

Laboratory Safety Guidelines

This is a hands-on laboratory class. You will be doing many lab activities that require the use of equipment or chemicals that could be hazardous. **Safety in the science classroom must be the #1 priority for students and teachers.** To ensure a safe science classroom, the following list of rules has been developed and provided to you. These rules must be followed at all times.

General Guidelines

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all written and verbal instructions carefully. If you do not understand a direction or part of a procedure, ask the instructor before proceeding.
3. Never work alone. No student may work in the lab without the instructor present.
4. When entering a science lab room, do not touch any equipment, chemicals, or other materials in the lab area until you are instructed to do so.
5. Do not eat food or drink beverages in the lab. Do not use laboratory glassware as containers for food or beverages.
6. Perform only those experiments authorized by the instructor. Never do anything in the lab that is not called for in the lab procedures or by your instructor. Carefully follow all instructions, both written and oral. Unauthorized experiments are prohibited.
7. Be prepared for your work in the lab. Read all procedures and safety precautions thoroughly before entering the lab.
8. Never fool around in the laboratory. Horseplay, practical jokes, and pranks can be dangerous and are prohibited. Anyone caught doing any of these in the lab will be removed from that lab and receive a grade of zero on the lab.
9. Observe good housekeeping practices. Work areas should be kept clean and tidy at all times. Bring only your lab instructions, worksheets, and reports to the work area. Other materials such as books, purses, backpacks, etc. should be stored in the classroom area.
10. Know the locations and operating procedures of all safety equipment including the first aid kit, and fire extinguisher. Know where the fire alarm and the exits are located.
11. Always work in a well ventilated area. Use the fume hood when working with volatile substances or poisonous vapors. Never place your head into the fume hood.
12. Notify the instructor immediately of any unsafe conditions you observe.
13. Dispose of all chemical waste properly. Never mix chemicals in sink drains. **Sinks are to be used only for water and those solutions designated by the instructor.** Solid chemicals, metals, matches, filter paper, and all other insoluble materials are to be disposed of in the proper waste containers, *not* in the sinks.
14. Read labels on chemicals and equipment carefully before use, and use the material only as directed.
15. Keep hands away from face, eyes, and mouth while using chemicals or preserved specimens. Wash your hands with soap and water after performing all experiments. Clean and dry all work surfaces and apparatus at the end of the experiment. Return all equipment clean and in working order to the proper storage area.
16. Experiments must be personally monitored at all times. Do not wander around the room, distract other students, or interfere with the lab experiments of others.
17. Students are never permitted in the science storage room unless given specific permission by the instructor.
18. If there is a fire drill during a lab period containers must be closed, gas valves turned off, and fume hoods and any other electrical equipment turned off.
19. Handle all living organisms used in a laboratory activity in a humane manner. Preserved biological materials are to be treated with respect and disposed of properly.
20. When using scalpels and other sharp instruments, always carry with tips pointing down and away. Always cut away from your body. Never try to catch falling sharp instruments. Grasp sharp instruments only by the handles.

Clothing

21. Any time chemicals, heat, glassware, or dissecting equipment are used, students will wear laboratory safety glasses.
22. Dress properly during a lab activity. Long hair, dangling jewelry, and loose or baggy clothing can be a hazard in the lab. Long hair must be tied back, and dangling jewelry and loose clothing must be secured. No open-toed shoes are allowed in the lab.
23. Lab aprons should be worn during lab activities.

Accidents and Injuries

24. Report any accident or injury to the instructor immediately, no matter how trivial it may appear.
25. If you or your lab partner is hurt, immediately get the instructor's attention.
26. If a chemical should splash in your eye or on your skin, immediately flush with running water for at least 15 minutes and notify the instructor.
27. When mercury thermometers are broken, mercury must not be touched. Notify the instructor immediately.

Handling Chemicals

28. All chemicals in the lab are to be considered dangerous. Do not touch, taste, or smell any chemicals unless specifically instructed to do so. The proper technique for smelling chemical fumes will be demonstrated to you.
29. Check the label on chemical bottles before removing any of the contents. Take only as much chemical as you need.
30. Never return unused chemicals to their original containers.
31. When transferring reagents from one container to another, hold the containers away from your body.
32. Acids must be handled with extreme care. Always add acid to water (not water to acid), swirl or stir the solution and be careful of the heat produced.
33. Never dispense flammable liquids near an open flame or source of heat. Flammable liquids should be dispensed over a sink or pan to contain spills.

34. Never remove chemicals or other materials from the laboratory area.
35. When transporting chemicals from one part of the lab to another, hold them securely with two hands and walk carefully.

Handling Glassware and Equipment

36. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated garbage can.
37. Your hands must be completely dry before removing or inserting an electric plug into a socket, or before touching an electric switch, plug, or outlet. Report any damaged electrical equipment immediately.
38. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
39. If you do not understand how to use a piece of equipment, ask the instructor for help.
40. Do not immerse hot glassware in cold water; it may shatter.

Heating Substances

41. Exercise extreme caution when using a gas burner. Be sure hair, clothing, and hands are a safe distance from the flame at all times. Do not put any substance into the flame unless specifically instructed to do so.
42. Never leave a lit burner unattended. Never leave anything that is being heated or that is visibly reacting unattended. Always turn the burner or hot plate off when not in use.
43. Do not point the open end of a test tube being heated at yourself or anyone else. Never look into a container being heated.
44. Heated metal and glass remain hot for a long time. Allow them to cool before handling. Use tongs or heat-protective gloves if necessary. Hot and cold glass have the same visual appearance. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.
45. Do not place hot apparatus directly on the lab desk. Always use an insulating pad.