



WATER/WASTE CAMPAIGN CLEAN AND GREEN

BACKGROUND AND CONCEPTS

Cleaning our homes and work places can be hard on the environment, depending on the products we use and how we use them. Many commercially available cleaners contain hazardous chemicals that can damage living things, as well as the air and water around us. The Clean and Green campaign provides some easy alternatives to harmful cleaning products, and the products are easy to make and safe for students to use.

- Chemicals that are hazardous in the environment
- WHMIS

PRE-CAMPAIGN AUDIT

Ask your building operator the following questions:

1. Who is responsible for deciding what type of cleaning products are used in the school?
2. List some of the environmentally friendly cleaning products that are purchased.
3. List some of the potentially hazardous cleaning products that are purchased.
4. Estimate the percentage of environmentally friendly cleaning products. (To calculate the percentage, divide the number of environmentally friendly products by the total number of products and multiply the answer by 100)
5. Are building operators and custodial staff trained in the Workplace Hazardous Materials Information System (WHMIS)?
6. What would make it easier to purchase more environmentally friendly cleaning products?

Ask students in your class the following questions:

1. List the kinds of environmentally friendly cleaning products you have in your homes.
2. List the kinds of potentially hazardous cleaning products you have in your homes.

POST-CAMPAIGN AUDIT

Ask the building operator and the students in your class the following questions:

1. Was the Clean and Green Campaign successful? Did you achieve your goals?
2. What parts of the Clean and Green Campaign did or didn't work well?
3. What kinds of reminders would help you to continue using environmentally friendly cleaning products?



CLEAN AND GREEN

Ideas for Campaigns

1. Make up samples of clean and green products and share them with classmates.
2. Experiment with the products you make and describe their effectiveness. (Clean whiteboards, desk surfaces, classroom walls, etc.) Take the products home and try them there; present your results to classmates.
3. Make and sell clean and green products as a class/club fundraiser. (Recipes are attached)
4. Research hazardous product symbols and what they mean, and create posters or newsletter items to let others know what you have learned.
5. Research the ingredients in various environmentally friendly cleaning products and describe issues about water quality and waste disposal.
6. Research the ingredients in various potentially hazardous cleaning products and describe issues about water quality and waste disposal.
7. Do presentations to other classes on how to make the clean and green products and where and why to use them.
8. Write or meet with your principal, building operator, or school division staff to discuss the cleaning product policies of your school and school division. Share the information you have discovered in your research.
9. Create a clean and green challenge with students in your class or in the school. Commit to a week, or month of using only environmentally friendly cleaning products. Keep track of your challenge with photos, videos, newsletter items and announcements. Celebrate the measures your building operator takes to use environmentally friendly cleaning products.



Clean and Green Recipes: EarthShaker™ Kitchen Cleaner

Ingredients: Baking soda and an essential oil for fragrance.

What Else You'll Need: A plastic flip-top or stain-less steel shaker.

How to Make: Fill the shaker half full with baking soda. Add 15-20 drops of pure essential lemon or lime oil. Stir. Fill the shaker to the top with more baking soda. Put the lid on the shaker and shake it.

How to Use: Sprinkle EarthShaker™ lightly on counters, sink, or tub, then wipe with damp sponge. Rinse well. Baking soda is a grease cutter, natural deodorizer, and a mild abrasive that will not scratch. Don't shake on too much or you may need a second rinsing. Don't use baking soda on aluminum pots and pans as it can turn the aluminum a discolored brown or dark gray.

Effectiveness Rating: 80% Destination Conservation Pacific Resource Conservation Society ©2006
This recipe is from the book "Clean House, Clean Planet" by Karen Logan, Pocket Books, 1997.

Earth Scrub™ Tub and Tile Cleaner

Ingredients: Baking soda, a high-quality liquid soap, white distilled vinegar, and water.

What Else You'll Need: A 16-oz. squeeze container with a wide mouth nozzle

How to Make: Mix 1 2/3 cups baking soda with 1/2 cup of liquid soap in a bowl. Dilute with 1/2 cup of water. Add the 2 tbsp. vinegar last. Stir until the lumps are gone. If you can pour it into the container easily, then you have the right consistency. If it's too thick, add more water. Keep the cap on and shake well before using.

How to Use: Squirt this excellent cleaner anywhere! Use it in the tub, sink, and toilet bowl or any other greasy, grimy job. If you find you are leaving a baking soda residue, use less scrub next time and/or rinse with a squirt of scented vinegar and water. A vinegar rinse may help to prevent mold and mildew, too.

Effectiveness Rating: 90 - 100%

This recipe is from the book "Clean House, Clean Planet" by Karen Logan, Pocket Books, 1997.

Merlin's Magic™ Antiseptic Soap Spray

Ingredients: Liquid soap, purified water, and tea tree oil.

What Else You'll Need: A 16-oz. squirt- or spray-bottle.

How to Make: Fill the bottle almost full with water and then add 3 tbsp. of liquid soap to prevent the bottle from sudsing up as you fill. Because minerals inhibit the cleaning action of soap, it's best to use purified or distill water for this recipe, especially if you have hard water. Add 20-30 drops or more of tea tree oil for antiseptic power. Shake to mix. I like to use unscented or eucalyptus-scented liquid soap for this recipe.

How to Use: Squirt this wonderfully safe alternative on floors, laundry, toys, doorknobs, bathtubs, toilet seats, and more. It also works as an anti-bacterial hand soap.

Effectiveness Rating: 95% Destination Conservation Pacific Resource Conservation Society ©2006
This recipe is from the book "Clean House, Clean Planet" by Karen Logan, Pocket Books, 1997.



Basic Ingredients for non-toxic cleaning products:

These ingredients are commonly found in most homes. They are relatively non-toxic but should still be used with caution.

Rags and Brushes

Rags and brushes can be used in cleaning to apply elbow grease instead of chemical power and to reduce the use of disposable rags.

Vinegar

Uses – window cleaner, all purpose cleaner, disinfectant, deodorizer, fabric softener and rinse, and hair rinse. (Acetic Acid)

Something to try: Use the vinegar and water spray to clean the mirror. Rub it with the rag and polish it with the newspaper. Is it clean and shiny?

Baking soda

Uses – Drain cleaner, scouring powder, fabric softener, and deodorizer. (Sodium Bicarbonate)

Something to try: use a sprinkle of baking soda to try to remove the stain from the counter top, rinse with the vinegar and water spray, then wipe dry.

Borax

Uses – Disinfectant, scouring powder, fabric whitener, toilet bowl cleaner, deodorizer. (Borax is a cleaning compound made up of water, oxygen, sodium and boron.)

Soap

Uses – All purpose cleaning, floors, walls, laundry, etc. (Biodegradable cleansing and emulsifying agent made by action of alkali on fat or fatty acids and consisting essentially of sodium or potassium salts of such acids.)

Washing Soda

Uses – Add to soap flakes to wash clothes, mix with borax for dishwasher detergent. Effective in cleaning up grease. (Mineral - sodium carbonate, also known as soda ash.)

Water for Stain Removal

Some stains like berries can ruin clothes if they are not removed soon after they appear. Berry stains can be removed by pouring boiling water through the stain, over a bowl, from a height of more than 30 cm.



ADDITIONAL RESOURCES

- **For information on the Workplace Hazardous Materials Information System (WHMIS)**
http://www.ccohs.ca/oshanswers/legisl/intro_whmis.html
http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html
- **Books:**
Clean and Green – Annie Berhold Bond (Ceres Press, 1990)
Clean House Clean Planet, Karen Logan (Pocket Books, 1997)
- **Yellow Fish Road**- National organization to raise awareness about pollution entering local watersheds through storm drains.
<http://www.yellowfishroad.org/>

CURRICULUM CONNECTIONS

<p>Grade 5 Science Outcome: MC5.3 Assess how the production, use, and disposal of raw materials and manufactured products affects self, society, and the environment.</p> <p>Social Studies: Outcome: RW5.1 Explain the importance of sustainable management of the environment to Canada's future.</p>
<p>Grade 6 Science: Outcomes: DL6.5 Assess effects of micro-organisms on past and present society, and contributions of science and technology to human understanding of micro-organisms.</p>
<p>Grade 7 Science: Outcomes: MS7.1 Distinguish between pure substances and mixtures (mechanical mixtures and solutions) using the particle model of matter. MS7.2 Investigate methods of separating the components of mechanical mixtures and solutions, and analyze the impact of industrial and agricultural applications of those methods. MS7.3 Investigate the properties and applications of solutions, including solubility and concentration.</p>
<p>Grade 8 Science: Outcome: WS8.1 Analyze the impact of natural and human-induced changes to the characteristics and distribution of water in local, regional, and national ecosystems.</p>
<p>Grade 9 Science: Outcome: AE9.1 Distinguish between physical and chemical properties of common substances, including those found in household, commercial, industrial, and agricultural applications.</p>