



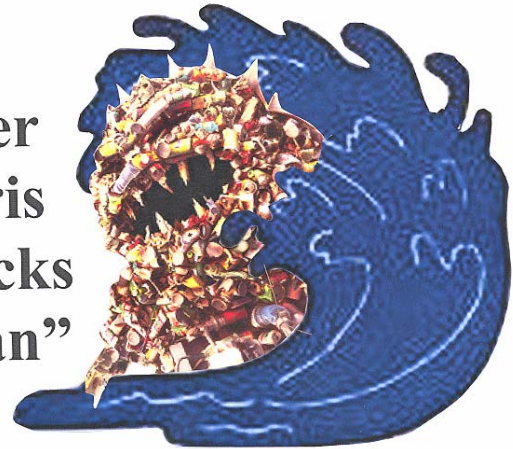
The MarineQuest Explorer

University of North Carolina Wilmington

September 2008

According to The Environmental Protection Agency **Marine debris** or trash has become a problem along shorelines, coastal waters, estuaries, and oceans throughout the world. It is defined as any man-made, solid material that enters our waterways directly or indirectly. Objects such as plastic bottles, rubber duckies, sneakers, cigarette lighters, medical syringes, and discarded fishing line all qualify as marine debris. In addition to being unsightly, it poses a serious threat to everything with which it comes into contact. Marine debris can be life-threatening to marine organisms and humans and can wreak havoc on our coastal communities.

“Killer Debris Attacks Ocean”



Facts: Some marine debris can last for over a hundred years. There are approximately 46,000 pieces of plastic floating in each square mile of our oceans! Plastic doesn't biodegrade, instead it photodegrades over time into tiny pieces called mermaid tears or **nurdles**. A floating garbage patch twice the size of the United States and containing approximately 100 million tons of flotsam has been discovered circulating in the middle of the Pacific Ocean. Scientists estimate 80% of marine debris originates on land.

What can you do to help? Why not become a **flotsamist**? It's just a fancy word for beachcomber. Visit <http://beachcombersalert.org/> to find out how beachcombers use their detective skills to uncover the source of some unusual flotsam. Organize a beach, river or creek sweep in your area and help prevent local trash from becoming marine debris. Use cloth bags when grocery shopping to reduce the use of plastic bags. Recycle as much of your plastic products as possible. And always clean up after yourself.

To learn more about marine debris visit these informational websites:

http://www.oceanconservancy.org/site/DocServer/NMDMP_Intro.pdf?docID=3223

<http://www.epa.gov/owow/OCPD/Marine/contents.html>

<http://marinedebris.noaa.gov/marinedebris101/welcome.html>

or watch these presentations:

<http://www.plasticsareforever.org/collateral/Eriksen-Algalita.pdf>

<http://sero.nmfs.noaa.gov/pr/pdf/Marine%20Debris%20in%20GOM.pdf>

Marine debris takes its toll on some of the oceans most beloved creatures!



Watch these videos to learn about a remarkable dolphin injured by marine debris

<http://www.youtube.com/watch?v=3j8u6RG8y-w> or <http://www.youtube.com/watch?v=fmx5YgxmCdw>

<http://www.youtube.com/watch?v=c2WnrfbBRbA&feature=related>

http://www.liveleak.com/view?i=650_1193508446

To learn more about our programs, visit our website at www.uncw.edu/marinequest



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Teachers may find the following marine debris educational resources useful:

Links to fun learning activities for kids:

<http://www.pbs.org/kqed/oceanadventures/educators/kure/gamelesson.html>

<http://www.keeptoceansclean.org/intro/>

<http://library.thinkquest.org/06aug/01036/>

Lesson plans and ideas:

<http://spoletousa.org/documents/Science%20Lesson%20NIKE-CURRENT.pdf>

Lesson plan with graphing based on journal article

http://www.plasticsareforever.org/collateral/lesson_plan.pdf

Lesson plan on making biodegradable plastics

http://www.pbs.org/kcet/wiredscience/video/116-flotsam_found.html

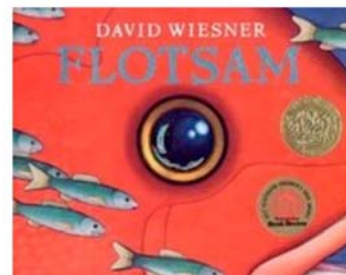
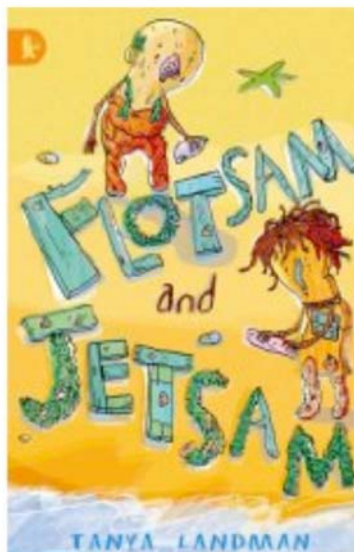
Lesson plan with excellent video and accompanying math ideas

Math – estimate the volume of trash, number of pieces it represents and sort the types of debris.

Geography – learn how to graph the journey of debris on an ocean map. Try to determine the geographic origin of some debris.

Technology – research how satellites are used to track the circulation of marine debris.

Language Arts – here are some interesting books on marine debris to read:



Washed Up: The Curious Journeys of Flotsam and Jetsam by Skye Moody (high school)

Flotsam and Jetsam by Tanya Landman (elementary school)

Flotsam by David Wiesner (pre-school)

Tracking Trash: Flotsam, Jetsam, & the Science of Ocean Motion by Loree Griffin Burns (middle school)

Printable posters and coloring books:

http://www.bim.ie/uploads/text_content/docs/542marine%20biodegradation%20poster.pdf

<http://www.education.noaa.gov/books/debris/debris1.htm>

To learn more about our programs, visit our website at www.uncw.edu/marinequest