

## 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.

### Idaho Chemical Roundup

In 2005, the Idaho Department of Environmental Quality (DEQ) launched the Idaho Chemical Roundup, a statewide program providing schools assistance and training on proper chemical management and disposal.

Through the Idaho Chemical Roundup, DEQ is committed to helping schools manage chemical wastes and prevent pollution.

## For More Information

### Contact DEQ:

Idaho Department of Environmental Quality  
Pollution Prevention Program  
1410 N. Hilton  
Boise, ID 83706  
ph: (208) 373-0502

### Log on:

DEQ's Idaho Chemical Roundup Web Site  
[http://www.deq.idaho.gov/waste/educ\\_tools/chemical\\_roundup.cfm](http://www.deq.idaho.gov/waste/educ_tools/chemical_roundup.cfm)

Contains information to help schools manage chemicals and chemical wastes including:

- Tips and best practices for chemical inventories, chemical storage, and chemical disposal
- Resource guides to hazardous waste management companies serving Idaho
- Lists of most hazardous chemicals found in schools nationwide

### Idaho Division of Building Safety

<http://dbs.idaho.gov/school/index.html>

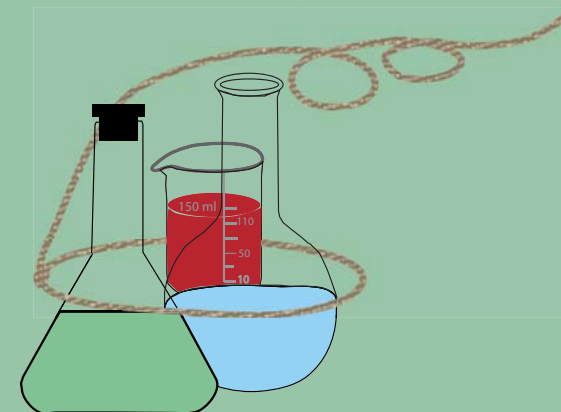
### U.S Environmental Protection Agency's Safe Schools Program

<http://www.epa.gov/epaoswer/osw/conserve/clusters/schools/index.htm>

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# Idaho Chemical Roundup

*Helping schools manage chemical wastes, keep kids safe, and prevent pollution*



Idaho Department of Environmental Quality  
[www.deq.idaho.gov](http://www.deq.idaho.gov)

## Managing Classroom Chemicals

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

### Inventory

Each school is required to 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. An inventory is essential in case of an emergency, informing emergency response professionals 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 the 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:

- Art departments
- Shop classes
- Janitorial maintenance and services
- Lawn maintenance
- Health facilities (e.g., nurses' offices)

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, in drawers
- Check basements and boiler rooms
- Open every box—even if it's labeled



### **DANGER!**

Over time, chemicals can become unstable or degraded. Warning signs may include unmarked containers; bulging, leaking, or rusted containers; containers with cracked or degraded caps; the presence of a liquid above a solid; or crystals in a liquid.

If any of these are present, the chemical should not be moved, even for an inventory. Contact a waste management company for assistance and disposal. In a chemical emergency, such as the discovery of an explosive or unstable chemical or an unmanageable chemical spill, call 911 or the State Communications Center at (800) 632-8000.

## 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, and leaking containers. Replacement containers, labels, and caps are available from most chemical suppliers.
- **Inspect shelving.** Rust is often a sign that there is 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.** Listing the formula alone is not sufficient. 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 that others not familiar with the chemical will be aware of potential dangers.

*Often schools use a small amount of chemicals each year, yet have enough on hand to last 50 years or more!*

### Disposal

Evaluate chemicals yearly and only keep what is actually used. In addition, remove chemicals that are:

- Hazardous
- Expired or old
- Duplicate or excess
- Showing signs that they are compromised, such as crystal build-up 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.

### Paying for 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, get 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 email. Once it is known how much disposal will cost, schools can begin to 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.