

SCIENCE TIMES

Up to date information and issues related to Science, Technology and the Environment

STUDENT ACTIVITIES Biodegradable Plastic

Research and Inquiry

Find out just how much plastic is floating around in our oceans. This is an excellent article that forces the reader to rethink what we do with our waste.

<http://thetyee.ca/Views/2006/07/26/PlasticSea/>

“Explore some of the Odyssey logs focused on the area of human impacts on the [ocean] environment.”

http://www.pbs.org/odyssey/odyssey/human_impacts_logs.html

Watch this Colorado Pure Spring Water bottle dissolve in 80 days. When do you think Pepsi or Coke will adopt this technology?

<http://www.biotaspringwater.com/>

When we throw waste into the trash, we may not think about where it ends up. In this lesson, students will examine how harmful litter can be to ocean creatures and come up with ways to prevent this. (Elementary)

http://www.dfo-mpo.gc.ca/canwaters-eauxcan/bbb-lgb/school-ecole/activities/act3_e.asp

This lesson targeted at Middle School students explores the benefits of biodegradable materials. Students design their own biodegradable items and create models that they can present to the class.

<http://school.discovery.com/lessonplans/programs/recycling/>

Carrying out the activities in this lesson will allow students to learn about the role they play in ensuring oceans remain healthy. (Elementary/Middle School)

http://www.marinematters.org/education/curriculum1/Lesson_8_OceanPollution_4-7.pdf

Learn about life on the ocean by following the voyages of the whale research vessel *Odyssey*. You can watch and listen (using Real Player) to logs, animal encounters and daily events as the *Odyssey* travels around the world.

<http://www.pbs.org/odyssey/odyssey/index.html>

In the ‘Organic School Project’, three schools in Chicago are growing their own organic food and students play a key role. Is this something we could do in our own schools?

<http://organicschoolproject.org/>

Discussion and Debate

Discussion questions

If we dispose of garbage in landfills, why not dispose of it in the ocean?

What are the hidden costs of packaging?

Is dumping biodegradable waste into the ocean a practical solution to a growing problem or a way to feel less guilty about polluting? Argue both sides.

Apparently DDT ‘biodegrades’ into 2 more toxic chemicals.

If this is true, what does biodegradable really mean? Read what enotes’ Encyclopedia of Science says.

<http://www.enotes.com/uxl-science-encyclopedia/biodegradable>

Take Action

Examine the “10 Things You Can Do to Save the Ocean”. Research and create a list of companies that support the recommended actions.

http://www.oceanalliance.org/education/education_10things.html

“In high school or middle school? Form an E club. Start by assessing your school’s impact on the earth by measuring its ecological footprint. (Learn how at www.globalfootprints.org/issues/footprint/councquiz1_ns.htm.) Then pick an area in which you think your school is slacking. Do your homework on the issue before meeting with school staff and making your pitch.”

http://www.nowtoronto.com/issues/2005-09-15/goods_ecoholic.php

Much of our packaging is plastic. And often items come with more than one layer of packaging. Read this article offering ideas to reduce waste and learn that ‘biodegradable’ may not be as environmentally friendly as we are led to believe.

<http://www.perc.ca/waste-line/rrr/home/waste.html#personal>

“Toyota Evergreen Learning Grounds helps schools create outdoor classrooms to provide students with a healthy place to play, learn and develop a genuine respect for nature.”

<http://www.evergreen.ca/en/lg/lg.html>

Apply for funding (\$500-\$2000) if you want to start a school greening or food garden project. Funding applications are accepted starting September 4, 2007 and continue until funding runs out.

<http://www.evergreen.ca/en/lg/lg-funding.html>

Related Links

This is a great series of inter-curricular lessons on the harbour porpoises. While not directly related to the article, students can learn about the life of a marine mammal in its ecosystem. (Middle School)

http://www.heb.pac.dfo-mpo.gc.ca/community/education/lessonplans/harbourporpoise/harbourporpoise_e.htm

Biodegradable Utensils

<http://www.goodearthorganiclunches.com/utensils.html>

Green Packaging in Toronto

<http://www.cbc.ca/news/background/consumers/green-packaging.html>

Green School Supplies

http://www.treehugger.com/files/2007/08/back_to_school.php

Biodegradable Plastics

<http://www.saskwastereduction.ca/plastics/biodegradable.html>

Companies marketing to the navy with biodegradable plastic
<https://www.denix.osd.mil/denix/Public/News/Navy/NEAT/1999/August/august99.html#bio>

