

projectgreenchallenge

pgc
2013

CURRICULUM

LESSON PLANS
FOR A
conscious
lifestyle

ZERO WASTE

Introduction

According to the Environmental Protection Agency (EPA), the average American produces about 4.4 pounds of garbage per day. And as a nation, the US uses over 2.5 million plastic bottles every hour, sending around 40 million bottles to landfill each year! This is in addition to the more than 100 billion plastic bags we throw away each year, less than 1% of which are recycled. We all need to use less, waste less, and conserve more.

*One thing we can do on a daily basis is support companies that design products to be reused, repurposed and upcycled or are made according to the **Cradle to Cradle** philosophy. And remember, buying nothing (or buying less) is even better for the earth than buying green!*

Resources

- *Pinterest Board*
- *Project Green Challenge 2012 the 5 r's*
- *Project Green Challenge 2011 plastic*
- *Project Green Challenge 2012 meatless monday*
- *Project Green Challenge 2011 Disposable reusable*

Objectives

In today's lesson, students will:

- Identify the types of waste generated in students' lives on a regular basis
- Discover alternatives to disposable and single use products
- Prepare a creative artifact that contains pledges to reduce waste

Materials Needed

- markers
- art supplies (glue, scissors, colored construction paper)
- large piece of paper (or a white board or chalk board) for students to write on
- calculators

Lesson Plan

Start of Class: 15 minutes

To begin, students should brainstorm what they throw away on a daily or weekly basis. In their notes or on a scratch piece of paper, give them two minutes to think of as many examples as possible. Then, have each student choose three things to write on the board or on an old piece of large paper.

Scavenger Hunt Activity: (homework the night before and 15 minutes of class time)

Have students do a scavenger hunt in their houses to find items listed in the article ***“25 Things You Can Probably Get Along Fine Without”***.

The list of products consists of:

- plastic wrap
- tin foil
- disposable cleaning cloths
- paper towels
- disposable pens
- paper plates
- plastic cutlery
- disposable razors
- prepackaged fruits and vegetables
- individually wrapped snacks
- juice boxes
- electric pencil sharpeners

- disposable diapers
- disposable cloths
- paper or plastic single-use grocery bags
- bottled water
- throw away batteries
- electric can openers
- single serving pudding or yogurt cups
- plastic cups
- disposable table cloths
- antibacterial wipes
- facial tissues
- paper bills and statements
- plasticized sticky notes

Students should write down everything they find on the back of another sheet of paper (as a way to reduce the waste in this activity). At the beginning of class, all students should bring their lists in and count up the number of things they found around their house and report the results to the teacher. Then, the students should look through their list and select five that they could easily switch. Have them underline these five items, and next to each write a zero waste option that students will purchase or use. Lastly, question the students if they think these switches are possible, or important, and why.

Lesson Plan cont.

Art Activity: One Person's Trash... (1 day of class)

What is upcycling? It is taking something that was destined for the landfill, and giving it new life. Check out this [guide](#) to see some examples of upcycled projects for inspiration, and share these with your class. In this activity, students bring in an item they want to upcycle into something else, but would have thrown away otherwise. You can provide several craft supplies to help them construct masterpieces. The goal is to create something useful, giving an old item a new use, while also providing a fun and creative outlet in class. At the end of class, you can host a small gallery and give the students a chance to walk around and admire each other's work, and appreciate how objects destined for landfill were transformed into works of art.

Math Activity, Calculate Your Landfill Impact: 25 minutes

Did you know that the average American throws away 4.5 pounds of garbage every single day? Assuming that your students follow this model throughout their lives, using scratch paper or paper you don't need anymore, have them calculate:

1. how much garbage they generate in one year
2. how much they have generated thus far in their lives
3. how much trash they will have generated by the time they are 50 years old
4. how much trash has been generated by the whole class thus far in their lives
5. how much trash the whole class will have generated by the time they are all 50 years old

But what do these numbers mean? What do these amounts of trash look like? Well, using the analogy of an elephant, have the students divide their answers to numbers 2, 3, 4, and 5 by 15,000, since each adult elephant weighs 15,000 pounds. Students will then be able to visualize the amount of waste they have generated in a landfill.

After calculating these numbers, have students explain what they think about these numbers. Are they higher than expected? What are strategies that can be used to reduce our waste?

Where Does It Go?: 5 minutes

Screen this brief [video](#) by GOOD Magazine, which details where our trash ends up, to encourage students to start thinking about the environmental impact of everything they throw away.

Assessment/Checks for Understanding: homework and one day of class time

Now that your students have learned about the waste we produce, they can turn the tables on waste by taking action. Using pictures, video, writing, or any other creative process they choose, students will try to convince as many people as they can to pledge to reduce waste in one way, such as using a reusable water bottle or coffee mug instead of disposables. They could share information with their parents, friends, siblings, teachers, classmates, neighbors, or anyone else. After the activity, students would assemble the results or footage from the activity into one presentation to share with other students and serve as a reminder to continue reducing impact.