

Eco-Conscious School Supplies Fall 2009

We ask that when you purchase school supplies for next year, you consider buying products that are eco-friendly - for the health of your children and our teachers and staff. At the bottom of the e-mail you will find more Information on what makes products toxic and how we can avoid risking our health by purchasing alternative products that are safe for us and the environment. You might ask, and rightfully so, what makes a product eco-friendly. Here are some characteristics:

- Products that are made of recycled materials,
- Products that are themselves recyclable at the end of their “useful” life,
- Products that do not emit toxic fumes,
- Products that are composed of materials that sourced locally,
- Products that are manufactured locally.

We also ask that you reuse where you can - I.e. if a composition notebook (from a previous year) only has 4-10 pages used, consider ripping them out and reusing that notebook. Same holds true for pocket folders (you can just re-title the subject), pens, pencils, markers, glue sticks, etc.

Where to buy? Most stores now carry “green” products, so purchasing green is fairly easy. Some products are a tad more costly, but they do help our environment, which gives you good value for money. While not intending to endorse any store, we know that environmentally friendly products can almost always be found at Staples, Target, Office Depot, Duane Reade (Seventh Generation), Fairway, and many other supermarkets and mega-stores. Some shopping suggestions are offered below.

Eco-friendly/recycled school supplies:

Pencils	No.2 Pencils - Paper Mate® EarthWrite™ or Staples® #2 Yellow Pencils Recycled
Pens	Retractable Ballpoint Pens Pilot® Recycled RexGrip BeGreen® or similar pens are available at Staples and Office Depot
Lined Notebook Paper	Staples® Eco Easy College Ruled Filler Paper. (Office Depot and Target sell similar products).
Folders	Oxford 100% recycled Twin Pocket Folders or Staples® Twin-Pocket Portfolios
Post-its	Post-it® Super Sticky 4" x 4" Recycled Notes are readily

	available
Markers	Crayola® Washable Markers Eco Easy and Recycled
Sharpies	Sharpie® Accent® Highlighters Eco Easy
Composition books	EarthWise® 100% Recycled Composition Notebook
Printer/computer paper	Purchase 30% to 100% recycled paper or paper that has been produced from sustainably harvested forests (it will be “certified”) Staples, Target, Office Depot, and many other office suppliers’ carry this product.
Crayons	Prang soybean crayons are available at prangpower.com. The super stores might have them in late summer- take a look.
Construction paper	recycled construction is available from office depot (riverside paper products is the manufacturer.)
3 Ring Binders	Staples and Office Depot will carry recycled versions
Glue	eco friendly “Coccolina” glue sticks and other glue products are available at greendepot.com.

Eco-friendly/recycled cleaning supplies:

Paper towels	“Marcal®” and “Seventh Generation” make 100% recycled paper towels which can be bought at many stores including Fairway, Target, Pathmark, etc. Hand sanitizer –
Hand Sanitizer	“Method Hand Sanitizer” and “Cleanwell” can be found at many “organic” stores including, Target, Wholefoods and Fairway.
Dish Liquid & Hand soap-	Seventh Generation® and Method makes good one
Tissues	Marcal® 100% Recycled Facial Tissues, 2-Ply, Cube Boxes other companies to follow in next few months. Many supermarkets carry this product, as does Staples, Target, Fairway, etc.
Handwipes	Seventh Generation® Chlorine Free Baby Wipes
All-purpose Cleaners	Many choices are available. Some notable brands include Seventh Generation® Natural All Purpose Cleaner Spray, Greenworks (yes,
Cleaning Products	Clorox does make wonderful eco-friendly cleaning products and the more we buy, the more they will make – these products

actually work the best), Sun and Earth, Nature's Source, Citrasolve, etc. Fairway, Target, and many supermarkets carry these products. Even Staples and Duane Reade now carry the Seventh Generation products.

White Board Cleaner individual bottles can be ordered on line from magneticconcepts.com or purchased in bulk from soysafe.com

Websites where you can purchase Green products online:

<http://www.staples.com/sbd/cre/marketing/ecoeasy/index.html>

<http://www.officedepot.com/a/browse/buy-green/N=5+11332/>

<http://www.seventhgeneration.com/products>

<http://www.cleanwelltoday.com/>

<http://www.redapplesupply.com> – click on green apple school supplies

<http://www.recycledproducts.org>

<http://www.thegreenoffice.com> Mostly sells in bulk

http://www.reallynatural.com/archives/kids/office_depot_offers_green_back.php

<http://www.thedailygreen.com/going-green/latest/5264>

<http://www.buygreen.com/recyclednewspaperpencils.aspx>

Thank you for helping to make PS3 a green school.

If you have any questions or need more information, feel free to connect one of the Green Committee Parents - Nicole Cox - chandishiva@mac.com
- Michael McDonough- here@michaelmcdonough.com
- Myriam Fishman- miriam.s.fishman@gmail.com

Backgrounder: What Are Organochlorines?
And Why Are They So Dangerous?

Many people wonder why "whiter than white" - when achieved using chlorine-based agents - is dangerous.

Brief History of Human Applications of Chlorine

To understand, a brief history of synthetic (i.e. human-made) chlorinated substances helps.

Gaseous (or elemental) chlorine - a highly-reactive yellowish-green gas with a distinctive odour - was first produced in the 19th century by breaking the chemical bond between sodium and chlorine in ordinary salt (officially known as sodium chloride). Gaseous chlorine soon became widely used as a bleaching agent and disinfectant. During the First World War, chlorine and mustard gas (another chlorine derivative) were turned against enemy soldiers as chemical weapons.

During the Second World War, both sides worked diligently to invent poisonous weapons far more pernicious than chlorine and mustard gas. As Rachel Carson explains in her classic work, "Silent Spring" (1962), WWII marked the rapid acceleration of experiments to combine gaseous chlorine with organic matter (organic = combinations of carbon and hydrogen atoms that are the building blocks of all life on earth). Many of these substances were tried out on insects, and when the war ended, they were turned with a vengeance against agricultural pests. DDT is one notable "invention" of Second World War laboratories.

The chemical industry mushroomed in the 1950's, and front and centre was chlorine combined with organic substances, usually petrochemicals. Plastics, paints, dyes, deodorants, bleaching agents, refrigerants, wood preservers and cleaning solvents – in addition to pesticides - are some of the products which often use combinations of chlorine and organics, otherwise known as "organochlorines". Making rayon and cellulose also depend on the use of industrial chlorine. More than 60,000 chlorinated compounds are produced on purpose.

Chlorine's Troubling Environmental Legacy

Along with the products, however, come a long and dangerous list of pollutants. Here are just a few:

- * Chloroflourocarbons, largely responsible for destruction of the ozone layer, are scheduled to be banned in North America by 1997, although the deadline for their elimination in Third World countries is longer. Still, even if CFC's and other ozone depleting substances were banned immediately, scientist say it would take from 75 to 100 years for the ozone layer to fully recover.

- * Polychlorinated biphenyls, widely used as electrical insulators until the 1970's when they were banned. PCB's continue to wreak havoc on wildlife, interfering with reproduction, causing birth defects and depressing immunity. They also adversely affect human health.

(See pages 23-28, "Whitewash")

* Dioxins and furans are chlorinated chemical "accidents" that have no useful application whatsoever. These result from a variety of processes, including bleaching pulp bright white with chlorine, copper smelting, burning of municipal and toxic waste, using leaded gas, and so on. The dioxin 2,3,7,8-TCDD (tetra-chloro-dibenzo-p-dioxin), is thousands of times more powerful than thalidomide or cyanide, and is considered by scientists to be the most potent synthetic poison ever created.

* The North American pulp and paper industry alone pumps 100 million tonnes of organochlorines - including dioxins and furans - into our waterways each year.

* Even household chlorine bleach - a dilute solution of sodium hypochlorite - produces trace amounts of chloroform, a known animal carcinogen and suspected human carcinogen.

Why Are Organochlorines So Odious?

(See pages 13-14, "Whitewash")

* Most of the chemicals produced by forging new bonds between chlorine and organic

substances are brand new to nature. They resist breakdown and are often very slow to

decompose, in some cases taking years or decades. Some actually break down into more toxic substances once in the environment.

* Organochlorines are often hydrophobic and lipophilic. That is, they hate water and love fat,

which is bad news for living creatures. Most do not readily dissolve in water, but instead

gravitate toward fat-containing organisms where their persistence allows them to

"bioaccumulate" as they move up the food chain. Dioxins and furans in the tissues of some fish species, for example, have been measured at 150 times greater than their level in the surrounding water.

* They're excellent hitch-hikers, carried everywhere by atmospheric winds, river systems and ocean currents. This accounts for their widespread presence in once pristine environments like the Arctic. Some water-borne organochlorines have been found 1400 kilometres downstream of their pulp mill of origin.

* While some organochlorines do occur naturally in the environment, with few exceptions, these are produced on a very small scale and serve very precise functions in the host organism (for example, they might act as an antibiotic). Industrially-produced organochlorines, on the other hand, are almost completely foreign to nature. Still, they may be similar enough to naturally occurring (unchlorinated) substances to "trick" living organisms, some of which can't easily detoxify or eliminate them. One theory about dioxin, for example, is that it mimics a steroid-like hormone. Masquerading as this hormone, it fools the body's standard chemical response into setting off a variety of physiological effects.

* These effects include suppressed immunity, damage to major organs such as the liver, reproductive and developmental impairment, infertility, birth defects and cancer. Rainbow trout have experienced delayed mortality (death 28 days after exposure) and changes in growth and behavior at the unimaginably low dose of 38 parts per quadrillion of dioxin, which in numerals looks like this:

38/1,000,000,000,000,000.

* Humans aren't exempt. Quote from Dr. Jack Vallentyne, Senior Scientist, Canada Centre for Inland Waters, Burlington, Ontario: "toxic chemicals, in large part organochlorines, have impaired and are impairing the natural populations of fish, reptiles, birds and mammals in the Great Lakes Basin. The concentrations of organochlorines in these wild populations are in the same general range as those found in human populations. Because of their short generation times, populations of fish and wildlife may be showing effects that will appear later in human populations. On this basis, and direct evidence from a limited number of human studies, the reports also concluded that there is a clear threat to human health. The dimensions of the human health threat are not well known."

Are "whiter than white" women's sanitary products and "disposable" diapers truly worth this risk?

Chlorine is a naturally occurring element (a gas) that occurs in many compounds, notably salt, and is used to purify drinking water. It comprises part of the ubiquitous plastic, PVC, and has numerous beneficial uses.

It is, in many manifestations, far from benign, however.

It was employed as a weapon of mass-destruction gas warfare agent in World War One, specifically to corrode (via the production of acid in the body) the respiratory system (it is also used in the production of mustard gas).

As is the case many warfare-based systems, the manufacturers needed to do something with it when the war was over and it was banned for use as a weapon (its too dangerous to be used as a weapon...).

So it is now a part of many industrial and household products, including bleached fabrics and paper.

The stuff we get today for household use (“fabric whitener”) is a manufactured liquid form of the gas, diluted by about 20 times the strength of the weapon-grade stuff (and it has a “lemony-fresh smell”).

While chlorine is an effective bacteriostat (prevents bacteria from reproducing) and germicide (kills them), it is also a powerful carcinogen and hormone disrupter. When chlorine comes into contact with organic matter (i.e., living things), it produces “organochlorines,” which are odd mixes of organic matter and chlorine. The pesticide DDT is one notable example.

Now here’s the rub on organochlorines: There are about 350 of them; 14 have been tested—all 14 are powerful, virulent carcinogens. Organochlorines have a nasty habit of accumulating on the bottom of waterways (they are heavy). Where it does, the fish and aquatic animals are born with massive birth defects, notably effecting the reproductive system. These include animals that are hermaphrodites (both sex organs, but vestigial); sterile; or without entirely reproductive organs. In some instances, when New York City periodically increases chlorination of its reservoirs, the fish downstream experience massive die-offs.

Many safer substitutes exist in many categories of use (white vinegar in many instances is a better disinfectant, for example), but the chlorine industry has fought their adoption through marketing.

(Or is Mr. Clean bald because he is in chemotherapy?)

As the industry noted in internal memos in the 1970s, “if people knew what our product was they would never use it.”

CHARCOAL filters do the best job reducing chlorine without eliminating it completely. In light concentrations it is much safer than in heavy concentrations.

One note: it is actually illegal to drink water in many municipalities in the US unless the water has chlorine in it. In other words, if you eliminate all of the chlorine in the water via filtration, it is not considered potable water. What you have here is a battle between viral and bacteriological contamination (which has its own risks) and organochlorine-based contamination (which allows cancer to bloom in the human body and disrupts the reproductive and immune systems).