

# Watching My Waste-Line

## Engage/Create Recycling Activities

### KNOWLEDGE

- Identify what products can be recycled and which ones cannot.
- Identify how garbage can impact aquatic life.
- Identify where the garbage ends up after it is taken away from the school.
- Discuss ways in which they can reduce their impact on the environment

### ACTIVE

- Sort through the classroom garbage can, identifying what can be recycled instead
- Students will participate in an educational card game

TIME	GROUP SIZE	LOCATION	GRADE LEVEL	EQUIPMENT
As long or short as you'd like.	Entire Class	Classroom	Any	Paper/chart Pencil Classroom garbage can Recycling bins Rubber Gloves
DEBRIEF/REFLECTIVE COMPONENT			HELPFUL TIPS	
<ul style="list-style-type: none"> <li>• Where does the garbage that we throw away eventually end up?</li> <li>• What impact does garbage have on the environment and aquatic life?</li> <li>• How can we reduce the amount of garbage we throw away?</li> <li>• What can we use instead of plastic and plastic bags?</li> <li>• Discuss the different ways garbage can make it to the ocean (wind. Rivers) and travel between oceans (currents).</li> </ul>			<ul style="list-style-type: none"> <li>• Ideas that students should come up with on how garbage affects animals should include: Animals eat it and get sick, animals get caught in it and die, it takes up space and habitat.</li> <li>• Could suggest a litterless lunch challenge to reduce the amount of garbage produced by the class or school.</li> </ul>	

## OCEAN LITERACY PRINCIPLES

1– The Earth has one big ocean with many features.

c. Throughout the ocean there is one interconnected circulation system powered by wind, tides, the force of Earth's rotation (Coriolis effect), the Sun and water density differences. The shape of ocean basins and adjacent land masses influence the path of circulation. This "global ocean conveyor belt" moves water throughout all of the ocean basins, transporting energy (heat), matter, and organisms around the ocean. Changes in ocean circulation have a large impact on the climate and cause changes in ecosystems.

g. The ocean is connected to major lakes, watersheds, and waterways because all major watersheds on Earth drain to the ocean. Rivers and streams transport nutrients, salts, sediments, and pollutants from watersheds to coastal estuaries and to the ocean.

h. Although the ocean is large, it is finite, and resources are limited.

3– The ocean is a major influence on weather and climate.

e. The ocean dominates Earth's carbon cycle. Half of the primary productivity on Earth takes place in the sunlit layers of the ocean. The ocean absorbs roughly half of all carbon dioxide and methane that are added to the atmosphere.

f. The ocean has had, and will continue to have, a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water. Changes in the ocean's circulation have produced large, abrupt changes in climate during the last 50,000 years.

g. Changes in the ocean-atmosphere system can result in changes to the climate that in turn, cause further changes to the ocean and atmosphere. These interactions have dramatic physical, chemical, biological, economic, and social consequences.

6– The ocean and humans are inextricably interconnected.

b. The ocean provides food, medicines, and mineral and energy resources. It supports jobs and national economics, serves as a highway for transportation of goods and people, and plays a role in national security.

d. Humans affect the ocean in a variety of ways. Laws, regulations, and resource management affect what is taken out and put into the ocean. Human development and activity leads to pollution (point source, non-point source, and noise pollution), changes to ocean chemistry (ocean acidification) and physical modifications (changes to beaches, shores, and rivers). In addition, humans have removed most of the large vertebrates from the ocean.

e. Changes in ocean temperature and pH due to human activities can affect the survival of some organisms and impact biological diversity (coral bleaching due to increased temperature and inhibition of shell formations due to ocean acidification).

g. Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.

## Setup

1. After lunch empty the garbage can in the classroom, and make a list of the types of garbage (e.g. plastics, juice box, paper, food, etc.) and the amounts of each type of garbage
2. Take out any recyclable material (paper, cans, juice boxes etc.) and arrange to have the recycled. Total the remaining waste and compare it to the original amount.
3. How much waste could have been reduced?
4. Challenge your class (or entire school) to have a litterless lunch.
5. Repeat activity every week and chart the progress
6. Make a sign that shows the amount of waste that has been reduced. For example, "Since September 6<sup>th</sup>, we've reduced our waste by 42%!!"
7. As an extension, consider looking at the community as a whole and methods to reduce waste, reuse and recycle?