

Appendix H

Science Laboratory Safety List

The safety program in the school and school district should be dedicated to preventing and minimizing injury to personnel and protecting and preserving the facilities and the environment.

The following checklist identifies some of the important considerations for schools, school districts, and interested individuals to address in planning and implementing a science laboratory safety program. This is not an exhaustive list; schools, school districts, and interested individuals are encouraged to review the pertinent statutes and regulations and consult with appropriate safety personnel and/or legal counsel as needed, to ensure compliance with the applicable laws.

- The school or the school district must have a written plan for, or exemption from, each of the following. If the plan is for the school district, it should be written to include the schools involved.
 - o Chemical hygiene plan (CHP), *CCR*, Title 8, Section 5191. Required of all employers in workplaces where there is laboratory use of hazardous chemicals; the plan must include safe operating procedures, use of protective equipment, employee information and training, provisions for medical consultations and examinations, and designation of a chemical hygiene officer.
 - o Bloodborne pathogens exposure control plan, *CCR*, Title 8, Section 5193. Required of all *employers* with employees reasonably anticipated to have exposure to blood or other potentially infectious materials in the performance of their duties.
 - o Hazard communication; Standardized Safety Data Sheets (SDS), *CCR*, Title 8, Section 5194. May be included in chemical hygiene plan noted above (see also Chapter 7, Section E). Required of all employers in workplaces where hazardous chemicals are used unless all exposed employees are under the direct supervision and regular observation of an individual with knowledge of physical and health hazards and emergency procedures and who conveys this knowledge to employees in terms of safe work practices. Labels and SDS received must be maintained and available to employees.
- The school or school district has implemented a plan for the safe storage, use, and disposal of hazardous chemicals (EC Section 49411).
- The implementation of the overall safety plan makes provisions at all levels for instruction and training, responsible supervision, and adequate and well-maintained facilities and equipment.
- Safety equipment includes each of the following, as appropriate:
 - o Fire extinguisher for class A, B, and C fires
 - o Dry sand or other provision for class D fires

- o Fire blanket
 - o Splash-proof goggles and sterilizer
 - o Eyewash, or eyewash and facewash fountain; drench hose
 - o Deluge shower
 - o Chemical-spill kit
 - o Fume hood
 - o First-aid kit
- Teachers are prepared to safely handle, use, and store science supplies and equipment as well as safety equipment. Documentation of staff training should be maintained at both school and school district sites.
- A safety assessment is regularly made of the science classrooms/laboratories and auxiliary rooms (e.g., by using the “Sample Safety Checklist for Science Instruction, Preparation, and Storage Areas” in Appendix F).
- Each science teacher consciously includes safety as a component in planning and conducting each lesson, demonstration, and activity.
- Classrooms are inspected daily for irregularities or dangerous conditions, including, but not limited to, faulty equipment, improper ventilation, and missing or nonfunctional safety supplies.
- Potential dangers (safety hazards, defective equipment, or unsafe conditions) that cannot be readily corrected within the department are reported immediately to the site administrator for necessary action.
- Each class is provided with proper initial instruction in safety procedures, specific to the subject, which are reviewed regularly. The review includes the following:
 - o Use of safety equipment, devices, and materials
 - o Proper laboratory preparation, attire, and attitude
 - o Proper use of material and equipment
 - o Disposal and cleanup procedures
- Documentation is maintained on the types of instruction given and the dates on which safety-related topics were demonstrated, conducted, or tested.
- Student safety consent/agreement forms, which attest to initial safety instruction and a knowledge of laboratory regulations and potential dangers, are signed by the student and his or her parent or guardian and retained by the teacher.
- The school and school district fire and earthquake drills and emergency procedures include special provisions related to science equipment, facilities, and materials. Procedures are included for contacting community resources (fire department, ambulance, paramedics, hospital, or doctor). Contact the California Emergency Management Agency (Cal EMA) for information on disaster preparedness.

- A report is made of any injury, illness, or incident, including appropriate procedures for remediation.
- Safety guidelines adopted by the school and school district are reviewed and updated on a regular basis.

By following the suggestions noted above, instructors, schools, school districts, and students can improve their ability to conduct laboratory activities safely and effectively. Failure to implement the procedures increases the relative degree of liability of school districts and individuals.

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