

SAFETY GUIDELINES FOR CAREER & TECHNICAL EDUCATION PROGRAMS

The goals of safety programs in career and technical education are:

- 1) To eliminate injuries and/or environmentally caused illnesses for students, staff and visitors;
- 2) To prepare students for employment in today's safety conscious workplaces (all aspects of the industry); and
- 3) To reduce the expenditure of resources on liability litigation and workers compensation claims.

Area 1. Recommendations for Supervision

- 1) **NEVER** leave students in a classrooms or labs without providing for supervision by a **professional** employee of the school system. If you have an emergency and must leave your assigned area for a few minutes, call or send a student to the office and ask them to send someone to relieve you.
- 2) If the person supervising your students in your absence (including substitute teachers) is not certified in your CTE area, students should not be allowed to operate equipment or engage in hands-on activities that carry the risk of injury or environmental hazards.
- 3) All CTE teachers should provide lesson plans for substitutes that do not require hands-on activities and should leave a notice for subs in big, bold print that students should not engage in hands-on activities in your absence.
- 4) Teachers should have a sign-out/sign-in and hall pass procedure to monitor students who leave the area during class time. If a student leaves without permission or fails to return in a reasonable time after signing out, notify the office immediately. If the entire class takes a break within your area, you must supervise them. If the whole school takes a break at the same time, clarify who is responsible for your students.
- 5) In those cases where the instructor must monitor students at work in different locations, other professional personnel should be recruited to supervise the additional groups of students. If that is not possible, the instructor should, at minimum, review the appropriate safety instruction for the task(s) to be performed, assign one student in each group to be the team safety supervisor, and supply each team safety supervisor with a two-way radio so the instructor and each team safety supervisor can be in constant communication.

Area 2. Classroom Management

- 1) Your classroom rules should contain specific instructions related to safety. One example would be the rule prohibiting horseplay. Another would be the rule that no student operates any piece of equipment or engages in any activity until he/she has received safety instruction for that equipment or activity and passed the relevant safety test with 100% accuracy. Parents as well as students should sign to indicate that they have read and agree with the rules. ***Don't lose these signed copies.***
- 2) No students except yours should be allowed in your lab and your students should not be allowed to visit other labs.
- 3) Enforce all safety rules all the time. Make the penalties severe enough that your students know you mean business. Grade them on demonstrating/violating safe practices. Let them know that if they break safety rules on the job they will likely be fired.
- 4) Post safety posters or reminders in prominent places. Create a general climate that reinforces the "safety first" concept.
- 5) Make students aware that CTE programs may use flammable or explosive materials and therefore, it is of paramount importance that they take all fire drills seriously.

Area 3. Classroom, Lab and Equipment

- 1) Maintain a clean and orderly classroom and lab. Have the necessary equipment and supplies on hand all the time to clean up oil and grease floor spills. Know the "who, what, when and how" of cleaning up bio-hazardous substances and always consult the Material Data Safety Sheet (MSDS) before proceeding. If the MSDS specifies that certified personnel are required to conduct the clean-up, evacuate the area and call your county maintenance department.
- 2) Replace any equipment that does not have all currently available safety guards. If you can't replace it, get rid of it anyway. Remember that "safety first" means safety has a higher priority than curriculum requirements.
- 3) Make sure your lab meets air quality and ventilation standards.
- 4) Don't forget that high decibel noise levels are also a hazard. Make sure students use the appropriate personal protective equipment to protect their hearing.
- 5) Electrical safety procedures should be taught in every lab.
- 6) Make sure all students (as well as teachers and visitors) properly use the personal safety clothing and equipment required for your program area. Do not allow students to engage in lab activities without it.

- 7) Correct all deficiencies noted by the Health Department, the Fire Marshal's Office, the State Veterinary Office or the district's insurance company immediately. If someone else is responsible for correcting the deficiency, keep documentation that you have notified them of the need. Discontinue the use of any equipment cited until the deficiency is corrected.
- 8) Make sure your classroom/lab has all recommended first aid materials prominently available, i.e., first aid kit, eye wash station, etc.
- 9) If there are students in the class who are taking medication that may impair the ability to safely operate machinery, ask for a letter from the school nurse stating that the students can safely perform those tasks before you allow them to do so.
- 10) **It is recommended at the beginning of each semester; complete the recommended Safety Inspection Checklist. Allowing students to assist will help raise their awareness of the importance of safety. Instructors and students can also go to the NIOSH web site noted in the introduction.**

Area 4. Hazardous Materials

- 1) Get rid of all hazardous materials that are not absolutely needed or that can be replaced with other, non-hazardous materials. For instance, replace mercury fever thermometers with alcohol thermometers.
- 2) Make sure all hazardous materials are stored in clearly labeled containers.
- 3) Make sure all hazardous materials are stored under lock and key anytime they are not being used.
- 4) Make sure all containers of flammable materials are stored in explosion/flame proof cabinets or storerooms.
- 5) Make sure you have Material Safety Data Sheets for all hazardous materials in your area. Make sure your students know where they are and how to use them in an emergency.
- 6) Contract with a licensed company to dispose of hazardous wastes. Use the storage containers and equipment (i.e., parts washers) they provide unless you are sure yours are safer.
- 7) Do not attempt to clean up all hazardous material spills yourself. If the MSDS indicates the need for certified personnel, evacuate the area and call your county maintenance department.

Area 5. Curriculum

- 1) Make sure you provide for thorough and frequent safety instruction in all your lesson plans.
- 2) Make sure you have adequate instructional materials that address safety.
- 3) Instruct and test students annually to 100% mastery on all general safety rules *before you allow them in the lab. Keep copies of these tests.*
- 4) Instruct and test students annually to 100% mastery on each piece of equipment or each activity *before you allow them to participate. Keep copies of these tests.*

Area 6. Investigating and Reporting

- 1) Report all injuries, however slight, to your school administrator immediately.
- 2) Apply first aid as indicated until a medically trained person takes over.
- 3) Conduct an immediate investigation and document everything. Remember that what might seem like a minor injury may turn out later to be a more serious matter. Note the date and time of the accident, who was injured, what they were doing at the time of the incident, what they were supposed to be doing (if different), what your inspection of the accident site revealed, who witnessed the accident, when the administrator was notified and how, when medical help was called or when the student was transported for medical care, when and how the parents were notified, etc. Keep these records forever.
- 4) Identify corrective actions that need to be taken to ensure this type of accident does not occur again.

These are general safety procedures. You must also observe all safety rules specific to your program. Contact the CTE Director of your school for additional safety information.

Safety Inspection Checklist CTE Shops and Laboratories

Inspection Performed by: _____

Date of Inspection: _____

Introduction

A safe environment is an essential part of the school safety education program. The safe environment will exist only if hazards are discovered and corrected through regular and frequent inspections by a school safety team consisting of administrators, teachers, and students.

Directions

Who Inspects?

This will depend upon local policies. It is recommended, however, that CTE teachers and the safety committee make regular inspections. It is also a good idea to include students as observers during inspections. This not only tends to share responsibility, but stimulates a broader interest in the maintenance of a safe school environment.

When to Inspect?

At a minimum, a formal safety inspection should be made at the beginning of every school semester. Daily observations should be made in regards to general safety maintenance.

How to Inspect?

Inspections should be well planned in advance. They should be systematic and thorough. No location that may contain a hazard should be overlooked. Inspection reports should be clear and concise, but with sufficient explanation to make each recommendation for improvement understandable.

Follow-up

The current report should be compared with previous records to determine progress. The report should be studied in terms of the accident situation so that special attention can be given to those conditions and locations which are accident producers. Each unsafe condition should be corrected as soon as possible in accordance with acceptable procedures. A policy should be developed in regard to taking materials and equipment out of service because of unsafe conditions.

Checking Procedures

Check the appropriate box, using the following letter scheme:

S – Satisfactory (needs no attention)

A – Acceptable (needs some attention)

U – Unsatisfactory (needs immediate attention)

Recommendations should be made in all cases where an “A” or a “U” is checked.

Space is provided at the end of the form for such comments. Designate the items covered by the recommendations, using the reference code number applicable (A-1, B-16, etc.)

Blank lines have been left in each section if you wish to add other observable safety items.

A. General Physical Condition

S A U

1.	Machines, benches, and other equipment are arranged to conform to good safety practice			
2.	Condition of stairways			
3.	Condition of aisles			
4.	Condition of floors			
5.	Condition of walls, windows, and ceiling			
6.	Illumination is safe, sufficient, and well placed			
7.	Ventilation is adequate and proper for conditions			
8.	Adequate temperature control			
9.	Fire extinguishers are of proper type, adequately supplied, properly located and maintained			
10.	Teacher and students know the location of an how to use the proper type of fire extinguisher for various fires			
11.	Number and location of exits is adequate and properly identified and posted prominently in each area			
12.	Proper procedures have been formulated for emptying the room of students and taking adequate precautions in case of emergencies			
13.	Lockers are inspected regularly for cleanliness and fire hazards			
14.	Locker doors are kept closed			
15.	Walls are clear of objects that might fall			
16.	Utility lines are properly identified			
17.	Teachers know the procedure in the event of fire including notification of the fire department and the evacuation of the building			
18.	Air in shop is free from excessive dust, smoke, etc.			
19.				
20.				
21.				
22.				
Evaluation for the Total Rating of A. General Physical Condition				

B. Housekeeping

S A U

1.	General appearance as to orderliness			
2.	Adequate and proper storage space for tools and materials			
3.	Work benches are kept in an orderly manner			
4.	Corners are clean and clear			
5.	Special tool racks are available and kept in an orderly manner			
6.	Tool, supply, and material room is orderly			
7.	Sufficient scrap boxes are provided			
8.	Scrap stock is put in scrap boxes promptly			
9.	Materials are stored in an orderly and safe condition			
10.	A spring lid metal container is provided for waste and oily rags			
11.	All waste materials and oily rags are promptly placed in the proper containers			
12.	Containers for oily rags and waste materials are frequently and regularly emptied			
13.	Dangerous materials are stored in appropriate cabinets			
14.	MSDSs are kept for all chemicals			
15.	Bulk storage of dangerous materials is provided outside of the main building			
16.	Flammable liquids are not used for cleaning purposes			
17.	Floors are free of oil, water, and foreign material			
18.	Floors, walls, windows, and ceilings are cleaned periodically			
19.				
20.				
21.				
22.				
Evaluation for the Total Rating of B. Housekeeping				

C. Equipment

S A U

1.	Machines are arranged to protect workers from hazards of other machines			
2.	Danger zones are properly indicated and guarded			
3.	Gears and moving belts are protected by permanent closure guards			
4.	All guards are used for every operation			
5.	All equipment control switches are easily available to the operator			
6.	All machines are "locked out" when the instructor is out of the room			
7.	Adequate storage facilities are available for tools and equipment when not in immediate use			
8.	Nonskid areas are provided around machines			
9.	Machines are in safe working condition			
10.	Machines are guarded to comply with American Standards Association and local state code			
11.	Adequate supervision is maintained when students are using machines and dangerous tools			
12.	Tools are kept sharp, clean, and in safe working order			
13.	All hoisting devices are in safe operating condition			
14.	Machines are shut off while unattended			
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
Evaluation for the Total Rating for C. Equipment				

D. Electrical Installation

S A U

1.	All switches are enclosed			
2.	There is a master control switch for all the electrical installations			
3.	Electrical outlets and circuits are properly identified			
4.	No electrical extension cords are used			
5.	All machine switches are within easy reach of the operator			
6.	Electrical motors and equipment are wired to comply with the National Electric Code			
7.	Individual cut-off switches are provided for each machine			
8.	Machines are provided with overload and underload controls			
9.	No temporary wiring is evident			
10.				
11.				
12.				
13.				
Evaluation for the Total Rating for D. Electrical Installation				

E. Personal Protection

S A U

1.	Goggles or protective shields are provided and required for all work where eye hazards exist			
2.	Shields and goggles are provided as needed			
3.	Rings and other jewelry are removed when working in the shop			
4.	Proper apparel, including safety boots, is worn			
5.	Respirators are provided for dusty or toxic atmospheric conditions			
6.	Provisions are made for cleaning and sterilizing respirators			
7.	Sleeves are rolled above elbows when operating machines			
8.	Clothing is free from loose sleeves, loose coats, etc.			
9.	Hoods are down			
10.	Ear protection is provided, as needed			
11.	Ipods and other music devices are not being used during class			
12.				
13.				
Evaluation for the Total Rating for E. Personal Protection				

F. Instruction

S A U

1.	Shop safety is taught as an integral part of each teaching unit			
2.	Safety rules are posted particularly at each danger station			
3.	Printed safety rules are given to each student			
4.	Student shop safety committees are formed and are active			
5.	Safety contests are utilized			
6.	Audiovisual aides are used in instruction			
7.	Safety tests are given			
8.	Safety posters are used			
9.	Guest lecturers are used to discuss industrial safety			
10.	Tours are taken of industrial plants as a means of studying safety practices			
11.	Periodic safety inspections of the shop are made by a student committee			
12.	A proper record is kept of safety instructions			
13.				
14.				
15.				
16.				
Evaluation for the Total Rating of F. Instruction				

G. First Aid

S A U

1.	An adequately stocked first aid cabinet is provided			
2.	The first aid is administered by a qualified individual			
3.	First aid instruction is provided to all students			
4.				
5.				
6.				
7.				
Evaluation for the Total Rating of G. First Aid				

