

2.3 INDUSTRIAL ARTS SAFETY

Catastrophic Risks

The greatest catastrophes associated with industrial arts are:

- ?? Fire
- ?? Amputation of limbs and fingers while using machinery
- ?? Explosion of pressurized cylinders
- ?? Inhalation of paint vapors, welding fumes and other solvents
- ?? Electrical Shock

Common Hazards

Most frequently reported accidents include:

- ?? Eye injuries while grinding, sanding, sawing, etc.
- ?? Cuts from operating machinery
- ?? Electrical shock involving power tools and equipment
- ?? Injury during tool/equipment set-up
- ?? Burns from welding, smelting, or other metal working operations

Accident Prevention

To minimize the potential for accidents to occur in industrial arts classrooms, these procedures should be followed:

- ?? All staff should review the "Safety Responsibilities of the Industrial Arts Staff" guidelines within this chapter. The bottom of these guidelines should be signed by the staff member and department head to indicate that he/she has a clear understanding of these responsibilities. This signed form should be forwarded to the School Personnel Office.
- ?? All industrial arts staff and students should review the "Industrial Arts Safety Rules" developed by the instructor. A sample guideline is provided in this chapter. Students should sign the statement at the bottom of the guidelines indicating their knowledge and pledge to comply with the rules. These signed statements should be maintained by the instructor for the duration of the course.

- ?? Formal written inspections should be completed weekly utilizing a checklist developed by the industrial arts department staff. A sample inspection checklist is included in this chapter to assist in development of a checklist which meets local conditions.
- ?? ***Prompt disciplinary action should be taken if any individual does not comply with the safety policies and rules of the department.***

INDUSTRIAL ARTS SAFETY RULES (Students)

IMPORTANT NOTE: These are general safety rules for industrial arts classes. Specific safety rules should be discussed with the individual instructor.

Personal Protective Equipment

1. Only nationally certified (ANSI/OSHA/MSHA/NIOSH-approved) personal protective equipment (safety glasses, face shields, respirators, shoes, etc.) will be worn by all individuals in the shop at all times.

Clothing

1. Short sleeves should be worn. Any long sleeves (not recommended) must be rolled up above the elbows. (No loosely rolled sleeves.) and maintained above the elbow.
2. All jewelry, rings, watches, bracelets, etc., must be removed.
3. No loose clothing (ties, coats, un-buttoned sweaters, or loose shirts tails) is permitted.
4. Sandals and open toed shoes should not be worn.
5. Long hair/braids must be protected by a hair net or band.

Machines

1. Never use any equipment or machine until instructed in its safe and proper operation by the instructor and authorized/certified in its use.
2. All machine guards shall always be in the proper position before any machine or equipment is put into operation.
3. Never leave an operating machine unattended. When not in use, turn off all equipment.
4. Never stand inside of marked safety zones **as an observer**.
5. Do not distract or talk to anyone while a power machine is running.
6. Know the location of all emergency stops and shutoffs.

General

1. Report all accidents, no matter how slight, to the instructor.
2. Know the location of all emergency exits.
3. Know the location and use of fire extinguishers.
4. Place all scraps in the designated waste containers - maintain good housekeeping at all times.
5. Never attempt to lift heavy objects alone.
6. Do not use any chemical (including fuels, solvents, cleaners, etc.) until instructed in their safe use and handling.
7. No smoking is allowed in shop areas.
8. *Students are never work in a shop unless an instructor is present.*

MISUSE OR UNSAFE EQUIPMENT OR MACHINE OPERATION , UNSAFE ACTIONS, FAILURE TO FOLLOW SAFE PROCEDURES, HORSEPLAY AND DISRUPTIVE BEHAVIOR WILL NOT BE TOLERATED!!!!!!!!!!

I understand and will comply with the safety rules above.

Student's Signature

Date

SAFETY RESPONSIBILITIES OF THE INDUSTRIAL ARTS STAFF

Instructors of industrial arts have the responsibility for keeping their rooms as safe as possible. Shops should have fire protection equipment and first aid supplies readily available. Adequate supervision is essential for a safe shop program. **Shops shall not be unsupervised while a class is at work, while machines are in operation or anytime there is a student in an industrial arts classroom.**

Accidents can be prevented if the staff is aware of and applies all safety measures, including:

1. Disconnect power to all machinery and equipment when the shop is unattended - Lock out and tag procedures are recommended.
2. Alert the proper school authorities to hazardous conditions and defects relating to the shop, its machinery and equipment.
3. In addition to the scheduled weekly inspections, continually assess the facilities for safety.
4. Post clearly visible notices of regulations, possible hazards, safeguards and precautions.
5. Monitor availability, function, and use of safety devices and guards continually.
6. Set good examples for students by personally following safety rules and practices.
7. Be sure students know, understand and use safe practices relating to specific activities. Continuous safety training must be part of any classroom discussion.
8. Be sure all individuals wear appropriate and proper personal protective equipment. Anyone refusing to do so must leave the classroom.
9. Complete incident review/investigation reports for all accidents.
10. Use color coding on machines to emphasize danger zones.
11. Be sure approved electrical grounding is provided for all motors, fuse boxes, switch boxes and other electrical equipment, whether stationary or portable.
12. Do not permit temporary wiring of any kind in the shop.
13. Verify that an adequate number of easily accessible fire extinguishers are provided and strategically positioned throughout the shop. They must be clearly identified by signs.
14. Store all flammable liquids in approved safety containers.

15. Fire extinguishing equipment shall be accessible where fire is a potential hazard.
16. Know and understand all chemicals in use and have an up to date Chemical hazard Communication Program.
17. Regularly inspect for clear paths to exit doors, aisles and passageways.
18. Prohibit unsafe behavior or horseplay of any kind. Appropriate disciplinary action must be taken immediately by the instructor.
18. Develop specific guidelines and regulations for each piece of machinery and equipment in the shop and communicate them to all students.

Staff's Signature

Date

INDUSTRIAL ARTS SAFETY INSPECTION (sample)

SCHOOL _____

- | | | |
|---|-----|----|
| 1. Are tools in good condition and properly stored? | Yes | No |
| 2. Are all machines properly guarded and in good repair? | Yes | No |
| 3. Are self closing containers (safety cans) available for storage of flammable liquids in use? | Yes | No |
| 4. Are ladders provided where needed in storage areas? | Yes | No |
| 5. Are shelves adequate for intended load and fastened to walls? | Yes | No |
| 6. Is proper personal protective equipment provided and utilized? | Yes | No |
| a. eye protection, goggles, welding hoods, etc.? | Yes | No |
| b. apron for welding? | Yes | No |
| c. gloves? | Yes | No |
| d. respirators? Is the respiratory protection program up to date? | Yes | No |
| 7. Is housekeeping adequate (e.g. proper storage, clear aisle space, proper furniture and equipment arrangement, etc.)? | Yes | No |
| 8. Are pressurized cylinders secured and capped properly? | Yes | No |
| 9. Are non-skid floor surfaces provided by or near machines? | Yes | No |
| 10. Is all electrical equipment properly grounded and in good repair? | Yes | No |
| 11. Are tool rests adjusted to no more than 1/8-inch clearance? | Yes | No |
| 12. Are switches and other danger areas on machines, etc. color coded? | Yes | No |
| 13. Is adequate space available for safe operation (e.g. machines and equipment not crowded and arranged properly)? | Yes | No |
| 14. Is all equipment permanently fastened to the floor? | Yes | No |

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|---|-----|----|
| 15. Are welding curtains provided in the welding area? | Yes | No |
| 16. Is the shop adequately ventilated? | Yes | No |
| 17. Is proper ventilation provided for toxic vapors, (e.g. solder, paint, etc.)? | Yes | No |
| 18. Are personal items of clothing, such as rings, ties, etc., removed before operating equipment? | Yes | No |
| 19. Are clearly visible notices of regulations, possible hazards, safeguards and precautions posted? | Yes | No |
| 20. Does staff set a good example for students by personally following safety rules and practices? | Yes | No |
| 21. Is proper fire extinguishing equipment accessible in potential fire hazard areas? | Yes | No |
| 22. Is the chemical hazard communication program in place? | Yes | No |
| 23. Have all staff/students reviewed the "Industrial Arts Safety Rules"? | Yes | No |
| 24. If No's are checked, follow up is needed. The principal should initiate the appropriate corrective action, such as a work order or change in procedure. | | |

Inspector

Date

All checklists should be turned in to the principal.