Safe, Green & Clean

Understanding employee rights, chemical hazards and the green alternative

EXAMPLE: Miami Dade County Public Schools Safety and Health

- Miami Dade County Public Schools *and many other districts* have a comprehensive Safety Program which is an essential management tool to provide standards for reducing accidents and for the prevention and reduction of injuries and illness among students and employees.
- It can help, but not guarantee, the protection of school children.

EXAMPLE: Miami Dade Safety and Health Program

The long-range objectives of the Safety Program are to:

- REDUCE STUDENT AND EMPLOYEE INJURIES
- REDUCE WORKERS' COMPENSATION LOSSES
- REDUCE PROPERTY LOSSES
- REDUCE SELF-INSURANCE FUNDING REQUIREMENTS
- REDUCE INSURED LOSSES AND REDUCE INSURANCE PREMIUMS
- REDUCE THE IMPACT OF LOSSES ON THE OPERATING BUDGET

Rights and Responsibilities

OSHA covers all private employers, including private schools. OSHA covers public school employees in 24 of the 25 states with state-adopted OSHA Plans.

Workers can protect their health and safety on the job by following safe work procedures and communicating with their employer or manager, or their union.

- Ask the supervisor to correct the problem. If this doesn't work, contact the union steward. He or she can:
  - Work to get the situation corrected through informal discussions with management, risk management, safety officer or plant operations, or,
  - File a grievance.

FIVE PARTS OF THE OSHA HAZARD COMMUNICATIONS STANDARD

Chemical Inventory

Written HAZ COM program

Training

Labels

Safety Data Sheets

(Chemical fact sheets)

The Written HAZ COM program

- After doing a chemical inventory, the employer must develop a written Hazard Communication program
- In the written program, the employer must outline how information about chemical hazards will be given to workers.
- It must include information on product labels, where Safety Data Sheets are maintained and how workers will be trained.

A COPY OF THE PROGRAM MUST BE made available TO WORKERS OR THEIR REPRESENTATIVES UPON REQUEST.

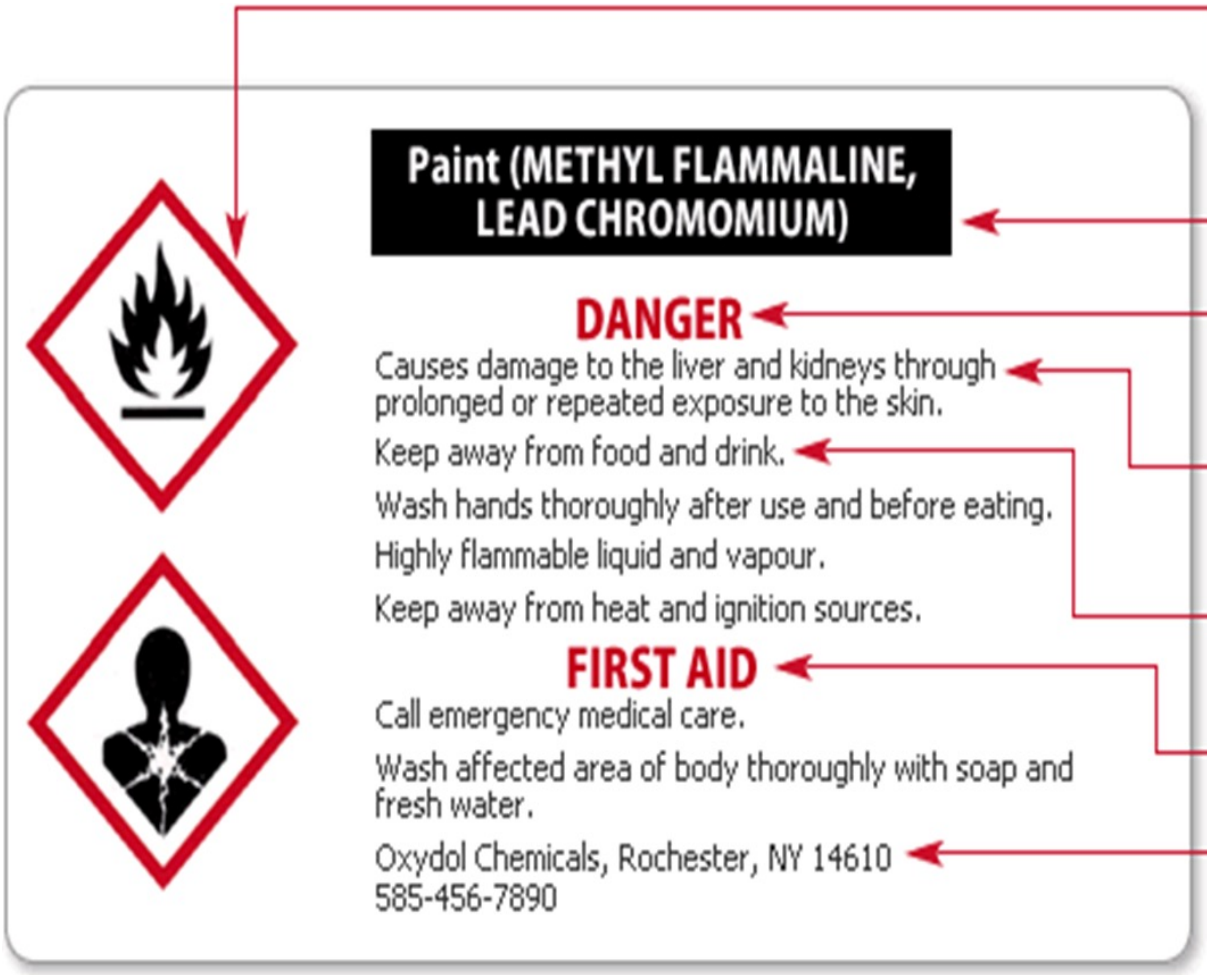
What is the Globally Harmonized system for classifying chemicals (GHS)?

- A common and coherent approach to defining and classifying hazards, and communicating information on labels and safety data sheets.

What are the Major Changes?

- Transition from performance oriented to a standardized approach.
- Health, physical and environmental hazard criteria for substances and classification of mixtures.
- Harmonized pictograms, hazard statements and signal words on labels.
- 16 section standardized safety data sheet (SDS).
- Workers must be trained on the new label and data sheet format by December 1, 2013

LABELING REQUIREMENTS



Pictograms
- Conveys specific information bout the hazard(s) of a chemical

Product Identifier
- Chemical name or number to identify the chemical

Signal Word
- Alerts level of severity of hazard

Hazard Statement
- Describes the nature of hazard(s) associated with a chemical

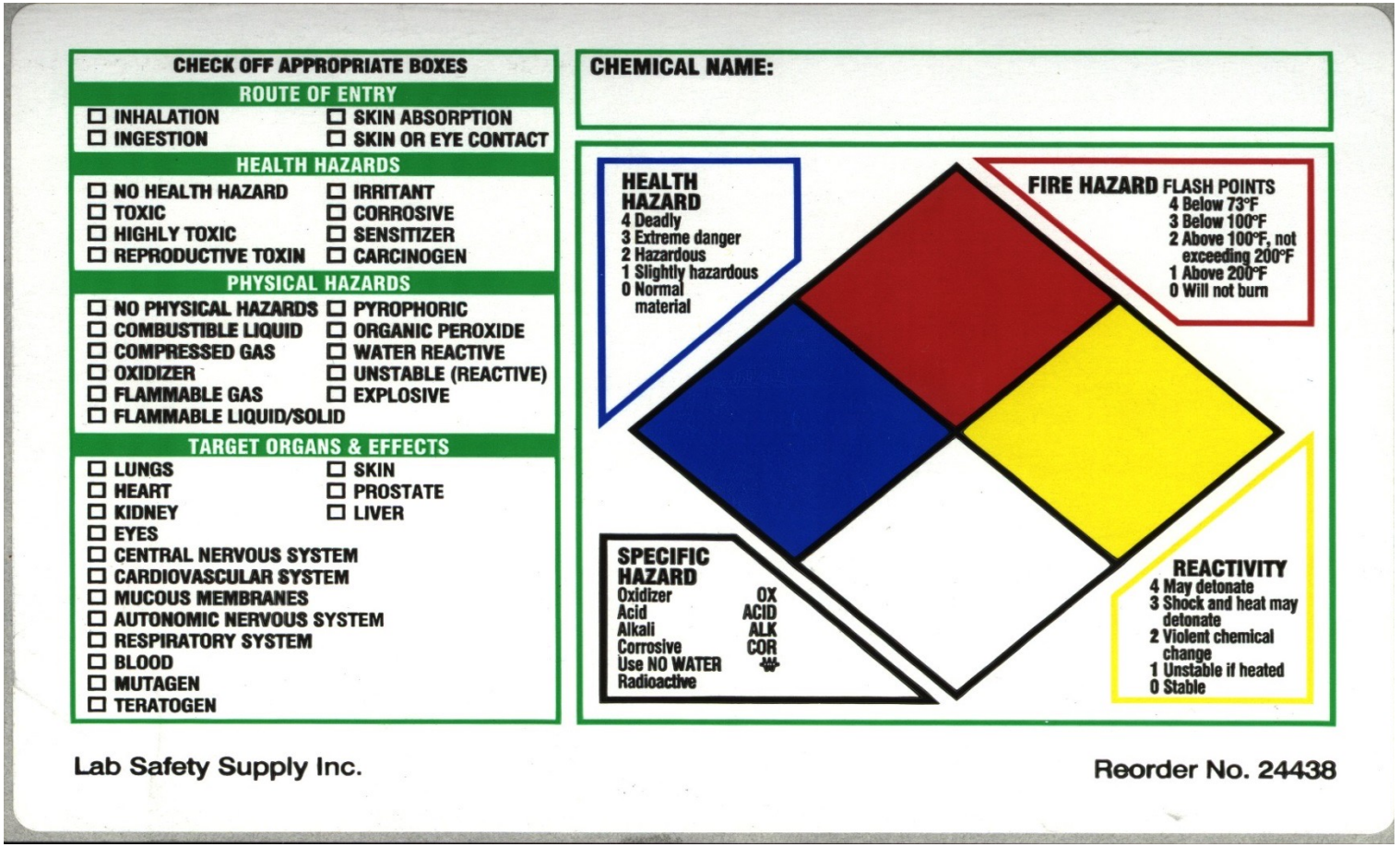
Precautionary Statement
- Recommended measures to take to prevent adverse effects

First Aid Statement
- Emergency care information

Supplier Information
- Name, address and telephone number of the chemical manufacturere, importer or other responsible party

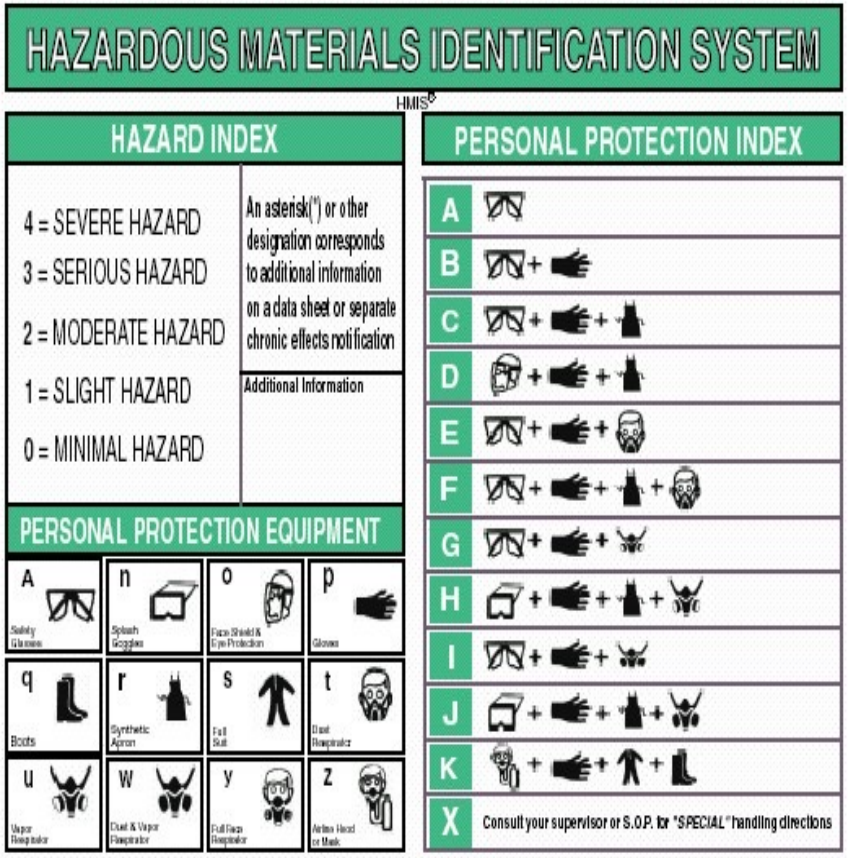
THE NATIONAL FIRE PREVENTION ASSOCIATION LABEL (NFPA)

Secondary labeling system used on products and SDS within MDCPS



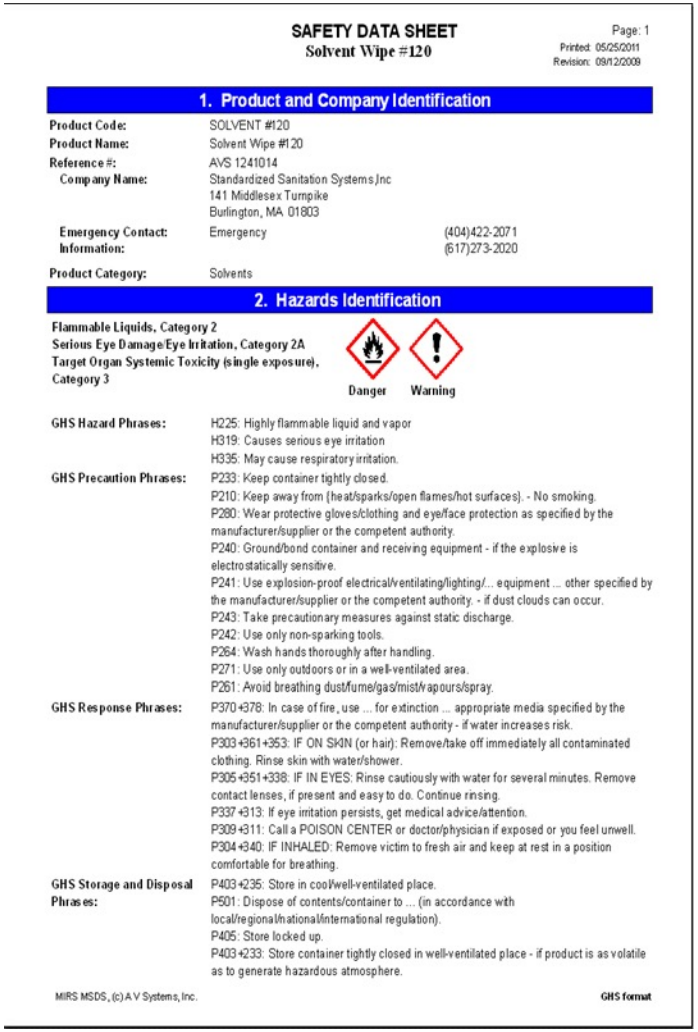
Hazard Material Identification System

Secondary labeling system used on products and SDS within MDCPS



Safety Data Sheet

- Must be in English and include information regarding the specific chemical identity and common names
- Must provide information about the:
  - Physical and chemical characteristics
  - Health effects
  - Exposure limits
  - Carcinogenicity (cancer-causing)
  - Identification (name, address, and telephone number) of the organization responsible for preparing the sheet
- Must be readily accessible to employees in their work area



SAFETY DATA SHEET
Solvent Wipe #120

Page: 1
Printed: 05/25/2011
Revision: 09/12/2009

1. Product and Company Identification

Product Code:	SOLVENT #120	
Product Name:	Solvent Wipe #120	
Reference #:	AVS 1241014	
Company Name:	Standardized Sanitation Systems Inc 141 Middlesex Turnpike Burlington, MA 01803	
Emergency Contact: Information:	Emergency	(404)422-2071 (617)273-2020
Product Category:	Solvents	

2. Hazards Identification

Flammable Liquids, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
Target Organ Systemic Toxicity (single exposure), Category 3

Danger Warning

GHS Hazard Phrases:	H225: Highly flammable liquid and vapor H319: Causes serious eye irritation H335: May cause respiratory irritation.
GHS Precaution Phrases:	P233: Keep container tightly closed. P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking. P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority. P240: Ground/bond container and receiving equipment - if the explosive is electrostatically sensitive. P241: Use explosion-proof electrical/ventilating/lighting/... equipment ... other specified by the manufacturer/supplier or the competent authority. - if dust clouds can occur. P243: Take precautionary measures against static discharge. P242: Use only non-sparking tools. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
GHS Response Phrases:	P370+378: In case of fire, use ... for extinction ... appropriate media specified by the manufacturer/supplier or the competent authority - if water increases risk. P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+313: If eye irritation persists, get medical advice/attention. P309+311: Call a POISON CENTER or doctor/physician if exposed or you feel unwell. P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
GHS Storage and Disposal Phrases:	P403+235: Store in cool/well-ventilated place. P501: Dispose of contents/container to ... (in accordance with local/regional/national/international regulation). P405: Store locked up. P403+233: Store container tightly closed in well-ventilated place - if product is as volatile as to generate hazardous atmosphere.

MIRS MSDS, (c) A V Systems, Inc. **GHS format**

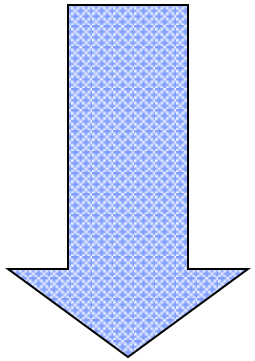
The Safety Data Sheet (SDS)

- The SDS should contain 16 headings in the following order. Blank spaces are not permitted. If any item is not applicable or no information is available the space must be marked to indicate that. Example (n/a)

1. Identification of substance or mixture and of the supplier
2. Hazard identification
3. Information on ingredients
4. First aid measures
5. Firefighting measures
6. Accidental release
7. Handling and storage
8. Exposure controls/PPE
9. Physical and chemical properties
10. Stability and reactivity
11. Health effects -toxicity
12. Ecological info
13. Disposal
14. Transport
15. Regulatory information-optional
16. Other information incl. date of preparation or revision

Priority: Reducing Hazards

Most Effective



Least Effective

- **Elimination** – not using chemical where possible.
- **Substitution -** replacing one substance or activity with a less hazardous one.
- **Engineering** – using ventilation or other means to capture.
- **Administrative** – following safe work policies and;
- **Personal Protective Equipment** – respirators gloves, safety glasses.

Routes of entry

Inhalation…

Absorption…

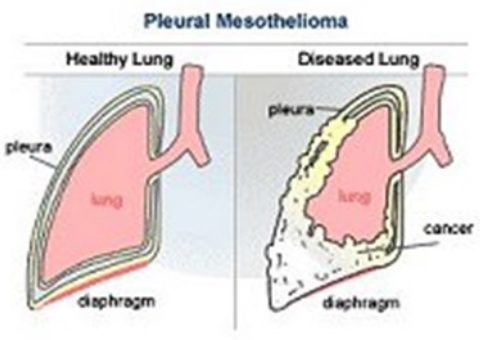
Ingestion…

Injection…

Health Effects

Acute health effects are felt or noticed almost immediately. Often within minutes or hours.

Chronic health effects may not be felt for months or even years, such as in cases involving asbestos fibers.



The **latency** period is the time between, when a person comes in contact with a substance, and the time that the effects are noticed.

Health Effects: Custodial Workers Using Toxic Cleaners

- A single custodial worker uses, on average, 194 pounds of chemicals each year
  - 25% of these are hazardous substances
- Custodial workers experience one of the highest rates of occupational asthma
- 6 out of 100 custodians are injured each year
  - 20% are serious burns to the eyes or skin
  - 12% are a result of inhaling chemical vapors

Health Impacts on Building Occupants

- Asthma
- Poor indoor air quality and Building Related Illnesses
- Allergies and sensitivities
- Absenteeism
- Reduced productivity of staff and students

Poor Indoor Air Quality and Health from Cleaning

Ingredients in conventional cleaning products can:

- Cause new cases of asthma and or trigger asthma
- Harm the brain, nervous system, reproductive organs, kidneys and liver
- Irritate the eyes and or cause headaches
- Cause breathing problems and illnesses
- Cancer

Solution: Cleaning for Health

Cleaning that protects public health, without harming the health of staff, students, building occupants and the environment.

Health first!

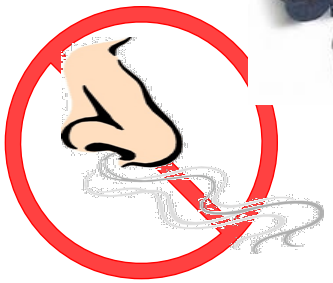
First Steps: Green Cleaning

Districts and local schools typically -

- Determine what cleaning products are in daily or frequent general use
- Review SDS from manufacturers
- Ask their most reliable vendors to provide free samples of *"3rd party-certified green cleaners"* and demonstrate to custodial staff
- Look at better cleaning technologies like microfiber cloths, mop head and pads, which are a quick and easy switch, and re-usable

Principles: Cleaning for Health

- Keep the dirt and debris out by using walk-off mats at all major entries
- Use less-toxic, 3rd party-certified cleaning products, paper products and hand soaps
- Update and maintain equipment
- Cleaning with detergent removes most germs; disinfect only in target areas.
- Breathe easier – clean doesn't have an odor!



Successful Steps to Green Cleaning in your school

- Educate teachers, parents, students and broader community
- Work with the Health & Safety Committee
- Train staff with new products and cleaning methods
- Phase in more "green" cleaning products
- Adopt state or local district policy
- Everyone must participate in the program and following policy to keep the school safe and healthy.

Healthier Cleaning Solutions

- Use low-odor, less-toxic cleaning products
  - Recommended by Materials Testing and Evaluation Department (S&D)
  - Cost-neutral product – using less product which saves money
  - Improve indoor air quality by reducing sources of pollutants

Cleaning for Health:
More green maintenance products

- Use greener products that are third-party certified

  - Hand soaps
  - Paper products

    - post-consumer waste recycled content for boxed facial tissue, toilet paper and dispenser roll or multifold towels
    - tissue & towels on large rolls
  - Paints
    - Low volatile organic compounds

    (vapors coming off of the product)

Better Cleaning Equipment

Use updated equipment to reduce particulates in the air

- Install dirt-grabbing walk-off mats inside and outside entrances, recommended 15+feet (3-4 strides)

- Use microfiber cloths and mops that pick up dirt while using a reduced amount of chemicals
- Employ high-filtration vacuums or microfiber mops instead of conventional dust mops

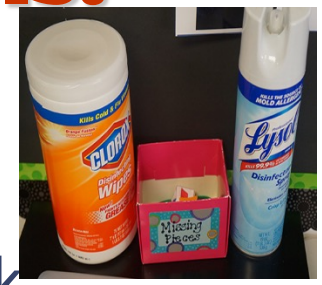
- Install high-filtration vacuum attachments on other floor-care equipment

Best Practices to use when Cleaning for Health

- Leave classrooms ready to clean
- Clean bathrooms from the top down
- Select durable, easy to clean flooring; maintain/replace carpets *(5-7 yrs)*

- Clean up spills; report leaks
- Cleaning with detergent will remove most germs; disinfect only in target areas
- Vacuum instead of dust mopping

Cleaning Challenges in Schools:



- Densely occupied areas heavily used
- Budget cuts fall first on non-mandated staff
- Boards, Administrators not trained on facility work
- Teachers and children bring products from home
- Unnecessary demands for "disinfection"
- Classrooms not ready to be cleaned; storage lacking; desk arrangements; "hoarder" classroom

In conclusion

- Conventional cleaning products can impact the health of cleaning staff and other building occupants
- Green cleaning promotes the use of less hazardous cleaning products and solutions. It is more than just choosing safer chemicals.
  - Consider how a building will be cleaned when it's being designed and constructed
  - Use third-party certified safer chemicals, preferring the effective and least-toxic options
  - Using state-of-the-art equipment and techniques to clean better with fewer chemicals
  - Training staff to implement the program

Track success: fewer illnesses/absences; lower operating costs

Celebrate success on National Healthy Schools Day!

- ***Visit www.NationalHealthySchoolsDay.org for ideas or help with setting up a local or state activity. Healthy Schools Day is in April every year, during National Public Health Week.***

Credits

National Collaborative Work Group on Green Cleaning and Chemical Policy Reform in Schools

Module Two, Worker Training *(first developed in 2007)*

Other educational materials including a free color poster and links to finding and using green products are at:
www.CleaningforHealthySchools.org

This 2014 updated Worker Training Module was prepared by

- American Federation of State, County and Municipal Employees, AFL-CIO, Department of Research and Collective Bargaining Services
Website: http://www.afscme.org

- Healthy Schools Network
Website: http://www.healthyschools.org