

NEW YORK STATE

Conservationist



WASTE REDUCTION





NEW YORK STATE Conservationist



In this issue: This issue explores how environmentally friendly choices can help us save natural resources and reduce the waste we create or that ends up in a landfill.



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WHAT CAN YOU DO?

REDUCE: Reduce how much waste you create by re-thinking your choices! Choose reusable water bottles and reusable shopping bags, wear or use what you have until it is worn out, take only as much food as you can eat, and select new items with less packaging.

REUSE: Think “trash to treasure.” Use things again and again, instead of throwing them away. Donate unwanted items to thrift stores or charities, or give them to family or friends. Books, toys, clothing, and furniture are examples of items that are commonly reused. In addition, remember reuse includes choosing cloth napkins or towels and reusable plates and utensils instead of paper towels, paper plates, and plastic ware.

RECYCLE: Instead of throwing things into the trash, recycle them. Recycling involves collecting and sorting materials like paper, plastic, metal and glass from trash and then making them into new items. Recycling and buying items made from recycled materials saves natural resources.

NYSAR³* has a campaign for textile donations. Textiles are items such as clothing, sports jerseys, sneakers, socks, blankets and towels. Lists of acceptable materials and bin locations can be found under the Re-Clothe NY section of the NYSAR³ website: www.nysar3.org.



Recycled textiles can be made into a variety of products, such as athletic tracks, pillow stuffing, insulation, tote bags and even paper money! Reducing, reusing, and recycling are all ways to help keep waste out of landfills!



GLOSSARY:

ENVIRONMENTAL SUSTAINABILITY:

Environmental sustainability means making choices in your daily life that enable you to meet your needs while at the same time helping to save **natural resources**. For example, packing your lunch in a reusable lunch box is more environmentally sustainable than using a new paper bag every day.

NATURAL RESOURCES: Natural resources are used by people but created by nature, such as water and trees. There are two types of natural resources—renewable and non-renewable (see below).

NON-RENEWABLE RESOURCES:

Non-renewable resources exist in a limited supply, and cannot be replaced once they're gone. Examples include oil, coal and minerals.

RAW MATERIALS: Raw materials are the “main ingredients” for making a product, such as paper. Raw materials used to make paper include trees and water. Most raw materials are natural resources.

RENEWABLE RESOURCES:

Renewable resources can be replaced or cannot be depleted. Examples include trees and wind. Trees can be replaced through replanting, and wind—moving air—cannot be used up.

WASTE (TRASH): Waste is anything we no longer need or want. It usually ends up in the landfill or gets combusted (burned).

WASTE REDUCTION: Waste reduction means decreasing how much trash you create.

Everyone from kids to adults need new things from time to time. When thinking about buying something new, we can also consider the environment in our decisions. By doing so, we can all work together to reduce our waste and help the environment through environmentally sustainable choices.

THINGS TO CONSIDER WHEN BUYING SOMETHING NEW...



Where does this come from?

You can check to see where something was made before buying it. When a product is made closer to where you live, less fuel is used in transporting it to you or to a store near you.



How often will the item be used?

Sometimes we need to buy things that are brand new, but in some instances there might be other options. If something is only going to be used once or just a few times, we may be able to make an environmentally sustainable choice to help reduce our waste. This includes borrowing an item, renting it, or purchasing it used.



How much packaging is there?

New items usually come in some type of packaging that often seems unavoidable. This packaging frequently ends up in landfills. One way to help reduce waste is to try to choose items with less packaging when you're able to. Options for this include items that are wrapped in little to no plastic.



Can the item be borrowed, rented, or purchased used?

Every time a new product is made, it requires raw materials. A borrowed, rented, or used item was once new and has already been made. This means that for these products, no additional raw materials (such as trees and water) had to be removed from the Earth to create them, thereby

helping to conserve natural resources. Things such as clothing or shoes can be borrowed from friends and family members; books, magazines, and DVDs can be borrowed or rented from libraries; and other items can be purchased used from secondhand or thrift stores.



Can this be reused or recycled when I no longer want it?

Items that can be reused or recycled are more environmentally sustainable than items that cannot be. When an item is reused, extraction of raw materials to make a new product isn't necessary. If a product can be recycled, there is less chance of it ending up in a landfill or being combusted. Also, recycled materials can be turned into new products, often with the use of fewer natural resources.

What is it made of?

Products can be made from many different types of materials. If we need to buy something new, one way to help conserve natural resources is to buy products that are made from recycled materials. For example, a lunch box made from recycled plastic is more environmentally sustainable than a lunch box made from new plastic. To create new plastic vs. recycled plastic requires the extraction of more oil from the Earth. Less energy and raw materials are needed to make products from recycled materials.





Re-Think Your Choices and Reduce Your Waste!

Making simple changes every day can lead to a big difference at the end of the week. You can start by choosing one way each day to reduce your waste. Hang this on your fridge and use the information to help you make your choices.

MORE



Lunchbox



Reusable or compostable utensils



Reusable water bottle



Reusable grocery bags



Cloth towels for dishes and hands



Glass or plastic storage containers for snacks

Visit DEC's website at www.dec.ny.gov to learn more.

LESS



Single-use plastic utensils



Paper lunch bag everyday



Sandwich/snack bags

Single-use plastic or paper grocery bag

If you forget your reusable bags, be sure to reuse and recycle your plastic and paper bags!



Disposable water bottles



Paper towels

RETURN YOUR CANS AND BOTTLES



Did you know that in New York State, the law requires most beverage containers (soda, bottled water) to have a 5-cent deposit added to them at the time of purchase? Customers get their 5-cent deposit back by returning the empty containers to local stores. This law helps reduce roadside litter and landfill waste, because the returned containers are being recycled.

THE LIFE CYCLE OF A CELL PHONE

Do you have a cell phone? Do your family members? Chances are, the answer is yes. But do you know what raw materials your cell phone is made from? Do you know where these raw materials come from? The life cycle of a product shows the steps used to make it, where the materials for it originated, and what happens to the product when you get rid of it. Follow the life cycle of a cell phone to learn how raw materials and natural resources are required to make it and how you can take steps to reduce your waste.



1

MINE RAW MATERIALS - Raw materials are needed to make the parts and packaging for a cell phone. For example, metals are extracted from ore, which must be mined. 🚛



8

NEW PRODUCTS - New products, such as Olympic medals, are made from recycled metal from cell phones. 🌍



7

RE-MANUFACTURING - Recycled materials from old cell phones are converted 👍 into materials that can be used to make new products.



2

MANUFACTURING - The parts needed to make a cell phone are manufactured from raw materials, and shipped to assembly plants.



Mine Materials



Manufacturing



New Product



Purchase



Use



Recycle



Manufacturing



New Product

Before getting rid of your old cell phone and purchasing a new one, remember the things to consider when buying something new.



When you recycle, fewer raw materials are extracted from the Earth 🌍 to make new products. Also, less fuel is used to transport 🚚 products, making a more sustainable future. 😊



3

FINISHED PRODUCT - The newly manufactured cell phone is now ready for sale, and is shipped 🚚 to a store or warehouse.

4

PURCHASE - Cell phones are bought at a store or online, and additional fuel is 🚗 required to get the new phone to your home.

5

USE - Ideally, 👍👍👍 a cell phone is used until its useful life ends—that is, until it no longer works or it has become insufficient for your needs. This may mean continuing to use the same cell phone, even if a newer version is for sale.



6

RECYCLING - Old cell phones should be recycled so usable materials can be removed from them and used to make new products.

Be sure to take your cell phone to a participating location for recycling. 🚗 Find one close to you at www.dec.ny.gov/chemical/8818.html 



BECOME A SUSTAINABILITY WHIZ KID!

Take the quiz below to learn more about how sustainable choices can help save natural resources and reduce waste.

1) How many gallons of water does it take to make one pair of jeans? _____

- a. 2 gallons b. 29 gallons c. 290 gallons d. 2,900 gallons

Sustainability by the Numbers: First, count how many pairs of jeans you have. Next, do the math and calculate how many gallons of water it took to make all of your jeans. Now, let's imagine that you need two new pairs of jeans. How much water could be saved if you bought two pairs of used jeans instead of new ones? (*Hint: check the answer key for the answer to #1 before trying the calculation.*)

2) Trees and water are two of the natural resources needed to make paper. Each person in the United States uses the equivalent of _____ per year in paper.

- a. 30 trees b. 13 trees c. 2 trees d. 21 trees

Recycling Tip: Help conserve natural resources and reduce your waste by recycling these common paper products: printer paper, looseleaf paper, cereal boxes, magazines, newspapers and greeting cards. Try to buy products made from recycled paper whenever possible.

3) It's important to remember your reusable shopping bags, to reuse plastic shopping bags, and to properly recycle plastic shopping bags. It can take _____ or even longer for a plastic bag to decompose in a landfill.

- a. 500 years b. 5 years c. 50 years d. 5,000 years

How to Recycle Plastic Bags: Take plastic bags to your nearest grocery store for recycling. Look for a bin near the front of the store with a label for plastic bag and plastic film collection.

4) _____ are among the fastest-growing raw materials on the planet, making them an environmentally sustainable choice for new products. You can buy clothing, utensils, dishes, flooring and towels made from this type of raw material.

- a. Pine trees b. Bamboo plants c. Cotton plants d. Redwood trees

Sustainable Materials: Check product tags and labels to see whether they're made with **sustainable materials**.

5) Each person in the United States produces about _____ of trash per day.

- a. 4.5 pounds b. 2 pounds c. 9 pounds d. 11 pounds

Reducing Your Waste: The choices you make every day determine how much trash you create. In most cases, we want to be above average, but, when it comes to how much waste you produce, that isn't a good goal. To be below average, follow the suggestions on pages 4 and 5.

FIND TREASURE IN YOUR TRASH — Practice reusing items and reducing your waste by starting with your own recycling bin! There are many crafts and projects that can be made with things that you usually put in your home or school recycling bin. Check out the *Conservationist for Kids* webpage at: www.dec.ny.gov/education/108755.html and send us photos of your projects!

Quiz key: 1.) d 2.) c 3.) a 4.) b 5.) a

Learn more about reducing, reusing, and recycling by participating in the NY Recycles poster contest! Learn more on DEC's website at www.dec.ny.gov/education/32506.html.

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Supplement for Classroom Teachers – Waste Reduction

What is Environmental Sustainability?

Environmental sustainability means making choices and carrying out daily tasks in a way that is kinder to the environment, or more environmentally friendly. By making environmentally sustainable choices in our everyday lives, we can not only meet our needs, but also help to protect the environment, reduce our consumption of natural resources, and reduce the amount of waste that we produce. Many of the resources that are used to make and transport products exist in finite amounts, and once they are gone, they cannot be replenished. Some natural resources are renewable, such as trees, although it might take many years for them to be replaced. Environmentally sustainable choices that both reduce our waste and help to lessen negative impacts on the environment and natural resources include reusing, recycling, and purchasing used items. This issue of *Conservationist for Kids* focuses on waste reduction and environmental sustainability, and will hopefully help your students learn more about how making environmentally friendly choices and decisions can have lasting positive impacts on the environment.

This Issue's "Outside Page"

The "Outside Page" in this issue of *Conservationist for Kids* encourages students and their families to learn more about sustainability by taking a short, information-filled quiz. Students can not only test their knowledge, but will also learn a variety of fun facts at the same time. Students are also encouraged to create "treasures from trash" by using items in their home and school recycling bins to create projects and crafts. Students are encouraged to send us photos of their creations, so that we can share them on our website and through our social media channels.

Teacher Workshops

For teachers who have participated in a **Project WET** or **Project Learning Tree (PLT)** workshop, the activities listed below complement this issue of *Conservationist for Kids*. Visit www.dec.ny.gov/education/1913.html for information about workshops and about how to obtain curriculum and activity guides.

Project WET: There is No Away
Rainy Day Hike
A-maze-ing Water

PLT: A Look at Aluminum
Reduce, Reuse, Recycle
Municipal Solid Waste

***Conservationist for Kids* and an accompanying teacher supplement are distributed free of charge to public school 4th grade classes in New York State three times per school year (fall, winter and spring). If you would like to be added to or removed from the distribution list, need to update information, or if you have questions or comments, please e-mail the editor at KidsConservationist@dec.ny.gov or call 518-402-8047. Limited quantities of some back issues are also available on request. The full archives can be found online at www.dec.ny.gov/education/100637.html**

Supplemental Activities for the Classroom

Visit a Recycling Facility

Plan a visit to a local recycling facility as a class, in order to have students learn more about what is involved in sorting and recycling the items placed in your collection bins. Many municipalities now utilize single-stream recycling, which means that different individual materials (glass, metal, plastic, paper) can all be placed together in the same bin for collection, and are then sorted at the recycling facility. During your visit, be sure to ask about the different technologies that are used during the sorting process. To help arrange the visit, contact your local community's or municipality's Recycling Coordinator for help finding a recycling facility in your area. To find your local municipality's or community's Recycling Coordinator visit www.dec.ny.gov/chemical/8511.html.

Conduct a Waste Audit

A waste audit allows you to look at how much waste and what types of waste are generated. Conducting a waste audit as a classroom activity will help your class realize how much waste the average student generates. After seeing how much waste is generated in your classroom, follow-up discussions can include steps that students can take to reduce waste at school and at home, how to improve in-school and at-home recycling, and what types of environmentally sustainable choices can help lead to less waste. Once you have performed a waste audit in your classroom, you might be able to partner with school staff to do a larger waste audit for other parts of the school, or even the entire school! Guides to conducting a classroom waste audit can be found online at <http://resourcefulschools.org/grades-4-12-classroom-waste-audit/> and www.recycleworks.org/schools/s_audits.html.

DEC Resources

www.dec.ny.gov/education/41746.html DEC's Green Schools webpage
www.dec.ny.gov/chemical/8802.html DEC's New York Recycles webpage
www.dec.ny.gov/chemical/294.html DEC's Recycling and Composting webpage
www.dec.ny.gov/chemical/8502.html DEC's Reduce or Waste Reduction
www.dec.ny.gov/chemical/8801.html DEC's Waste Reduction and Recycling Pamphlets

Online Resources

www.earth911.com *This website is especially helpful for the "odd" recyclables*
www.epa.gov/education US EPA's Environmental Education webpage
<http://www3.epa.gov/recyclecity/> US EPA's Recycle City (*online game and activities/resources*)
www.epa.gov/environmental-topics/land-waste-and-cleanup-topics US EPA's Wastes webpage
www.greeneducationfoundation.org Green Education Foundation
www.greenschoolsalliance.org Green Schools Alliance
www.naturebridge.org/garbology.php Garbology
<http://www1.nyc.gov/site/sustainability/initiatives/urban-sustainability.page> NYC Urban Sustainability
<http://ocrra.org/services/education-program/> Onondaga County Resource Recovery Agency (*look for their "reduce" game*)
<http://onemoregeneration.org/educational-program-info/> One More Generation Plastic and Recycling Awareness
www.savethefood.com Save the Food (resources about food waste)

Books

Recycled Crafts Box by Laura C. Martin, Storey Publishing, 2004
Recycled Craft Projects for Kids by Marion Elliott, Armadillo, 2014
The Soda Bottle School: A True Story of Recycling, Teamwork, and One Crazy Idea by Laura Kutner and Suzanne Slade, Tilbury House Publishers, 2016
Where Does the Garbage Go? by Paul Showers, Harper Collins (revised edition), 1994