

Discussion and Notes

For more information on how to take a chemical inventory, please read the article entitled "Seven Step Plan to Clean Up Your Chemical Storage Area," pages 1042–1043 in the 2007 Flinn Scientific Catalog/Reference Manual.

Flinn Scientific ships a CD containing all of our MSDS with every chemical purchase. MSDS for all Flinn chemicals may also be downloaded from our Web site at www.flinnsci.com.

Chemical Storage Safety Checklist

Now that spring is finally here, it's a good time to start thinking about ways to improve the safety conditions in your school's chemical preparation and chemical storage areas. The following questions provide a good starting point for evaluating these areas. Suggested policies are listed under every question.

Security

1. Do students have access to the prep area or chemical storage room?

Access must be limited to science teachers only. Place signs on doors to remind students: "Danger—Authorized Personnel Only."

2. Does the chemical storage entry door have self-return hardware and a high quality lock that will automatically lock when the door closes?

Doors to the prep room and chemical storage areas must always be locked. A high quality lock is required to prevent break-in. The doors should automatically close and lock.

Communication

3. Is there immediate (or nearby) access to a telephone to call 911?

A telephone with an outside line should be available in case of an emergency. If not, keep your cell phone with you when working in the chemical storage areas. If you use an intercom system for emergencies, make sure someone will be on the other end to hear you—accidents often happen before or after school when teachers are working alone.

Right-To-Know Law Compliance

4. Does a chemical inventory exist and is it up to date?

By law, you are required to know what chemicals you are storing, how much you have, and the locations where chemicals are stored.

5. Are Material Safety Data Sheets available for every chemical?

MSDS must be available for every chemical stored in the science department. The MSDS library should be located in close proximity to where the chemicals are stored and used. Electronic MSDS libraries are allowed.

6. Are all chemical bottles properly labeled?

The chemical name, concentration, and the physical and chemical hazards, including target organs affected, must be listed on all chemical labels. The hazard information should be specific, e.g., toxic by skin absorption.

Chemical Storage

7. Is an approved acid storage cabinet used to store corrosive chemicals?

Every school should have a dedicated, locked cabinet for storing corrosives. Wood construction is best to avoid rusting. If the cabinet is metal, check shelf clips and cabinet for corrosion.

8. Is an approved flammables cabinet used to store flammable liquids?

Store flammable liquids in a locked, designated, fireproof cabinet as required by federal and state OSHA regulations. Check the cabinet to make sure it has a sticker verifying that it meets NFPA and OSHA specifications.

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For complete details on how to store chemicals using the Flinn Scientific Compatible Chemical Family system, please refer to pages 1073–1079 in the 2007 Flinn Scientific Catalog/Reference Manual.

9. Are poisons stored in a locked cabinet?

Store highly toxic chemicals under lock and key in a dedicated poisons cabinet.

10. Are chemicals stored using the Flinn Chemical Storage System?

Do not store chemicals in alphabetical order. All chemicals should be stored in chemical-compatible families according to the Flinn Chemical Storage System.

11. Are hazardous chemicals properly stored to prevent and contain spills?

Any chemical with a severe hazard warning should be considered a “devil” chemical and should be stored using secondary containment to control a possible spill. Plastic bags, absorbent (cat litter), and metal paint cans are inexpensive, easy to find, and provide effective secondary containment.

12. Do the chemicals have a date on the bottle that tells you when they were purchased?

Some chemicals become more hazardous with age. The age of all chemicals must be known. When you receive a shipment of chemicals, take a few minutes to write the date on the label. If you purchase your chemicals from Flinn, this is not necessary—we place a date purchased sticker on the bottle before we send it to you.

13. Are chemicals stored in a refrigerator?

Storing flammable organic chemicals in a refrigerator may cause an explosion. With the possible exception of biological chemicals, such as enzymes, proteins, and DNA, there is no valid reason why chemicals must be stored in a refrigerator.

Chemical Shelving

14. Is the chemical shelving stable? Shake the shelves carefully, do they move?

Shelving units should be affixed to the wall and should never move. Check the shelf clips to make sure they are not corroded.

15. Are the shelves overloaded with chemical bottles? Are the shelves “bowing” in the middle?

Chemical bottles should not be stacked on top of one another. The shelves should not bow in the middle. Replace all shelves that are warped, bowed, or delaminating.

The above checklist is by no means exhaustive. Issues like storeroom ventilation, personal protective equipment, and climate control may be addressed if time permits.

Flinn Scientific Values Your Support

Flinn Scientific has provided your Science Department Safety Training Notes. Without your orders, the safety training notes and the indispensable *Flinn Scientific Catalog/Reference Manual* would not be possible. Please continue to support our efforts to improve safety in school science labs by sending Flinn Scientific your valuable orders.

Next Month's Topic

End of the School Year Classroom Tips



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All science teaching staff can benefit from a quick tour of the chemical prep room and storage areas to assess whether chemicals are stored safely. As you review and answer the questions on this checklist, you may find that there are other safety concerns the department will want to discuss. Please feel free to call Flinn Scientific at 1-800-452-1261 anytime if you have questions about chemical storage or safety.

The safety meeting should take only 6–8 minutes to present. The discussion period will vary depending on the issues that need to be addressed.

It is very important to keep a copy of these safety meeting notes and a signed attendance sheet to verify that regular safety training meetings were held. The sign-up sheet is almost as important as the meeting notes and is usually the first thing that is reviewed by regulatory inspectors. A copy of the sign-up sheet we suggest using can be found at www.flinnsci.com/Sections/Safety/SNotes/signup.pdf.

Materials (one per staff member)

Flinn Scientific Science Department Safety Training Notes, Volume 7–9

Sign-up sheet (one for the group)

Additional Questions for Discussion

1. Discuss any safety questions or issues that were brought up during the visit to the chemical prep room and storage areas.
2. Does the school have procedures in place for the science department to notify the administration that a safety concern or problem exists?
3. Does the science department have a plan for regularly inspecting chemical storage areas and evaluating what chemicals are no longer used or needed?

We Welcome Your Comments

Are the Science Department Safety Training Notes useful to you? Are they working for you and your department? We would love to hear from you if you have any suggestions for topics that you would like to see covered or for how we can improve these safety training notes. Please e-mail us with your comments and suggestions. Our e-mail address is flinn@flinnsci.com.