

**SAFETY AND LABORATORY RULES****PERSONAL PROTECTIVE EQUIPMENT – 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, or any substance that might get in your eyes. Protective gloves should be worn when working with corrosive chemicals.
2. Laboratory aprons or coats should also be worn whenever working with chemicals or heated substances.

**DRESS CODE**

3. Wear regular long sleeve blouses or shirts. Slacks give good protection for the legs. 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 laboratory 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 your 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 procedures. Never simply pour chemicals or other substances into the sink or trash container.
11. Never eat or drink in the laboratory.
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 extinguisher, etc).
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 your 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. Chemicals can splash or boil out of a heated test tube.
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 chemicals that you do not know for a fact is harmless. Many chemicals are poisonous. If you're 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. 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 work bench.
31. When diluting an acid, always pour 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 the teacher of the acid spill. Same procedure for bases.

33. Use a pipet bulb for solutions. Never use 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 you 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 using the mercury clean up kit. If there is no kit, consult with the teacher.

#### 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. Your teacher will demonstrate the proper way to insert glass tubing.
43. When heating glassware, use a wire or 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.

#### USING SHARP INSTRUMENTS

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

#### ELECTRICAL EQUIPMENT RULES

50. 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. If a mercury type dry cell is shorted, an explosion can result.
51. **Never deliberately shock yourself or another person.** Susceptibility to shock and possible resulting injury is unpredictable because of the many physical and physiological variables.
52. Turn off all power when setting up circuits or repairing equipment.
53. Never use metal articles such as metal rulers, metal pencils or pens, nor wear rings, metal watch bands, bracelets, etc., when doing electrical work.
54. When disconnecting a piece of electrical equipment, pull the plug and not the wire.
55. Use caution in handling electrical equipment which has been in use and has been disconnected.
56. Never connect, disconnect, or operate a piece of electrical equipment with wet hands or while standing on a wet floor.

#### END-OF-EXPERIMENT RULES

57. When an experiment is completed, always clean up your work area and return all equipment to its proper place.
58. Wash your hands after every experiment.
59. Make sure all candles and burners are turned off before leaving the laboratory class. Check that the gas line leading to the burner is off as well.

#### OTHER SAFETY RULES

60. 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.
61. Synthetic fingernails are also highly flammable and should not be worn in the lab.

# SCIENCE CLASS SAFETY AGREEMENT

Students will be removed from the science activity area by the teacher if:

- a. their personal appearance or dress is such that they cause injury to themselves or to other students.
- b. they are behaving in such a manner that they can cause injury to themselves or to other students.
- c. they are not following the prescribed safety rules for the science activity area or the particular science activity being conducted.
- d. they are going beyond the limits of the science activity into areas that may lead to an unsafe situation.
- e. they have not completed the pre-experiment activities that will allow them to work safely in the laboratory situation.

I, \_\_\_\_\_ (Print student name), have read all of the rules, including those attached. I understand what they meant when they were discussed by my teacher, or I had the teacher explain them to me. I will keep the attached rules in my notebook for reference and easy access.

I, \_\_\_\_\_ (Print parent/ guardian name), have read all the rules, I have discussed them with my child and feel that my child understands what they mean and the consequences for removal from class. I would like to inform the school that my child has the following physical or medical situations that could affect their learning in a science class (ex. Specific allergies, etc).

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

\_\_\_\_\_ Home Phone Number

\_\_\_\_\_ Alternative Phone Number

X \_\_\_\_\_  
Parent/ Guardian's Signature

Contact lenses are controversial in the science laboratory. Some experts feel that they are an added risk if there is a chemical splashed in the eye. All students must wear safety goggles to prevent any such accidents. As a parent, the decision is yours.

\_\_\_\_\_ (Print student name) (will/ will not) be wearing contact lenses in the lab.  
**circle one**

X \_\_\_\_\_  
Parent/ Guardian's Signature

I \_\_\_\_\_, have received a copy of this form from \_\_\_\_\_  
Teacher's Signature Student's signature

on \_\_\_\_\_  
Date

**\*Upon completion of this document, return to teacher to retain in files.**