happen]* _____
