

Plastics Resources

All of the information and links on this Plastics Resources list have been taken from other websites; therefore, The JFP does not take any credit for the writing, products or programming. We are continually developing this list, so if there are any resources that could be added, please contact us at info@thejellyfishproject.org with the Subject Line: Additional Educational Resources. *Please note that any text highlighted in blue will double as an online link to the website provided*

Plastics

1. Earth Day Network

http://www.earthday.org/takeaction/endplastic_education.html

Start a Classroom or School-Wide Campaign to Stop Using Disposable Plastic – The bigger the better! Most schools have recycling programs, which students should be encouraged to participate in, but because we produce so much plastic, in order to fix the problem we need to reduce the amount of disposable plastic products that people buy and use. Have your students come up with ways to limit their use of plastic in the classroom or school and watch them implement and track their ideas.

Coupled with these classroom activities, Earth Day Network also has a series of free plastic-themed lesson plans listed below. If you want to see what other educational resources we have to offer, check out our <u>Educator's Network site</u>.

Grades: Lesson Plan:

- K-4The Bigger Meaning of Recycling: Green Play Structures
- K-5 Healthy Earth, Sick Earth
- K-12 The Truth About Plastic Bags
- 2-5 Per Square Meter
- 3-5An Ocean of Plastic
- 5-8 Recycling and Waste Reduction
- 5-8 Understanding the Energy Demand of Bottled Water
- 5-8 Where Do Recyclable Materials Go?
- 6-8 Sustainable Materials
- 9-12E-Cycling for Environmental Justice
- 9-12 Reduce, Reuse and Create Art!

To get more news about Earth Day Network's education initiatives and get access to more resources, join our Educator's Network!



2. Plastic Pollution Coalition

The following information and resources on plastics can be accessed from the Plastic Pollution Coalition website.

Plastic Free Resources

Program partners are programs around the world with a focus on helping campuses reduce their plastic consumption. As a coalition organization, PPC values the work of all those efforts that are on the ground, providing resources, supporting campaigns, and catalyzing the campus community. If your campus project is in need of some help, see below for partners that may be able to help. Most of them work in a particular region in the world, some focus on a particular issue (i.e. disposable water bottles), and some offer educational programming.

International

Plastic Not So Fantastic

Plastic Not So Fantastic (PNSF) is a world-wide tour of plastic pollution awareness. Its goal is to communicate the many facets of plastic pollution, by traveling over 160,000 kilometers and visiting schools and universities in over 50 countries: PNSF will hit the road on the 23rd of April 2012, al hamdu'illah. They will be driving through Iran, then Turkey, Bulgaria, Romania, Hungary, Austria, Germany then the UK for mid-June via Switzerland and France. In early July PNSF will head back to Europe via France, Belgium and Germany. Denmark, Sweden, Norway, Sweden, Denmark, Germany, Poland, Ukraine, Russia, Kazakhstan, Turkmenistan, Iran and back in Dubai by end of September / early October. PNSF will encourage each school and university to connect to the global community of Plastic Free Campuses, a project by the Plastic Pollution Coalition. If you go to school in one of the above countries, and would like the PNSF expedition to visit your campus, email ben (at) plastic pollution coalition.org, or visit www.pnsfexpedition.com/

Kokua Hawaii Foundation

Kokua's **Plastic Free Schools** program provides resources and materials to educate school communities on the environmental and health benefits of going plastic free to minimize the consumption and pollution of plastics in Hawaii's schools and throughout the Islands. Plastic Free Schools aims to reduce single-use plastics on school campuses by encouraging students, faculty, and parents to make plastic free commitments to use reusable water bottles and tote bags and pack waste free lunches. Although targeted to Hawai'i, the program is a model that could be duplicated elsewhere as well, and Kokua provides a number of resources to those looking to start



similar programs in their local school districts. The <u>Plastic Free Schools Educator's Resource Guide</u> is available for download from the Foundation's website as well. Kokua offers an assortment of <u>other school programs</u> focused on teaching young people about sustainable living, as well as an <u>extensive resource section for educators</u>.

Sea Turtle Restoration Project

Sea Turtle Restoration provides educational videos, materials, and a variety of <u>lesson plans</u> for teachers. The organization also runs its popular Adopt-a-Nest program. Teachers have used their materials to educate classes about sea turtles and the marine environment, and then capped off the lesson with a bake-sale or other fundraising event in order to buy an Adopt-A-Nest. This allows the students to turn their learning into action as the Adopt-A-Nest helps protect sea turtle nests and hatchlings.

Tara Oceans

The marine research organization teamed up with Biosphere 2 in Arizona to create this <u>lesson on</u> the <u>Great Pacific Garbage Patch</u>, by Victoria Milani, for middle-school students.

Australia- Plastic Free Campaigns and Resources for Campuses -Bottled Water

Do Something's Go Tap

The Do Something organization's Go Tap campaign works with schools and communities in Australia to promote the tap over bottled water. Their site has research, action guides, case studies, and other resources.

Canada -Plastic Free Campaigns and Resources for Campuses –Bottled Water

Back the Tap

Network, online resources. Back the Tap sponsors bottled water free day on March 15, and works with communities and campuses in Canada to go bottled water free. Their website has resources for action projects, and an invitation to take the bottled water free pledge. Back the Tap has a popular <u>Facebook page</u>, ideas for events, and a registration page for events.



Inside the Bottle

Online resources, campaign guides. Inside the Bottle has a special campus section, with a wide array of resources for campaign activities, plastic free events, case studies, and resources for dealing with campus exclusivity contracts. (Resources also available in French!).

<u>United States - Workshops and Presentations For Schools</u> All Ages

S.T.O.P. (Students Take On Plastic)

Student engagement curriculum developed by BagIt Contest winning Green Schools Alliance member The Hewitt School to engage and train high schools students to push for legislation in their towns and cities that reduces the use of disposable plastic.

Bash the Trash

Arts group Bash the Trash pulls together informative concerts for youth ages 3 to 6 years old as part of its Very Young Audiences series. The group is also available for performances and workshops for other age groups, as well as family concerts and events. Their instruments are made from trash, and each interactive performance is a journey into sound, science and music – how instruments are made, why they work, and how to make your own. And of course Bash the Trash highlight environmental issues and how each of us can help fight global warming along the way.

Rise Above Plastics Student Speaker Series

Green Ambassadors, in partnership with The Surfrider Foundation and The Algalita Marine Research Foundation, created the Rise Above Plastics Program, a student speaker series that encourages Los Angeles to curb their single-use plastic habits. Through the program, students learn about the impact of plastics on our lives and the environment, including plastic marine debris, chemicals and toxins. Students spread the word to their peers and the community by delivering engaging presentations that encourage practical solutions. They also learn the value of teamwork and polish their public speaking and presentation skills. For a presentation at your school, business or organization, email.



Pick Up America

School presentations and workshops. Pick Up America is the nation's first coast-to-coast roadside litter pickup. Their mission is to pick up trash across the country, educate, and encourage a transition toward zero waste. Through community litter clean-ups and outreach events, the Pick Up Artists encourage alternatives to our nation's throwaway mentality. The trek began at Assateague Island, Md., in March 2010 and plans to span 13 states to the San Francisco Bay in November 2012.

Grades K-12

Algalita Marine Research Foundation

Algalita's education goals are met through its K-12 school programs (including curriculums and/or DVDs set to California's science standards), through public outreach, and through its unique educational literature. The Foundation also makes presentations at the local, state, federal and international levels on the topics of marine debris and ocean health, and has also created a series of videos intended to inform the public about ocean pollution.

Heal the Bay

Heal the Bay's "Heal the Bay on Campus" program brings members of the organization's speaker's bureau into schools for a free, interactive presentation on the causes of ocean pollution. The organization also provides lesson plans and curricula for multiple grades, as well as teacher workshops, and help organizing service learning projects for schools.

Save Our Shores

Educational programs and workshops for K-12 audiences, including field components, educator resources. The **Marine Debris Classroom Education Program** teaches marine conservation and watershed stewardship with a focus on coastal processes, marine debris and marine ecosystems. This program provides students with an interactive and fun learning environment that promotes a sense of wonder, empowerment, and connection to the ocean and our watersheds.

<u>Surfrider Foundation</u> – Educational videos, studies and articles, plus the award-winning <u>Respect the Beach</u> program, which brings Surfrider environmentalists into the classroom to help teachers with field trips, classroom lectures, handouts, video, and hands-on projects designed to



explain coastal watershed processes, shoreline ecology and coastal areas stewardship to K-12 students and community groups.

Grades 3-12

5 Gyres

Educational information and exhibits related to ocean plastic pollution and the gyres. Interested schools and teachers can even bring 5 Gyres scientists and researchers in to give students a fantastic hands-on lesson!

Plastic Free Campaigns and Resources for Campuses

Ban the Bottle

Offers resources for schools, municipalities, and communities to implement a Ban the Bottle campaign to end sales of bottled water.

Rethink the Drink

Programs to install water refill stations at schools in the Santa Barbara, California area "Rethink the Drink" is a Community Environmental Council program to reduce plastic water bottle usage at local schools.

Think Outside the Bottle

Campaign planning resources, organizing kits, campus network. "Think Outside the Bottle" is a project of Corporate Responsibility International, that works with municipalities, faith groups, businesses, and campuses to promote and protect public water systems. Their extensive campus resources include organizing kits and campaign resources, as well as a student network to connect into for support on your campus bottled water initiative. This group has successfully led campuses through the process of eliminating bottled water in support of local public water systems and campus adoption of plastic alternatives.

Take Back the Tap

National campus network, middle school curriculum, downloadable resources, campus campaign guides. "Take Back the Tap" is a program of the Food & Water Watch which offers resources to help governments, individuals, businesses, schools, and events to stop using bottled water in



favor of public tap water. The Take Back the Tap middle school curriculum teaches the issues of bottled water, and the benefits to choosing the tap. The college campus program includes a well-established network of campuses that have or are on their way to banning bottled water, and connect you with experienced student organizers across the country.

United Kingdom

Plastic Free Campaigns and Resources for Campuses –Bottled Water

TapWater.Org

Hydration station installation, reusable bottles, school grants. TapWater.Org is a UK charity that helps to provide alternatives to schools and businesses in the form of tap fed, rapid-fill, water chilling hydration stations. TapWater.Org also supplies their distinctive Lifebottle insulated steel water bottles to the schools and businesses that install hydration stations. This organization also offers grants for schools and students to help in adoption of plastic alternatives.

Students for Free Water

Campaign, student network. Students for Free Water is a campaign started by students at Leeds University and Sheffield University, in the UK. Students targeted their student unions to put an end to sales of bottled water in favor of tap water. Case studies are available to guide students at other Universities through the process, and students are invited to join the campaign on their website.

3. The Water Brothers

They are a team of two brothers embarking on an eco-adventure documentary series to explore the world and uncover the most important water stories across the globe. The brothers are passionate about water conservation and use their educational backgrounds in film and environmental studies to create the award-winning series and the quest for sustainability. Episodes can stream for free online.

Video topics:

- <u>Bottlegate</u> exploring the unnecessary demand for bottled water
 - o Teacher resource <u>episode guide questions</u>
- <u>Plastic Ocean</u> discovering the "Great Pacific Garbage Patch", a massive collection of plastic waste congregated in the middle of the Pacific Ocean



4. NOAA

Ocean pollution – lots of resources on marine debris including point source and non-point source pollution. Highlights on oil spills, dead zones, plastics, algal blooms, and other contaminates.

5. Documentary - Tapped

Tapped focuses on the ugly truth behind the "big business" of bottled water. The film also delves into the impact bottled water has on our own health, and discusses the danger existing in BPA and other chemicals that have been found in some plastic bottles

6. Documentary - Plastics Paradise

The truth about the Great Pacific Garbage Patch and its affect on wildlife on Midway

7. Documentary - Plasticized

An intimate account of a first-hand journey aboard the Sea Dragon with the 5 Gyres Institute on the very first scientific expedition, focused on plastic waste, through the centre of the South Atlantic Ocean. An eye-opening story about the institute's global mission to study the effects, reality, and scale of plastic pollution around the world.

8. Project Learning Tree

https://www.plt.org/greenschools-resources-waste-and-recycling

Suggested Resources K-12:

U.S. Forest Service - This website offers a "Green Jobs" curriculum and activity guide.

Keep America Beautiful - KAB offers curricula and teacher training in litter prevention, preserving resources, responsible solid waste management, and how to reduce, reuse and recycle. The classroom curriculum supplement, Waste in Place, is designed for use in grades K - 6 and contains 33 lesson plans on subjects such as litter prevention, waste reduction, recycling, and landfills. KAB also reaches schools with a K - 12 school recycling competition called "Recycle-Bowl".

<u>WasteFreeLunches.org</u> - This website provides information on developing and implementing a waste-free lunch program at schools. It includes tips, success stories, and resources.

Waste Education - This U.S. EPA website provides waste education resources.

<u>Climate Change</u> - This U.S. EPA website provides information for kids on how simple actions can help our environment.



2009 EPA Report - This is a link to the U.S. EPA Report for 2009. Municipal Solid Waste Generation, Recycling, and Disposal in the United States: Facts and Figures.

<u>Fluorescent Bulb Recycling and Disposal</u> - This U.S. EPA website provides information on the proper disposal or recycling of fluorescent bulbs, which contain small amounts of mercury.

<u>Blueprint for a Green School</u> - This website offers a blueprint provided by the Center for Environmental Education at Unity College in Maine. The site provides information on environmental health and safety issues in schools, including information on waste and recycling.

<u>Green School Report Card</u> - This California-based Green Schools Initiative encourages K-12 teachers, students, and parents to explore local schools to discover how environmentally friendly (or unfriendly) they are. Teachers and students can take an online quiz and generate a report card for their school. The site also includes profiles of successful Green Schools, suggestions for "teaching green," and tips on finding green products for the classroom.

<u>Thinkgreen.com</u> - Sponsored by Waste Management and Discovery Education, this website contains k-12 lessons, videos and interactive tools to help students rethink what they know about waste. The site also provides downloadable posters promoting recycling ideas.

<u>U.S Environmental Protection Agency – Planet Protectors Club for Kids</u> - As a Planet Protector, your mission is to improve the world around you by making less trash. Planet Protectors also help others learn to reduce, reuse, and recycle. Targeted for K-5 students, this website features interactive games and activity booklets for informing students about reducing waste and conserving resources, as well as helping them understand the connection between trash and climate change. Booklets are available in Spanish and English.

How Green is My Town? - is a grassroots effort to empower citizens and local decision makers to address the issues of climate change, sustainability, and environmental health at the local level. The website functions as a national clearinghouse of programs, ideas, and policies for exploring solutions. Learn how you can be part of that change by reviewing a list of actions any school or town can take.

Elementary, Middle and High School Reading Suggestion

Bowden, Rob. *Waste, Recycling and Reuse: Our Impact on the Planet.* Raintree Publishers. 2002. In this selection from the "21st Century Debates," subtitled "Our Impact on the Planet," author Rob Bowden provides readers with an analysis of the issues linked to waste management. Bowden provides background in areas such as waste disposal, pollution, recycling, and reuse. ISBN: 0739831801

9. CleanWaterShed.org



http://www.cleanwatershed.org/learning

Catalyst ABC TV - Plastic Oceans — This 12-minute video is the first world study of the plastic polluting our coastlines. Oceans are silently choking on our plastic waste. Plastic and synthetic materials are the most common types of debris in our oceans and are having horrific impacts on marine wildlife and systems.

The Ocean Conservancy – This organization believes it's time to look beneath the surface to see where the health of our planet really begins. This is a great site to discover how all living things are connected to the ocean.

Back2Tap – A resource offering eco-friendly, high quality, custom stainless steel bottles and other litter-less lunch and back-to-school accessories.

Stop Waste at Schools - StopWaste.Org provides a variety of services and resources to students, teachers, schools and districts in Alameda County to advance waste reduction education.

Education and the Environment Initiative (EEI) - This new curriculum introduced in early September 2009 positions California to lead the nation in environmental literacy. For watershed specific coursework, please scroll to the 5th grade section.

U.S. Environmental Protection Agency - Teaching resources geared at helping you share important water conservation, stewardship and protection facts and figures with your students.

The Groundwater Foundation - This is great site for educators and students alike with informative games, articles and projects designed to teach young people about protecting our groundwater.

Drought for Kids - A timely drought resource, this site provides a good resource tool for both students working on research projects and teachers needing to explain the impacts of a drought on a region.

Watershed Wonders - is an educational video series exploring issues in marine conservation, watershed management, and the plague of plastic debris. Episode 1 DVD and printed curriculum is available for free for California schools ONLY.

The California Coastal Commission's Science Activity Guide - Waves, Wetlands, and Watersheds is a classroom activity guide for teachers aligned with the California State Science Content Standards for grades 3 through 8, and includes "Community Action" lessons adaptable for all ages up to and beyond 12th grade.



Adopt-A-Beach School Assembly Program - This comprehensive environmental education program is designed to motivate teachers and K- 12 children to care about our beaches and oceans. It demonstrates how beaches and oceans get dirty and provides "hands-on" opportunities to make a difference by recycling and reducing litter.

MERITO - MERITO is the multicultural education program for the Channel Islands National Marine Sanctuary (CINMS) and it stands for Multicultural Education for Resource Issues Threatening Oceans. The goal of the MERITO program at CINMS is to provide programs and products to our multicultural population to build sanctuary stewardship, help increase understanding of ocean related threats, and motivate culturally diverse students to pursue careers in marine sciences and/or resource protection so that our entire community can actively contribute to ocean preservation.

10. Grow NYC

http://www.grownyc.org/recyclingchampions/student-activities

Our Environmental Education programs get kids involved by teaching them how to plant trees, build gardens, grow vegetables, cook with solar ovens, and teach fellow students the hows and whats of recycling and healthy eating. Our four core education programs engage children from all five boroughs.

Greenmarket Youth Education Project

The Greenmarket Youth Education Project connects thousands of New York City school children with Greenmarkets, farmers, and chefs through fun, interactive learning experiences like at-market school tours, farmer classroom visits, interactive cooking classes, and farm field trips.

Grow to Learn NYC

Grow to Learn NYC, the Citywide School Gardens Initiative, was established in 2010 as a public-private partnership between GrowNYC, the Mayors Fund to Advance New York City, and several government agency partners, with a mission to inspire, promote and facilitate the creation of sustainable gardens in public schools throughout New York City.

Learn It, Grow It, Eat It

Learn it, Grow it, Eat It is a hands-on education program which empowers teens to take control of their health and to help others do so through hands-on food growing in Bronx community gardens, managing a community farm-stand, nutrition education, and by teaching their communities about the links between personal health, healthy eating, and the environment.



Recycling Champions

Recycling Champions develops model recycling programs at over 100 NYC public schools each year, educating 100,000 students, staff, and custodians about recycling. The best practice resources available through Recycling Champions' webpage will help make recycling an everyday practices at your school.

Environmental Education

Environmental Education uses academic-based service learning programs to educate young people about the environmental consequences of their choices, teaches them to improve the environment in which they live, and increases their interest in environmental sciences and issues.

11. National Association of Biology Teachers

http://www.nabt.org/websites/institution/index.php?p=107

Recycling Lesson Plans and Activities

Recycling

The Educational Technology Center at Kennesaw State University web site listing of research/Informational sites, online activities/lesson plans, offline lesson plans, offline activities, online projects, and more on recycling.

Recycling Lesson Plans

The Pennsylvania Department of Environmental Protection site contains K-12 lesson plans to illustrate a variety of recycling concepts on waste, litter, classroom paper recycling, composting, motor oil and unwrapping packaging.

Reduce, Reuse, Recycle Theme Page

A collection of links to Internet sites that contain information or other related links specific to the topic of recycling.

Teach Engineering Resources for K-12

Design a Recycling Game where students come up with alternative uses for used products. Additional curricular units, lessons and activities for K-12 teachers on a variety of topics are shown for primary and secondary teachers.



Trash Goes to School

The Cornell Waste Management Institute presents K-12 resource provides solid waste background information, activities, ideas on how to integrate solid waste issues into multiple subjects plus grade level glossaries.

National Recycling Coalition

The NRC is a nonprofit advocacy group that focuses on waste reduction, reuse and recycling in North America. A map of state and regional recycling organizations provide a network to address public policy advocacy and public education.

Paperrecycles.org

The Paper Industry Association Council maintains this site with information for teachers on paper and paper recycling including interactive features, statistics and a step-by-step guide for developing or improving a recycle program at your school.

Recycled Plastic Products Directory

The Plastics Division of the American Chemistry Council and the Environment and Plastics Industry Council of Canada web site presents K-12 resources for students and teachers including a learning center with links to health safety, environment and sustainability content.

U.S. Green Schools Foundation

The For Educators section of their sit highlights curriculum on sustainability, green building principles, renewable energy and recycling.

Your Comprehensive Recycling Resource Library

A full page of links with instructions on how to recycle almost everything from household materials to constructions zone disposal.

12. Trashed (Documentary)

http://www.trashedfilm.com/

In the new docu-feature TRASHED, a Blenheim Films production, produced and directed by British filmmaker Candida Brady (Madam and the Dying Swan), which was selected to receive a Special Screening at the Cannes Film Festival, Irons sets out to discover the extent and effects of the global waste problem, as he travels around the world to beautiful destinations tainted by pollution. This is a meticulous, brave investigative journey that takes Irons (and us) from scepticism to sorrow and from horror to hope. Brady's narrative is vividly propelled by an original score created by Academy Award winning composer Vangelis.



13. Teacher Vision

 $\frac{https://www.teachervision.com/tv/tvsearch.php?keywords=plastic+waste\&go.x=0\&go.y=0}{\&sitesearch=1}$

14. Terracycle

http://www.terracycle.com/en-US/curricula

In nature, the waste of one living system is food for another. Drawing upon the first and second laws of thermodynamics, students learn that to achieve sustainability, human production and waste systems need to emulate nature, and must work towards a cradle to cradle approach.

15. Millenium Recycling

http://www.millenniumrecycling.com/resources/

Serving Sioux Falls and the upper Midwest since 1999, we recycle a wide variety of materials from residential and commercial generators. Our goal is to continue driving the recycling rate up through education and innovation

16. American Chemical Society

http://www.acs.org/content/acs/en/education.html

ACS is a congressionally chartered independent membership organization which represents professionals at all degree levels and in all fields of chemistry and sciences that involve chemistry.