

Managing Classroom Chemicals

Schools should carefully evaluate chemicals on site and develop plans for managing them properly.

Inventory

It is imperative that schools keep an up-to-date, accurate inventory of chemicals used in the school. A good inventory can help a school minimize chemical purchases by preventing accumulation of duplicate chemicals. Inventories are essential in case of an emergency, informing emergency responders of hazards they may face.

Chemicals can be dangerous. Before conducting an inventory, schools must decide if they are qualified to do the inventory, have appropriate protective equipment, and have emergency precautions in place. Schools may want to consider hiring a waste management company with trained professionals to conduct the inventory.

Never allow students to conduct an inventory.

Dangerous chemicals are not only used in science class. Other school operations may generate chemicals and chemical wastes, including the following:

- Art departments
- Shop classes
- Janitorial maintenance and services
- Lawn maintenance
- Health facilities (e.g., nurse's office)

Ensure the inventory includes the entire school. Due to shortage of space, chemicals often end up in unintended places.

- Check every classroom
- Check every closet
- Check under sinks, in cupboards, and in drawers
- Check basements and boiler rooms
- Open every box—even if it is labeled

Steps Your School Can Take

Storage

Take precautions to ensure chemicals and wastes are stored safely, securely, and properly.

- ***Make sure chemicals are stored according to compatibility.*** Most chemical suppliers provide suggested storage patterns that prevent incompatible chemicals from being stored next to each other.
- ***Ensure chemical containers are in good condition.*** Replace cracking lids, peeling labels, or leaking containers. Replacement containers, labels, and caps are available from most chemical suppliers.
- ***Inspect shelving.*** Rust is often a sign of an acid spill or leak. Replace worn shelves, shelf holders, and brackets.

- **Ensure labels have the chemical name, formula, date of purchase, and expiration date.** Formula alone is not enough. Chemical information on material safety data sheets is most commonly listed by name, not formula. Non-chemists may have a difficult time finding information about a chemical by using just its formula. Also, list the chemical's hazards so others not familiar with the chemical will be aware of potential dangers.

Schools often use only a small amount of chemicals each year, yet have on hand enough to last 50 years or more!

Disposal

Evaluate chemicals yearly and only keep what is actually used. In addition, remove chemicals that meet any of the following conditions:

- Hazardous
 - Expired or old
 - Duplicate or excess
 - Showing signs of compromise, such as crystal buildup or discoloration
- Dispose of waste that cannot be reused or returned to a vendor through a reputable hazardous waste management company. Note: It may be illegal to dispose of chemicals and chemical wastes down the drain or in the trash. Contact DEQ for more information about hazardous disposal requirements.

Chemical Management

Chemical disposal can be expensive. Chemicals may be hazardous and must be disposed of according to state and federal rules designed to protect our health and our environment. If chemical stockpiles exist, obtain a cost estimate for disposal from a hazardous waste management company. Most companies will provide a free estimate from an inventory submitted via fax or e-mail. Once disposal costs are known, schools can plan and budget for removal. Schools may need to pay for disposal a little at a time, disposing of a portion of the chemicals each year, starting with the most hazardous.

Chemicals in Schools

Science class is one of the first places children formally learn about our natural world. Who can forget the first time they mixed vinegar and baking soda to create a volcano?

However, many schools contain old, unwanted, and potentially hazardous science chemicals. Over time, chemicals may become compromised, creating unsafe conditions for students, staff, and teachers.

Proper chemical management benefits schools by protecting public health, reducing risks from chemical spills, and preventing theft.

Proper chemical management also protects the environment, especially soils and ground water, which can be impacted by chemical pollutants.

Safe Chemical Management in Schools <http://www.epa.gov/schools/chemicals.html>

Resources <http://www.epa.gov/schools/resources.html#present>