OVERVIEW

The youngsters discover which kinds of man-made litter provide animals with food or shelter. The youngsters are then asked to make a value judgement about litter.

BACKGROUND

Discarded artifacts of our affluent society decorate our environment. Cans and bottles adorn roadsides, while paper bags and newspapers flutter on fences and shrubs. Familiar sights around every building include the inevitable wrapper, empty package, plastic—this, and metal—that. This fugitive refuse, set free by someone's thoughtlessness, has become part of the ecosystem. Many consider this refuse to be pollution. But is this man-made litter really pollution? Many small animals use cans and crumpled paper for homes.

Often, a piece of paper provides a meal for a cluster of isopods or a passing slug. Making these discoveries helps children realize that there is often more to litter than meets the eye.

CHALLENGE: FIND OUT HOW ANIMALS USE MAN-MADE LITTER IN THEIR ENVIRONMENT.
LOOKING AT LITTER

In this activity, the youngsters find out how organisms use litter in the site. Using the evidence they uncover, the youngsters discuss the pros and cons of having litter in the environment. The youngsters pick up litter during the course of the investigation, but the decision to return it to the environment or dispose of it is left up to the participants. The activity itself neither encourages nor discourages littering. No matter which decision your youngsters make, they will probably be surprised by the numbers and variety of animals living in their litter collection.

MATERIALS

For each team of two to four:
2 large grocery bags* (one labeled “With,” the other labeled “Without”)

For the group:
6–8 white-bottomed containers* or milk-carton halves
6–8 magnifiers* or bug boxes*
1 marking pen*
OBIS Lawn Guide (optional)
* Available from Delta Education.

PREPARATION

Group Size. The activity works best with eight to twenty youngsters.

Time. Plan on thirty to fifty minutes for this activity.

Site. Select a site that contains man-made litter (the more the better), such as a vacant lot or a field. Make sure there are insects or other small animals living in or underneath some of the litter. Old papers or cardboard usually harbor animals. Look for gnawed edges or holes, spider webs, cocoons, eggs, etc. In general, the longer the litter has been in the site, the more animals you are likely to find. Mark a few pieces of litter that are particularly rich in animal life. Try not to disturb the animals; you don’t want to scare them away before your group has a chance to see them.

Labeling the Bags. Mark one bag “With” and one bag “Without” for each team.

ACTION

1. Draw attention to the litter by asking if anyone noticed it. Ask the participants if they think the organisms (plants and animals) living in the environment use the litter in any way.
2. Ask the youngsters to examine the pieces of litter you marked earlier. The youngsters should discover animals or plants living in, on, or underneath the litter. Explain to the youngsters that one way to find out how litter affects organisms is to pick the litter up and examine the animals and plants that live in, on, or underneath it.
3. Define the boundaries of the area to be “de-littered,” and divide the group into teams of two to four youngsters. Ask the teams to collect the litter from the site and to examine each piece for animals or plants. If the youngsters find animals or plants living in, on, or underneath a piece of litter, they should place it and its animals into the paper bag marked “With.” If the youngsters don’t find any organisms, they should place the piece of litter in the “Without” bag. Give each team two bags, and send the teams out to collect all the litter in the site.

4. After the participants have found and sorted the litter, ask them to share their discoveries.

5. Ask the group what plants and animals they found living in the litter. Encourage the kids to shake the animals from each piece of “With” litter into the white-bottomed containers and to use magnifiers to examine the animals. Allow plenty of time for this part of the activity. Encourage the youngsters to look closely at the animals and to share their discoveries with each other.

6. After completing the observations, make sure the youngsters return all the animals to the environment.

GIVE IT A “LITTER” THOUGHT

1. Look over the “With” and “Without” litter. What kinds of litter do plants and animals use? What kinds of materials are not used by plants and animals? Do you think the materials that plants and animals do not use can be recycled and used again by humans?

2. Mini-Habitat. Each litter item and its immediate surroundings make up a mini-habitat. Ask the youngsters to describe why they think certain litter is used by some organisms.

3. Look through the “With” litter for evidence that animals have been eating it. (This is part of the process of natural recycling.) Which kinds of litter are being recycled (eaten) and which are not? Do you think any changes should be made in the materials used for disposable packaging and beverage containers? What kinds of changes?
4. Consider aesthetics. Does the site look better with or without the litter?
5. What might happen to the animals you found in the litter if you removed the litter? Will the animals find natural homes? (See "Branching Out.")
6. What effect does litter have on plants? Were plants growing in the litter? Under the litter?

A CONTROVERSY: RETURN IT OR TRASH IT?

You have a collection of litter: some that supports life and some that does not. Ask the group what should be done with the litter. If everyone agrees, then either return the litter to the site, or place it in a trash can. However, if some feel inclined to return some of the litter, and others want to dispose of it, divide the group into teams representing each side of the controversy. Ask the "return it" faction to prepare a list of reasons why the litter should be returned and the "trash it" faction to prepare a list of reasons why it should be trashed. Allow ten minutes for this preparation. Then ask a spokesperson for each faction to state its point of view, referring to the list of reasons. Encourage the teams to rebut at the end of each presentation. Then work out a solution to the problem, and act on the decision.

BRANCHING OUT

1. Find out where else your litter animals live besides in the litter. Look for the animals in an unlittered site. Release some litter organisms and see where they go.
2. Repeat the activity in a different environment: seashore, farm, city park, or trail. Do you find the same kinds of animals in these sites using litter for homes?
3. Do you find more animals in litter when the weather is cool and moist or warm and dry? If your site is dry, moisten a littered section two days before you compare it with a dry area.
4. Take the litter you have collected to a recycling center to find out what can be recycled.