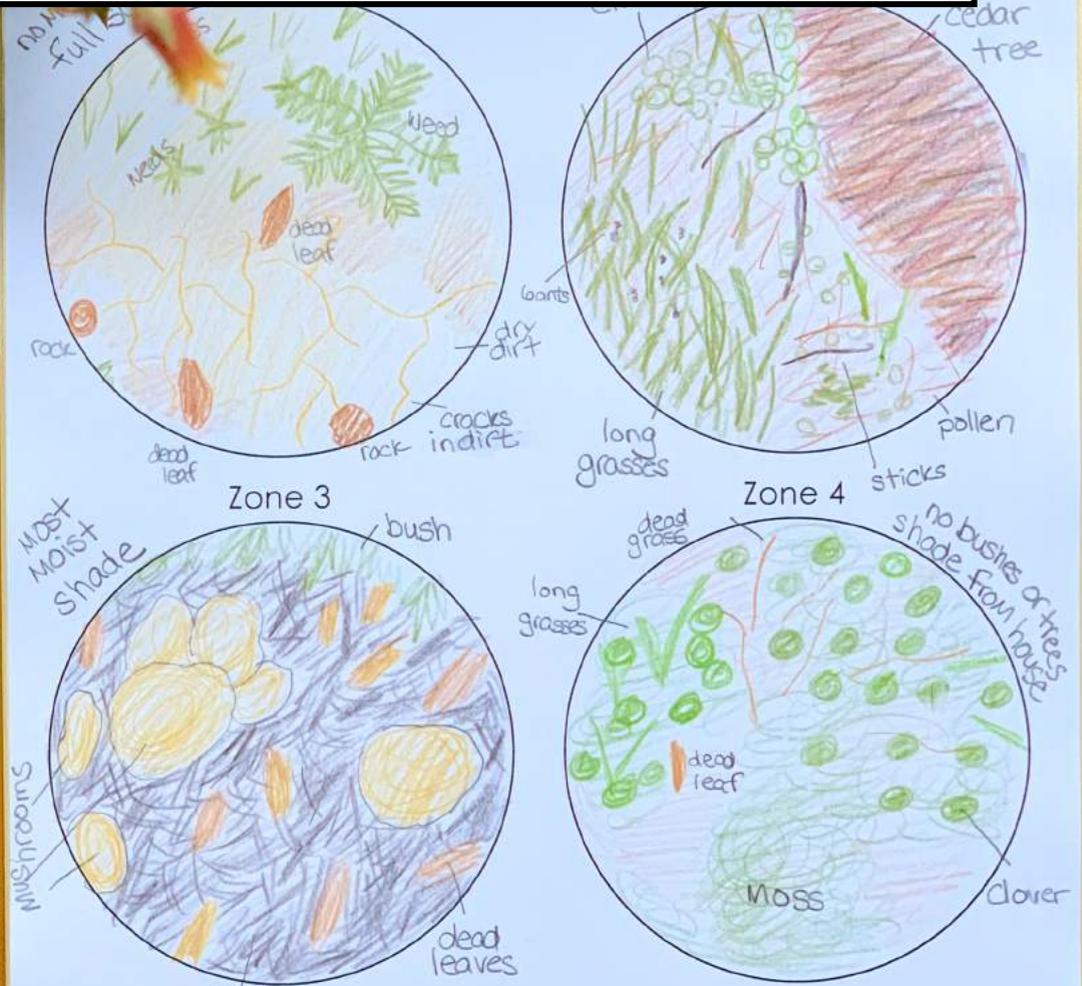
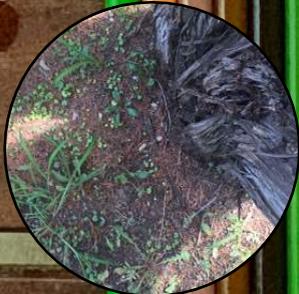
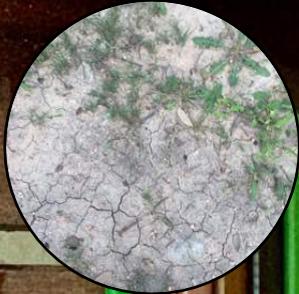


# FAMILY SCIENCE

## MICROECOSYSTEM OBSERVATIONS



Nonliving components of an ecosystem impact the life within the area. Zone 1 receives full sunlight and has dry, cracked soil. The only life within Zone 1 is short grass and 3 weeds. However, the other zones receive some or a lot of shade. More organisms can be found in zone 4.

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You may share the “Family Science: Ecosystem Observations” resource with families and students online or in print.

Source: [Free Elementary Science Activities for Educators and Families from The Science Penguin](#)

# MICROECOSYSTEM OBSERVATIONS

Topic: Ecosystems

Activity: Observe four microecosystems.

Location: Outside



## Materials

- Hula hoop or long piece of string
- Optional printable
- Colored pencils (optional)

## Preparation

- Think of 4 very different microsystems (small zones of living and nonliving things) in the outdoor area you will explore (e.g. mossy shaded area, tree, dirt with patches of grass, an ant hill on the sidewalk, or area with mulch and mushrooms).
- Gather materials.

## Overview

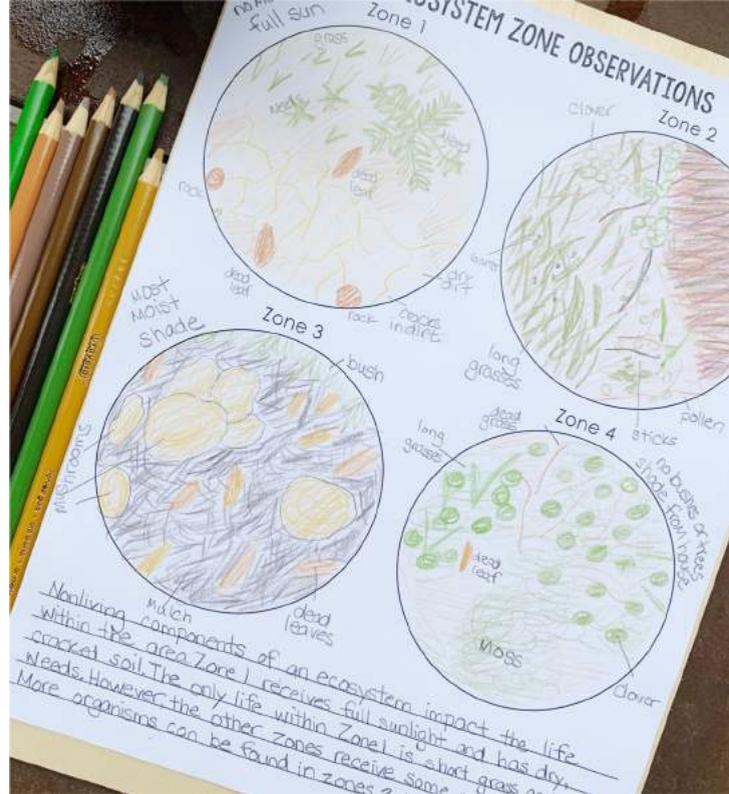
Day	Activity Overview	Time Needed
1	Complete microecosystem observations.	30 minutes
2	Discuss and write about your observations.	20 minutes
3	Choice Activity	20 minutes

## DAY 1

Let's answer the following questions: What are the living and nonliving components of nearby microecosystems? How do the microecosystems differ?

For 4 different locations, place a hula hoop or a long string in a circular shape on the ground. Draw a labeled diagram of the zone, and identify all of the living and nonliving components located within the zone (ants, grass, soil, rocks, water, trees, mushrooms, worms, mulch, butterflies, amphibians, shadows, moss, flowers, exposure to sunlight etc.)

1. Set up the first zone. Draw and label detailed observations of the zone.
2. Find a second zone that is different from the first. Draw and label detailed observations of the zone.
3. Repeat for a third zone.
4. Repeat for a fourth zone.



## DAY 2

Discuss the questions below. Then choose one to write about more in depth.

1. Explain how one living organism in each microecosystem interacts with both living and nonliving components within the zone. For example: if a zone had a worm in it, the worm eats decaying plants (living) and buries itself below the soil (nonliving).
2. How do nonliving components of each microecosystem impact life within the zone? Examples of nonliving components that impact the life in each zone may be: season, amount of moisture, amount of sunlight, type of soil, etc.
3. Propose different scenarios of changes that might occur to the different microecosystems. How might that change impact living things within the zone? Examples of changes: wildfire, flooding, building a sidewalk, cutting down a tree, etc.

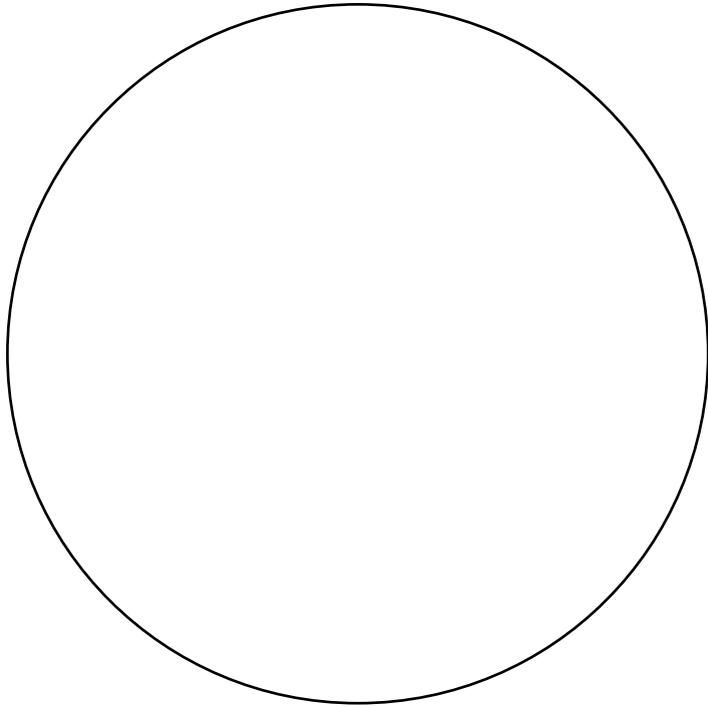
## DAY 3

Choose one of the following activities:

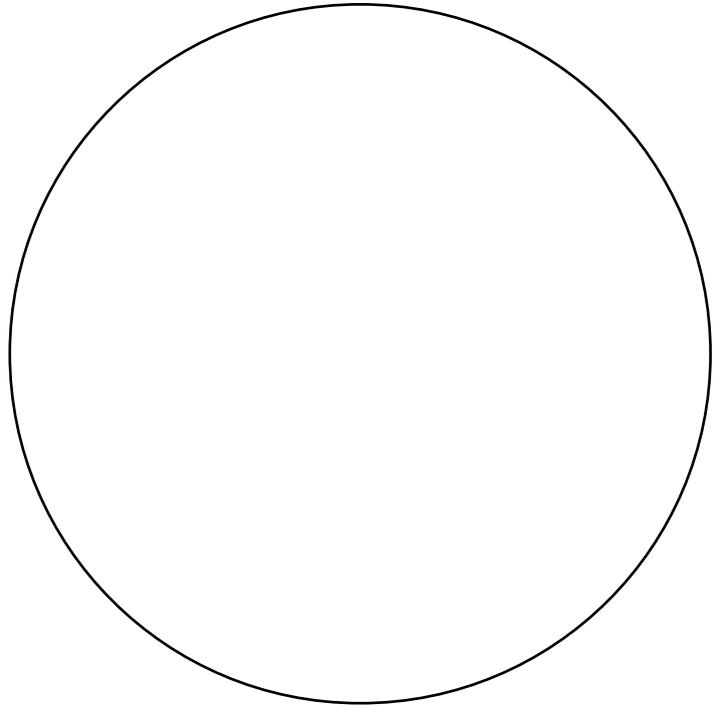
1. Watch the video and write about what you learned.  
<http://bit.ly/habitatvideoclip>
2. Complete the interactive activity and write about what you learned.  
<http://bit.ly/eointeractive>
3. Compare and contrast 2 microecosystems that you observed on Day 1.

# MICROECOSYSTEM ZONE OBSERVATIONS

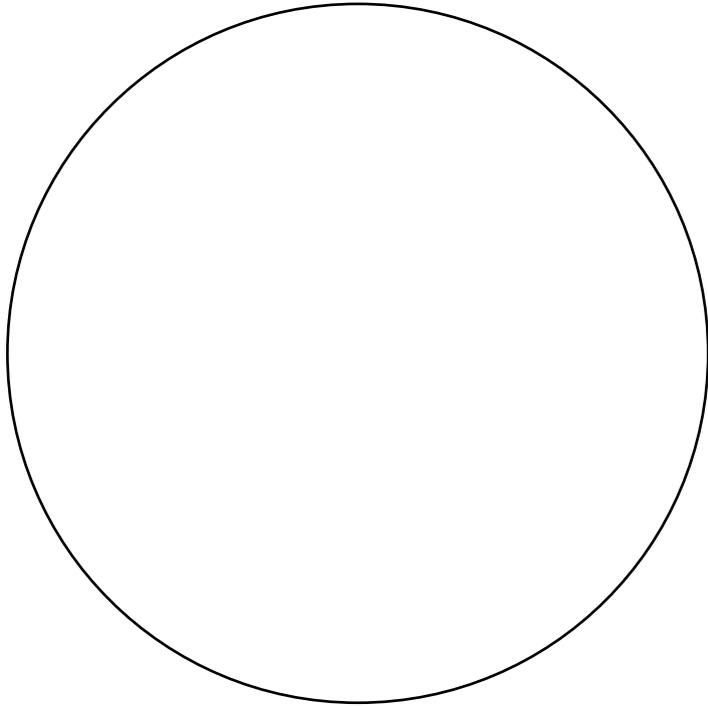
Zone 1



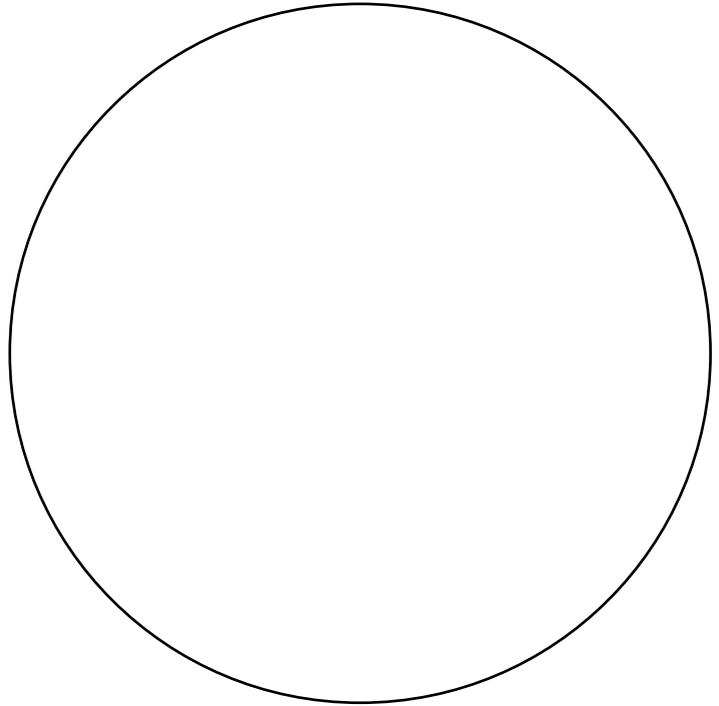
Zone 2



Zone 3



Zone 4



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