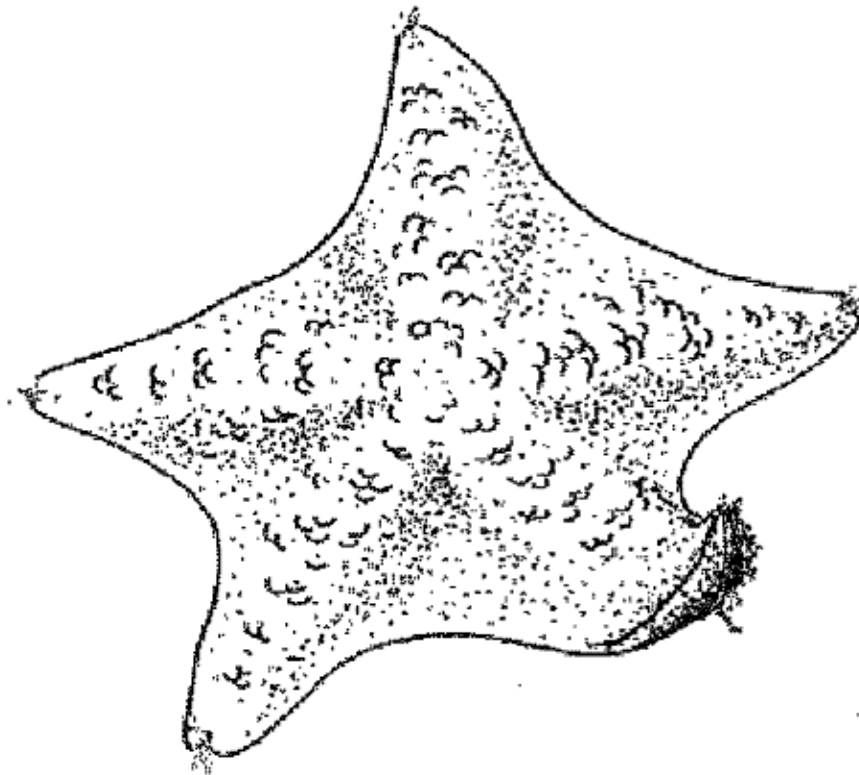


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# ADOPT-A- PLAYGROUND



## For the Teacher

### **Discipline**

People and the Sea

### **Theme**

Systems and Interactions

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**Key Concept**

Litter may harm land animals or be carried by the wind to the seashore where it can harm the animals living there.

**Synopsis**

Students investigate the effects of litter on animals living at the seashore and then conduct a clean-up of their playground. They sort and classify the material they find and make pollution posters to display.

**Science Process Skills**

observing, communicating, comparing, categorizing

**Social Skills**

cooperating, attentive listening, sharing

**Vocabulary**

recycle, litter, entanglement, decompose

## Materials

**For INTO the activities**

- drawing paper and marking pens or crayons for each student
- large piece of butcher paper for the class drawing

**For THROUGH the activities**

Material for the “wastebasket”

- all kinds of paper including newspaper, white (some should be written on one side only), colored and glossy
- food items such as apple cores or orange peels
- aluminum cans
- recyclable glass bottle and jar
- cardboard
- Styrofoam cups or packaging popcorn
- plastic and paper grocery bags
- inexpensive plastic toy or comb
- recyclable lunch containers such as a thermos, reusable plastic (such as Tupperware), and a lunch box
- bags to collect litter

**For BEYOND the activities**

- large sheets of drawing paper or poster board and marking pens or crayons for the poster contest
- poster or tag board and glue for the weird litter collage

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## Introduction

**R**ocky seashores and sandy beaches are often the final stop for a heavy load of litter and garbage thrown from boats and carried by the currents until it washes up on the shore. More litter is left by visitors and blown from nearby cities or garbage dumps. Most of the debris found at the seashore changes little from when it is first dumped because it decomposes slowly—cans, bottles, Styrofoam and plastics. Many of these items are recyclable.

Each person in the United States generates about five pounds of garbage every day. We are rapidly running out of room to put all that garbage. In one year, Americans throw away over one million tons of aluminum cans and foil, 11 million tons of glass bottles and jars, over 4 1/2 million tons of white paper, and almost 10 million tons of newspaper. All that can be recycled and used again, instead of ending up in the garbage heap. Recycling aluminum saves 95% of the energy it would take to make new aluminum from raw materials.

The most dangerous debris at the seashore are plastics. Every year hundreds of thousands of tons of plastic fishing lines, nets, and packaging are dumped into the ocean where they drift around for years, not sinking or decomposing. Sea turtles mistake plastic bags for their favorite food, jellyfish. Gulls are ensnared in 6-pack rings. Plastic straps from shipping containers wraps around the mouth or neck of seals and sea lions; fishing line and nets entangle many marine animals including birds, whales, dolphins, sharks, turtles, and fish.

Plastics dumped at sea eventually wash ashore onto beaches where they endanger the rocky seashore and sandy beach animals. In turn, plastics left or washed on shore are eventually carried by wind and tide back into the ocean. Collecting trash off beaches is our only opportunity to break this unending cycle of death caused by plastic pollution. Plastics may kill as many marine animals as oil or toxic pollution. Because it is not as easy or economical to recycle plastics, consumers should exercise their choice in the market and purchase only those items with a minimum of plastic packaging.

People can do a great deal to prevent trash from ending up at the seashore. We should be careful while we are at the seashore to take all our garbage home with us. We can make a big difference by participating in Beach Cleanups. Closer to home, we all need to keep our yards, schools, and neighborhoods free from the litter that might harm the animals nearby, or make its way to the seashore and harm the animals there.

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# INTO

## the Activities

### Our Schoolyard

Have students draw a picture of their schoolyard from memory. Display the pictures around the room and have the students do a gallery walk as they look at the pictures and talk quietly to a partner about what they see. Lead a class brainstorm about what the students think should be shown in a picture of the schoolyard. As the students make suggestions draw them on a large sheet of butcher paper.

Go on a tour of the schoolyard. Point out the elements in the schoolyard represented in the class drawing. Ask the students to look for anything left out of the drawing that they want to add. Specifically, point out any litter you find. You might also walk through the neighborhood to look for litter on the sidewalks.

### My Buddy Says

See Teaching Strategies section for how to present this activity.

#### Questions

- Did you see any litter? What kind of litter did you see?
- How do you think the litter got there?
- How does it make you feel when you see litter?
- Do you think the litter could harm any plants or animals? How?
- What could we do to clean up the litter?

# THROUGH

## the Activities

### Mini-discussion

Use the **Introduction** information to lead a discussion about how the litter on the rocky seashore and beach may harm the animals living there. Also discuss how litter gets to the beach (people leave it, wind blows it there, or currents carry it).

### Our Wastebasket

Prepare a wastebasket with the items listed in MATERIALS and bring it into class. Tell the students it is typical of what most Americans throw away. Alternately, you can use a wastebasket from home or the teachers' room. Explain that the class will investigate the contents of this real wastebasket to

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see what has been thrown away. Have the students predict what they think will be found in the wastebasket and then with a flourish, dump the entire contents of the wastebasket on a newspaper covered table.

First separate out all the cans and bottles from the rest of the trash and stand them up together. All of these, including plastic bottles bearing a redemption mark, are recyclable.

Next, pull out all the paper. There should be a lot because it makes up half of the garbage sent to landfills. In most communities all of the paper is recyclable. Ask the students if the paper could have been used again before throwing it out or even recycling it.

Find the food items. Most food scraps can be composted to make rich soil. This helps gardeners and reduces the amount of fertilizer needed and the waste going into landfills.

Look at the non-recyclable plastics that are left. Ask the students if they can think of recyclable products that could be substituted for these non-recyclable ones. Some ideas might include a thermos instead of a juice box, and aluminum foil or Tupperware instead of plastic wrap. Lastly, hold up the plastic toy or comb, and ask if anyone has an idea about how it might be used again.

Review which items can be recycled if found on the schoolyard or at the seashore; glass bottles, aluminum cans, plastic redemption bottles, paper, cardboard, etc.

### **Playground Cleanup**

Divide the class into teams of five to clean up different areas of the schoolyard. Each team will have one person who collects only glass and metal, one who collects only recyclable plastic, one for other plastic, one for paper, and one for food scraps (you can adjust the teams depending on what you expect to find). The best time to do your cleanup is probably after lunch. Provide the students with bags to collect the litter and garbage and have them bring the bags back to class so they can be categorized.

### **Sort and Classify**

Have the students sort all the material from the schoolyard cleanup into items that can be recycled, those that could be composted, and those made from non-recyclable plastic. Did each group of students get similar or different results from the overall sorting and classifying? Did some areas have mostly certain types of trash? Why? Weigh and measure the volume (number of bags) of each type of trash.

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Ask the students how each of the items collected might harm seashore animals if the litter was at the seashore.

Make a display of some of the garbage found in the cleanup and what the recyclable counterpart would be (e.g. juice box and thermos, plastic sandwich bag and reusable container, lunch bag and lunch box).

### **Questions**

- Ask the students if they think they could reduce the amount of garbage they make? How?
- What are some other disposable products that could be replaced with non-disposables? Record suggestions on the board or on a large sheet of paper and post them as reminders for a “Green Classroom.”

## **BEYOND the Activities**

### **Pollution Poster Contest**

Have groups of students make posters about how litter can harm animals living at the seashore. Have a class contest. The winning group(s) will have a poster that shows the issue most dramatically and clearly. Display the winning poster, or all the posters, in the office, cafeteria, or school district office.

### **Field Trip**

Contact the California Coastal Commission in San Francisco to participate in a beach clean-up. Ask for the Save Our Seas curriculum materials, which are free. (See the Resources section.)

Take a walking field trip to clean-up the neighborhood. Take the recyclables to the recycling center and the garbage to the dumpster. Stop to explain to passersby what you are doing. You might want to make the clean-up a monthly field trip and keep a running tally of the amount of material collected. Taking pictures is a good way to document what the class collects.

### **Weird Litter Collage**

Make a collage by gluing some of the weirdest litter collected onto poster board. Make this a work-of-art-in-progress as the class adds items as they are found.

### **Lunch Bag Re-Using Contest**

If students bring their lunches, have a contest to see who can re-use a lunch bag the most times before losing or ruining it. Can anyone bring an entire lunch to school with nothing in it that will be thrown away?