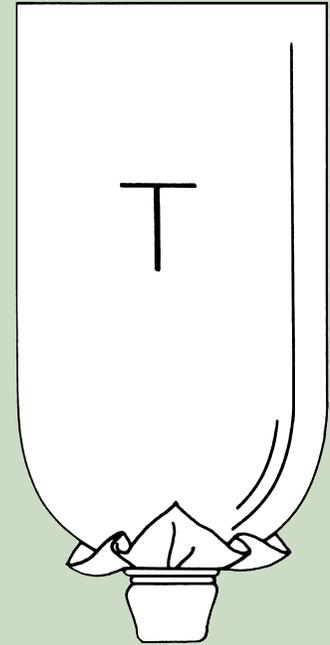


Student Instructions for Setting Up the Terrarium

1. Use part T for the terrarium.
2. Remove the cap from part T. (Save the cap. You will be using it again at the end of this lesson.) Place a square piece of fiberglass screen over the mouth of the bottle. Secure the screen with a rubber band. Place the band on the neck of the bottle to hold the piece of screen in place.
3. Stand part T, neck down, on a plastic cup. One partner will need to hold the terrarium steady. The other can put in the things. Be sure to take turns doing this.



4. Add one plastic cupful of gravel to the terrarium.

5. Add two plastic cupfuls of soil on top of the gravel. Try not to muddy the sides of the terrarium as you work.



6. Divide the surface of the terrarium soil into four equal parts. (You can use your toothpick to draw the dividing lines in the soil.) Each part will hold something different. Since the soil will not stay divided permanently, use a marking pen to label the outside of the bottle with the words "leaf matter" and the names of all three seeds. This will help you remember where each type of seed was planted.



7. In three of the parts you will plant seeds. Plant all three kinds the same way:

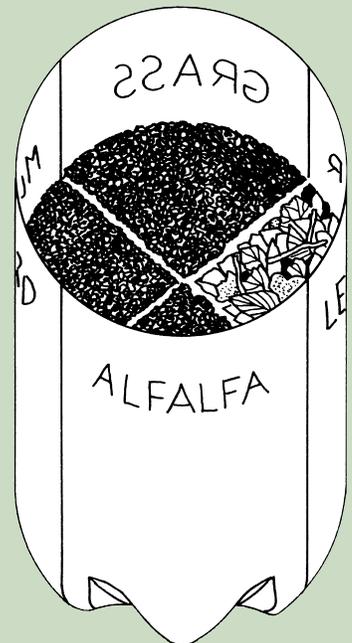
- First, count your alfalfa seeds, and record the number. Use the hand lens to observe the seeds. Sprinkle the seeds evenly on the soil's surface in their proper section. Use your toothpick or a pencil tip to spread them out if necessary. Press them down **gently** with your fingers. **Be careful not to plant too deeply.**
- When you have planted all the alfalfa seeds in their proper section, plant the grass and mustard seeds the same way in their own sections.

- Use your empty gravel cup to get one cup of water. With the water dropper, wet the soil thoroughly. Count how many droppers of water your terrarium will take before the water begins to drip out of the bottom. Record this number on **Record Sheet 2-A: Setting Up the Terrarium** or in your science notebook. Now replace the bottle cap to prevent leaks.
- Decide how many times a week you will water your terrarium. Remove the cap each time and replace it once the water drips through. Record the number of water drops each time you water your plants. The number of drops must be accurate. It is important to know how much liquid the soil in your terrarium will hold before it begins to leak. You will use this information later in the unit.

8. In the fourth section, add some dead plant material, like leaf matter and a new twig or two. A small rock would fit nicely, too. Use a hand lens to observe these materials.

9. On **Record Sheet 2-A** or in your science notebook, draw and label a picture of what you put in your terrarium. Include information on how many seeds you planted, what the dead plant material is and looks like, and what the rock looks like.

10. Plan to make daily observations of your terrarium and record this information in your science notebook. Remember to observe the sides of your terrarium for any changes that may be occurring in the soil.



Record Sheet 2-A

Name: _____

Date: _____

Setting Up the Terrarium

Use this table to record how you set up your terrarium today. Take time to observe each item closely with the hand lens.

Observe changes in your terrarium each day throughout this unit. Record these daily observations in your science notebook. You may want to use this table as a model. Be certain to include dates for each observation.

1. Fill in the table.

Terrarium Observations Table

	Amount and Size	Color/ Description	Other Observations (for example, texture and shape)
Soil (including gravel)			
Alfalfa Seed			
Grass Seed			
Mustard Seed			
Rock			
Twig			
Dead Leaves			
Water			

Record Sheet 2-A

Name: _____

Setting Up the Terrarium *(continued)*

2. In this circle, draw and label your terrarium as it looks from above.

