



Practice Task: Marine Debris

PART 1: Research (approx. 60-90 mins) Student Directions

Your Assignment:

Marine debris presents a significant problem for wildlife along our coast. The *River and Ocean Film Festival* highlights the beauty of the Olympic Peninsula, as well as some of the issues faced by its marine and freshwater habitats. You have been asked to present a speech at the opening of the film festival, explaining why marine debris is such a problem for wildlife. Use information from the video, the fact sheet, the infographic, and the data you collect on the shoreline to outline your speech. Your audience is visitors to the Washington Coast.

Steps you will follow:

To plan and compose your speech, you will need to do all the following:

1. Watch a video.
2. Read a fact sheet.
3. Review the infographic.
4. Answer three questions about the sources.
5. Investigate marine debris along a shoreline.
6. Compose and practice your speech.



Directions for beginning:

Watch the video and read the fact sheet and infographic. Take notes to refer to while answering the questions and to help plan your speech. You can watch the video and read the sources as often as you like.

Source Information:

- Source 1:** **Video:** "Marine Debris" YouTube. NOAA National Ocean Service, June 11, 2009. June 2015
<https://www.youtube.com/watch?v=xmz-8p0AB0>
- Source 2:** **Fact Sheet:** Burns, Chantelle. *TeachWild: A Journey of Marine Discovery*. (Adapted from p. 4 & 35.) Web: September 2013. Source Link: <http://teachwild.org.au/wp-content/uploads/2013/09/TeachWild-Marine-Debris-Education-Kit.pdf>
- Source 3:** **Poster:** Carlson, Rich. "Marine Debris Starts on Land." *ESD 113*. February 2015
Source Link: <http://tnl.esd113.org/cms/lib3/WA01001093/Centricity/Domain/17/Poster.ppt>



Practice Task: Marine Debris



Note-Taking Tool

	Source 1: Video	Source 2: Fact Sheet	Source 3: Infographic
What is marine debris?			
How does marine debris impact wildlife?			
What can we do to help stop marine debris?			

FACT SHEET

Marine Debris and Animal Entanglement

The Problem

Marine debris is a major global threat to biodiversity (the variety of different types of life on Earth).

Marine debris is any human-made object that enters the marine environment. Marine debris impacts marine life and the marine environment by:

- Ingestion (being eaten by animals)
- Bioaccumulation (moving up the food chain)
- Being regurgitated as food for baby birds
- Entanglement (getting caught in debris)

Marine Debris comes from two different areas: land based and ship-based sources. Both create an immediate threat to our marine life.

Marine animals are at risk when they come into contact with marine debris. Marine Debris affects as many as 250 different species of animals. These species include seabirds, marine mammals, and sea turtles. Animals often die after becoming entangled in or ingesting marine debris which they have mistaken for food.



Entanglement

Entanglement is when an animal gets caught in marine debris. It can occur when an animal is curious about an object and gets too close. It also happens when an animal is looking for shelter in or near debris.

It is harmful because it can cause:

- Drowning
- Disruption or prevention of feeding by the animal
- Restrict movement or ability to swim
- Increase vulnerability to predators
- Cutting that result in infection/loss of limb(s)



Lost fishing line and nets, rope and packing straps are common items that entangle marine life.

Ingestion

Ingestion is when an animal mistakes marine debris for food and eats it. Usually the debris gets stuck inside the animal's body. Small or tiny bits of debris can also be eaten by filter feeding organisms. This causes problems in the food chain as bigger animals eat smaller animals who have eaten debris. It is harmful because it can cause:



Turtles Mistake Plastic Bags for Jellyfish (Photo: Ron Prendergast, Melbourne Zoo)

- Blockages of the esophagus (the part of your throat that leads from your mouth to your stomach)
- Blockages in the intestines
- Sharp objects can cause injuries and infections
- Toxins from the debris can build up in an animal's body, making them sick.

Plastic bags, cigarette lighters, and plastic pellets known as "nurdles" are some of the items that have been found inside marine animals.

Marine Debris Starts on Land

Marine Debris: Any persistent solid material that is manufactured or processed and is disposed of in the marine environment



At a critical point, someone, somewhere, mishandled trash – either deliberately or thoughtlessly. Now we all must deal with it



Every piece of litter has a person's face behind it.



10% of Marine Debris is Plastic Bags



One Million:

- Years for a glass bottle to decompose
- Number of plastic bags used every minute
- Seabirds killed by litter each year

Marine Debris Hurts People



Traps and Drowns Swimmers



Destroys Fishing Areas and Blocks Boats

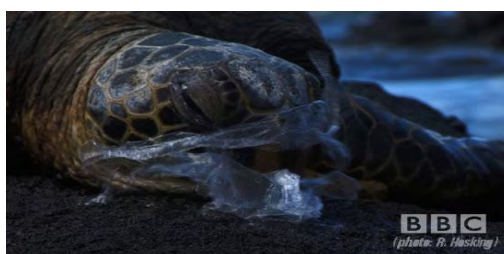


Makes Beaches Unsafe and Ugly

Marine Debris Kills Wildlife



He thought it was a toy, now he cannot open his mouth to eat.



She thought the small plastic bag was a jellyfish – it choked her



Even a piece of string can kill



Lost nets can keep catching and killing for over 100 years



Swimming in marine debris can be deadly



This bird ate so much plastic there was no room for food

WHAT YOU CAN DO?



Reduce



Re-use



Recycle



Get Involved



Photo Credit: Ocean Conservancy



Photo Credit: NOAA Marine Debris Program



Photo Credit: NOAA Marine Debris

Safety First!

- Stay away from large drums or five-gallon buckets
- Wear gloves and good shoes
- Do not pick up syringes or other medical items (inform an adult)
- Be careful of glass or other sharp objects
- Do not lift anything heavy
- Stay away from logs and debris that might shift and crush you
- Pay attention to the tides



IN JUST 30 SECONDS YOU CAN MAKE A DIFFERENCE

In the time it takes for a typical television ad, you can:

- Fill a bucket or bag with trash and dispose of it properly
- Put a garbage bag in the car, or empty the one that is already there
- Put recyclable items in the appropriate container
- Carry reusable shopping bags into the store for your parents
- Refill your reusable water bottle
- Plant a tree



Photo Credit: Ocean Conservancy

This poster created by Rich Carlson, Restoration Ecologist from U.S. Fish and Wildlife Service



Practice Task: Marine Debris



PART 2: Essay (approx. 60-90 mins)

You will now have time to review your notes and sources and compose your essay. You may use your notes from the media sources and your data from the shoreline survey. You may also refer to the media sources. Read your assignment and the information about how your essay will be scored, then begin your work.



Your Assignment:

You have researched the issue of marine debris and its impact on wildlife and collected data about marine debris in the field. Your job now is to create a short essay explaining why marine debris is a problem for wildlife and how people can help solve this problem. You will present your essay at the *River and Ocean Film Festival* in Forks, Washington to help alert other people to this important environmental issue. Use information from the print and video resources, as well as the data you collected on the shoreline, to outline your essay.

How your essay will be scored:

1. **Statement of Purpose / Focus:** How well did you clearly state and maintain your focus? How well did you stay on topic throughout the movie?
2. **Organization:** How well did your ideas logically flow from the introduction to conclusion using effective transitions? How effective are your introduction and conclusion?
3. **Elaboration of Evidence:** How well did you provide evidence from the sources and your data to support your claims? How well did you integrate specific information from your sources?
4. **Language and Vocabulary:** Did you effectively express ideas using precise language and images that were appropriate for your audience and purpose?
5. **Presentation:** Did you use language and pacing that was understandable to your audience? Did your use of audio, graphics and visuals effectively clarify your message?

Now begin work on your essay:

- Review your notes and data
- Plan your essay
- Select photo(s) or other visuals to support your essay





Practice Task: Marine Debris



Outlining My Essay

Essay Components	Supporting Photo(s) or Other Visuals
Attention grabbing introduction:	
Main Point 1 - Define marine debris:	
Main Point 2 - Describe how marine debris impacts wildlife:	
Main Point 3 - Explain what people can do to help fight marine debris:	
Persuasive conclusion:	

Except where otherwise noted, this work developed by [Pacific Education Institute](#) (PEI) for the [Washington Office of Superintendent of Public Instruction](#), is available under a [Creative Commons Attribution 4.0 License](#). All logos and trademarks are the property of their respective owners.