

Lab Safety

As stated in Science Safety Making the Connection produced by the Council of State Science Supervisors:

The LEGAL DEFINITION of “negligence” is important for every teacher to know. Negligence, as defined by the courts today, is conduct that falls below a standard of care established by law or profession to protect others from an unreasonable risk of harm, or the failure to exercise due care. It should be noted that in the absence of specific laws or local policies, the standard of care expected is set by the profession, e.g., position statements adopted by the National Science Teachers Association (NSTA), the National Association of Biology Teachers (NABT), the American Chemical Society (ACS), or the Council of State Science Supervisors (CSSS).

The science teacher has three duties relating to the modern concept of negligence:

- Duty of instruction
- Duty of supervision
- Duty of properly maintaining facilities and equipment

Failure to perform any duty may result in a finding that a teacher and/or administrator within a school system is/are liable for damages and judgment and award against him/them.

With the increase of hands-on, minds-on science inquiry instruction, it becomes the responsibility of Tennessee School systems to ensure the greatest safety for students during laboratory activities at all grade levels. It has become more incumbent upon science teachers to be as knowledgeable as possible about laboratory safety issues.

This science curriculum provides two samples guidelines. These guidelines are intended to provide science teachers safety and conduct rules. Resources have been included for further guidance, if deemed necessary. For all grade levels, pictures and posters can be placed around the room to remind students of safety tips and guidelines.

Safety Internet Contacts

American Chemical Society Centers for Disease Control Council of State Science Supervisors <http://www.acs.org>

<http://www.cdc.gov>

<http://www.csss-science.org/safety.shtml>

Flinn Scientific Laboratory Safety Institute Online Information MSDS Online <http://flinnsci.com/>

<http://labsafety.org>

<http://msdsonline.com>

National Association of Biology Teachers OSHA Laboratory Standard-29CFR1910.1450 Sargent-Welch

<http://www.nabt.org>

<http://osha.gov>

<http://www.sargentwelch.com/>

Adapted from Tennessee Science Framework Kindergarten through Twelve

Laboratory Safety and Conduct Guidelines and Rules Upper Elementary/Middle School

Safety Rules for the Science Laboratory

Your personal safety and that of others working near you depend upon the care with which you observe the rules listed below. Become familiar with these rules and FOLLOW THEM AT ALL TIMES.

1. Always pay attention to your work.
2. Never goof off during lab.
3. Never bring food or drink into the lab.
4. Dispose of trash and waste as indicated by the teacher.
5. Follow directions carefully using only the materials called for—more is NOT always better.
6. Wash your hands carefully after each lab session.
7. Always leave your area clean and dry.
8. Whenever you are unsure of directions, ask your teacher.
9. Whenever you are unsure of how to use a piece of equipment, ask your teacher.
10. Other than by accident, anything you damage or break will be paid for by you.
11. Know where fire extinguishers or fire blankets are and how to use them.
12. Wear appropriate eye protection when conducting an experiment.
13. Wear safety goggles properly.
14. Contact lenses can cause eye hazard, so should not be worn during certain lab activities involving chemicals.

15. Appropriate protective non-latex gloves, aprons, or smocks should be worn when conducting certain experiments.
16. Do not wear long, loose sleeves or a loose lab coat in the lab.
17. Bracelets, dangling jewelry, and ties should be removed before working in the lab.
18. Tie back long hair while working in the lab.
19. Only perform experiments that have been approved by your teacher.
20. Tell your teacher of any accident, no matter how minor it may seem to you.
21. Never put anything in the laboratory in your mouth unless specifically directed by the teacher.
22. Be sure to have clear exit pathways in case of emergencies.
23. Ventilate when working with chemicals.
24. Understand the terms of “dilute” and “concentrated” as relates to concentration of potential harmful chemicals.
25. Use water, the “universal” solvent, if a chemical splash occurs.
26. Use appropriate procedures for handling sharp/pointed objects and electricity.
27. Be responsible in the use of an open flame.

I, _____, have read, understood, and agree to follow the above safety rules and conduct guidelines. I agree to follow any additional verbal or written guidelines provided by my teacher. I understand that I am responsible for replacing any equipment or materials that I damage or break, except by accident.

_____ Date _____

(Student’s signature)

_____ Date _____

(Parent/Guardian’s signature)

Adapted from Tennessee Science Framework Kindergarten through Twelve

Class Safety Rules Guidelines

Lower Elementary School

Safety Rules for the Science Classroom

Your personal safety and that of others working near you depend upon the care with which you observe the rules listed below. Become familiar with these rules and FOLLOW THEM AT ALL TIMES.

1. Listen carefully and follow ALL directions given by the teacher.
2. Inappropriate behavior during science activities is unacceptable.
3. Ask questions if you are unsure of what to do.
4. Never touch, taste, or smell any material unless directed by the teacher.
5. Students may be asked to secure long hair, remove jewelry, or adjust loose clothing in order to maintain safe working conditions.
6. Proper safety eyewear and non-latex protective aprons, smocks, or gloves will be used if necessary.
7. Clear your work areas of extra books, papers, notebooks, etc. before beginning science activities.
8. Always leave your work area clean and dispose of trash as directed by the teacher.
9. Always wash your hands thoroughly after each and every science activity.
10. Tell the teacher about any accident, no matter what happens.
11. Science activities should not be done at home without adult supervision.

I, _____, have read, understood, and agree to follow the above safety rules and conduct guidelines. I agree to follow any additional verbal or written guidelines provided by my teacher. I also understand that I am responsible for replacing any equipment or materials that I damage except by accident.

_____ Date _____
(Student's Name)

_____ Date _____
(Parent/Guardian's Name)