

**Household Chemicals and Alternatives: Greening Your Cleaning  
Reducing Waste and Environmental Impacts  
Resources for Further Information**

Provision of these resources is for educational purposes only and should not be construed as an endorsement by the Illinois Waste Management and Research Center.

**Web sites (Accessed June 2005)**

**Guide to Safer Cleaners and Disinfectants**

[http://www.healthychild.com/database/guide\\_to\\_safer\\_cleaners\\_and\\_disinfectants.htm](http://www.healthychild.com/database/guide_to_safer_cleaners_and_disinfectants.htm)

**Cleaning and Stain Removal Tips (lengthy list)**

<http://doityourself.com/clean/index.shtml>

**Dawn Chemical, Inc. – The Chemistry of Cleaning**

<http://www.dawnchemical.com/shop/scripts/default.asp?s=dawnchemical>

**Dilmaghani's Interactive Stain Removal Chart**

<http://www.dilmaghani.com/care/stains/removalchart.html>

**Eco-friendly Alternatives to Commercial Cleaners and other Household Products**

[http://www.ems.org/household\\_cleaners/alternatives.html](http://www.ems.org/household_cleaners/alternatives.html)

**Environmental Education Resources for Teachers**

[http://www.wmrc.uiuc.edu/main\\_sections/info\\_services/library\\_reference\\_environment\\_education\\_for\\_teachers.cfm](http://www.wmrc.uiuc.edu/main_sections/info_services/library_reference_environment_education_for_teachers.cfm)

**Google Directory of Cleaning and Stains**

[http://directory.google.com/Top/Home/Homemaking/Cleaning\\_and\\_Stains/](http://directory.google.com/Top/Home/Homemaking/Cleaning_and_Stains/)

**Household Hazardous Waste Reduction (U.S. EPA Region 5)**

<http://www.epa.gov/reg5rcra/wptdiv/p2pages/hhw.pdf>

Defines household hazardous waste and provides information on pollution prevention and waste reduction. Includes ideas for classroom activities and a household hazardous waste quiz.

**Household Waste Management (U.S. EPA Region 5 and Purdue University)**

<http://www.epa.gov/seahome/housewaste/src/open.htm>

Includes a “virtual house” tour and extended discussions of chemicals in household products and their hazards. Safer alternatives and tools for waste management are presented, along with student quizzes and a glossary.

**How to Clean Anything Stain Removal Guide (glossary, submit tips, ask a pro)**

[http://www.howtocleananything.com/frame\\_cleaningtips\\_stains.htm](http://www.howtocleananything.com/frame_cleaningtips_stains.htm)

**Journal of Chemical Education online**

<http://jchemed.chem.wisc.edu/Journal/Issues/2002/Oct/index.html>

A variety of articles and activities related to chemistry and cleaning are provided in this issue.

### **Kiwi Web Chemistry and New Zealand**

<http://www.chemistry.co.nz/propwat.htm>

Includes information on the chemical properties of water, surfactants, synthetic detergents and a guide to removing various types of soils.

### **Learn About Chemicals in Your House**

<http://www.epa.gov/kidshometour/tour.htm#view> This U.S. EPA Web site leads children through a “virtual tour” of a household. Explore different rooms by clicking on each. Selecting various items in the room takes you to an explanation of that product including chemicals it contains and health and safety information on the product.

### **Soap and Detergent Association, Cleaning Products Overview**

[http://www.sdahq.org/cleaning/soaps\\_and\\_detergents.html](http://www.sdahq.org/cleaning/soaps_and_detergents.html) Includes information on the chemistry of soaps and detergents, the history of cleaning products, safety, the functions of various products and ingredients, and information on common manufacturing processes.

### **Soap Making 101**

<http://www.rohmhass.com/company/plabs.dir/exp09.htm>

Elementary lesson for making soap, grades 5-8.

### **Stain Detective**

<http://www.tide.com/staindetective/selectStain.jhtml>

This site contains very good explanations of the chemistry of water, surfactants, synthetic detergents, and the identification of soils.

### **Stain Removal Tips**

<http://www.sanitarymaintenance.com/guide.htm>

Exhaustive resource from Sanitary Maintenance Services Inc of West Haven, Connecticut

### **Teacher’s Guide to Indoor Air Pollutants**

<http://www.nsc.org/public/ehc/iaq/teachgde.pdf>

This 133-page pdf file was developed by the National Safety Council’s Environmental Health Center and the U.S. Environmental Protection Agency. It was developed in cooperation with U.S. EPA’s Indoor Air Quality for Schools Action Kit, which is geared toward school administrators and other school personnel.

### **University of Illinois Extension Service Stain Removal Guide**

<http://web.extension.uiuc.edu/regions/family/Stain%20Removal.pdf>

### **Windows on Waste: An Elementary, Interdisciplinary Environmental Studies Activity Guidebook about Solid Waste and Environmental Issues (Ohio DNR)**

<http://web.extension.uiuc.edu/regions/family/Stain%20Removal.pdf>

In particular, see Lesson XI, “Home, Safe Home” on pages 262-274 (This is a lengthy pdf)

## **Material Safety Data Sheets (MSDS) Information**

### **Proctor and Gamble, Materials Safety Data Sheets for Home & Fabric Care**

[http://www.pg.com/company/our\\_commitment/material.jhtml](http://www.pg.com/company/our_commitment/material.jhtml)

### **Colgate-Palmolive Company Food Safety Guide**

<http://www.colgate.com/app/Colgate/US/Corp/ContactUs/MSDS.vsp>

### **Vermont SIRI (Safety Information Resources, Inc.) MSDS Index**

<http://hazard.com/msds/> Searchable database of material safety data sheets.

## Learning Standards

### Illinois State Learning Standards and Performance Descriptors

<http://www.isbe.state.il.us/ils/Default.htm>

## Books, Printed Curricula

Berthold-Bond, Annie. *Clean & Green: The Complete Guide to Nontoxic and Environmentally Safe Housekeeping*. Woodstock, NY, Ceres Press, 1990. This book provides several recipes for making your own alternative cleaners using safe, readily available ingredients.

Dadd, Debra Lynn. *Nontoxic & Natural: A Guide for Consumers*. Los Angeles, CA, Jeremy P. Tarcher, Inc. 1984. This book provides an alphabetical listing of household products and items with information on potentially harmful ingredients, safer commercially available alternatives, and do-it-yourself alternatives.

Dadd, Debra Lynn. *The Nontoxic Home: Protecting Yourself and Your Family From Everyday Toxics and Health Hazards*. Los Angeles, CA, Jeremy P. Tarcher, Inc., 1986. Each chapter of this book deals with a different category of products (i.e. Cleaning Product, Personal Care Products, Food, Clothing, Bedding and Laundry Products). Potential dangers associated with these products are discussed, followed by alternative, less toxic methods to achieve the same objectives. See Chapter 2 or information specific to cleaning products.

*Dirt Alert: The Chemistry of Cleaning*. Middletown, OH. Terrific Science Press, 1999. Includes an exercise on "Creating a Window Cleaner Company." See <http://www.terrificscience.org/> and enter their online bookstore for price and ordering information.

*Fat Chance: The Chemistry of Lipids*. Middletown, OH, Terrific Science Press, 1999. Includes activities and demonstrations on esters, making candles, candle investigations, making cleansing cream, the preparation and comparison of four soaps, surface tension, blowing bubbles, food colors in milk, emulsifying peanut or vegetable oil, properties of lubricants, and make-it-yourself slime. See <http://www.terrificscience.org/> and enter their online bookstore for price and ordering information.

Lewis, Grace Ross. *1,001 Chemicals in Everyday Products*. New York, Van Nostrand Reinhold, 1994. Provides an alphabetical listing of chemicals you might find on the labels of products used in your home. Each chemical entry includes the name of the chemical, products that contain the chemical (general), uses of the chemical, health effects, a list of synonyms, and a graphic symbol that depicts the use of the product.

*The Natural Formula Book for Home & Yard*. Edited by Dan Wallace. Emmaus, PA. Rodale Press, 1982

Selinger, Benjamin Klaus. *Chemistry in the Marketplace*. Sydney, Harcourt Brace, 1998. Includes sections on chemistry related to laundry, the kitchen, the chemistry of surfaces, and other applications of chemistry to everyday life.

This entire list is available as a PDF with interactive links at  
<http://www.greeningschools.org/docs/HouseholdChemicalsandAlternatives.pdf>  
Greening Schools, a joint program with WMRC and Illinois EPA provides resources for teachers and administrators to help with improving the environmental quality of the schools. Contact 217333-8940 or visit [www.greeningschools.org](http://www.greeningschools.org) for to learn more.