

LAB SAFETY

Read Carefully - Always remember that there is nothing more important than your own personal safety and the safety of those around you. Because of this, there will be no leniency if you conduct yourself in such a way that compromises safety in the laboratory.

General Guidelines

1. Conduct yourself in a responsible manner at all times. Be prepared for work in the laboratory. Horseplay, practical jokes, and pranks are dangerous and always prohibited.
2. Read all procedures thoroughly. Follow all written and verbal instructions carefully. Ask questions if you are uncertain about the procedure. Unauthorized experiments are prohibited.
3. No student work in the laboratory is allowed without an instructor present.
4. Upon entering a science room, do not touch anything in the laboratory area until instructed to do so.
5. Food and beverages are not allowed in the laboratory.
6. Keep your work area clean, tidy, and free of clutter at all times. Wash and wipe the lab counter at the close of the period. Do not sit on the lab counters. Store your backpack etc. at your desk (not your lab station) in such a way that it does not compromise safety and does not impede movement in the lab.
7. Know the locations and operating procedures of all safety equipment including the first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket. Know where the fire alarm and the exits are located.
8. When an experiment is completed, return clean equipment and glassware to the proper storage location. Clean and wipe dry your lab area.
9. Monitor your own experiment at all times. Work at your own lab station unless otherwise directed. Do not wander around the room, distract or interfere with the work of others.
10. Stay out of all storage rooms and cabinets unless specifically permitted by your instructor.
11. If there is a fire drill, close chemical containers and turn off gas valves and electrical equipment.

Clothing

12. Any time chemicals, heat, or glassware are used, students are required to wear laboratory goggles (even if you are not directly involved in the experiment).
13. Dress properly: no loose hair, baggy clothing, dangling jewelry, open-toed shoes, shorts or skirts. Wear a laboratory apron to protect your clothes from corrosive chemicals.

Accidents and Injuries

14. There is nothing more important than safety in the laboratory. Do not hesitate to use safety equipment whenever necessary.
15. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) immediately, no matter how trivial it may appear.
16. If a small amount of chemical should splash on your skin, rinse thoroughly with water from the sink. Larger quantities must be rinsed using the safety shower. If a chemical should splash in your eye(s), flush with water from the eyewash station for at

least 20 minutes. You are advised to consider the risks associated with wearing contact lenses. Chemicals may become lodged between the lens and cornea, making them harder to flush out.

Handling Chemicals

17. All chemicals in the laboratory are to be considered dangerous. Never taste or touch any chemical even if you think it is harmless. You may have misidentified it or it may have become contaminated.
18. Keep your hands away from your face and body while using chemicals. Wash your hands after working with chemicals and after every lab.
19. Never put any chemical directly under your nose to observe its odor. Rather, hold the bottle at a safe distance and gently waft a current of air over the top of the container toward you.
20. Check labels on chemical bottles carefully, take only as much as directed, and never return unused chemicals to their original containers. Take care not to contaminate lids and stoppers. Do not insert your own pipet or dropper into a stock reagent bottle. Avoid contamination by pouring the solution from the bottle into a smaller container. Leave reagent bottles at the stock table.
21. When transferring chemicals from one container to another, hold the containers away from your body. When transferring chemicals from one part of the laboratory to another, hold them securely and walk carefully. Be aware of people around you.
22. Acids must be handled with extreme care. When diluting acid, pour the acid SLOWLY into the water while stirring. "Do what you oughta; add acid to watta!"
23. Use the hood for reactions involving poisonous gases.
24. Dispose of chemicals and other waste according to your instructor's directions. Don't assume chemicals can be washed down the sink. Never mix chemicals in a sink.
25. Never remove chemicals or other materials/equipment from the laboratory area.
26. Notify the instructor of any chemical spill, however small.

Handling Glassware and Equipment

27. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up and put the broken glass in the proper container (NOT the trashcan). Ask your instructor for disposal directions.
28. Use wash bottles only for their intended purpose and fill only with distilled water.
29. Examine glassware before each use. Do not use chipped, cracked, or dirty glassware. Clean all glassware before and after use. Invert glassware over a paper towel to dry.
30. Report any equipment that appears to be damaged.
31. Do not immerse hot glassware in cold water; it may shatter.
32. To insert glass tubing (including thermometers) through a rubber stopper, lubricate both with water (unless moisture must be avoided) or vacuum grease. Hold the tubing with a cloth near the end to be inserted and insert with a twisting motion.

Heating Substances

33. Exercise extreme caution with a gas burner. Stay a safe distance from it, do not reach over it, do not put anything directly in the flame (unless directed), and light only as directed.
34. Never leave a gas burner or hot plate unattended and never leave anything that is

being heated or is visibly reacting unattended. Turn off when not in use.

35. Never heat glassware that is not heat resistant. Do not heat heavy glassware such as volumetric flasks, graduated cylinders, or bottles (they break easily).
36. Never point the open end of a test tube being heated at yourself or anyone else. The contents may splatter out.
37. Be sure the bottom of a container is dry before placing it on a hot plate.
38. Never look into a container that is being heated.
39. Avoid heating any apparatus too suddenly; apply flame intermittently at first.
40. Remember that heated materials remain hot for a long time. Take care not to burn yourself or damage the laboratory desk. Check the temperature using the back of your hand as directed by your instructor.

(Adapted from Flinn Catalog, 1996)

Bellingham High School SAFETY RULES IN THE HIGH SCHOOL SCIENCE CLASSROOM

1. Learn the locations of safety equipment, eyewash station, and fire extinguishing devices, and how to use them.
2. Wear eye protection devices when observing or performing certain functions in connection with laboratory activities.
3. FLOOD WITH WATER IMMEDIATELY if any chemical is spilled or splashed on your skin or in your eyes.
4. Notify your instructor of any accident or potentially hazardous situation, no matter how minor.
5. Keep the workspace and apparatus at your station clean and in good order.
6. Never mix or heat chemicals unless directed to do so.
7. Know what you are doing. Be wary of what neighboring students are doing.
8. Throw all solids and paper to be discarded into appropriate waste containers. Never discard matches, filter paper, paper towels, or other solids in the sink.
9. Read an assigned investigation carefully before beginning. Note and comply with every caution listed in the experiment. Follow closely, but not blindly, all oral and written directions.
10. Read the label carefully before taking anything from a bottle or container. Using the wrong material could result in an injury.
11. Do not carry side shelf bottles to your desk or work area.
12. Do not concentrate heat in just one spot on the test tube, and never point the open end of the test tube at anyone. Never look down a test tube.
13. Never pour water into concentrated acid when mixing acids and water. Always pour concentrated acid into water slowly and stir constantly.
14. Don't smell a liquid directly when observing an odor. Use your hand to fan the odor toward you.
15. Regard all chemicals as hazardous unless your instructor informs you otherwise.
16. Allow sufficient time for materials to cool, as many materials are not observably hot.
17. Work deliberately and with definite purpose, but do not hurry.
18. Do not remove any chemicals from science labs – there will be no tolerance for violation of this rule.
19. Removal of chemicals or deliberate misuse of chemicals will result in removal from classroom and perhaps more severe discipline.
20. Be sure that gas and water lines at your station are shut tightly and that all equipment and supplies are in their proper places before leaving the lab.
21. When inserting glass tubing or thermometers into stoppers, use a towel, grasping the tubing close to the stopper that has been moistened with water or a lubricant.
22. Ask your instructor for help if you do not understand how or why to do a task.

23. Be aware that synthetic clothing and hair spray are highly flammable materials.
 24. If you wear contact lenses, follow the guidelines posted in the room.
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I have read, understand, and will follow the above science safety rules and laboratory regulations, and acknowledge that the below checked items have been explained.

- Noncompliance with any of the above regulations will result in disciplinary action that may include suspension or expulsion from school.
- Location and use of the fire extinguisher.
- Location and use of eye wash devices.
- Emergency evacuation procedures.

Name of Student

Science Course/Period/Teacher

Signature of Student

Date

Signature of Parent

Date