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Lesson 1: Introduction

Description: This lesson will serve as a general introduction to Washed Ashore and plastic pollution.





Upon completion of this lesson students will be able to:

Recognize how plastic is used in their lives and consider alternatives.

Concepts:

1. Every ocean contains trash that came from land.
2. Plastic pollution is harming ocean ecosystems.
3. Plastic is used to make many items we use every day.
4. Community art is created by many people making small parts of a larger work.

Outcomes:

Upon completion of this lesson students will be able to:

1. Identify the main source of plastic pollution in the ocean.
2. Discuss the ways in which plastic pollution is harming animals.
3. Recognize how plastic is used in their lives and consider alternatives.
4. Provide examples of community art.

Outline:

- I. Set up (5 min.)
 - II. Introduction (5 min.)
 - a. Learner Level Assessment
 - b. Behavior Guidelines
 - III. Plastic Pollution and Washed Ashore (35 min.)
 - a. Washed Ashore Introductory PowerPoint
 - b. Visual Scavenger Hunt
 - IV. Conclusion and Review (5 min.)
 - V. Follow-up Activities
 - a. Tracking Plastics Challenge
 - b. What Can We Do?
 - VI. Additional Resources
 - a. Sources
 - b. Vocabulary
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Although there are many facets of the marine debris and plastic pollution issue, this unit focuses on consumer habit change.

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I. Set up (5 min.)

This lesson requires a screen and projector to show two PowerPoint presentations. These presentations can be downloaded from the Washed Ashore website. Students will also need pencils and paper for brainstorming activities.

II. Introduction (5 min.)

a. Learner Level Assessment

Ask students to write individually or work as a small group to brainstorm answers to the question, "Where does the trash in the ocean come from?" Make a list on the board of answers. Use this activity to assess learner level and evaluate lesson needs and discussion points for the PowerPoints that will follow. As the conclusion to this introduction, reveal that roughly 80% of the trash in the ocean comes from land based activities. **(Section 1.3, chapter 25, United Nations World Oceans Assessment)**

Assessment (Outcome 1): Name the number one source of plastic pollution in the ocean.

b. Behavior Guidelines

Some lessons and activities in this curriculum require tools and/or physical activity, so there may be a need to discuss behavior expectations before activities. For this lesson, there are no specific behavior guidelines beyond standard classroom rules.

III. Plastic Pollution and Washed Ashore (35 min.)

a. Washed Ashore Introductory PowerPoint

Use the Integrated Art Marine Debris Curriculum (IAMDC) Washed Ashore Overview PowerPoint to discuss the concepts of plastic pollution, community art, and the Washed Ashore Project. Although there are many facets of the marine debris and plastic pollution issue, this unit focuses on consumer habit change. Use learner level and grade level as a guide for how much time to spend with this presentation and which topics to focus on most.

Assessment (Outcomes 1 & 2): Name three animals that are being affected by plastic pollution in the ocean and three trash items that may be affecting them.

b. Visual Scavenger Hunt

Use the slides and prompts in the IAMDC Visual Scavenger Hunt PowerPoint to lead students through this activity. Students can work as individuals, small groups, or as a class. The goal of the scavenger hunt is to connect plastic pollution found on the beach with items students use in everyday life.

Assessment (Outcome 3) Have students take two minutes to walk around the classroom and touch as many items made of plastic as possible. Discuss results as a class to show how common plastics are in everyday life.



Future lessons in this unit will include ideas for alternatives to single use plastic items.

IV. Conclusion and Review (5 min.)

During this lesson we have looked at where plastic pollution comes from, why it is a problem in the world's oceans, how Washed Ashore is raising awareness about the issue, and a few ways we can all be part of the solution.

Assessment (Outcome 1) Use the question, "Why does 80% of plastic pollution in the ocean come from land based sources?" as a writing or discussion prompt.

Assessment (Outcome 2) Identify a local environment that students are familiar with and is being affected by plastic pollution. Identify animals there that may be harmed by this pollution. Options: Have students count the number of trash items they see around the school ground and predict where they will end up if no one picks them up. Consider the local neighborhood storm drains and where they lead.

Assessment (Outcome 4): As a group, identify works of community art that students are familiar with. Discuss how they were created and their purpose. Option: Focus on a school project where lots of people worked together on a project that was displayed.

V. Follow-up Activities

a. Tracking Plastics Challenge

Because plastics have become such an integral part of our lives, we often don't even notice all of the items they are used to create. In the introduction to her book *Plastic: A Toxic Love Story*, author Susan Frankel tries to keep track of all the plastic in her life for 24 hours. This helps her to fully recognize how plastic has come to be part of every facet of our lives. Having students repeat this experiment at home may help them to recognize why plastic has become such a pollution issue in the world.

Assessment (Outcome 3): Track every item that is made of or contains plastic for one evening at home. Make a special note of items that are only used once before they are thrown away or recycled. Review and discuss results in class.

b. What Can We Do?

After establishing the prevalence of plastic in our world and considering some of the impacts of plastic pollution, challenge students to consider what they can do about the issue. Future lessons in this unit will include ideas for alternatives to single use plastic items. Single use plastics are the focus because they generally have accessible alternatives.

Assessment (Outcome 3): Make a list of the five most common single use items found by students during the tracking plastics challenge. Brainstorm sustainable alternatives to those items.

VI. Additional Resources

a. Sources

NOAA Marine Debris Website:
<http://marinedebris.noaa.gov/>

United Nations World Ocean Assessment Website:
<http://worldoceanassessment.org/>

Plastic: A toxic love story
Freinkel, S. (2011). *Plastic: A toxic love story*. Boston: Houghton Mifflin Harcourt.

Washed Ashore Website:
<http://washedashore.org/>



At Washed Ashore, we believe that the arts are a language that can be learned and used to communicate with.

b. Vocabulary

In this lesson, these are words that may be unfamiliar to students. In this context, they have the following definitions:

Language of the Arts: At Washed Ashore, we believe that the arts are a language that can be learned and used to communicate with, just as any other language can be with practice. In visual art, design elements are the letters of this language, and design principles are the words.

Aesthetically Powerful: The capacity to strongly impact the viewer in a lasting way.

Plastic Pollution: Manmade trash made of plastic that ends up in the environment.

Community art: Art, often constructed through a conglomeration of small pieces brought together into a larger work, created through the collaboration of artist and volunteers based in a community location.

Land-Based Source: This refers to the source of the majority of trash in our oceans. Roughly 80% of the items that become marine debris were not manufactured for ocean based industry or ocean based recreation. These items reach the ocean through litter, industrial discharge, and poor garbage.

Consumer Habits: The patterns we develop when purchasing goods.

Ecosystem: "The complex of a community of organisms and its environment functioning as an ecological unit." Merriam-Webster Examples include deserts, rainforest, coral reefs, and intertidal zones.

Habitat: the place or environment where a plant or animal naturally or normally lives and grows.

Biodegradable: "Capable of being broken down especially into innocuous products by the action of living things." Merriam-Webster.



**2016
Marine Debris
Fact:**

**Plastic pollution
is becoming one
of the most
common items
in the sea and has
entered the
bottom of the
ocean food chain.**

Washed Ashore Mission Statement:

Washed Ashore builds and exhibits aesthetically powerful art to educate a global audience about plastic pollution in oceans and waterways and spark positive changes in consumer habits.

How We Fulfill Our Mission:

Our travelling exhibit of sculptures made completely of marine debris moves around the country in order to reach as many people as possible. Through both educational programs and interactions with our art and signage, we help audiences understand the problems of plastic pollution and marine debris. We offer educational programming at exhibit sites and support materials to educators interested in spreading awareness about plastic pollution through community art.

In order to create the sculptures we build, we first collect trash that has been removed from beaches through community beach cleanups and individual volunteers. This trash is then washed, sorted and prepared for the creation process. Each sculpture is designed and directed by a lead artist and then created through a collaboration of Washed Ashore team members, volunteers, students and artists.

Washed Ashore Facts as of 2016:

- Over 65 giant sculptures have been created.
- Over 35,000 pounds of marine debris have been processed.
- Over 12,500 volunteers have contributed to this project.

Marine Debris Facts as of 2016:

- Every ocean and every marine environment contain pieces of our trash.
- 80% of marine debris comes from land; from streets to streams to rivers to oceans.
- Plastic pollution is becoming one of the most common items in the sea and has entered the bottom of the ocean food chain.

National Standards Addressed:

Next Generation Science Standards

5-ESS3-1.

Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

MS-PS1-3.

Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. [Clarification Statement: Emphasis is on natural resources that undergo a chemical process to form the synthetic material. Examples of new materials could include new medicine, foods, and alternative fuels.] [Assessment Boundary: Assessment is limited to qualitative information.]

MS-ESS3-3.

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.* [Clarification Statement: Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).]

MS-ESS3-4.

Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems. [Clarification Statement: Examples of evidence include grade-appropriate databases on human populations and the rates of consumption of food and natural resources (such as freshwater, mineral, and energy). Examples of impacts can include changes to the appearance, composition, and structure of Earth's systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.]

The National Core Arts Standards

Responding:

Understanding and evaluating how the arts convey meaning.

- **Anchor Standard #7:** Perceive and analyze artistic work.
- **Anchor Standard #8:** Interpret intent and meaning in artistic work.
- **Anchor Standard #9:** Apply criteria to evaluate artistic work.

Connecting:

Relating artistic ideas and work with personal meaning and external context.

- **Anchor Standard #10:** Synthesize and relate knowledge and personal experiences to make art.
- **Anchor Standard #11:** Relate artistic ideas and works with societal, cultural and historical context to deepen understanding.

National Curriculum Standards for Social Studies

- **Thematic Standard #3)** People, Places and Environments: Include experiences that provide for the study of people places and environments.
- **Thematic Standard #7)** Production, Distribution, and Consumption: Include experiences that provide for the study of how people organize for the production, distribution and consumption of goods and services.
- **Thematic Standard #9)** Global Connections: Include experiences that provide for the study of global connections and interdependence.
- **Thematic Standard #10)** Civic Ideals and Practices: Include experiences that provide for the study of the ideals, principles and practices of citizenship in a Democratic Republic.