



# Terrific Terrariums!

A unit on the  
Interdependence of Living Things

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# Guiding / Essential Questions

What are examples of interdependence found in terrariums?

What kind of evidence can we gather about the interdependence among living things?

How can we analyze the evidence we gather?

# Living things have needs that must be met in order for them to survive.

Terrariums contain living plants and sometimes animals that depend on each other to survive. They recycle their moisture, so they rarely need to be watered, requiring almost no attention. Often, a closed terrarium can be left for a month or more between watering.

The terrarium is a tiny sample of what exists on the rest of the Earth. The enormous environment that we live in is made up of different ecosystems, all working together. Ecosystems are made up of a large variety of individual processes and complex systems in which animals, insects, and plants contribute to in their own ways.

Kids seem to respond very strongly to responsibility for taking care of living things. With this in mind, you can use terrariums to teach the life cycle of plants, interdependence, water cycle, etc.

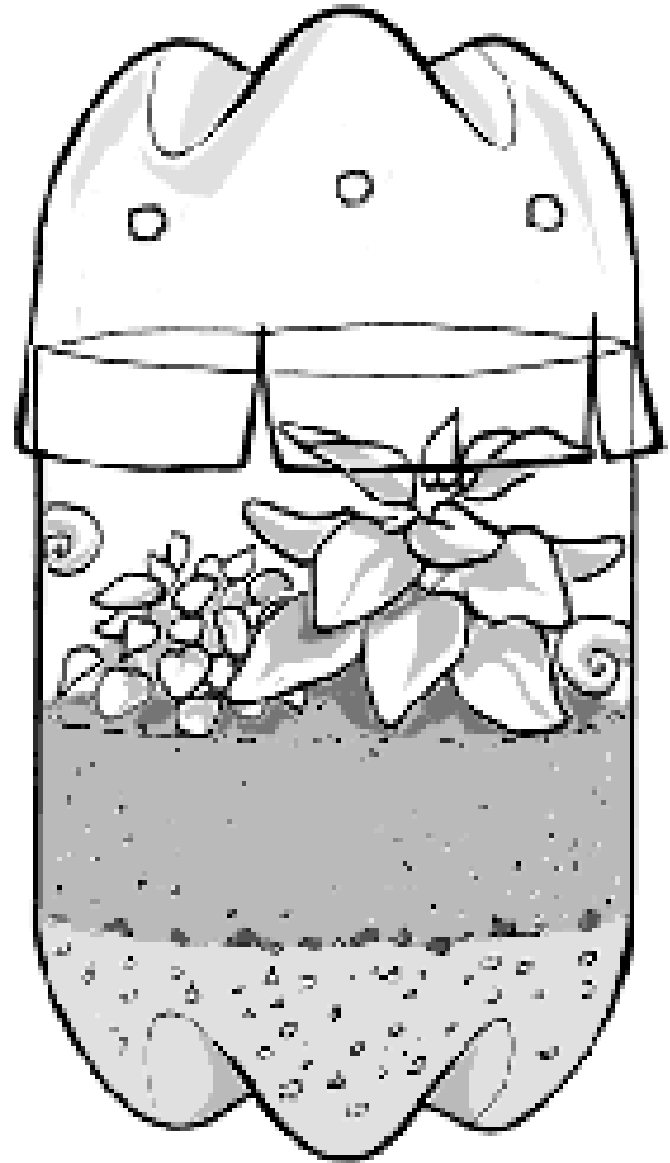
Interdependence  
the relationship  
between two or more  
living things where  
each one benefits  
from the other



Review what students have learned about plants. Discuss what plants need to live.

Discuss the interdependence of the plant, soil, water and caregiver for the terrarium. Talk about the cycle that is needed for growth.

Make a Classroom terrarium. Directions follow!



# How to Build a Terrarium

1. Find an appropriate Container. Glass jars, fish bowls and tanks, clear plastic bottles and food containers, and the like can all make fine terrariums. Just make sure you have enough room to reach your hand into your container for planting and maintenance.

You may choose to create one large terrarium as a class project (using a large fish tank perhaps) or you may opt to have students make smaller individual terrariums. Many teachers make terrariums by cutting off the tops of large, clear plastic soda bottles, leaving a container that is approximately 8 inches tall. After planting in the soda bottles, you can either tape the top back onto the soda bottle or just cover it tightly with plastic.

2. Clean the container using soapy water and rinse well. Dry completely.

3. Cover the bottom of the container with  $\frac{1}{2}$  inch (for small containers) to 1- $\frac{1}{2}$  inch (for large containers) of pea gravel for drainage. This mimics the bedrock found under our soils and allows access water to drain from the soil.

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 optional and is not needed if your terrarium maintains proper moisture levels.

4. Next fill the container to approximately one-third to one-half 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 problems with molds and fungi (small bags of potting soil are available at most garden centers). The moisture level of the soil when you put it into your terrarium is very important. 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.

5. Next add your plants. You need to look for plants that are small, slow-growing, and perform well in humid environments. These are just a few suggestions. Experiment with different plants. If they appear to grow too vigorously or respond poorly to the humidity, remove them and try something new.

6. In addition to plant material, you can also allow your students to 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.

7. After planting, attach the container lid or cover with plastic. Place the terrarium in a windowsill with indirect lighting or under grow lights. Do not place it in strong direct sunlight or water will evaporate too quickly and plants may scorch.

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 get misty with 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.

8. Check on your terrarium periodically. Prune 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 foliage.

Also check on the moisture levels as some water may be lost over time.

(from [kidsgardening.org](http://kidsgardening.org))



Name \_\_\_\_\_

## Making a Terrarium

We made a terrarium to investigate  
the i \_\_\_\_\_ of living things.

Our supplies:


Our Procedures:


What I think will happen over time:

--



Name \_\_\_\_\_

This is what our terrarium looks like on \_\_\_\_\_.

I can label the parts.

I will watch our terrarium for changes and interdependence!

Name \_\_\_\_\_

This is what our terrarium looks like on \_\_\_\_\_.  
I am watching our terrarium for changes and interdependence!

The changes I notice are \_\_\_\_\_

Name \_\_\_\_\_

Find the terrarium words in the Puzzle.



i	o	v	e	t	o	p	l	a	y	i	n	t	h	e	d
i	n	t	e	r	d	e	p	e	n	d	e	n	c	e	i
d	a	e	m	r	e	v	i	e	u	o	y	v	a	h	r
e	a	r	m	u	d	p	a	i	e	m	u	d	p	i	t
b	y	r	s	s	e	m	n	o	s	e	r	a	g	s	e
u	t	a	o	h	h	o	t	w	i	l	o	v	r	e	t
y	m	r	o	C	k	s	s	o	i	l	t	e	o	g	o
h	a	i	n	d	s	d	i	r	t	y	C	a	w	n	y
h	s	u	a	C	o	n	t	a	i	n	e	r	w	u	o
y	o	m	u	r	h	a	n	d	s	n	e	e	d	s	o
C	u	o	w	a	t	e	r	y	e	s	r	u	o	C	f
a	n	i	t	d	o	e	s	i	i	v	i	n	g	t	m

interdependence

terrarium

plants

soil

rocks

living water

container

grow

needs

