Lab Safety

It is vital that you maintain a well-managed classroom and student laboratory. Before students enter the laboratory, take steps to ensure a successful, mishap-free year of science teaching. We suggest beginning your school term with a thorough examination of your laboratory work and storage areas.

Teachers and lab technicians should lead by example and wear personal protective equipment (PPE); follow and enforce safety rules, procedures, and practices; and demonstrate safety behavior to promote a culture of safety. They should be proactive in every aspect of laboratory safety, making safety a priority.

This general safety checklist highlights essential information for working in the laboratory. It should be periodically reevaluated for updates.

Laboratory and Equipment Upkeep

- Conduct regular inspections of safety and first aid equipment as often as requested by the administration. Record the inspection date and the inspector's initials on the any equipment inspection tags or other documents for recording.
- Make sure eyewash stations, safety showers, fire extinguishers, and fire blankets are correctly positioned and in good working order.
- Insist that only authorized personnel can access the storage area.
- Check PPE to ensure that goggles, gloves, and aprons are in serviceable condition and adequate for the number of students in your classes. Make sure that the goggle sterilization cabinet works correctly.
- Notify the administration in writing if a hazardous or possibly hazardous condition (e.g., malfunctioning safety equipment or chemical hazard) is identified in the laboratory and follow through on the status.
- Never use defective equipment.

Plan ahead

- Overcrowding, a tremendous problem in many schools, is exceptionally unfortunate for those who teach science. Laboratory accidents escalate dramatically when too many students attempt to work in a confined area. Do what you can to eliminate overcrowding.
- If possible, make science classrooms off-limits to non-science classes. Curious students cannot resist the wondrous things residing in science rooms. A science teacher should always control these facilities to prevent unfortunate occurrences.
- If it's not already scheduled, initiate a meeting of science teachers; the principal; and, if appropriate, the Head of Department. Review your school's laboratory safety rules, making certain they conform to those mandated at district and state levels.

Record keeping

- Keep organized records on safety training of staff for as long as required by the school system.
- Keep records of all laboratory incidents for as long as required by the school system.
- Post an up-to-date chemical hygiene plan.
- Safety and emergency procedures
- Educate students on the location and use of all safety and emergency equipment prior to laboratory activity.
- Identify safety procedures to follow in the event of an emergency or accident. Provide students with verbal and written safety procedures to follow in the event of an emergency or accident.
- Know the location of and how to use the cutoff switches and valves for the water, gas, and electricity in the laboratory.
- Know the location of and how to use all safety and emergency equipment (e.g., safety shower, eyewash, first aid kit, fire blanket, fire extinguishers, and mercury spill kits).
- Keep a list of emergency phone numbers near the phone.
- Conduct appropriate safety and evacuation drills on a regular basis.
- Explain in detail to students the consequences of violating safety rules and procedures.

Source: Lab Safety – A Teacher's Responsibility. https://knowledge.a2hosted.com/professional-growth/lab-safety-teacher-responsibilities/