

*Presents*

Safety in the Science Classroom

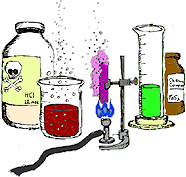


Table of Contents

Mandates for Safety Standards ...................................................................................      1

Responsibilities of the Teacher ...................................................................................      2

Safety Equipment and Supplies ..................................................................................      4

Chemical Purchase, Storage, Disposal .....................................................................      4

School Safety Committee .............................................................................................   6

#### Standards for Class Size............................................................................................... 6

Sources of Information ..................................................................................................   7

Appendices

# A.  OSHA Standards................................................................................................ 8

B.  Regulations  Eye Protective Devices ..............................................................       9

C.  Student Safety Contract ..................................................................................    11

# D.  Safety References ...........................................................................................    12

##### E.  Forms

# ·       Laboratory – General Checklist..................................................................    14

·       Teacher Accident / Incident Report ...........................................................    15

·       Staff / Student Witness Accident Incident Report ....................................    16

·       Request for Correction of Safety Concern................................................    17

·       Chemical Hygiene Plan – Notice of Noncompliance ..............................    18

·       Schedule for Safety Compliance ..............................................................    19

**SAFETY IN THE SCIENCE CLASSROOM**

To provide a safe and appropriate environment for learning is the responsibility of every teacher.  Because activities and investigations in the science classroom and laboratory involve the use of potentially hazardous materials, the task of maintaining a secure teaching/learning situation is a particular concern of the science teacher.

**MANDATES FOR SAFETY STANDARDS**

The Occupational Safety and Health Administration (OSHA) regulations set standards for employee safety which are applicable to the school workplace.  (See Science Appendix A for highlights of the OSHA standards.)  While the federal OSHA requirements do not apply to public schools, the Connecticut OSHA regulations, identical in scope, are applicable.  Of these regulations, those described below are of specific interest to the science teacher.

·        *The Hazard Communication* *Standard* (29 CFR 1910.1200) requires the identification of hazardous materials, the availability of Material Safety Data Sheets, and the establishment of appropriate procedures for training employees in handling hazardous materials.

·        The Laboratory Standard, *Occupational Exposure to Hazardous Chemicals in Laboratories*, (29 CFR 1910.1450) provides for the identification of hazardous materials used in the laboratory, and further requires that procedures be established for the safe use, storage, and disposal of those materials.  The Standard calls for a written Chemical Hygiene Plan that includes standard operating procedures, and requires the appointment of a Chemical Hygiene Officer, responsible for maintaining the integrity of the plan.

·        The *Occupational Exposure to Bloodborne Pathogens* regulation (29 CFR 1910.1020) requires the identification of employees whose responsibilities might reasonably be expected to result in exposure to blood or other potentially infectious materials.  The legislation requires that “universal precautions” be followed when bodily fluids are handled, and makes information concerning procedures for medical evaluations, training, protective clothing and Hepatitis B vaccine available to employees.

·        The OSHA standard 29 CFR 1910.151 requires that suitable facilities for drenching or flushing the eyes and/or body be readily available for any employee who may be exposed to injurious corrosive materials, and mandates the maintenance of safety showers and eyewash fountains.

In addition, the use of appropriate eye protection is mandated by Section 10-214a of the *Connecticut General Statutes*.  State regulations specify that the wearing of splash proof goggles is required whenever caustic or explosive chemicals, hot liquids, solids, or gases are used.  (See Appendix B for the text of the statute.)

**RESPONSIBILITIES OF THE TEACHER**

The science teacher’s responsibilities begin with a duty to offer appropriate instruction to students.  In a laboratory situation, this requires that careful attention be given to the materials and techniques used by both teacher and student.  The location and proper use of emergency equipment, evacuation procedures, and proper procedures for the handling of supplies and equipment should be taught in formal, planned lessons (See Appendix C for sample Student Safety Contract.)  Students should be tested formally on the topics, and the material should be reviewed and reinforced periodically.

Specifically, directions for laboratory activities should be provided in *written* form, with the instructor reviewing the directions with students before the activity is done.  In discussing the activity, the teacher should remind students of the procedures to be followed and of appropriate methods for the safe use and disposal of materials to be used.  Students’ knowledge and practice of laboratory safety techniques should be evaluated on an ongoing basis by the direct observation of students in laboratory situations, and the inclusion of safety-related questions on tests and quizzes administered throughout the year.

The requirement for appropriate instruction extends also to field trips and to projects done outside the school, e.g., as part of science fairs or exhibits.  Even if the activity is being done as a “home” assignment, the teacher must be aware of the materials the student is using and must determine that safe procedures are being followed.  The same safety guidelines used for in-class laboratory activities should be applied to out-of-class projects, whether they are independent science projects or school-related investigations.  Written parental or legal guardian permission should be obtained before a student embarks on any out-of-school independent science project.  In the case of a science field trip or planned class outdoor experiment, emergency medical information as well as written permission must be provided.  Where necessary, specialized safety equipment may be required and should be available.

A second responsibility of the teacher is that of adequate supervision of student activities.  The laboratory is a potentially dangerous environment, requiring the careful attention of the instructor.  Lessons in laboratory safety should emphasize appropriate student behavior.  Students should not conduct laboratory activities without supervision, and should be allowed in the laboratory only if the teacher is present.  It is recommended that short-term substitute teachers not be permitted to conduct laboratory activities.  If an extended teacher absence requires that regular classwork continue, the long-term substitute teacher must be both certified and qualified to conduct laboratory investigations.

Special-needs students may require an increased level of supervision.  It is important that these students be active participants in the science program.  However, their safety is the greatest consideration.  The teacher must take into account the limitations and abilities of each special-needs student and decide, on an individual basis, which experiments are appropriate for each one of these students to perform.  Handicapped stations, both portable and those that can be permanently installed in a lab room, are available.

While teachers are aware of the need to exercise care in the use of chemicals, they must also be alert to the potential hazards in the biological and physical science laboratories.  For example, the teacher must provide adequate instruction and supervision in students’ use, handling, and disposal of live and preserved specimens.  The physical science laboratory may present problems related to the use of electrical devices or in the handling of projectiles.  Finally, the teacher must develop an awareness of potential allergens which may be used in the laboratory or which may pose a hazard in laboratory, field trips, or outdoor investigations.

Since the maintenance of a safe laboratory environment is an additional responsibility of the science teacher, the teacher must be aware of, and take steps to correct, unsafe conditions.  The written notification of supervisors should be followed by additional requests for the correction of the problem, and documentation of the requests should be maintained by the teacher.  (See Appendix E for sample forms.)

Additional concerns for the science teacher are the physical design and the condition of the laboratory.  Of particular importance are:

**SAFETY EQUIPMENT AND SUPPLIES**

The Occupational Safety and Health Administration (OSHA) requires the presence of eyewash fountains and safety showers.  Fire extinguishers and fire blankets should be a part of the basic equipment of every laboratory.  The local fire marshal can be a source of information as to the appropriate type and placement of extinguishers.  State and local codes will dictate the presence and location of shut-off valves for gas, electricity and water in the laboratory, as well as for the installation of ground-fault interrupters.

Materials for the containment and clean up of chemical spills should be readily available.  Commercial spill kits may be purchased from most school laboratory supply companies.  Teachers or staff members who administer emergency treatment are protected from civil damages for ordinary negligence if they have satisfactorily completed a course in first aid with a local health department or with one of several organizations, such as the American Red Cross.

Each school district’s purchasing agent will be able to provide the names of companies specializing in safety and emergency equipment and supplies.  Also, the National Science Teachers Association publishes a document containing the names of suppliers of safety and emergency equipment and materials.  A list of resources is given in the Appendix.

**CHEMICAL PURCHASE, STORAGE, DISPOSAL**

While some element of risk is inherent in most laboratory activities, the responsibility of assessing the hazards and usefulness of chemical reagents is of particular concern to the teacher.  The following should be considered when deciding on the chemicals to use in the science program:

·          identification of chem`icals requiring particular care in handling, storage, and/or disposal;

·          identification and subsequent elimination of chemicals deemed too hazardous for use in a school science laboratory; and

·          revision of existing laboratory experiments which employ materials and/or procedures deemed too hazardous for use in a school science laboratory.  The teacher is advised to consult professional literature on a regular basis in order to ensure that information is both current and correct.

Security is a vital element of chemical storage.  All storage rooms and cabinets should be kept locked.  The storage of chemicals in classrooms is inappropriate.  Although alphabetical arrangement of chemicals is convenient, it may result in incompatible chemicals being placed in close proximity to one another.  Recommended storage patterns may be found in the references listed in the Appendix.

For reasons of health and safety, OSHA guidelines require the maintenance of a current chemical inventory.  A copy of the inventory must be available, and the location of hazardous and flammable chemicals should be noted.  In order to ensure that school personnel have access to information on hazardous chemicals present in the school, OSHA guidelines require the creation and maintenance of a file of Material Data Safety Sheets (MSDS).

Proper maintenance of stored chemicals includes periodic inspections for signs of aging or deterioration of both the chemicals and their storage containers.  Aging and deteriorating chemicals, chemical waste generated by the science program, and unwanted hazardous chemicals must be disposed of in an appropriate manner.  The U.S. Environmental Protection Agency has identified reagents that present specific risks to the environment.  It has specified procedures for the disposal of these reagents.  Chemicals identified as hazardous must be disposed of in licensed landfills, and must be transported to these landfills by licensed disposal services.  The Connecticut State Department of Environmental Protection maintains lists of licensed waste handlers and of state-licensed disposal companies.  Since the cost of disposing of unwanted chemicals can be considerably greater than their purchase price, the teacher is advised to become familiar with disposal requirements before chemicals are purchased.

Copies of the Chemical Hygiene Plan, the Standard Operating Procedures, the Hazard Communication Program, and Materials Safety Data Sheets must be kept on file and be readily accessible to all school personnel.

###### SCHOOL SAFETY COMMITTEE

Science safety should be the concern of everyone - teachers, administrators, staff members, supervisors, and students.  Ongoing training of teachers of science in appropriate safety procedures and the use of laboratory equipment is a high priority for every school.  While training in safety can be the beginning of a personal commitment to safe practices, the formation of a school safety committee should be the beginning of a schoolwide focus on safety needs.  Composed of representatives of administration, students, and the teaching and support staffs, the committee should be responsible for the following:

·          regular examinations of laboratory and storage facilities to assure that these facilities meet established safety guidelines (See Appendix E - Forms.);

·          development and implementation of a plan for teaching safety and for evaluating procedures followed in laboratory activities; and

·          communication to appropriate authorities of the need for new or improved facilities, equipment, and procedures.

# STANDARDS FOR CLASS SIZE

When considering the effects of class size on the ability of students to participate in a laboratory-based program, teachers and administrators should consider the standards established by professional organizations and by outside organizations.  The National Fire Protection Association 101, *Life Safety Code* (11-1.7.1) defines an occupant load for shops, laboratories, and similar vocational rooms as one person for each fifty net square feet.

The National Science Teachers Association (NSTA) publication, *Pathways to the Science Standards – High School Edition,* states that a minimum of sixty square feet per pupil would be needed for a good and safe laboratory program.  In addition, *Pathways* recommends an additional ten square feet per pupil for teacher preparation space, and a separate storage space of 240 square feet.

In 1990 the NSTA adopted a position statement entitled “Laboratory Science.”  It contains the statement, “The number of students assigned to each laboratory class should not exceed 24.  The student must have immediate access to the teacher in order to provide a safe and effective learning environment.”

An additional factor impacting on recommendations for class size considers the role of the science teacher as an employee of the school district. OSHA code 1990 29 CFR Part 1910 requires a safe working environment relative to the use of chemicals in science laboratories.  A student/teacher ratio in excess of the professional standards described would create a greater risk of accidents both for students and for the teacher/employee.

# SOURCES OF INFORMATION

The guidelines offered in this chapter serve as an introduction to the topic of school science safety.  References and resources listed in the Appendix include some science safety guides that will help both the administrator and the teacher to develop, implement, and evaluate plans for science safety.  Personnel from the Connecticut State Department of Education, the U.S. Consumer Product Safety Commission, the National Institute for Occupational Safety and Health, the Connecticut State Department of Environmental Protection, and local health and fire officials can serve as resources for the development of a total program of laboratory safety.

**APPENDIX A**

**OSHA STANDARDS**

29 CFR 1910.1200 Hazard Communication Standard

·       requires that Material Safety Data Sheets be current and available for all hazardous chemicals, and further requires the employer keep current a list of all hazardous chemicals on site.

·       mandates a written hazard communication program, training for new employees, and training for employees potentially exposed to new hazardous materials.

·       sets standards for the labeling of hazardous chemicals.

·       requires training for non-routine tasks which might involve exposure to hazardous chemicals, and for outside contractors, brought onto the work site, who might be exposed to hazardous materials.

29 CFR 1910.1450 Laboratory Standard

·       requires that the employer monitor and limit employee exposure to hazardous chemicals.

·       mandates the appointment of a qualified Chemical Hygiene Officer, and the development of a written Chemical Hygiene Plan detailing standard work practices and policies, and procedures for working with hazardous chemicals.

·       requires initial and periodic employee training in the content of the Chemical Hygiene Plan including: chemical hazards; the content of MSDS; measures, including protective clothing and equipment, to minimize exposure to hazardous chemicals; emergency procedures; exposure limits and signs of overexposure; and the availability of medical consultation and treatment.

·       requires that a current inventory of hazardous chemicals be maintained and that all hazardous chemicals be appropriately labeled.

·       mandates that records of air concentration monitoring results, exposure assessments, medical consultations and examinations be maintained for at least 30 years.

29 CFR 1910.1030 Occupational Exposure to Bloodborne Pathogens

·       requires a written plan to eliminate or minimize employee exposure including the determination of the likelihood of exposure, and the tasks in which exposure might occur.

·       mandates the listing of precautions to limit exposure and a description of work practices and protective equipment.

·       requires employee training in techniques to avoid exposure, medical treatment available, including the availability of pre- and post-exposure Hepatitis B vaccination, and the accessibility and contents of the Exposure Control Plan.

·       requires documentation of employee training (kept for three years) and post-exposure medical records (maintained for term of employment + 30 years).

**APPENDIX B**

**REGULATIONS CONCERNING EYE PROTECTIVE DEVICES**

**AS AUTHORIZED BY SECTION 214a OF THE**

**CONNECTICUT GENERAL STATUTES**

The regulations of Connecticut state agencies are amended by adding sections

10-21 4a-1 to 10-21 4a-3, inclusive as follows:

Section 10-21 41-1.  By whom, when and where eye protective devices shall be worn: definitions.  Any person who is working, teaching, observing, supervising, assisting in or engaging in any work, activity or study in a public or private elementary or secondary school laboratory or workshop where the process used tends to damage the eyes or where protective devices can reduce the risk of injury to the eyes concomitant with such activity shall wear an eye protective device of industrial quality in the manner in which such device was intended to be worn.  For the purposes of sections 10-21 4a-1 to 10-21 4a-3, inclusive, “workshop” and “laboratory” shall include any room or area used to teach or practice industrial arts, vocational and technical education; science, arts and crafts, or any similar skill, activity or subject.  The following list of sources of danger to the eyes and the type of protection required to be worn in each case is exemplary, not exclusive.

|  |  |
| --- | --- |
| SOURCE OF DANGER TO THE EYES | TYPE OF PROTECTION REQUIRED |
|  |  |
| a)     Caustic or explosive chemicals | Clear goggles, splash proof |
| b)     Explosives, solids or gases | Clear goggles |
| c)      Dust producing operations | Clear goggles, splash proof |
| d)     Electric arc welding | Welding helmet |
| e)     Oxy-acetylene welding | Colored goggles or welding helmet |
| f)      Hot liquids and gases | Clear goggles, splash proof |
| g)     Hot solids | Clear or colored goggles, or spectacles |
| h)     Molten metals | Clear or colored goggles |
| i)       Heat treatment or tempering of metals | Clear or colored goggles |
| j)       Glare operations | Colored spectacles or goggles, or welding helmet |
| k)      Shaping of solid materials; chipping, cutting, grinding, milling, sawing, stamping | Clear goggles or spectacles |
| l)        Repairing or servicing of vehicles when hazard is foreseeable | Clear goggles or spectacles |
| m)   Spraying and dusting | Clear goggles, splash proof |
| n)      Other similar activity being conducted in the instructional program which risks damage to the eyes | Proper eye protective device |

Section 10-21 4a-2.  Minimum standards for the design, construction and quality of eye protective devices used in schools.  Any eye protective device used in such school workshops or laboratories shall be designed and constructed to resist impact, provide protection against the particular hazard for which it is intended, fit snugly without interfering with the movements of the user and be durable, cleanable, and capable of frequent disinfection by the method prescribed for such device by the school medical adviser.

All materials used in such eye protective devices shall be mechanically strong and lightweight, non-irritating to perspiring skin and capable of withstanding washing in detergents and warm water, rinsing to remove all traces of detergent and disinfection by methods prescribed by the school medical adviser without visible deterioration or discoloration.  Metals used in such devices shall be inherently corrosion resistant.  Plastics so used shall be non-flammable and shall not absorb more than five percent of their weight in water.

Section 10-21 4a-3.  Responsibilities of public and private elementary and secondary school governing bodies.  The governing board or body of each public and private elementary and secondary school in the state shall require the use of appropriate eye protective devices in each laboratory and workshop by any person in such areas during any activity engaged in, and shall post warnings and instructions in laboratories and workshops which include the list of hazards and protection required set form in Section 10-21 4a-1.  Such boards shall make and enforce rules for the maintenance of all eye protective devices in clean, safe condition and shall replace any such protector which becomes irritating to the skin.

Purpose:  To direct the school administrators in the kinds, construction, times and uses of devices for eye protection of teachers and pupils in school laboratories and workshops.

Connecticut Law Journal

January 9, 1968

**APPENDIX C**

**STUDENT SAFETY CONTRACT**

            I recognize that the laboratory is a safe place in which to work and learn if I conduct myself in a responsible manner, and I am willing to accept that responsibility.  Accordingly, I agree to follow all safety guidelines set forth in my textbook and in the supplementary materials I am given, and I agree to follow the teacher’s instructions.  In addition, I will abide by the following safety rules at all times:

·        I will handle all laboratory equipment and materials properly.

·        I will familiarize myself with the laboratory techniques involved in each activity before attempting to perform the activity.

·        I will learn the location and proper use (as applicable) of the safety equipment in the classroom.

·        I will familiarize myself with the procedures to be followed in case of fire or other emergency in the laboratory.

·        I will report any accident - *no matter how trivial it may seem* - to the teacher immediately.

·        After each lab activity has been completed, I will turn off the water, disconnect all electrical equipment, and dispose of all chemicals as directed.  I

will return all materials and equipment to their proper places and assist in general cleanup.

·        I will provide  the teacher with health information that might affect my health and safety in the classroom, as indicated below:

         I have the following allergies/personal health concerns:

         At this time, I wear prescription glasses/contact lenses/neither (circle one).

I understand and agree to follow the safety rules described above.

        (Date)   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(Student’s Signature)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                   (Parent’s Signature)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**APPENDIX D**

**SAFETY REFERENCES**

Your plan for teaching science safely and in compliance with OSHA regulations should include provisions for a library of safety-related materials.  The following resources will be useful additions to your library.

Art Hazards News, Center for Safety in the Arts, 5 Beekman St., Suite 820, New York, N.Y. 10038.

CHEMECOLOGY, Chemical Manufacturers Association, 2501 M St. N.W., Washington, D.C.

Chemical Catalog Reference Manual, Flinn Scientific Inc., P.O. Box 219, Batavia, IL

60510-1261.

Chemical Health and Safety, American Chemical Society, Division of Chemical Health and Safety, Publications Marketing Dept., 1155 Sixteenth St. N.W., Washington, D.C.  20077-5768, 1994.

Compliance Magazine, HIS Publishing Group, P.O. Box 512. Libertyville, IL 60048-0512

Developing a Chemical Hygiene Plan, Jay A. Young, Warren K. Kingsley, George H. Wahl, Jr., American Chemical Society, 1155 16th St., N.W., Washington, D.C. 20003.

Flinn Fax!  Flinn Scientific Inc., P.O. Box 219, Batavia, IL  60510-1261.

Life Safety Code Handbook, National Fire Protection Association, 1 Battermarch Park, P.O. Box 9191, Quincy, MA 02269-9904, 1994.

Manual of Safety and Health Hazards in the School Science Laboratory, Laboratory Safety Workshop, 101 Oak St., Wellesley, MA  02181-4723.

NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Prudent Practices in the Laboratory: Handling and Disposing of Chemicals, National Academy Press, 2101 Constitution Ave., Washington, D.C. 20418, 1995.

Safety in the Elementary Science Classroom, Robert A. Dean, et al., National Science Teachers Association, 1840 Wilson Blvd., Arlington, VA 22201-3000.

Safety News, VWR Scientific, 6411 Ivy Lane #714, Greenbelt, MD 20770-9888.

Understanding Chemical Hazards: A Guide for Students, American Chemical Society, 1155 16th St., N.W., Washington, D.C. 20003.

Written Hazard Communication Program for Schools and Colleges, Forum for Scientific Excellence, Inc., J.B. Lippincott Co., East Washington Square, Philadelphia, PA 19105.

## Websites

### Vermont SIRI MSDS Collection

<http://hazard.com>

<http://hazard.com/hazard>

<http://hazard.com/hazard/msds/links.html>

Environmental Protection Agency

<http://www.epa.gov/enviro/html/emci/chemref/index.html>

Howard Hughes Health Medical Center

<http://www.hhmi.org/science/labsafe/less/listing.html#html>

OSHA

<http://www.osha.gov/safelinks.html>

National Institute for Occupational Safety and Health (NIOSH)

<http://www.cdc.gov/niosh/homepage.html>

**APPENDIX E - FORMS**

**LABORATORY - GENERAL CHECKLIST**

1.    Each student experiment and teacher demonstration is reviewed by

        the department for possible dangers prior to being done.  Substitute

        experiments and/or demonstrations are developed as needed.                                         \_\_\_\_\_\_\_\_\_\_

2.     The teacher promotes a positive student attitude toward safety.                                       \_\_\_\_\_\_\_\_\_\_

3.     The teacher models appropriate, safe behaviors.                                                               \_\_\_\_\_\_\_\_\_\_

4.     Good housekeeping rules are maintained by the staff and students.                                 \_\_\_\_\_\_\_\_\_\_

5.    Long hair, loose student clothing, and dangling jewelry are restricted

        to prevent injury.  For the same reason, appropriate footwear is

        required.                                                                                                                               \_\_\_\_\_\_\_\_\_\_

6.    Frequent, regular safety inspections of instructional areas are

        performed.                                                                                                                           \_\_\_\_\_\_\_\_\_\_

7.    All work surfaces are thoroughly cleaned following each use.                                 \_\_\_\_\_\_\_\_\_\_

8.    Students and staff are not permitted to bring food and beverages

        into the lab.                                                                                                                           \_\_\_\_\_\_\_\_\_\_

9.    Mouth pipetting of liquids is never allowed.                                                                           \_\_\_\_\_\_\_\_\_\_

10.  The teacher provides safety instruction and has students sign the

        Student Safety Contract at the start of the school year.  Instruction

        is reinforced throughout the year.                                                                                            \_\_\_\_\_\_\_\_\_\_

11.  Copies of the Accident/Incident Report Form are available and used

        following all accidents.  In addition, all accidents are reported as

        required by the district.                                                                                                             \_\_\_\_\_\_\_\_\_\_

**TEACHER ACCIDENT/INCIDENT REPORT**

Name of staff member completing the report:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Complete all information relating to the accident/incident:

1.    Date:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.    Time:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.    Location:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.    Staff/student(s) who witnessed or were involved in the accident/incident:

                                                                                                                                                            \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                                                                                                            \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

        Have all staff/students filed reports?  (Please attach.)

5.    Teacher description of the accident/incident.  (Attach additional sheets as needed.)

6.    Immediate action taken to deal with the emergency.

7.         Corrective action(s) taken to avoid a repeat of the accident/incident in the

        future:

**STAFF/STUDENT WITNESS ACCIDENT/INCIDENT REPORT**

Name of person completing the report:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

        Circle one:                Staff                Student

Complete all information relating to the accident/incident:

1.    Date:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.    Time:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.    Location:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.    Description of the accident/incident:      \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                          \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

    Date report completed                                         Signature of person completing report

**REQUEST FOR CORRECTION OF SAFETY CONCERN**

**(Teacher’s Copy)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                                                                                                 \_\_\_\_\_\_\_\_\_\_

                  Date                                                                                                    Room

The following is a safety concern in the science area:

Name  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                                                                    Signature

...........................................................................................................................................................

**REQUEST FOR CORRECTION OF SAFETY CONCERN**

**(Administrator’s Copy)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                                                                                                 \_\_\_\_\_\_\_\_\_\_

                  Date                                                                                                    Room

The following is a safety concern in the science area:

Name  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_                                                                                     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

                                                                                                                    Signature

**CHEMICAL HYGIENE PLAN**

**NOTICE OF NONCOMPLIANCE**

1.    Date:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.    Location:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.    Person responsible for location:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.    Area of noncompliance:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

  \_\_\_\_\_\_   Hazard communication

   \_\_\_\_\_\_   Chemical hygiene

5.    Noncompliance cited:

6.    Required action and timeline:

7.    Previous notification dates and action:

8.    Conference:

                                                                                                \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   (Signature)

                    \_\_\_\_\_\_   Hazard communications                                 \_\_\_\_\_\_   Chemical hygiene

c:           \_\_\_\_    Supervisor(s)

              \_\_\_\_    Building Administrator

              \_\_\_\_    Personnel File

              \_\_\_\_    Other

**SCHEDULE FOR SAFETY COMPLIANCE**

Please indicate the month(s) in which each of these items will be checked.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **September** | **October** | **November** | **December** | **January** | **February** | **March** | **April** | **May** | **June** |
| **Add-ons to inventory** |  |  |  |  |  |  |  |  |  |  |
| **Biological**  **waste**  **collection** |  |  |  |  |  |  |  |  |  |  |
| **Chemical**  **waste**  **collection** |  |  |  |  |  |  |  |  |  |  |
| **Classroom**  **safety check** |  |  |  |  |  |  |  |  |  |  |
| **Contact lens update** |  |  |  |  |  |  |  |  |  |  |
| **Drench**  **shower** |  |  |  |  |  |  |  |  |  |  |
| **Eyewash**  **fountains** |  |  |  |  |  |  |  |  |  |  |
| **Fire**  **extinguishers** |  |  |  |  |  |  |  |  |  |  |
| **Goggles**  **hygiene** |  |  |  |  |  |  |  |  |  |  |
| **Hood velocity**  **check** |  |  |  |  |  |  |  |  |  |  |
| **MSDS**  **updates** |  |  |  |  |  |  |  |  |  |  |
| **Staff**  **training** |  |  |  |  |  |  |  |  |  |  |
| **Storage area**  **safety check** |  |  |  |  |  |  |  |  |  |  |
| **Student**  **training** |  |  |  |  |  |  |  |  |  |  |

This document was compiled by

Estelle Fanucci, District Science Chairperson, Amity Senior High School, Woodbridge, CT;

Barbara Kmetz, Director of Curriculum, Trumbull Public Schools Trumbull, CT;  and

Mary Moffa, Science Teacher, East Ridge Middle School, Ridgefield, CT.

The information contained in this monograph is believed to be accurate and has been compiled from sources believed to be reliable.  It is offered for your consideration, investigation and verification.  The authors and the sponsors make no warranty of any kind, express or implied, concerning the accuracy or completeness of the information.  Neither the authors nor the sponsors will be liable for claims relating to the use or reliance on information regardless of whether it is claimed that the information is inaccurate, incomplete or otherwise misleading.