

Safety & Laboratory Rules

Personal Protective Equipment (PPE)—follow directions on MSDS forms

1. Many materials in the laboratory cause eye injury. To protect yourself from possible injury, always wear safety goggles whenever you are working with chemicals, burners, preserved animals or any substance that might get into your eyes. Protective gloves should be worn when working with corrosive chemicals and preserved animals.
2. Laboratory aprons or coats should also be worn whenever working with chemicals or heated substances.

Dress Code

3. Dress appropriately for labs. For example - Shorts do not protect your legs and are not appropriate for lab work.
4. Tie back long hair in order to keep it away from any chemicals, burners, and candles, or other lab equipment.
5. Any article of clothing or jewelry that can hang down and touch chemicals and flames should be removed or tied back before working in the laboratory.
6. Wear regular enclosed shoes. Sandals will not protect the feet and are not allowed.

General Safety Rules

7. Read all directions for an experiment several times. Listen alertly at the lab briefing. Ask questions if you do not understand any part of the experiment. Follow the directions exactly as they are written.
8. Never perform activities that are not authorized by our teacher.
9. Never handle any equipment unless you have specific permission.
10. Take extreme care not to spill any material in the laboratory. If spills occur, ask your teacher immediately about the proper clean-up procedure. Never pour chemicals or other substances into the sink or trash.
11. Never eat or drink in the laboratory. Wash your hands after working with any chemical.
12. There should be no loud talking or horseplay in the laboratory.
13. When performing a lab, make sure the work area has been cleared of purses, books, jackets, etc.
14. Know the location and use of all safety equipment (goggles, aprons, eyewash, fire blanket, fire extinguishers)
15. Read your assignment before coming to class and be aware of all safety precautions. Follow directions.
16. Never work alone in the lab.

First Aid

17. Report all accidents to your teacher immediately.
18. Learn what to do in case of specific accidents, such as getting acid in your eyes or on your skin. Use the shower to rinse acids from your body, rinse for 15 minutes.
19. Become aware of the location of the first aid kit. However, your teacher should administer any required first aid due to injury. Or you teacher may suggest sending you to the school nurse or calling a physician.

Heating and Fire Safety

20. Again, never use any heat source such as a candle or burner without wearing safety goggles.
21. Always maintain a clean work area and keep all materials away from flames. Never leave a flame unattended. When the burner is not needed, shut it off.
22. Never reach across a flame
23. Make sure you know how to light a Bunsen burner.
24. Always point a test tube that is being heated away from you and others. Heated chemicals can splash or boil.
25. Never heat a liquid in a closed container. The expanding gases produced may blow the container apart, injuring you or others.
26. Never pick up any container that has been heated without first holding the back of your hand near it. If you can feel the heat on the back of your hand, the container may be too hot to handle. Always use a clamp or tongs when handling hot containers. Hot glassware looks the same as cool glassware.

Using Chemicals Safely

27. Never touch, taste, or smell any chemical that you do not know for a fact is harmless. Many chemicals are poisonous. If you are instructed to note the fumes in an experiment, always gently wave your hand over the opening of a container and direct the fumes toward your nose (waft). Do not inhale the fumes directly from the container.
28. Use only those chemicals needed in the activity. Keep all lids closed when a chemical is not being used. Notify your teacher when chemicals are spilled.
29. Dispose of all chemicals as instructed by your teacher.
30. Be extra careful when working with acids or bases. Pour such chemicals over the sink, not over your workbench.
31. When diluting an acid, always pour the acid into water. Never pour water into the acid.
32. Rinse any acids off your skin with cool running water. Have the student next to you immediately notify your teacher of the acid spill. Same procedure for bases.
33. Use a pipet bulb. Never pipet solutions using your mouth.
34. Be sure you use the correct chemical. Read the label twice.
35. Do not return excess chemicals back to the reagent bottle and do not contaminate the supply.
36. Keep combustible materials away from open flames (alcohol carbon disulfide, and acetone are combustible).
37. Do not use the same spatula to remove chemicals from two different containers. Each container should have a different spatula.
38. When you remove the stopper from a bottle, do not lay it down on the desk, but place the stopper between your two fingers and hold the bottle so the label is in the palm of your hand so drips won't ruin the label, etc. Both the bottle

and the stopper will be held in one hand. Be sure to rinse any drips that might have gotten on the outside of the bottle.

39. Be careful not to interchange stoppers from two different containers.
40. Replace all stoppers and caps on the bottle as soon as you finish using it.
41. Mercury spills must be cleaned up immediately. Use the mercury clean up kit. If there is not kit, consult with the teacher. [call 1-800-CLEANUP (1-800-253-2687) or visit the [1-800 Cleanup](#) web site.]

Using Glassware Safely

42. Glass tubing should never be forced into a rubber stopper. A turning motion and lubricant will be helpful when inserting glass tubing into rubber stoppers or rubber tubing. Your teacher will demonstrate the proper way to insert glass tubing.
43. When heating glassware, use a wire/ ceramic screen to protect glassware from the flame of a Bunsen burner.
44. If you are instructed to cut glass tubing, always fire polish the ends immediately to remove sharp edges.
45. Never use broken or chipped glassware. If glassware breaks, notify your teacher and dispose of the glassware in the proper trash container.
46. Never eat or drink from laboratory glassware. Always thoroughly clean any glassware before putting it away.
47. Be cautious when handling glass slides and cover slips.
48. Do not touch the glass lenses on a microscope. If the lenses are dirty, ask for lens paper to clean the lenses.

Using Sharp Instruments

49. Handle scalpels or razor blades with extreme care. Never cut any material towards you; always cut away from you.
50. Notify your teacher immediately if you are cut in the laboratory.
51. Properly mount dissecting specimens to the dissecting pan before making a cut.

Electrical Equipment Rules

52. Batteries should never be intentionally shorted. Severe burns can be caused by the heat generated in a bare copper wire placed directly across the battery terminals.
53. Never deliberately shock yourself or another person. Susceptibility to shock and possible resulting injury is unpredictable because of the many physical and physiological variables.
54. Turn off all power when setting up circuits or repairing electrical equipment.
55. Never use such metal articles as metal rulers, metal pencils, or pens, nor wear rings, metal watchbands, bracelets, etc. when doing electrical work.
56. When disconnecting a piece of electrical equipment, pull the plug and not the wire.
57. Use caution in handling electrical equipment that has been in use and has been disconnected. The equipment may still be hot enough to produce a serious burn.
58. Never (dis)connect or operate a piece of electrical equipment with wet hands or while standing on a wet floor.
59. Always carry a microscope with two hands - one on the arm and one underneath the base.

End-of-Experiment Rules

60. When an experiment is completed, clean up your work area and return all equipment to its proper place.
61. Wash your hands after every experiment.
62. Make sure all burners are turned off before leaving the laboratory. Check that the gas line leading to the burner is turned off as well.
63. Always clean slides and microscope when finished. Set the microscope on the lowest objective with the nose piece turned down to its lowest position (using the coarse adjustment knob). Turn off the microscope before unplugging.
64. Cover the microscope with a dust cover and return to microscope to the storage if requested by your teacher.

Animal Safety—Live & Preserved: In CISD, students never handle live animals in a classroom. Exceptions include Veterinary science, small animal science.

65. Do not handle animals until your teacher has instructed you on the correct handling method and potential risks.
66. Handle all animals as though they can bite.
67. Treat animals in such a way as to not cause them harm, pain, or discomfort.
68. Handle animals only with your teacher's permission and when necessary.
69. Special handling may be required if an animal is excited or frightened, pregnant, feeding, or with its young.
70. Treat preserved animals respectfully. They gave up their lives for you to learn.
71. Wash your hands after handling live or preserved animals and/or equipment, cages, and contents.

Other Safety Rules

72. Do not use hair spray or hair mousse during or even before coming to laboratory class. These are highly flammable and might cause automatic ignition when in close proximity to a heat source.
73. Synthetic fingernails are also highly flammable and should not be worn in the lab.