

Want to get involved?

Mark your calendars for:

Washington Coastal Clean-up
Saturday, April 23, 2016

International Coastal Clean-up
Saturday, September 17, 2016

Visit www.coastsavers.org for more information and beach registration.

Show your completed booklet at Feiro and receive free family admission for the day!



Feiro
MARINE LIFE CENTER

360.417.6254
www.feiomarinelifecenter.org

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www.MarineDebris.noaa.gov

This program is funded in part by NOAA Marine Debris and the City of Port Angeles.

Systems for

Survival

North Olympic Watershed Science

A Field Study of the
Impacts of Marine Debris

Name:

Date:



Feiro
MARINE LIFE CENTER



NATIONAL MARINE
SANCTUARIES
OLYMPIC COAST

Outline of Field Study:

Field Study Question:

How does marine debris affect local ocean life?

Procedure

Data to be collected

Before field study

- Non-fiction reading(s)

During field study

- Collection of plankton
- Observation of intertidal marine life
- Albatross bolus dissection
- Short videos

Results: See pages 3-10 to fill out your data tables, sketches and observation notes.

Conclusion: Use the collected data to write an informational/explanatory paper answering the field study question.

Vocabulary

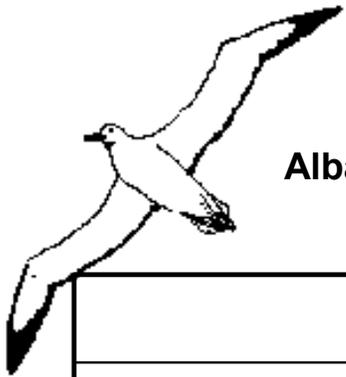
Abiotic	Nonliving factors that affect an ecosystem
Biotic	Living things found in an ecosystem
Degrade	To break down a compound into smaller components
Gyre	A ring-like system of ocean currents that rotate clockwise in the Northern Hemisphere and counter-clockwise in the Southern Hemisphere.
Invertebrate	An animal that does not have a spine such as an crab, a worm or a slug
Marine Debris	Man-made objects that enter the coastal or marine environment
Microbead	A small particle of plastic, usually between 0.05 millimeters and 5 millimeters in size. These particles can be found in exfoliating face wash, but can also take the form of fibers shed from clothing.
Microplastic	A small piece of plastic, 5 millimeters (0.2 inch) or smaller in size. Microplastics may have been produced at that small size, or their size may be the result of the breakdown of water bottles, plastic bags or other larger plastic items.
Nutrients	Vitamins, minerals, fats, carbohydrates, and proteins needed by organisms to live.
Ocean Currents	Large mass of continuously moving oceanic water
Plankton	An organism that drifts or floats in the sea or fresh-water
Pollutant	A substance that taints something— such as the air, water, our bodies or products. Some pollutants are chemicals, such as pesticides. Others may be radiation, including excess heat or light. Even weeds and other invasive species can be considered a type of biological pollution.
Toxic	Poisonous or able to harm or kill cells, tissues or whole organisms. The measure of risk posed by such a poison is its toxicity.
Variable	An element, feature, or factor that is likely to vary or change
Vertebrate	An animal with a spine such as a human, fish, or snake

Albatross Bolus Dissection

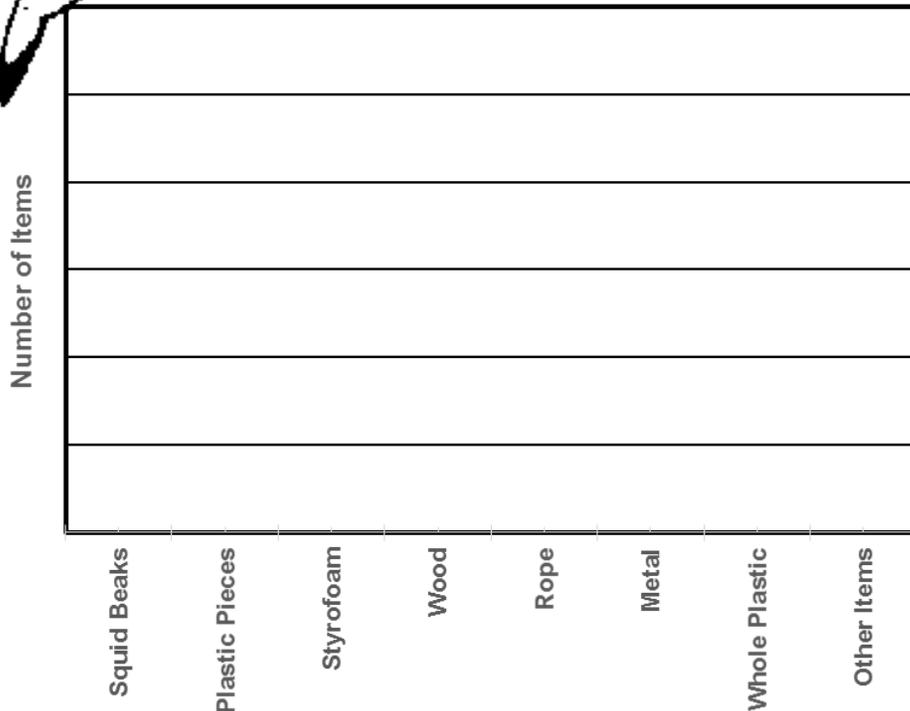
Instructions: Record what you find in your bolus.

Item Found	# Found	Item Found	# Found
Squid Beaks		Rope	
Plastic Pieces		Metal	
Styrofoam		Whole Plastic	
Wood		Other Items	

Create a graph to summarize specific items found by the group.



Albatross Bolus Contents



Things to Know Before the Field Study

What is marine debris?

Circle the items below that are considered marine debris

- | | | | |
|---------|------|---------|----------------|
| Oil | Logs | Lumber | Rope |
| Float | Tire | Seaweed | Beach Glass |
| Feather | Rock | Shoe | Plastic Bottle |

How much of the Earth is covered in water?

What are 3 major benefits we receive from the ocean?

1. _____
2. _____
3. _____

Literature Review

Title: _____

Author: _____

Main Idea:

Three Supporting Details:

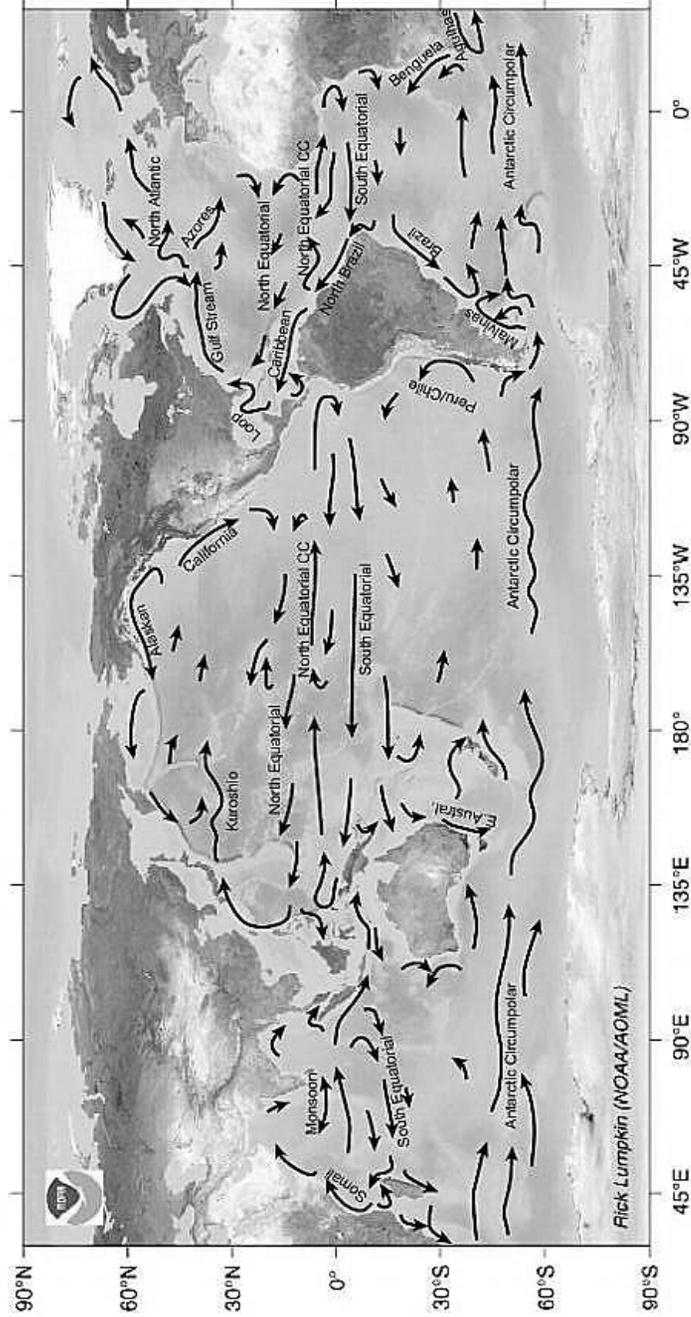
Title: _____

Author: _____

Main Idea:

Three Supporting Details:

Olympic Coast National Marine Sanctuary



List two ways the National Marine Sanctuaries protect the ocean

1. _____
2. _____

Exhibit Exploration

Choose one animal in Feiro's collection and create a comic strip telling a story of how that animal feeds in the boxes provided below.

Plankton Investigation

Current weather conditions:

Time: _____ Location: _____

Tides (on either side): _____ / _____

Tide direction: _____

Circle one of the following:

Weather:

Sun Cloud Rain

Wind:

None Light Moderate Strong

Wave Action:

Flat Light Moderate Strong

List the 3 criteria one must meet to be called a plankton.

- 1.
- 2.
- 3.

What are the major forces that move plankton?

- 1.
- 2.
- 3.

List 3 species of plankton identified in your sample

1. _____
2. _____
3. _____

Plankton Investigation

Illustrate how a copepod that eats microplastic could end up in your stomach.

Draw one phytoplankton you observed.

Draw one zooplankton you observed.

Species: _____

Species: _____

Exhibit Exploration

Animal: _____

What it eats: _____

How can marine debris impact it:

Animal: _____

What it eats: _____

How can marine debris impact it:

Animal: _____

What it eats: _____

How can marine debris impact it:
