

GRADES 9-12

PLASTIC TRASH AND WILDLIFE

SUBJECTS:

Environmental Education, Social Studies, Home Economics

OBJECTIVES:

Students will learn the negative effects of plastic solid waste on wildlife and consider what each can do to avoid adding to this problem.

TIME:

1– 2 class periods

MATERIALS:

- Article “Plastics at Sea” from Natural History Magazine 2/83
Go to: www.dtsc.ca.gov/Education/OEA_FLY_NWA.pdf
(Print pages 98-100)

All this trash gives me a headache!



Elephant Seal

■ BACKGROUND

Since the early 1970's, the amount of plastic in the marine environment has increased dramatically.

Plastic negatively affects wildlife in a number of ways. Some animals, mistaking plastic for food, eat it. For example, sea birds are known to have eaten plastic in the form of pellets, bits of styrofoam, even plastic toy soldiers. In addition, sea turtles, apparently regarding plastic bags as jellyfish upon which they regularly feed, have been found with balls of plastic in their stomachs. (One such ball, when unraveled, measured 9 feet wide and 12 feet long.)

Other marine animals found to have eaten plastic in one form or another are: whales, dolphins, bottom fish, a manatee, sea snails and worms, and plankton. Another damaging effect of plastic trash on wildlife is the entanglement of animals in everything from six-pack holders to plastic rings, discarded fishing line and nets.

Plastic debris is responsible for the death of 100,000 marine mammals. “Some government

officials estimate that about 50,000 northern fur seals currently die in North Pacific waters each year as a result of entanglement in fishing gear.” (“Plastics at Sea”) “In 1975, the National Academy of Sciences estimated that commercial fishing fleets alone dumped more than 52 million pounds of plastic packaging material into the sea and lost approximately 298 million pounds of plastic fishing gear, including nets, lines, and buoys.” (“Plastics at Sea”)

■ PROCEDURE

1. Have each student pick up or list all items of plastic litter and trash found in a 50-yard stretch along a beach, lake, river, or stream near his/her house. Bring lists or bags of litter to class.

■ DISCUSS

2. What nonrenewable natural resource is plastic made from? (petroleum) What uses other than making plastics can you think of for this resource?

Referring to the collected plastic litter,

Ask: What other material or container could have been used in place of this piece of plastic? Why



Common Dolphin

is plastic litter even more of a problem than many other kinds of litter? Where did all this plastic come from? Why do people litter? Do you litter?

3. Have students make a list of the wildlife commonly found in the area where the plastic litter and trash were recorded or collected.

Ask: How will this plastic affect the wildlife we have listed? In what ways might this plastic litter endanger wildlife?

Ask: Why is so much material that harms wildlife manufactured? What can each of you do to lessen the negative impact of plastic trash on wildlife?

4. Have students read “Plastics at Sea.”

■ DISCUSSION/TEST QUESTIONS

What nonrenewable natural resources is plastic made from?

Why is plastic litter even more of a problem than other kinds of litter?

In what ways does plastic waste and litter endanger wildlife?

Adapted from *A-Way with Waste*, 1985, and *The Fourth R*, 1985