December 2001

SeaWorld/Busch Gardens

Nature's Recyclers

4-8 Classroom Activities

Compost Critter Hunt

OBJECTIVE

The student will identify macro organisms that help decompose and recycle nutrients.

ACTION

1. Ask students to name or describe bugs or other invertebrates they have seen on the school grounds, such as earthworms, pill bugs, beetles, spiders, or others. Review the terms diversity and invertebrates.
2. As a class, construct a data table of schoolyard habitats where leaf litter collects. Habitats may include areas under a tree, under hedges, garden bed areas, and patches of dead grass.
3. Divide students into groups containing three to five students, and assign each group one of the leaf-litter habitats. Ask the class which habitat they think will be the most diverse and which will be the least. Distribute disposable cups, pencils, and paper to each group. Lead the class to the schoolyard to sample habitats.
4. Ask groups to first walk the yard to find the site that they feel fits their assigned habitat. Once a site is chosen, students should scoop up some leaf litter and dirt in the disposable cup. After all groups have sampled their area, gather as a class at a central work location on the schoolyard (at picnic benches, under covered area, etc).
5. Instruct students to carefully sort through their samples by spreading the collected material on one of the white papers. On the other white paper, have students identify and record the number of different organisms they find. After sampling, students should return their litter samples and animals to their assigned habitats.
8. Return to the classroom to discuss findings and create a whole-class data table with all the various habitats listed on it. Use the following questions to prompt discussions after groups have written their information on the data table.
   Which habitat was the most diverse?
   Is a habitat with the greatest number of organisms necessarily the most diverse?
   Which habitat was the least diverse?
   How did the results compare to the class predictions?
   Why would these animals live in leaf litter?

DEEPER DEPTHS

Repeat the habitat survey outside the schoolyard. Choose such ecosystems as river beds or lake shorelines, open field or meadow areas, or forested or shrub-covered ground. Define and survey habitats within these areas. For example for a river bed, define areas by the distance from water; water's edge, one foot away, two feet away, etc.

Surveys can include marine or freshwater habitats by replacing the leaf litter
criteria with kelp or shore plants. Also redefine habitat animals: kelp flies, rock slaters (like pill bugs), various worms, crabs, mayflies, stoneflies, and caddisfly larvae common inhabitants of these environments.

MATERIALS

Per student group:

- pencils
- disposable cups
- two sheets white paper
- copy of Compost Critter Hunt Funsheet

Per classroom:

- a chalkboard, overhead, dry erase board, or other surface to write data table

When selecting habitats with leaf litter, consider the presence of water too. Animals living next to a rain gutter might not be found in areas without a water source.

Compost Critter Hunt

Question: Which habitat will be the most diverse?

Hypothesis: We believe that the _____ will be the most diverse because _____
_____

Experiment and Data Gathering:

habitat areas	under bush	_____	_____	_____
pillbugs				
millipedes				
spiders				
earthworms				
beetles				
ants				
other				
Total				

Conclusions (write answers on back if you need more room):

1. Which habitat was the most diverse?
2. Is a habitat with the greatest number of organisms necessarily the most diverse?
3. Which habitat was the least diverse?
4. How did the actual results compare to the class predictions?
5. Why would these animals live in leaf litter?