

Micro-World, Macro-WOW!

Grades K-4 (Warm months only.)

Nutshell

Students will search out and examine the small creatures and their roles in nature's micro-world. They will explore the basic needs for survival of micro-organisms and compare those needs to those of larger organisms.

Objectives

Upon completion of this activity, students will be able to:

- Describe what life is like for living things one inch tall.
- List a living thing's five needs for life and compare how large and small creatures fill those needs.
- Explain how they would feel if they were only one inch tall.

Micro-World, Macro-WOW Pre-visit Activities

The following materials are aids to help prepare your students for their visit to the Central Wisconsin Environmental Station. The vocabulary list contains terms and concepts your students will encounter in their visit. Please modify the definitions as needed. The activities listed below are merely options – it is not necessary to do them all or follow any particular order. Keep in mind that your students' learning experiences at CWES will be enhanced if they are familiar with these concepts and terms prior to the on-site activities.

Activity #1

Read *I Wish I Were A Butterfly*, by James Howe, to your students. Have students act out the story or create a puppet show to go along with it.

(Howe, James. 1987. *I Wish I Were a Butterfly*. San Diego, CA: Gulliver Books)

With older students, read aloud the poem “Speck of Dust”, by Dorris Smith. Have the students illustrate the poem.

A third option is to read students the book Gulliver's Travels. Discuss what it might be like to be a Lilliputian when Gulliver arrived. Would it be hard to have something that big in your micro-world? What was it like for Gulliver? Have students pick a Lilliputian character in the book and write a story about what it was like for that person.

(Swift, Jonathan. 1930. Gulliver's Travels. Chicago: Rand, McNally & Company)

Activity #2

Have the students write a story about what they think it would be like to be a small “stow-away” in their classroom. For example, they could write about their perspective as a mouse, fly, ant, etc. How would things be different if they were that size? What would a typical school day be like? Would the classroom look the same? Have them illustrate the story with drawings from the perspective of that animal.

Micro-World, Macro-WOW Pre-visit Activities

Speck of Dust by Dorris Smith.

It all began
When in the grade school room
The teacher told us
What an atom was.

She said
That if you had a penny
You could put
A million atoms
On the eye of Lincoln.

She held
A pin up
By its head
And said "If atoms could be counted,
Then a hundred thousand atoms could be
balanced on the point."

We lived in a basement
Which we did
Till I was twelve, and I remember
Coming home from school
That night
And lying on the floor
Below the small high window
On the wall.
The sun shone mellow
In the afternoon
And cast a ray
Across the room
Above my head.

I lay and watched
The dust descend
And dance about
Within the ray.
A million specks of dust.

I followed one... one speck
It floated
undisturbed
by weight.
I wondered
On the tons of atoms
In the dust around the moon.

I wondered, too, if worlds exist
On the atoms
In the dust.
And then I ran outside
And climbed the hill
Behind the barn.

I looked out over house and orchard,
Stretched my gaze
Across the valley,
From the heavy granited mountains
To the lake.

I watched the sun drop over
Distance hills
Until I felt
The roundness
Of the earth itself.

I lay
Upon the hill
And looked into the sky;
Then pressed to earth
With back and shoulders
wondered
if the globe
that swirled with me
weren't in someone else's
basement
just like a speck of floating dust.

Excerpted from Stokes, David and
Sarah. *Environmental Awareness and
Celebration*. Schlitz Audubon Society.
N.d.

Micro-World, Macro-WOW Post-visit Activities

A visit to the Central Wisconsin Environmental Station can be a school-year highlight for both students and their educators. We feel the knowledge and concepts gained during a Station visit apply outside the Station as well. The following activities will allow students to expand their knowledge and help them incorporate those lessons into their everyday life. Feel free to pick from and modify the activities as best suits your group.

Activity #1

Have students choose a small animal or plant to research. Explain to the students that you are going to make a class book about the micro-world. Have each student draw a picture and write a short story about their critter's life. What do they look like? Where do they live? What do they eat? Does anything eat them? Compile the pages into a book that you can display in your classroom.

Activity #2

Use butcher block paper to create two big posters. At the top of one write "It would be nice to be small because..." and on the other write "It would be hard to be small because..." Have your class brainstorm advantages and disadvantages to being small and write them on the posters. Then talk about them. Do they see more advantages or disadvantages? Are there advantages and disadvantages to being big? Have students create illustrations to go along with your lists.

Activity #3

Have students draw a picture of their room (or the classroom) as seen from the eyes of a "dust bunny." Encourage each student to share their drawing with the class.

Activity #4

Ask the students to each bring in one tiny thing from home. It could be a tiny toy, a miniature model, a small leaf, rock, or pine cone, etc. Have each student share their tiny thing with the rest of the class and describe what it would be like if that thing were suddenly able to talk to us. What might it say?

Micro-World, Macro-WOW Resources

Teacher Resources

Kramer, Jack. 1978. *The Picture Encyclopedia of Small Plants*. New York: Stein and Day. 192 pp.

Youth Literature

Dorros, Arthur. 1987. *Ant Cities*. New York: Harper Trophy. (Grades pre-K to 4)

Goor, Ron and Nancy. 1990. *Insect Metamorphosis: From Egg to Adult*. New York: Atheneum. (Grades 4-6)

Howe, James. 1987. *I Wish I Were a Butterfly*. San Diego, CA: Gulliver Books.

Johnson, Hannah Lyons. n.d. *Hello, Small Sparrow*. New York: Lothrop, Lee and Shepard Company.

McDonald, Megan. 1990. *Is This a House for Hermit Crab?* New York: Orchard Books. (Grades pre-K to 4)

Parsons, Alexandra. 1990. *Amazing Spiders*. New York: Alfred Knopf, Inc. (Grades pre-K to 4)

Ryder, Joanne. 1987. *Chipmunk Song*. New York: Lodestar Books. (Grades pre-K to 4)

Swift, Jonathan. 1930. Gulliver's Travels. Chicago: Rand, McNally & Company