

**Urbana Park District
Anita Purves Nature Center**

SCHOOL TOUR: **LITTLE CRITTERS**

TEACHER'S GUIDE

Grades: **1st & 2nd**

Program Length: **1.5 Hours**

Focus Concept: *Tiny animals (macroinvertebrates) live everywhere and play important roles in the ecosystem.*

OBJECTIVES Students will:

1. Investigate two ecosystems and list at least two animals that live in each.
2. List five things that animals need to survive; soil/food, water, air/space, shelter & light.
3. Determine the role of the little critters in their ecosystems

School Tour Teacher's Guide

INTRODUCTION

Children sometimes include only mammals in their idea of animals. The Little Critters programs is designed to help students discover the multitude of small animal life in two different habitats – soil and the pond. Students will also be introduced to the four components (soil, water, air, sunlight) that all living things need to survive.

Common Core Standards Correlated

Area	Strand	Standard	Standard Numbers
English Language Arts	Speaking/Listening	Comprehension & Collaboration	1.SL.1,3,6 2.SL.1,3,6
English Language Arts	Language	Conventions of Standard English	1.L.1 2.L.1

Next Generation Science Standards Correlated

Physical Science	Life Science	Earth & Space Science
	1-LS1-1, 2-LS4-1	

Illinois Learning Standards Correlated

Learning Area	Goal	Standard	Benchmark
Science	11	A	1b
	12	A	1b
		B	1a, 1b
	13	A	1a
Social Science	17	B	1b
		C	1a

WORD BANK: The following words will be used by the educators during the program.

Adaptation	Humus	Roots
Air	Oxygen	Soil
Breathe	Predator	Sunlight
Decay	Prey	Water
Decompose	Requirements	

SUPPLEMENTAL ACTIVITIES

The activities listed below are intended to provide ideas to be used before and after the field trip. Some are more appropriate for older or younger students. Feel free to adapt the activities to match your students' ability level.

1. **What We Find When We Look Under Rocks** (see reference list): Read this book to the students. Have them think about and discuss any small creatures that they may have seen or found outside under rocks, logs, after a rain, in ponds, etc.
2. **Micro-Hike:** Using hand lenses, take a "micro-hike". Practice looking at things up close. What is the smallest animal you can find?
3. **Worm Hunt:** After a rain, look for worms and long, squiggly "worm tracks" in dried mud puddles. Explore the area around your school for other places where small animals might live.
4. **Squirmy Science Loan Box:** The Nature Center has an Educational Loan Box on worms and worm bin composting. It comes complete with a worm bin, activity guide, books, and supplemental items. Call 384-4062 for further information.
5. **Create your own worm farm:** Worms may be obtained at bait shops and or the sports departments of stores such as Wal-Mart. Fill an old aquarium, plastic box, or large glass jar with soil to within 4-5 inches from the top. Let the students put the earthworms into the farm and watch them burrow down into the soil. Completely protect them from light with cloth or black construction paper, or put the container in a dark place. This should accelerate burrowing. Keep covered when you are not watching the worms. Give them fresh food (lettuce, cereal, corn meal) each day. Keep the soil moist but do not saturate it as the worms will drown. *Worms Eat Our Garbage* (see reference list) has many suggestions for studying worms.
6. **Art Projects:** Have students create their own little critters out of egg cartons, cornhusks, paper, clay, pipe cleaners, or any other materials you can think of. Encourage them to use their imaginations while emphasizing certain physical characteristics of each animal. For example, making an earthworm out of an egg carton may emphasize that its body is segmented while making it out of clay would show that it is smooth to the touch. Or experiment with string art – have students create spider webs by gluing string onto construction paper in a web design.
7. **Classroom aquarium:** Try to find a local stream or pond from which to collect water and some of the organisms that live there. Observe the animals and keep a record of your observations. (Please note that collecting organisms from Park District natural areas such as Busey Woods is not allowed.)

8. **Snail Observation:** Fill two mayonnaise jars with water and let stand overnight. Add one cup of sand, three pieces of Elodea (a water plant available at pet stores) and a snail to each jar. Screw the lid on one jar and place both jars in indirect sunlight. Discuss the things in the jars and their relationship to each other. Leave the jars alone and observe daily. Discuss the possible reasons for any changes.
9. **Writing Stories:** After the field trip, have each student write a story, poem, or drama. For example, "If I were a... (earthworm, snail, crayfish), I would live..., eat..., spend most of my time..., survive the winter by..., and I would feel..."
10. **Sea Monkeys:** Purchase a couple packages of "Sea Monkeys" (brine shrimp) to grow in the classroom. They are similar to the fairy shrimp found in Busey Woods. Students can observe their growth and feed them. (Save the package wrapping and compare the picture of the "sea monkey" with the real thing. Was the picture accurate?)

RESOURCES

Amos, W. H. *The Life of the Pond*. McGraw-Hill, New York. 1967

Appelhof, Mary. *Worms Eat Our Garbage: Classroom Activities for a Better Environment*. Flower Press. 1993

Back, C. and B. Watts. *Tadpole and Frogs*. Silver Burdett. 1984

Behnke, Frances. *What We Find When We Look Under Rocks*. McGraw-Hill. 1971

Fleming, Denise. *In the Small, Small Pond*. Henry Holt & Co. 1993

George, Lindsay Barrett. *Around the Pond: Who's Been Here*. Greenwillow Books. 1996

Glaser, Linda. *Wonderful Worms*. Millbrook Press. 1992

Hunter, Anne. *What's Under the Log?* Houghton Mifflin. 1999

Pfeffer, Wendy. *Wiggling Worms at Work: Let's-Read-and-Find Out Science*. HarperCollins. 2004

Reid, George. *Pond Life: A Golden Guide*. St. Martin's Press. 2001

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