WORKSHOP: Watching Our Waste

Engage/Sorting Activity

BACKGROUND

By 2050 there is expected to be more plastics in the ocean than fish by weight. If all we do is clean up, that's all we'll ever do (*Quote: Tangaroa Blue Foundation)*. It's just as importance to collect information on what we find during a clean-up, so we can use that information to stop the trash at the source.

AIM

To encourage students to think about the source and destination of the things they consume in everyday life (focus on single-use plastics and marine debris) and gain a better understanding of which bin to put it in

KNOWLEDGE

- Identify what marine debris is, where it comes from and its impact on our health and the environment
- Identify where the garbage ends up after it is taken away from the school
- Identify what products can be recycled and which ones cannot
- Identify what single-use plastics are, which ones we use in everyday life, and the direction society is going in
- Discuss ways in which students can reduce their impact on the environment

ACTIVE

- Sort through the classroom garbage can, identifying what can be recycled instead
- Mark down what type of trash is in the bins and the quantity

TIME	GROUP SIZE	LOCATION	GRADE LEVEL	EQUIPMENT
Any time	Entire class	Classroom or eating area	All grades	Paper/chart, reusable gloves, pencil, classroom garbage can, recycling bins

DEBRIEF/REFLECTIVE COMPONENT

- Where does the garbage that we throw away eventually end up and what impact does garbage have on the environment and aquatic life?
- How can we reduce the amount of garbage we throw away and what can we use instead of plastic?
- Discuss the different ways garbage can make it to the ocean (wind. Rivers) and travel between oceans (currents).
- How can we use our voice and actions to create change?

OCEAN LITERACY PRINCIPLES

(from https://education.ocean.org/oceanlitsec/)

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.

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 chemisty (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 6th, 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