

Student Safety Contract

by Frey Scientific

Although any safety contract needs to be customized to the circumstances of a particular classroom, the Frey Scientific Student Safety Contract emphasizes general safety guidelines which, when followed, will ensure the safety of students and teachers. Since true science is hands-on, inquiry-based experimentation, students must conduct experiments in an appropriate manner, as modeled by teachers and other scientists. In modeling communication as being critical to the methods of science, Frey Scientific recommends that each student be given two copies of this contract with instructions to discuss safety rules with his/her parent(s)/guardian(s). The student should then return one copy to the teacher, signed by both the student and parent/guardian in agreement to obey the safety rules. The student and parent can retain the second copy for future reference.

General Rules

1. These rules are designed to ensure the safety of all in the laboratory; thus they should not be compromised.
2. Appropriate, responsible conduct is mandatory at all times in the laboratory.
3. No unauthorized experiments may be conducted and horse-play/pranks are inappropriate.
4. Both written and verbal instructions may be given and must be followed. Please ask for clarification about procedures or hazards before proceeding.
5. Students are not permitted to work in the laboratory alone. An instructor must be present.
6. Do not enter the laboratory prior to the instructed time. Please do not disturb any lab apparatus, which may have been set up by the instructor prior to class.
7. Due to potential for accidental contamination, food, gum and beverages should not be brought into or eaten in the laboratory.
8. Pre-lab exercises are designed to familiarize the student with the experiment prior to conducting the lab. Proper preparation is necessary to understand the procedures and to determine if clarification is needed.
9. Do not clutter your work area and properly clean and maintain your equipment.
10. Assist the teacher in keeping walkways clear and know the locations and operating procedures of safety equipment in the laboratory and classroom. These include fire extinguishers, eyewash and safety shower station, first aid kit, etc.
11. When working with volatile chemicals, which generate fumes that may be poisonous or annoying, use a properly functioning fume-hood with the sash in a lowered position.
12. Check with your instructor for the proper method of disposal of chemicals. With the exception of those identified by the teacher, do not wash chemicals down the sink drains. It is better to double check than to regret a mistake. Paper and other wastes should be discarded in the appropriately labeled trash receptacle. Again, verify the instructions and labels before disposing of wastes.
13. When using chemicals or preserved specimens, avoid accidental ingestion and exposure by wearing chemical splash safety goggles and lab aprons. Goggles should also be worn whenever heating or using glassware. Treat each chemical as if it is hazardous and thoroughly wash hands with soap and water, including under fingernails. Avoid touching your face, especially your eyes or mouth, when working with chemicals. Your teacher will instruct students when chemicals are to be smelled and will demonstrate the proper "wafting" technique to safely smell chemicals. According to your teacher's instructions, properly clean your work area when finished with your experiment.
14. Remain at your workstation in the laboratory and do not distract others. Failure to do so could cause an accident.
15. Students should **NEVER** be allowed to enter science storage rooms. As a general rule, teachers should keep these areas locked and not ask students to enter these areas.
16. In the event of emergency alarms, such as fire alarms, gas valves should be closed and fume hoods should be turned off to reduce danger.
17. When working with live or preserved animals, specimens should be treated with respect which includes treating them humanely and disposing of them properly.
18. Scalpels and sharp objects should be inspected by the teacher for each use and carried point-downward by their handles. Remember: Scalpels are used similarly to sketching a line with a pencil away from you and lab partners, not as steak knives.
19. Since contact lenses float on a layer of tears in which fumes can dissolve and be trapped in contact with the eye, contact lenses should not be permitted in the laboratory. Parents/guardians must help enforce this rule. The teacher should notify students at least one day in advance to allow students to arrange to wear glasses for that session.
20. Clothing, hair and dangling jewelry need to be secured so as to avoid dangling into burner flames and equipment. Since they do not cover the feet completely, sandals should be avoided in the laboratory.

©2002 Frey Scientific-Divison of School Specialty, 100 Paragon Parkway, Mansfield, OH 44903

100 Paragon Parkway • Mansfield, OH 44903
Phone: 1.800.225.FREY • Fax: 1.877.256.FREY
www.freyscientific.com

frey scientific®

Student Safety Contract by Frey Scientific

21. Laboratory aprons reduce exposure to chemical splashes and should be worn whenever chemicals are involved, just as is the case for chemical splash safety goggles.

22. Students should immediately report **ANY** seemingly unsafe condition or accident to the teacher. Again, it's better to be safe than sorry.

23. If a chemical should splash on your face, skin or eye(s), **IMMEDIATELY** flush the exposed area with running water continuously (for minimum of 15 minutes) until emergency help arrives. You may need to assist your partner to the eyewash/safety shower and notify the teacher. If you assist a classmate, be certain to thoroughly clean yourself with soap and water after assisting. The teacher should also notify the administration of the accident.

24. Spirit-filled (alcohol with food coloring) thermometers should be used in middle and high school laboratories. They are generally accurate enough for typical experiments and do not pose the hazard of exposure to mercury in the event of breakage of mercury-filled thermometer. Dispose of mercury-filled thermometers properly. Contact your local solid waste district for assistance and local regulations.

25. When obtaining samples of chemicals, always double check the label for accuracy, measure only the amount needed and do not return unused portions to their original containers. Ask your teacher for directions on what to do with leftover samples.

26. Use rubber bulbs or other devices to pipette substances. **Never pipette by mouth.**

27. Only teachers should handle concentrated acids. When students dilute moderately concentrated solutions, remember to follow this method: **ALWAYS ADD ACID TO WATER (A TO W)**. The acid should be gently swirled as it is gradually added to the water.

28. To reduce potential hazards and confusion, only chemicals necessary for the current laboratory experiment should be available for student use. When carrying chemicals to their workstations students must carefully support containers. Students should never transport chemicals from the laboratory.

29. When heating with an open flame such as with an alcohol or Bunsen burner, follow your teacher's instructions on lighting and use caution. Never reach over an open flame and secure loose articles and hair, which could fall into the flame. Never use flammable substances near open flames or heat sources.

30. Do not place anything in burner flames unless instructed to do so by the teacher and always turn the heat source off when finished. Treat hot plates and burners as if they are hot. Test for heat by placing the back of your hand near, but not touching a heat source. Tongs or heat resistant gloves should be used to handle hot items. **Caution: Cool and hot glassware cannot be distinguished by sight alone.**

31. When heating test tubes of liquids, always point the open end away from yourself and others. Your teacher should demonstrate proper technique. Never set hot glassware directly on lab tables; instead allow hot items to cool on an insulated pad.

32. If glassware is broken, **NEVER** handle the broken pieces with your bare hands. It is much more effective to use a broom and dustpan to collect the pieces. Dispose of broken glassware in a durable, properly marked container to prevent injury to unsuspecting custodial workers. Broken or chipped glassware should be discarded, not used.

33. To avoid breaking, never immerse hot glassware in cold water. Properly clean glassware when finished using it.

34. If glass tubing must be inserted into or removed from rubber stoppers with holes, the teacher should prepare these items and demonstrate the proper technique. This includes protection of hands, lubrication of the glass and rubber stopper and avoidance of excess pressure.

35. Never touch electrical devices with wet hands and remove plugs by grasping the plug, not the cord. Report any frayed cords or other evidence of equipment damage.

I have read and understand the safety rules included in this safety contract. Futhermore, I agree to obey these rules to ensure my safety and that of my classmates and teacher. I understand that my failure to follow these rules may result in being immediately removed from the lab, earning a failing grade for the assignment, detention, and/or even removal from the class, as determined by the teacher and/or administration.

(Student's Signature)

(Date)

In support of the safety of my dependent, my signature indicates that I have read and understand the rules and possible consequences outlined in this safety contract. I will instruct my son/daughter to follow through with his/her agreement and obey these rules.

(Parent/Guardian's Signature)

(Date)

100 Paragon Parkway • Mansfield, OH 44903
Phone: 1.800.225.FREY • Fax: 1.877.256.FREY
www.freyscientific.com

