

Laboratory Safety Guidelines

Section 1. Introduction. The teacher in a laboratory or shop is the organizer and director of learning experiences and activities for those pupils under his/her supervision. This is a responsibility the teacher assumes when he/she accepts a teaching position.

The professional teacher accepts this responsibility by carefully selecting curricular materials and experiences, organizing and presenting them in such a manner so as to bring about desired behavior outcomes and attitudes in students.

It is the responsibility of the teacher to make certain the total instructional program reflects safety practices, proper use and care of equipment, and instill attitudes which will not only protect the student from injury while in school, but will continue to promote safety consciousness when the student enters the world of work.

The temptation to "read through" the entire list of safety practices at the beginning of the school year without further discussion is to be avoided. While several general safety precautions must be presented early in order to have the laboratory/shop function safely, consideration should be given to the sound, educational principal of giving instruction when it will be most timely and meaningful to the student.

A safety program has much greater chance of success when the students participate and become actively involved in planning and presenting programs, demonstrations, etc. Safety instruction is not incidental nor accidental. It must be taught in an organized manner and as a never-ending subject.

Section 2. Safety Guidelines for Industrial Arts.

1. Classroom Instructions

- A. Discuss with each class the general safety rules and guidelines for the shop facility, including the reporting of accidents and the use and location of the fire extinguisher and other safety apparatus.
- B. Discuss with each class the care, use and safety rules for hand tools and machines that apply to that class.
- C. Administer test(s) regarding safety rules to each student. Students will not be permitted to work in the shop or laboratory until they pass the test(s) with a score of 100.

2. Equipment Requirements

- A. Safety rules for each machine must be posted on or near that machine.
 - B. All guards and safety devices shall be kept in place and in good repair.
 - C. A method of locking out each machine shall be provided.
 - D. When a machine is under repair or unsafe to operate, it must be locked out and an "out of order" sign placed on the control switch.
 - E. Safety goggles shall be provided for everyone in shop.
3. Recordkeeping
- A. The instructor shall follow the corporation guidelines for reporting and recording all accidents. Accident reports and related information for those accidents which may result in permanent injury or disfigurement are to be kept on file until three (3) years after a student's regular graduation date from high school.
 - B. A record shall be kept on each student of all safety violations.
 - C. Keep on file the tests given each student covering all safety procedures.
4. Supervision
- A. The instructor is responsible for the development and implementation of safety guidelines.
 - B. In the case of a substitute teacher, if the substitute is not a licensed Industrial Arts or Vocational Education Instructor the machines will be turned off, and alternate activities will be provided.
 - C. The instructor may suspend students from class for one (1) day if their behavior endangers themselves or others. Building level procedures are to be established concerning the disciplinary action to be taken if a student continues to violate safety guidelines.

Section 3. Safety Guidelines for Home Economics.

- 1. Classroom Instructions

- A. Discuss with each class the general safety rules and guidelines for the laboratory facility, including the reporting of accidents and the use and location of fire extinguishers and other safety apparatus.
 - B. Discuss with each class the care, use and safety rules for all equipment.
 - C. Discuss need for a dress code which ensures safety of all students participating in laboratory.
 - D. Administer test(s) regarding safety rules to each student. Students will not be permitted to work in the shop or laboratory until they pass the test(s) with a score of 100.
2. Equipment Requirements
- A. Provide step stool to reach item stored in high places.
 - B. Provide fire extinguisher in each kitchen near stove.
 - C. Provide master shut-off switch for irons and sewing machines.
 - D. Maintain equipment and safety devices in proper working condition.
 - E. Post safety rules in all needed areas.
3. Recordkeeping
- A. The instructor shall follow the corporation guidelines for reporting and recording all accidents. Accident reports and related information for those accidents which may result in permanent injury or disfigurement are to be kept on file until three (3) years after a student's regular graduation date from high school.
 - B. A record shall be kept on each student of all safety violations.
 - C. Keep on file the tests given each student covering all safety procedures.
4. Supervision
- A. The instructor is responsible for the development and implementation of safety guidelines.
 - B. The instructor may suspend students from class for one day if their behavior endangers themselves or others. Building level

procedures are to be established concerning the disciplinary action to be taken if a student continues to violate safety guidelines.

Section 4. Safety Guidelines for Science

1. Classroom Instruction

- A. Inform students that all unauthorized experiments are forbidden in science class.
- B. Discuss use of safety goggles.
- C. Discuss the use of lab aprons.
- D. Demonstrate use of eyewash and deluge showers.
- E. Discuss use of fume hood.
- F. Discuss use of fire extinguisher.
- G. Demonstrate use of fire blanket.
- H. Warn that chemicals should not be tasted.
- I. Demonstrate how to light a Bunsen burner.
- J. Demonstrate how to heat chemicals in a test tube.
- K. Demonstrate the correct procedure for mixing acid solutions.
- L. Instruct students to keep combustibles away from open flames.
- M. Instruct students not to pour material back into reagent bottles.
- N. Instruct students to keep apparatus clean.
- O. Instruct students to read label carefully before taking anything from a bottle.
- P. Instruct students not to use more material than directed.
- Q. Instruct students not to hold the test tube in their hands when doing an experiment.
- R. Discuss proper disposal of waste materials.
- S. Require that all injuries be promptly reported to teacher.
- T. Demonstrate and instruct student on proper methods of smelling and "whiffing" chemicals.
- U. Implement other safety requirements as dictated by individual conditions.
- V. Administer test(s) regarding safety rules to each student. Students will not be permitted to work in the shop or laboratory until they pass the test(s) with a score of 100.

2. Equipment Requirements

- A. Provide safety goggles for everyone in laboratory.
- B. Provide eye wash facility for all science labs.
- C. Provide deluge shower for chemistry labs.
- D. Provide a fire blanket.

3. Recordkeeping
 - A. The instructor shall follow the corporation guidelines for reporting and recording all accidents. Accident reports and related information for those accidents which may result in permanent injury or disfigurement are to be kept on file until three (3) years after a student's regular graduation date from high school.
 - B. A record shall be kept on each student of all safety violations.
 - C. Keep on file the tests given each student covering all safety procedures.
4. Supervision
 - A. The instructor is responsible for the development and implementation of safety guidelines.
 - B. In the case of a substitute teacher, if the substitute is not a teacher licensed in the subject, all lab work will be cancelled and alternate activities will be provided.
 - C. The instructor may suspend students from class for one day if their behavior endangers themselves or others. Building level procedures are to be established concerning the disciplinary action to be taken if a student continues to violate safety guidelines.

Section 5. Safety Guidelines for Vocational Agriculture.

1. Classroom Instruction
 - A. Hand out and discuss with each class a copy of the shop safety rules. The rules should cover the following areas:
 - (1) Behavior
 - (2) Dress
 - (3) Safety glasses
 - (4) Fire safety
 - (5) Accident procedure
 - (6) Proper use of power tools
 - (7) Proper use of hand tools
 - (8) Welding
 - (9) Oxyacetylene welding
 - (10) Other

- B. Administer test(s) regarding safety rules to each student. Students will not be permitted to work in the shop or laboratory until they pass the test(s) with a score of 100.

2. Equipment Requirements

- A. All equipment must be in proper working order.
- B. Safety rules for each machine must be posted on or near that machine.
- C. All guards and safety devices shall be kept in place and in good repair.
- D. Provide a method of shutting off all machines when an unsafe act or accident occurs.
- E. Arc welders and oxyacetylene equipment must be in good repair.
- F. Mark safety zones in yellow around each machine that is stationary.

3. Recordkeeping

- A. The instructor shall follow the corporation guidelines for reporting and recording all accidents. Accident reports and related information for those accidents which may result in permanent injury or disfigurement are to be kept on file until three (3) years after a student's regular graduation date from high school.
- B. A record shall be kept on each student of all safety violations.
- C. Keep on file the tests given each student covering all safety procedures.

4. Supervision

- A. The instructor is responsible for the development and implementation of safety guidelines.
- B. In the case of a substitute teacher, if the substitute is not a qualified shop teacher the machines will be turned off and alternate activities will be provided.
- C. The instructor may suspend students for one day if their behavior endangers themselves or others. Building level procedures are to

be established concerning the disciplinary action to be taken if a student continues to violate safety guidelines.

Section 6. Corporation Guidelines

1. Maintaining Facilities and Equipment

A. Ventilation

1. Shop and lab room shall be adequately ventilated to remove toxic vapors following the "Indiana Administration Building Code of Uniform Building Codes #1855". IOSHA standards will be verified by on-site consultations by IOSHA.
2. Any deviations from this code shall be reported in writing to the building administrator.

B. Electrical

1. A yearly inspection by the corporation shall be made of electrical equipment in the shop.
2. Any violations shall be reported in writing to the building administrator to initiate repair.

C. Lighting

1. All lights shall be kept in good repair and clean.
2. Burned out bulbs shall be replaced immediately.
3. Any areas of insufficient lighting shall be reported in writing to the building administrator.

D. Plumbing

1. Gas valves shall be cleaned and lubricated each summer by maintenance personnel.

E. Equipment

1. All equipment repairs shall be completed as soon as possible. Any equipment that is unsafe to operate, shall be locked out until the repair is completed.

2. Equipment needing repair or replacement shall be reported in writing to the building administrator.
3. Safety goggles and equipment for sterilization of goggles shall be provided.

F. Safety Equipment

1. Any machine without proper safety features or guards shall be locked out until the repairs are made or the missing parts are replaced.
2. First aid supplies will be available in each lab or shop room and an accurate record will be kept of all materials dispersed to students.
3. Fire extinguishers and fire blankets of the proper type shall be readily available in all shop and laboratory areas and will be inspected regularly.

G. Storage/Disposal

1. All combustibles shall be stored in OSHA approved containers and safety cabinets.
2. All chemicals shall be properly labeled with contents and date of purchase.
3. All chemicals with evidence of decomposition shall be disposed of immediately.
4. A procedure will be developed to pick up toxic wastes for disposal at an industrial waste processing center.

Section 7. Supervision of Students. The number of students enrolled in a class should be limited to a number than can be safely supervised by the instructor.

Section 8. Recordkeeping. Corporation guidelines for reporting and recording all accidents shall be reviewed periodically.