HAZARDOUS CHEMICAL MANAGEMENT IN SCHOOLS

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Puget Sound Educational Service District
Workers' Compensation Trust
Unemployment Pool

SCIENCE LABORATORY SAFETY

Laboratory experiments are an exciting part of teaching science and an important tool for engaging students. And yet, these activities also come with a great deal of responsibility. Chemicals, when not properly handled, can be hazardous for both staff and students.

Puget Sound Workers' Compensation Trust has developed a tool to assist districts and schools with the management of hazardous chemicals. Here, we outline the steps needed to ensure your staff and students stay safe while in the lab.

Remember the key to any safety program is training! For each step listed, it is imperative to include the appropriate training.

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1 PLANNING & OVERSIGHT

Proper oversight and proactive planning are essential to safe curriculum design. Teachers should work under the supervision of their administration to plan experiments that both support scientific concepts in the curriculum and pose the lowest potential hazard to staff and students, in terms of both the methodology of the experiment and the chemicals used.

2 PURCHASE

When purchasing chemicals, choose those with the lowest hazard and order no more than a two years' supply. Before placing an order, identify the necessary storage features required and make sure your school can accommodate them. Make it a practice to exhaust your existing supply before purchasing additional chemicals.

3 STORAGE

Chemicals should always be kept in their designated storage space, and should always be properly reshelved immediately after use. This storage space must be equipped with any necessary or required safety features. Keep chemical storage organized and separate chemicals by hazard categories. Perform periodic audits and remove old, damaged, and unnecessary items.

4 USE

Proper use and handling of chemicals starts with preparation. Read and understand all safety documentation and practice experiments before introducing them to a class. Identify potential hazards and ways to protect staff and students. Provide any necessary safety equipment and train staff and students in proper techniques and lab safety.

5 WASTE

Reduce waste generation through proper planning – reduce, reuse, recycle. Choose experiments that produce little waste, such as in small-scale chemistry. When disposing of hazardous waste, do so properly, through a reliable, licensed vendor. Remember to budget for the costs associated with chemical waste disposal, which can be higher than the price of the chemicals themselves.

6 EVALUATE

Evaluate your science curriculum, chemical inventory, and chemical storage regularly, and involve all stakeholders in this process. Encourage stakeholders to recommend and implement improvements. Investigate all accidents and incidents and analyze their "root cause" in order to identify methods to prevent accidents from reoccurring.