



# Coalition *for* Healthier Schools

*...providing the national platform and  
the forum for environmental health at school, since 2001...*

Coordinated by Healthy Schools Network

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## Healthy Purchasing for Healthy Schools

### A Guidance Memo

#### ***Green Cleaning + Five More Product Categories to Help Make Schools Healthier***

Maintaining a healthy learning environment is an important part of ensuring that students receive the best possible education experience. Even the best curriculum and educators cannot succeed when students cannot concentrate, are absent from school or are uncomfortable in the classroom. One way to improve the health of the school indoor environment is to minimize the amount of toxic chemicals in products used in schools. Reducing toxic chemicals in products used in schools benefits children, teachers and custodial staff, particularly those with asthma and environmental sensitivities.

**Purchasing environmentally preferable products, equipment, and services that have a reduced impact on human health and on the environment can help create healthier learning environments and may not cost more or may save money.** Environmentally Preferable Purchasing (“EPP,” aka, “green purchasing”) promotes the purchase of products, services and equipment that have reduced impacts on health and the environment compared to equivalent products, services and equipment (see New York State Executive Order No. 4 as an example<sup>1</sup>). EPP often promotes the purchase of products that have multiple benefits, not just single attributes.

Healthy Schools Network commissioned this customizable guidance memo to help organizations and education policy makers make smart decisions to reduce the presence of toxic chemicals in schools. The goals are always to have more children achieve their full potential and miss fewer school days, and to have school administrators reduce risks to health and stay on budget. We hope Coalition members and others will use this document to start a dialogue about these issues.

#### **Credits**

This guide was produced by Healthy Schools Network, in collaboration with Renee Hackenmiller-Paradis, Sharp Strategies, and Alicia Culver, Responsible Purchasing Network, as well as comments and insights from attendees at the January 2013 meeting of the Coalition for Healthier Schools. We are grateful to Green Seal and to UL EcoLogo (UL Environment) for

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<sup>1</sup> <http://www.ogs.state.ny.us/purchase/spg/pdfdocs/EO4.pdf>

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## Green Cleaning + Five Product Categories Covered in Guidance Memo

- **Cleaning Supplies:** Take simple steps to prevent dirt and grime and purchase less toxic and cost-effective cleaning supplies.
- **Office Equipment:** Choose EPEAT-registered computers, monitors, printers and copiers to significantly reduce chemical hazards and lower energy costs.
- **Interior Wall and Ceiling Paints:** Certified low-toxicity latex paints and coatings are better for indoor air quality, easy to clean up and cost effective.
- **Office Supplies:** Purchase PVC-free office supplies with high recycled content and minimal packaging to eliminate toxic exposures and reduce waste.
- **Art Supplies:** As a first step, identify art supplies labeled “AP” by the Art & Creative Materials Institute (ACMI), then further screen product Material Safety Data Sheets (MSDS). Avoid PVC, asbestos and other toxic chemicals.
- **Furniture:** Prevent exposure to formaldehyde and highly toxic flame retardants by purchasing furniture made of whole wood, glass, metal or chrome. Avoid furniture containing polyurethane foam because it also often contains highly toxic flame retardants.

**FACT:** The **Federal Trade Commission (FTC)** regulates environmental marketing claims. In October 2012, it issued new regulatory guidance stating that such claims must be documented. For more information, see [www.ftc.gov/opa/2012/10/greenguides.shtm](http://www.ftc.gov/opa/2012/10/greenguides.shtm).

**FACT:** learn the facts about **greenwashing** (making false or unsubstantiated environmental claims), see *The Seven Sins of Greenwashing* poster at the end of this memo or visit <http://sinsofgreenwashing.org>.

**MYTH BUSTER:** Green products are NOT necessarily more expensive than conventional products. As with any products, there is a wide range of product options and prices to suit any school’s budget.

### Need More Help Finding Green/EPP Supplies?

Visit **Green Seal** and **UL EcoLogo** to see the full range of products and services they certify as EPP/green. These third party certifications are important because they ensure that independent organizations reviewed the manufacturer’s documentation to ensure that products meet standards that are protective of health and of the environment.

Ask your vendors to carry third party certified products. Encourage local retailers offering back-to-school supplies to carry a range of green/EPP certified products as well.

## **Cleaning Supplies:**

### **1. Simple steps to prevent dirt and purchase less toxic cleaning supplies.**

**Build on Green Cleaning Successes!** Eleven states now require or promote the use of green cleaning products in schools and thousands of local schools across the country have already realized the health and economic benefits of purchasing a full complement of green cleaning supplies and advanced equipment. These states and their schools know that it is easy to purchase and use third party certified green cleaning products that are economical, effective, and contain fewer toxic chemicals.

Products used to clean and maintain schools today often contain toxic chemicals. Of the 85,000 synthetic chemicals in commercial use today, only a few have been individually tested for toxicity. Despite this, a wide variety of toxic or hazardous chemicals are routinely used for cleaning homes and offices. Schools are no different, except the majority of school occupants are children. New research on children and their vulnerability to toxic chemicals gives reason to urge preventive measures to protect children.

#### **Green Cleaning for Healthy Schools Principles**

- Keep the dirt out.
- Use less toxic, third party certified, all-purpose cleaners, paper products and hand soaps.
  - Schools can rely on third party certifiers to evaluate products against specific criteria and ensure that they work.
- Update and maintain equipment.
  - Install dirt-grabbing walk-off mats inside and outside entrances, recommended 15–20 feet.
  - Use microfiber cloths and mops, which are highly effective at picking up dirt.
  - Use high efficiency (HEPA) vacuums.
  - Install high-filtration vacuum attachments on other floor-care equipment.
- Disinfect when required or only in high risk areas (door knobs).
  - Cleaning with all-purpose cleaners and microfiber cloths removes most germs.

#### **Key Elements for Successful Green Cleaning for Healthy Schools**

- Evaluate current cleaning problems, products and methods.
- Educate building occupants and the broader community.
- Work with an existing school committee (environment, wellness, etc.) or start a new one that includes key groups: facility directors, custodians, nurses, parents.
- Develop a pilot project to test one or two products in one building.
- Train staff with new products and methods.
- Track success (school nurse visits, attendance).
- Phase in more “green” cleaning products.
- Reward staff for participating.
- Adopt policy.

Visit [www.CleaningforHealthySchools.org](http://www.CleaningforHealthySchools.org) for more information. See Appendix for poster.

## Cleaning Supplies:

### 2. Considerations for choosing sanitizers and disinfectants

Proper cleaning will effectively reduce the amount of microorganisms on surfaces. In many cases, disinfectants and sanitizers may not be required.

1. Using a third party certified all-purpose cleaner, microfiber cloths and ordinary friction can remove most germs and is good for most situations.
2. Sanitizing is often sufficient for food prep areas and in childcare diapering areas, etc.
3. Use disinfectants only when required and or in high-risk areas (door knobs); know the law; follow label directions exactly.

If sanitizers or disinfectants are needed, avoid those containing active ingredients that are known respiratory sensitizers, such as chlorine bleach (sodium hypochlorite), quaternary ammonium chloride compounds (“quats” or hydrogen chloride, as well as ortho-phenyl phenol, which is a known human carcinogen. Instead, use sanitizers or disinfectants with reduced asthma and cancer risks, such as those that contain hydrogen peroxide, citric or lactic acid or thymol (derived from the herb thyme).

**The table below provides the sanitizing and disinfecting requirements for California childcare centers’ infant and toddler classrooms, as well as recommendations from the American Academy of Pediatrics.** See Appendix for more detail.

Surface	CA Req’d	Frequency	AAP Rec	Frequency
<b>Infant/Toddler Classrooms:</b>				
◆ Diaper changing area	Disinfect	After each use	Same	Same
◆ Potty training chairs	Disinfect	After each use	Same	Same
<b>Napping Equipment:</b>				
◆ General	Disinfect	Weekly, or if soiled or wet	Clean	Weekly-monthly, or before use by another child
◆ Infants	Disinfect	Daily, or if soiled or wet	Clean	Weekly-monthly, or before use by another child
<b>Infant/Toddler Classroom with Mildly Ill Children:</b>				
◆ Sinks	Disinfect	After each use	No guidance	No guidance
◆ Floors	Disinfect	At least daily, or more often if necessary	Same	Same
◆ Walls/Partitions	Disinfect	At least daily, or more often if necessary	No guidance	No guidance
◆ Mouthed objects (including toys)	Disinfect	At least daily, or more often if necessary	Same	Same
<b>All Classrooms</b>				
◆ Dishes, Utensils, Cups	Sanitize	After each use	Same	Same
<b>Infant/Toddler Classrooms:</b>				
◆ Disposable diaper container	Sanitize	Daily	Same	Same

**Office Equipment:**  
**For PCs, laptops, monitors and printers, choose EPEAT-registered products to significantly reduce chemical hazards and lower energy costs.**

Computers and other office equipment can contain heavy metals (such as lead and mercury) and toxic flame retardants, as well as other hazardous chemical ingredients that can expose workers when these products are manufactured or handled at the end of their useful life. These and other harmful substances can also be released into the school's indoor environment as contaminated dust or emissions, particularly from laser printers.

The Electronic Products Environmental Assessment Tool (EPEAT) is a voluntary standard for environmentally preferable computer and imaging equipment (printers and copiers). EPEAT-registered products meet strict environmental criteria. From fewer toxins in manufacturing to efficient operation including ENERGY STAR requirements and easier-to-recycle components, EPEAT-registered products offer reduced environmental impacts across their life cycle.

EPEAT products must meet strict standards that minimize or eliminate hazardous chemicals including lead, cadmium, mercury, and highly toxic brominated flame retardants.

**Same Quality, Less Toxic**

EPEAT registration addresses environmental performance attributes, not performance criteria such as memory size or processor speed. An EPEAT-registered computer is no more or less likely to have adequate storage or processing speed for specific uses than a non-EPEAT computer.

Use the following minimum contract language to ensure products meet the EPEAT standard:

*All desktops, laptops and computer monitors provided under this contract are required to have achieved Silver registration or higher in the EPEAT system. EPEAT is a procurement tool designed to help large-volume purchasers evaluate, compare and select electronic products based upon their environmental attributes as specified in the consensus-based IEEE Standard for the Environmental Assessment of Personal Computer Products (IEEE 1680.1).*

*[Purchaser] will prefer products that have achieved EPEAT Silver or EPEAT Gold registration. The EPEAT registration criteria and a database of all registered products are provided at <http://www.epeat.net>.*

Additional procurement specifications can be found here:  
<http://www.epeat.net/model-purchase-language/>

**Note: as of December 2012, EPEAT does not rate tablets and e-readers such as Kindle and iPad.**

## Other Healthy Computing Tips

**Recycle.** The toxic metals and other harmful chemical ingredients in electronic equipment can be released into the environment at the end of their useful life. Consequently, unwanted electronic equipment should be handled in an environmentally responsible manner. Never discard computers in the trash, as it goes to a landfill or incinerator. Instead, recycle them through local recycling facilities or negotiate a recycling service agreement with a recycler certified by [eStewards](http://e-stewards.org)<sup>2</sup> or R2.<sup>3</sup>

Many states have implemented e-waste programs that offer free collection and recycling services. To see if your state has an e-waste program and to read the details, visit [http://www.electronicstakeback.com/wp-content/uploads/Compare\\_state\\_laws\\_chart.pdf](http://www.electronicstakeback.com/wp-content/uploads/Compare_state_laws_chart.pdf).

**Save More by Conserving Energy.** Turn off your computer when you know you won't use it for an extended period of time. Turn on power management features during shorter periods of inactivity. Power management causes monitors and computers to enter low-power states when sitting idle. Simply hitting the keyboard or moving the mouse awakens the computer or monitor from its low-power sleep mode in seconds. Power management systems can save energy and help protect the environment.

**FACT:** *Less toxic computers don't cost more. According to leading computer manufacturers, EPEAT-registered products carry no price premium compared to conventional models. In addition, since all EPEAT-registered computers meet the ENERGY STAR standards, they are up to 60% more efficient than models without energy-management controls.*

*As a result of New York State's Executive Order No. 4, "Greening New York State," in fiscal year 2008-09, New York state agencies **saved over \$130 million by purchasing EPEAT-Gold computers.** This demonstrates that green procurement is not only good for the environment and our health, but also for the bottom line.*

**MYTH BUSTER:** *Despite what many have heard, computers will not be damaged in any way if you shut them down at night. In fact, it actually creates more wear and tear on your computer to keep it on all the time. Shutting down at night makes your computer run cooler and last longer.*

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<sup>2</sup> <http://e-stewards.org/find-a-recycler/>

<sup>3</sup> <http://www.r2solutions.org/certified/electronic-recyclers-with-r2-certified-facilities/>

## **Interior Wall and Ceiling Paints: Certified low-toxicity paints protect indoor air quality and are cost effective.**

Studies by the EPA indicate that indoor levels of pollutants may be 2 to 5 times—and occasionally more than 100 times—higher than outdoor pollutant levels.<sup>4</sup> The EPA considers indoor air quality to be one of the top five hazards to human health. Paint fumes can be a significant contributor to indoor air pollution.

Paints can release toxic emissions into the air when applied and for years after application. A major source of these toxins is a variety of volatile organic compounds (VOCs), once considered essential to the performance of paint. Most paint manufacturers now produce one or more lines of paint that are certified as low toxicity by independent third party organizations such as Green Seal, UL EcoLogo, and Master Painters Institute (MPI). These certified low-toxicity paints are durable, cost effective and less harmful to human health and the environment. Many paint types (particularly latex wall and ceiling paints) now contain zero or low VOC levels, reducing negative effects on indoor air quality.

***Important!** Certified low-toxicity paints containing fewer toxic chemicals of concern perform as well as standard paints, since many of the environmental certifications require compliant paints to meet performance criteria developed by the Master Painters Institute (MPI).*

Choose paints that are certified to meet multi-attribute environmental standards developed by the following third party organizations to ensure that you are getting the least toxic paints possible.

### **Recommended Third Party Certification Standards for Paints**

#### *Green Seal*

- GS-11: Paints and Coatings (last revised January 2010)
- GS-43: Recycled Content Latex Paint (issued August 2006)
- GS-47: Stains and Finishes (issued September 2009)

#### *UL EcoLogo* (also labeled [UL Environment](#)<sup>5</sup> or [ULE](#) depending on product and market)

- CCD-2760: Architectural Surface Coatings (last revised December 2005)
- CCD-2760: Surface Coatings - Recycled Water-borne (last revised March 2006)
  - Some recycled paints have higher VOC levels than low-VOC virgin paints and are often used in outdoor applications

#### *Master Painters Institute (MPI)*

- [Extreme Green \(issued January 2010\)](#)<sup>6</sup>

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<sup>4</sup> <http://www.epa.gov/region1/communities/indoorair.html>

<sup>5</sup> [http://www.responsiblepurchasing.org/UserFiles/File/Paint/Standards/CCD047\\_Architectural\\_Surface\\_Coatings.pdf](http://www.responsiblepurchasing.org/UserFiles/File/Paint/Standards/CCD047_Architectural_Surface_Coatings.pdf)

<sup>6</sup> [http://www.paintinfo.com/MPInews/ExtremeGreen\\_Jan2010.shtml](http://www.paintinfo.com/MPInews/ExtremeGreen_Jan2010.shtml)

**Procurement Specifications**

In addition to requiring third party certifications that include hazardous chemical component limitations, contract specifications could consider the following criteria:

- Low percent or no petrochemical components
- Light colors and/or low-VOC colorants or paint tints
- Take-back (recycling) services for leftovers and containers

**Office Supplies:**  
**Recycled papers and PVC-free office supplies with high recycled content<sup>7</sup> and minimal packaging will help reduce toxic exposures and reduce waste.**

Green purchasing choices for office products can mean a smaller ecological footprint and a healthier and more productive school environment. Areas to focus on are increasing recycled content and avoiding PVC-, lead-, and phthalate-containing products.

**Recycled Paper Products**

- Purchase copy paper with recycled content—try to get the highest percentage of post-consumer recycled content available.
  - *Insider tip: If you purchase paper with higher than 30% post-consumer recycled content, prices can be higher. Work with your suppliers to get the highest percentage of recycled content at a price that fits your budget. Consider paper reduction strategies to offset higher costs.*
- Give preference to recycled-content paper with Forest Stewardship Council (FSC) certification to ensure that any virgin fiber was grown in a forest that was sustainably managed.
- Avoid purchasing paper made entirely from virgin (new) material, even if it has FSC or another green certification.

**MYTH BUSTER:** *Recycled paper will NOT jam the photocopier. The most likely problem is moisture in the paper. It is best to store all photocopy paper in a cupboard that has no moisture problems.*

**Polyvinyl Chloride (PVC)-Free Products**

PVC—also known as vinyl—poses major hazards in its manufacture, use and disposal. Hazardous chemicals created during the production of PVC are known to cause cancer, brain damage and birth defects. Due to the health and environmental hazards associated with PVC, Wal-Mart, Target, Apple and many other companies have taken steps to reduce or completely phase out PVC from their product lines. While companies and institutions are phasing out PVC, it continues to be widespread in schools. Safer, cost-effective PVC-free alternatives are available. Examples include recycled cardboard binders and polyethylene plastics.<sup>8</sup>

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<sup>7</sup> Be aware that high-recycled-content office supplies can contain PVC.

<sup>8</sup> *Back-to School Guide to PVC-free School Supplies* [www.chej.org/publications/PVCGuide/PVCfree2012\\_1.pdf](http://www.chej.org/publications/PVCGuide/PVCfree2012_1.pdf).

### **PVC's Troubling Partners: Lead and Phthalates**

In addition to its inherent problems, PVC often contains heavy metals including lead to keep it from breaking down. Lead is a neurotoxin that impacts brain function at very low levels. Other troubling additives often found in PVC are phthalates. Since PVC is naturally stiff, phthalates, which are hormone mimickers that negatively impact human health, are added to PVC to make it flexible.

### **How to Identify and Avoid PVC**

The key to avoiding PVC products is recognizing them and knowing how to find safer alternatives.

- PVC products are often labeled with the word “vinyl” on the packaging, such as vinyl 3-ring binders.
- Look for the universal recycling symbol. If it has the number “3” inside it, or the letters “V” or “PVC” underneath it, you know the product is made of PVC.
- Some products are unlabeled or mislabeled, making it tough to determine whether they contain PVC. If you’re uncertain, e-mail or call the toll-free number of the manufacturer or retailer and ask what type of plastic their product is made of. You have a right to know.
- Some PVC office supplies are marketed as “green” products because they contain some recycled PVC. They can still present health risks.

### **Additional Office Supply Tips**

- Choose products that have minimal or recyclable packaging.
- Avoid Post-it notes to reduce paper—use cut up scrap paper instead.
- Avoid PVC-coated spiral binders, as they can contaminate the recycling stream; instead use staples, as these are easily removed during recycling.
- Always reuse before purchasing new items such as folders and stationery items.
- Always ask your supplier what certified green product options they have available and if they don’t have any, then request that they obtain them. See the *Green Procurement Resources* section at the end of this guide for additional information.
- Consider prohibiting non-green items (such as virgin copy paper and PVC binders) from your contracts when greener, healthier alternatives are readily available at a comparable price.
- Remember: first cost is not the same a life-cycle cost. How much does a light bulb cost to buy versus operate over its life?

## **Art Supplies:** **Use less toxic supplies to reduce risks to children's health and safety.**

Art and craft supplies can contain toxic ingredients that, when used or stored in a classroom or play area, can create a risk to the health and well-being of children. Lead, asbestos and petroleum-based solvents are sometimes used to preserve art products, enhance their color or make them easier to apply. These toxic ingredients can trigger acute effects such as asthma attacks, headaches and nausea, especially if used in a poorly ventilated area. Research has shown that some inks, adhesives, dyes and clays contain chemicals that can cause adverse health effects in adults after occupational exposures. Children are more sensitive to the negative effects of toxic chemicals.

**Finding less hazardous art and related instructional products is not simple as it should be. It will require a multiple-step screening process.**

- **Step 1:** Identify art supplies certified “AP” by the Art & Creative Materials Institute (ACMI).
- **Step 2:** Read the product’s Material Safety Data Sheet (MSDS) and each product’s label.
- **Step 3:** Choose products without high-hazard chemicals such as lead or asbestos, ketones or xylene, acetone, phthalates and fragrances often added to markers. When purchasing markers, specify low odor or water based and fragrance free.

### **Products to Avoid**

- Solvent-based products (e.g., conventional dry erase markers, oil-based paints, aerosol spray paints, rubber cement), which can be extremely flammable and release toxic vapors.
- Products that contain lead, cadmium, cobalt, chromium or other toxic heavy metals (some paints, ceramic glazes, enamels).
- Products that can be easily inhaled, or get into children’s eyes, such as clay dust, powdered paints, aerosol fixatives, spray paints, etc.).
- Products not in original containers or without proper labeling (including donated items).
- Papier-mâché pre-mixes, which may contain asbestos fibers as well as lead or other metals from colored printing ink.
- Permanent felt-tip markers and scented markers.

### **Safer Art and Crafts: What to Look for on Labels**

As an initial screening step, search for art supplies approved by the Art & Creative Materials Institute (ACMI). The “**AP**” (Approved Product) logo indicates that ACMI has found that the product has “no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems.” The logo is sometimes accompanied by the word “nontoxic.” *Caution: AP does not mean safe for all kids!*

- Products with the AP ACMI seal are not necessarily nontoxic but are a better choice than products without the seal. The AP mark should be used as a first step, not as a

guarantee of a child-safe product.

- ACMI has not responded to requests to define “normal use” by children. ACMI is an industry standard, not a third party certified standard, and may not take into account the growing special needs of children with health or learning issues.
- Avoid products designed for professional artists and adults labeled with the ACMI “CL” mark from ACMI.
  - **CL** indicates that the product contains hazardous ingredients, but is fully tested and labeled in compliance with federal law.
- Look for products labeled "low odor." There are now many art supplies including markers, pens and clear coatings that are formulated to produce fewer fumes. Choose water-based products, whenever available. If the only choices contain VOCs, then chose the products with lowest percentage of VOCs.
- Schools can specify or give preference to art products that meet the South Coast Air Quality Management District VOC limits. These include paints and coatings that can be used in art projects, such as faux finishes, varnish and stains, shellac and other types of top coats.
- Look for the following signal words on the product label: DANGER, WARNING or CAUTION. Avoid products that bear the DANGER or WARNING labels. The least hazardous products do not need a signal word.
- Look for the words “Conforms to ASTM D4236” on art supplies to ensure that the products are properly labeled for chronic health hazards.
  - *Caution! “Conforms to ASTM D4236” only means that a product is labeled sufficiently, not that it is safe for children to use. If a product does not have one of the signal words above, then you must look for the ASTM D4236.*

### **Look for warnings of specific health hazards.**

Warnings of acute hazards include “Harmful or fatal if swallowed” or “May cause skin irritation.” Labels for long-term health effects under ASTM D4236 may warn of health risks such as cancer, sterility, permanent eye damage, birth defects, allergic reactions or organ damage, or that the product may be harmful if swallowed, or that exposure may occur by breathing vapors or dusts or by skin contact. Any art product with these warnings shouldn’t be used.

### **Be alert to children’s health symptoms during class.**

Children are not necessarily able to identify or name their health symptoms. If children are getting drowsy or dizzy, or are coughing, or complaining of headaches or breathing problems, get fresh air into the room immediately, stop the art project, cap supplies, and alert the school nurse if needed.

## Other Tips

- Read labels and follow precautions regarding fumes or ventilation (e.g., vent kilns to the outside).
- Discard moldy water-based paints.
- Never transfer art materials out of the original container or you will lose the safety information on the original product labels.
- Take extra care when buying or using foreign-made arts and crafts materials, regardless of what the label says. Other countries' safety standards may not take children's vulnerability into consideration.
- Always supervise children while they are using art and craft supplies. Young children frequently put things in their mouths and are likely to paint or draw on themselves.
- Avoid the use of art supplies that require adults to wear personal protection equipment such as masks, goggles or gloves. When such equipment is indicated by use instructions, ensure students have age and size-appropriate protective gear and teachers have protective gear.
- Don't eat or drink while working with art and craft supplies.
- After using art supplies, students should wash their hands with soap and water.
- Care should be taken to properly clean up the supplies themselves (brushes, surfaces where art supplies may have spilled, etc.).

### **Say "NO" to Toxic Dry Erase Markers for Classroom Use!**

Dry erase whiteboards often come with toxic dry erase markers and toxic cleaning solvents. Some schools require children to use individual whiteboards and dry erase markers at their desks, resulting in prolonged close exposures to toxic chemicals.

#### **Proper Dry Erase Marker Use and Alternatives to Consider**

- Children should not use permanent pens or dry erase markers at school or at home. Only adults should handle these products.
- Teachers whose classrooms have whiteboards should use only low-odor, small-tip dry erase markers and request extra ventilation in the classroom.
- Safer alternatives to dry erase markers include dry erase wax crayons, watercolor markers, paper and pencil, or erasable pens.
- Various whiteboards, bulletin boards and projection screens are certified as low-emitting by UL GREENGUARD. Many boards meet its "Children and Schools" criteria, but the group does not certify dry erase markers.

For more information, see Healthy Schools Network's fact sheet *Markers* at <http://www.healthyschools.org/documents/Markers-2011.pdf>

## **Furniture:**

**To avoid exposure to formaldehyde and other toxic chemicals, purchase low-emissions furniture made of whole wood, glass, metal or chrome.**

Furniture can contain highly toxic materials such as formaldehyde, brominated flame retardants, fluorinated stain resistant compounds and other harmful chemicals. Off-gassing (the release of chemicals into the air) from furniture can cause headaches; nausea; burning of the eyes, nose, and throat; skin rashes; wheezing; asthma attacks and chest tightness.

### **Formaldehyde**

Plywood, pressed wood, particleboard and medium density fiberboard, which are often used to make furniture today, sometimes are held together with formaldehyde-containing adhesives and resins, which can emit fumes for as long as five years. Formaldehyde can be irritating to the eyes, skin and mucous membranes and is listed as a respiratory sensitizer by the Association of Occupational and Environmental Clinics ([www.AOEC.org](http://www.AOEC.org)), a national authority on asthmagens.

Formaldehyde is a known human carcinogen, a respiratory sensitizer and a suspected neurological, reproductive and liver toxin. For more information on formaldehyde, see the federal government's National Toxicology Program's formaldehyde profile paper at <http://ntp.niehs.nih.gov/ntp/roc/twelfth/profiles/formaldehyde.pdf>.

### **Flame Retardants**

A class of flame retardants called polybrominated diphenyl ethers (PBDEs), sometimes added to furniture as a fire prevention measure, is highly toxic and persistent in the environment and has been found to bio-accumulate in humans and other beings. Moreover, recent studies indicate that flame retardants may not offer the prevention advertised by the industry.<sup>9</sup>

### **Stain-Resistant Chemicals**

Another class of chemicals of concern that is often added to furniture is fluorinated compounds used to prevent the fabric on furniture from becoming stained. Some of these "liquid Teflon" compounds persist in the environment and concentrate in wildlife and humans, according to EPA. In addition, they have been shown to cause adverse health effects in laboratory animals.

### **Purchase Furniture That Does Not Release Formaldehyde or Contain Other Toxic Chemicals**

- To avoid exposure to formaldehyde, it's best to purchase furniture made of whole wood, glass or metal.
  - When purchasing wood furniture, it should be Forest Stewardship Council (FSC) certified to ensure that it was sourced from sustainably managed forests.

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<sup>9</sup> [http://articles.chicagotribune.com/2012-05-06/news/ct-met-flames-barriers-20120506\\_1\\_flame-retardants-furniture-foam-smoke-detectors](http://articles.chicagotribune.com/2012-05-06/news/ct-met-flames-barriers-20120506_1_flame-retardants-furniture-foam-smoke-detectors)

- Avoid new furniture coated with polyurethane, a respiratory toxin.<sup>10</sup>
- Everything that goes into a school needs to be easily washed and replaced. Dry-clean-only products are not good for a school on a tight budget.
- Wool or cotton, rather than synthetics—which are made with chemicals—are best for upholstery fabrics for furniture cushions.
  - Be aware that some children may be allergic to wool and that cotton can be treated with stain- and flame-retardant chemicals.
- Products made from MDF or chipboard should be completely sealed to avoid off-gassing. Where possible, specify [UL GREENGUARD-certified products](#),<sup>11</sup> which verify that the product does not off-gas formaldehyde and other VOCs of concern.

*Insider tip: You may see furniture that meets standards developed by the Business and Institutional Furniture Manufacturers Association (BIFMA). This is not third party certification and should not be considered a guarantee of safety—although BIFMA “Level”-certified products may have some environmental or health attributes.*

- Avoid furniture cushions and mattresses made from polyurethane foam or plastic as well as any fabric with acrylic or PVC, all of which can be toxic to the respiratory system.<sup>12</sup>
- Avoid plastic furniture made of vinyl/PVC.
- Furniture should not be treated with stain-resistant chemicals such as Stainmaster.

### **Tips for Reducing Exposure to Formaldehyde and Other Harmful Chemicals in Furniture**

- Have children wash their hands frequently with soap and water.
- Ensure good ventilation and air out new products.
- Flooring should be durable, easy to maintain and have a long life cycle. Avoid wall-to-wall carpeting in schools; choose hard flooring (wood, tile) with easy-to-clean area rugs or mats instead.
- Avoid products made with foam. Dispose of torn foam items (cushions, pillows, stuffed animals).
- Choose new items stuffed with down, wool or cotton; these are less likely to contain toxic fire retardants.

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<sup>10</sup> <http://www.cdc.gov/niosh/topics/isocyanates/>

<sup>11</sup> <http://www.greenguard.org/en/index.aspx>

<sup>12</sup> <http://safepackaging.eu/124>

## Using Cooperative Purchasing to Find Healthy Products

One of the fastest and easiest ways for schools to purchase **environmentally preferable products** is to order them from vendors that have competitively bid contracts with the government of the state in which the school is located. Most, if not all, states have established cooperative purchasing programs that allow public schools to utilize their price agreements for goods and services. Purchasing on state contracts can save schools a tremendous amount of time and money, eliminating the two most often cited barriers to green purchasing.

**US Communities.** The U.S. Communities Government Purchasing Alliance is a nonprofit alliance that helps local and state government agencies, as well as school districts, reduce the overall cost of products by pooling the purchasing power of public agencies nationwide. The four main product areas in the program are office supplies, office furniture, computer equipment and industrial supplies. To find green products offered under US Communities' price agreements, go to its Go Green Program web site, [www.gogreencommunities.org](http://www.gogreencommunities.org).

**EPA's Environmentally Preferable Purchasing (EPP) database** is a searchable database of product-specific information (e.g., environmental standards and guidelines or contract language) developed by government programs, both domestic and foreign, as well as third parties. It can be found at <http://yosemite1.epa.gov/oppt/eppstand2.nsf>.

**Educational and Institutional Cooperative Purchasing (E and I)** is a cooperative purchasing entity that includes in its mission a commitment to helping its members (primarily educational institutions) meet their sustainability objectives. See [www.EandI.org](http://www.EandI.org).

**Western States Contracting Alliance (WSCA)** was created to enable participating states across the United States to join in cooperative multistate contracting. Several WSCA contracts offer environmentally preferable products, such as EPEAT-registered computer equipment, green-certified cleaners, floor maintenance products, hand soaps, paints and energy-efficient, mercury-free LED lighting equipment. See [www.aboutwsca.org](http://www.aboutwsca.org).

**Responsible Purchasing Network's Fact Sheet "Buying Green on Cooperative Procurement Contracts"** provides an overview of several cooperative purchasing organizations that may have environmentally preferable products available. See [www.responsiblepurchasing.org/includes/cooperative\\_contracts.pdf](http://www.responsiblepurchasing.org/includes/cooperative_contracts.pdf).

### Need More Help Finding What You Need?

Visit **Green Seal** and **UL EcoLogo** to see the full range of products and services they certify as EPP/green. These third party certifications are important because they ensure that independent organizations reviewed the manufacturer and its documentation to ensure that the products meet standards. Ask your vendors to carry certified products. Encourage your local retailers who participate in back-to-school purchases to carry a range of green/EPP certified products as well.

## Adopt a Districtwide Healthy Purchasing Policy

**We encourage schools to work with their state agencies and or regional purchasing consortia.**

However, schools may decide that instead of using an existing cooperative purchasing agreement to procure healthy products, they want to go out to bid on their own. One way schools can make their commitment to healthy purchasing clear to vendors is to develop and adopt a policy.

Public schools are public agencies and must follow state and local policies regarding how to issue requests for bids for various products, services and equipment. Make sure your specifications are objective, verifiable and consistent.

**Examples.** Below are several examples of purchasing policies that promote protection of the health of children and staff in addition to the environment. Consider using elements of these purchasing policies when developing your own.

- The **Santa Barbara Unified School District** (CA) adopted a board policy in August 2010, *Green School Operations*, that states: “The Superintendent or designee shall promote green school practices that conserve natural resources, reduce the impact of district operations on the environment, and protect the health of students, staff and community.” See <http://www.sbsdk12.org/board/policies/3000/BP3510.pdf>
- The **City of Portland, Oregon School Board** adopted a policy in May 2001, *Environmentally Sustainable Business Practices*, which commits to, among other things, “reduce and eliminate where feasible, the use of chemical pesticides.” See [http://www.pps.k12.or.us/files/board/3\\_30\\_082\\_P.pdf](http://www.pps.k12.or.us/files/board/3_30_082_P.pdf).
- **Additional green purchasing policies** can be found on the
  - **Green Schools Initiative’s** web site ([www.greenschools.net](http://www.greenschools.net)),
  - **Responsible Purchasing Network’s** web site ([http://www.responsiblepurchasing.org/purchasing\\_guides/all/policies/](http://www.responsiblepurchasing.org/purchasing_guides/all/policies/))
  - **National Association of Counties’ Green Purchasing Toolkit** [www.naco.org/programs/csd/Pages/NACoGreenPurchasing.aspx](http://www.naco.org/programs/csd/Pages/NACoGreenPurchasing.aspx).

Alternatively, look for opportunities to use **third party certifications that are based on multi-attribute standards**, that is, **standards that address many environment and health attributes, not just one**, such as “PVC-free” or “No VOCs.”

- **If multi-attribute certifications and standards do not exist** for a specific product category, the next best thing for schools to cite in a bid specification are one or more single-attribute certifications that cover important health and environmental criteria for

the type of product that is being evaluated. Examples of credible single-attribute certifications include UL GREENGUARD (low air emissions products), Forest Stewardship Council (sustainably managed wood) and USDA Organic (food).

**Caution.** Don't just specify "reduced environmental impact" or worse still, "green," or "earth-friendly," all considered greenwashing terms. Choose specific attributes, such as percent recycled content, mercury-free or nonhazardous under the Resource Conservation and Recovery Act (RCRA)<sup>13</sup>, then specify exactly what you are looking for.

Make sure you communicate clearly about your contract specifications. For instance, if you require a VOC-free product, many vendors may interpret this to mean no VOCs in excess of 1%. If you mean that the product cannot contain any contaminant VOCs, you will need to specify a different level. You will also need to indicate how the chemical content must be verified, by indicating if independent laboratory testing results or certificates of analysis are required.

### **Needs Assessment**

When developing specifications, the very first thing that should be assessed is the need for the product. This involves determining:

- Why do you need the specific product or are there alternatives?
- How is the product going to be used?
- What is the product going to be used for?
- Who is going to use the product?
- Are safer, third party certified products available on the market?

Answering these questions will help you determine the requirements of the product you need.

### **Developing Green Specifications—Getting to the Details**

In developing your specifications, you will be identifying and prioritizing these requirements into a biddable document. This list of requirements should include a description of the physical and performance characteristics of the product. You should also identify any or all of the environmental requirements of the product.

Other important single-attribute health or environmental standards that can be referenced in bid specifications include ENERGY STAR (energy-efficient products), RoHS-compliant (electronic equipment that meets the EU's Restriction of Hazardous Substances Directive, which restricts the amount of particularly toxic heavy metals and flame retardants) and SCAQMD-compliant (paints that meet the South Coast Air Quality Management District's limits on the amount of VOCs in a product).

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<sup>13</sup> <http://www.epa.gov/epawaste/inforesources/online/index.htm>

## More Healthy Purchasing Resources

There are many valuable resources that can help schools begin purchasing environmentally preferable goods and services. Keep it simple: don't start from scratch!

### **Guide to “Buying Green on Cooperative Procurement Contracts”**

[http://www.responsiblepurchasing.org/includes/cooperative\\_contracts.pdf](http://www.responsiblepurchasing.org/includes/cooperative_contracts.pdf)

### **Green Purchasing: A Guide for Local Governments and Communities**

[http://www.state.nj.us/dep/opsc/docs/green\\_purchasing\\_guide\\_local\\_governments.pdf](http://www.state.nj.us/dep/opsc/docs/green_purchasing_guide_local_governments.pdf)

### **Local Government Green Procurement Guide**

[http://sustainca.org/sites/default/files/publications/Local\\_Government\\_Green\\_Procurement\\_Guide.pdf](http://sustainca.org/sites/default/files/publications/Local_Government_Green_Procurement_Guide.pdf)

### **National Association of State Procurement Officials (NASPO) *Green Purchasing Resource Guide*.**

This resource provides more information about the green purchasing programs and resources of states.

[www.naspo.org/content.cfm/id/Green\\_Guide](http://www.naspo.org/content.cfm/id/Green_Guide).

### **Consumer Reports Greener Choices UL EcoLabels**

This web site offers a searchable tool to help users find *Consumer Reports'* expert evaluation of eco-labels for food, wood, personal care products and household cleaners

<http://www.greenerchoices.org/eco-labels/>

### **Responsible Purchasing Network's Fact Sheet on EPP Resources**

Describes credible ecolabels and other green purchasing resources.

[http://www.responsiblepurchasing.org/publications/epp\\_resources\\_0511.pdf](http://www.responsiblepurchasing.org/publications/epp_resources_0511.pdf)

### **Seven Sins of Greenwashing**

This web site helps users learn what to look out for including claims that are vague or unsubstantiated.

<http://sinsofgreenwashing.org/>

### **Federal Trade Commission's Going Green web site**

This site helps consumers “learn how to question green advertising claims.”

[www.consumer.ftc.gov/features/feature-0013-going-green](http://www.consumer.ftc.gov/features/feature-0013-going-green)

## **Appendix**

**Cleaning for Healthy Schools Poster**

**San Francisco Disinfecting and Sanitizing Guidelines for Child Care**

**Seven Sins of Greenwashing Poster**