Litter Walk

Concept
Solid waste can be classified as natural or human-made.

Objective
Students will identify natural and human-made objects while outside and will classify them as litter or not litter.

Method
The class will collect and classify local litter.

Materials
Brown lunch bags, local litter, used cardboard for displays or posters, ten natural objects and ten human-made objects

Subjects
Science, Language Arts

Skills
Collaborating, communicating solutions, investigating, problem solving

Time
One class period

Vocabulary
Natural, human-made, litter, waste

Resources
Lisa S. French, The Terrible Trash Trail: Eco-Pig Stops Pollution; Charlotte Guilain, Cleaning up Litter (Help the Environment); Ann Zane Shanks, About Garbage and Stuff; Fulvio Testa, Too Much Garbage; Dare Wright, Edith and Little Bear Lend a Hand; Michelle Lord, Nature Recycles, How About You

3R's of the Common Core
Parallel Activities
7-8, Throwing it All Away
7-8, School Trash Analysis
Information
Components of Waste Stream
Resources
General
Environmental Education and Educational Resources

What is in Our Solid Waste Stream?

Background
When waste is disposed of improperly, it is called litter. Litter can be human-made objects such as plastic bags and paper cups. Litter can also be natural materials such as apple cores, fallen leaves or dead flowers. Whether an object is natural or human-made will have an effect on what we should do with it. Natural litter can include seed pods, leaves and torn branches all of which nourish and replenish natural systems if they are composted or left in the forest. Human-made litter needs to be sorted and disposed of in special ways. If done properly, this can save some of the natural resources that were used to make it.

Leading Question
What is the difference between human-made and natural litter?

Procedure
1. Write the words natural and human-made on the board. Ask each student to look around the room, name an object and tell whether it is natural or human-made.
2. Sorting and Classifying:
   • Assemble at least ten natural objects (e.g.: shell, pine cone, seed, tree branch or leaves, stone, moss, apple, bird’s nest, piece of fur or hair, sand, earthworm, mulch, pine needles, antler, tooth, flower, egg) and ten human-made objects (e.g.: tape, key, plastic toy, shoe, sweater, pencil, envelope, can, glass bottle, candy wrapper, jewelry, button, clothes pin, crayon, stapler, ballpoint pen, desk calendar, spoon.)
   • Place the assortment on a table where all the students can see them easily. Be sure to include an approximately equal number of both human-made and natural objects.
   • Hold up each object and ask the students to say its name. Ask a few students to group the objects on the table by various characteristics such as color, size, hardness and softness, length.
   • Now ask students what natural and human-made mean. Explain that natural means all things made by nature that people or machines cannot make. Natural objects include: all living things, plants and animals and all non-living things such as rocks, dirt and sand. Human-made means anything in our world that people or machines do make.
   • Have students arrange the objects on the table into these two groups—natural objects and human-made objects.
3. Have the students make litter bags from brown lunch bags. They can decorate them for the litter walk and reuse them each time they collect litter or they can be recycled after the activity.

4. Take the class on a short walk around the school yard. Ask the students to name objects they see on the ground, sidewalk, street or roadside and decide if they are natural or human-made. Where did each item come from? Does it belong on the ground? If not, where? If it is human-made, can it be recycled? Explain that when any object (human-made or natural) has been discarded improperly, it is called litter.

5. Pair students and have one student in each pair pick up an example of human-made litter and one pick up a sample of natural litter. Bring the class back and make posters or a display of natural and human-made litter from the collections of the class walk.

6. Ask the students to think of ways nature uses natural litter objects. (e.g.: Leaves replenish the soil, pine cones can be food for birds or squirrels and spread seeds.) How do people use the natural objects? Write and/or draw a picture of how people use natural objects. For older students write a ‘how to use’ recipe, informative text and/or create a poem about objects use in nature. (People can use natural items to make things and to decorate their homes, or add them to a compost pile for their gardens.) Think of a project (e.g.: compost, natural sculpture, build fairy houses) for the class to do with some of the natural litter.

Evaluation
What is litter? What kinds of litter are there? How should we dispose of the following kinds of litter? (list of examples)

Classroom Activities
A. Litter Box: Ask the custodian for a discarded cardboard box. Decorate it with pictures of nature and label it nature’s litter. Label the trash can and recycle bin human-made litter. Ask the students to empty their litter bag contents into the appropriate container. Let them know that it is important to keep natural litter out of the trash because it is still useful to the earth. Make a trip out to the woods or somewhere where the natural litter can be disposed of where it will be of use to the earth and won’t be litter.

B. Use the collected natural litter to begin a class compost. See 4-6, III.C. I, Mini Compost.

C. Make a litter garden to test decomposition rates of different litter. See K-3, II.A.3, Litter Garden.

D. Pictures, Book, or Game
   - Ask students to draw two pictures - one with four human-made objects in it and the other with four natural objects in it.
   - Introduce a book such as Look Out for Litter by Lisa Bullard (“Earth has a litter problem. How can you help? Join Trina to learn how little pieces of trash can become big problems. Find out safe ways to take care of litter. Do your part to be a planet protector!”)
• Have children play the Dolphin game online at http://www.aplikids.org/dolphingame.html. The website describes it as a “short, interactive experience (designed for elementary school students) provides an overview of how our actions can affect animals in the ocean. It follows the story of a dolphin who has become sick from all of the litter that ends up in his home. It shows what students can do to clean up and prevent litter from polluting the oceans and keep the animals in the ocean happy and healthy.”

E. More Classifying
Put a sign reading Natural Objects on one desk or table and a sign reading Human-made Objects on another. Ask each of five students to find a natural object in the classroom and place it on the Natural Objects desk. Do the same for the Human-made Objects desk. Discuss the characteristics of each group of objects. (For example, plants are one important type of natural object and plants are often green in color.) Have the students use their senses of touch, smell, sight and hearing, to help describe the characteristics of the objects. Help the class find any misplaced objects and group them correctly. Name some object not in the classroom. Ask a student to tell whether it is natural or human-made. Have students name other objects outside the classroom and ask other individuals to correctly classify their examples.

F. Feeling Game
Make a surprise box by cutting a fist-size hole in the side of a covered corrugated box. Decorate the outside of the box to increase the student’s interest in it. Put several small natural and human-made items in the box. Change the items every few days. Ask the students to reach inside the box with their eyes closed. Tell them to pull out three natural objects and three human-made objects using their senses to identify them.