

DOLPHIN RESEARCH CENTER

Don't Teach Your Trash To Swim !

Grade Level: 3rd -5th

Objectives: Students will increase their awareness of the fact that what goes into our ocean can either be ingested by marine animals, entangle marine animals or wash out of the ocean as litter on the shore. The student knows that reusing, reducing, and recycling natural resources improves and protects the quality of life.

Florida Sunshine State Standards:

Science

SC.D. 2.2.1: The student knows that reusing, recycling, and reducing the use of natural resources improve and protect the quality of life.

Social Studies

SS.B.2.2.4: The student understands how factors such as population growth, human migration, improved methods of transportation and communication, and economic development affect the use and conservation of natural resources.

National Science Standards:

Content Standard F (K-4) - Changes in Environments: Changes in environments can be natural or influenced by humans. Some changes are good, some are bad, and some are neither good nor bad. Pollution is a change in the environment that can influence the health, survival, or activities of organisms, including humans.

Content Standard F (5-8) - Natural Hazards: Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.

Background: Think about everything you do in relation to how it might effect the ocean, and ultimately dolphins. Each day you have the opportunity to **choose**, and to **change** your behavior. Do not support the production of wasteful or harmful products by contributing to the demand for them. Support responsible manufacturers by choosing their products, even if it means spending a little more. By using recycled or recyclable items, buying in bulk instead of many little packages, and, whenever possible, simply reusing what you can, you can significantly reduce the amount of waste YOU create.

Industry creating large-scale pollution is not the greatest cause of the ocean's decline. Industry responds to the needs of consumers, namely you and me. No matter where you live, your personal choices effect the health of the oceans. Americans use an incredible amount of **plastics**, most of it for **packaging**. Currently only about 3% of the plastic waste stream is recycled. Where does the rest of it go? It is believed that hundreds of millions of pounds of plastics are lost or dumped into the oceans each year.



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Household chemicals that go down your drain, and toxic chemicals commonly used for weed and pest control for your lawn, can contribute to **groundwater contamination** and eventually effect the health of our oceans. The average American home uses approximately 25 gallons of hazardous chemicals per year.

Devastating pollution also comes from the manufacture of plastics and other products we use at home, such as oven cleaner, furniture polish, and laundry soap.

Sewage and runoff from excess fertilizer feeds the growth of algae, which not only produce toxins, but also rob the water of huge amounts of oxygen needed by other forms of aquatic life to survive. Anything that upsets the delicate balance of the natural food web can ultimately destroy those species at the top: dolphins, whales, and humans.

Materials:

- Trash bags
- Latex gloves
- Cards
- Items from kit- biodegradation time line
- Scale

Teacher Prep Notes: Find an area to clean up first. If possible or preferred, arrange times when pairs of students can talk to other classes/grade levels. Set up the timeline (see sheet) and do activity as an introduction to the clean up or as a wrap up to the clean up. When cleaning up an area, have students use caution and avoid picking up glass or other sharp objects.

Procedures:

1. As intro or as a wrap up, do the timeline activity described below.
2. Pose the question, "Do you have to be at a beach to have a beach clean up?"
3. Discuss the motto, "Don't teach your trash to swim!"
4. Guess what? We are going to have a beach clean up right here at school!
5. Divide class into groups and go over some cautions and things to avoid (glass, broken, sharp objects)
6. Pass out gloves and trash bags to groups.
7. CLEAN UP!

Key Terms

Biodegradation: the break down of matter over time.

Marine debris: is anything from a discarded sandwich bag to a lost fishing net. Every ocean in the world is littered with some form of debris, which resembles food for marine life. Many animals accidentally eat marine debris causing internal injury, intestinal blockage, and starvation.

Human impact: the effect of human presence on an area or environment

Conservation: the official care and protection of natural resources



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Wrap Up:

1. Timeline activity if not done already
2. Use the scale and weigh the group's trash.
3. Discuss and compare with other groups and the time line.
4. How many lives and what kind did we save by cleaning up? Discuss where litter goes, how it ends up in our water (water cycle).
5. In pairs, visit other classes and talk with them about the three R's - reduce, reuse, and recycle- and why they are important.

Taking it Further:

- When visiting other classes, have students make costumes (soda can, newspaper) and encourage them to dress up as trash items, or carry bags of trash with them as props and for more effect (especially for younger grades).
- Host a school Beach Clean Up or find a local area in the community and advertise with student- made flyers, etc.

Biodegradation Timeline Activity:

Individually or as a group/s

1. Set up a table with the time cards in order to make a time line.
2. Place the items on the table in random order.
3. Give students five minutes to place the items along the time line.
4. Check students' work and silently move the incorrect items back from the time line. They have three chances to check their work.

Newspaper - 6 weeks

Waxed milk container - 3 months

Styrofoam cup - 50 years

Tin soup can - 50 years

Aluminum can - 200 years

6-pack rings - 400 years

Diapers - 450 years

Plastic bottle - 450 years

Fishing line - 600 years

