

# Plastic pollution assignment



**ASSIGN  
BUSTER**

The modern plastic bag was not possible until the accidental discovery of the first industrially practical method of polyethylene synthesis in 1933. Fast forward to today, the use and manufacturing of polyethylene have seen rapid growth and has come from four percent of the world's petroleum (Sang, 2011). It's been less than 30 years since the introduction of the plastic grocery bag but experts estimate that our current use of plastic bags is 500 million to 1 trillion per year. Problem With Plastic Plastic, which we now know is a by-product of petroleum production has been in use for over 100 years and has no real end in sight.

The plastic we reduce has four key characteristics that make up their identity: Sang, Anita. ' Plastic Bags And Environmental Pollution. " 63. 3 (2010): 39-43. 28 Mar 2012. ; Geometry. The shape of the debris is important from the point of view of entanglement. Products such as six-pack rings and netting represent more of a potential hazard than an equivalent mass of the same polymer in the form of a laminate. (Dakota, 2011) ; Durability. The likelihood of encounter between a given item of marine debris and a marine animal depends upon the life time of the material.

The duration available for the encounter is crucial in determining the potential hazard posed by the plastic material. Unfortunately, little information is available on the lifetime of plastics at sea. Lack of this information is a definite setback in the assessment of potential hazards posed by plastic waste. (Dakota, 2011) ; Strength. The strength of the debris material determines the likelihood that an entangled animal can escape.

Alternatively, the possible obstruction of the gut in case of ingestion is less

likely if the material is weak enough to mechanically fail during the ingestion process. (Dakota, 2011) ; Toxicity.

Plastics, being indigestible acropolises, cannot be absorbed through the digestive track. So technically there are not toxic materials, but the plastics used in the fabrication of products may contain chemical additives which can be absorbed, and be extremely harmful. (Dakota, 2011) Dakota, Henry. “ Diffuse Pollution By persistent Organic Pollutants As Measured in Plastic Pellets Sampled From Various Beaches in Greece Pollution Bulletin 62. 2 (2011 31231 7. Purpose Marine The purpose of this paper is to educate, and provide awareness that plastic’s in our ocean is serious marine environmental threat.

This threat is beyond he marine animals, and is becoming a major health issue because of the amount of food we rely on from the ocean. Picture above from: vim. Grey. Com Discussion Though the seas cover the majority of our planet’s surface, far less is known about the biodiversity of marine environments then that of the land based habits on all continents. The re is over whelming evidence that plastic pollution is a threat to marine biodiversity, already at risk from over fishing, climate change and other forms of anthropogenic disturbance(Deck, 2010).

Due to the long life of plastics on marine ecosystems, it is imperative that ever measures are taken to address the problem at both international and national levels, since even if the production and disposal of plastics suddenly stopped, the existing debris would continue to harm marine life for many decades. When plastic objects make it into the main sewer system and the

water treatment plants become Christine, Deck. "Go Green Go Plastic." Canadian Young Scientist Journal 2010. 2 (2010): 17-20. Web. 28 Mar 2012. Overwhelmed by excessive rain, then those floating objects can float right out to sea.

This is precisely what happened on the New York and New Jersey coasts in 1988, when medical waste was floating up onshore. That year had an extremely dry spring, as litter began accumulating on the streets and in storm sewers, heavy rains arrived in mid-summer and overloaded the sewer system. After floating out to sea, the debris was blown back onto the shores from tides and currents. Effects on Marine Animals These seals often play with fragments of plastic netting or packing straps, and end up catching their necks in the webbing.

The plastic harness can constrict the seal's movements, killing the seal through starvation, exhaustion, or infection from deep wounds caused by the tightening material. While diving for food, both seals and whales can get caught in transparent nets and drown. In the fall of 1982, a humpback whale was tangled in 50 to 100 feet of net and washed up on a Cape Cod beach. (Hoi, 1994) It was starving and its ribs were showing, the whale died within a couple of hours. Along Florida's coasts, brown pelicans diving for fish sometimes dive for the bait on a fisherman's line.

Cutting the bird loose only makes the problem worse, as the pelican gets its wings and feet tangled in "Plastics in Our Oceans." Woods Hole Oceanographic Institution (1994): n. Page. Web. 28 Mar 2012. The line, or gets snagged onto a tree. Plastic soda rings, baggies, Styrofoam particles

and plastic pellets are often mistaken by sea turtles as authentic food.

Clogging their intestines, and missing out on vital nutrients, these turtles starve to death. Seabirds undergo a similar ordeal, mistaking the pellets for fish eggs, small crab and other prey, sometimes even feeding the pellets to their young.

Despite the fact that only 0.05% of plastic pieces from surface Waters are pellets, they comprise about 70% of the plastic eaten by seabirds. These small plastic particles have been found in the stomachs of 63 of the world's approximately 250 species of seabirds. Effects on Humans Plastic becomes toxic once it enters the ocean environment. Particles are magnets for different types of pollutants, such as EDT (dichlorodiphenyltrichloroethane) and POPs (Persistent Organic Pollutants), and expel harmful chemicals such as PA (Biosphere A).

Organisms at the bottom of the food chain, such as plankton and krill, ingest the chemicals along with the microscopic plastic particles. As larger fish consume the smaller ones, the chemicals work their way up the food chain. Ultimately, people consume the largest fish, having a devastating effect on human health. In addition we know that plastic pollution leads to birth defects, cancer, disease, and even death. What is Being Done In 1987, a law was finally passed restricting the dumping of plastics into the ocean.

The Marine Plastic Pollution Research and Control Act (AMORAL) went into effect on December 31, 1988, making it illegal for any U. S. Vessel or land-based operation to dispose of plastics at sea. Originally, ships were the largest contributor of plastic pollution till 1988, but now landfills and public

uttering is the largest contributor to plastic in the ocean. The plastics industry has also stepped in, taking measures to reclaim plastic resin pellets that often get lost during production or transport.

As of now the most effective method right now for solving the persistent plastic problem is beach combing. Recommendations International Level The best recommendation I could make to resolve this problem is using the united States influence on the United Nations to pass international rules and regulations for the dumping of plastic's into the ocean. Until we have a relied cooperation at all levels of business, political, and environmental we will endure the dangerous of plastic pollution. Unfortunately, change comes from major catastrophic events to begin any sort of movement in cleaning our oceans and the dies-use of plastic products. National Level This problem is not only within U. S. , but on all continent shores, and only major global action can be taken to really combat this problem. On the United States shores, we can begin to participate beach clean-up's either through non-profit organizations, research firms, or through state correctional facilities. Additionally, provide recycling options to all business's, public spaces, and home pick-up services.