# SECTION XXX LABORATORY/VOCATIONAL ARTS/FINE ARTS SAFETY

## LABORATORY, VOCATIONAL ARTS & FINE ARTS SAFETY

Traditionally, industrial arts classes, i.e., wood shop, metal shop, electric shop, auto shop, etc., have included extensive safety instruction. The students have also been required to pass written safety tests before being permitted to operate the equipment.

Classes such as chemistry, biology, auto mechanics and body repair, photography, graphic arts, pottery and other fine arts classes involve the use of hazardous materials. This area of risk has often been overlooked and given the same degree as safety training.

Biology, physics and chemistry labs need to be considered as work places which deserve as much attention to safety as other hazardous work places. This is especially true considering the relative inexperience of the students in handling and working with hazardous substances.

Due to the health and safety risks inherent in handling the hazardous materials in these classrooms, immediate attention needs to be given to providing safety awareness and training to the students.

For the use and handling of hazardous materials, students should receive at least the same level of training as is required for employees in the Employee Hazard Communication regulations and other regulations for employees who handle, or are exposed to, hazardous materials.

The Districts Hazard Communication Plan could be modified to apply to students and used as a handout and the training outline.

There are two primary areas of safety concern:

- 1. Hazards associated with the substances themselves, i.e., explosion, fire and runaway chemical reactions.
- 2. Hazards arising from the interaction between substances and the students, i.e., poisoning, contamination and asphyxiation.

The following checklist should be integrated into the District's laboratory safety program:

- a. Develop a safety inspection program in academic laboratories.
- b. Implement proper procedures for the storage of hazardous substances.
- c. Mandate the use of protective clothing and equipment.
- d. Observe safety procedures within the laboratory, including kind and arrangement of furnishings, access to washing stations, accessible and clearly posted exits, fire prevention and containment equipment, etc.

- e. Develop a safe and effective hazardous waste disposal procedure.
- f. Properly label hazardous substances.
- g. Develop a safety training program for all personnel.
- h. Devise and use proper accident reporting procedures.
- i. Maintain Material Safety Data Sheets for all hazardous substances.
- j. Require students to pass a safety test and demonstrate understanding and knowledge of Material Safety Data Sheets.

There are specific hazardous materials in some classrooms which are known by the State of California to cause cancer, reproductive harm and/or birth defects. These materials are on the list commonly referred to as the "Governor's List of Hazardous Materials," which was developed following the passage of the Safe Drinking Water and Toxic Enforcement Act in 1986.

Where possible, the chemicals on this list should be removed from the classroom. If some of them are necessary as part of the curriculum, extra precautions are appropriate to be certain they are handled only under specified circumstances.

Storing, using, disposing and handling of hazardous materials generates numerous exposures including injury, damage to property and possible violation of local, state and federal regulations.

It is very important that the District have a written policy regarding hazardous materials for reasons of safety and to comply with local, state and federal regulations. This policy, at a minimum, should include inventory, purchasing, storage, labeling, use of respirators and student/employee training in the safe use of these materials

### CHEMISTRY LABORATORY GENERAL SAFETY GUIDELINES

- 1. Wear safety glasses or goggles at all times while working in the laboratory. (Special care is needed if you wear contact lenses, since sometimes chemicals splashed into the eye can get under the contact lens.) Note the location of the eyewash station.
- 2. Wear shoes at all times while working in the laboratory.
- 3. Eating, drinking and smoking are prohibited in the laboratory at all times.
- 4. Know where to find, and how to use, the first aid equipment and fire extinguisher. Note the location of the safety shower.
- 5. Consider all chemicals to be hazardous unless instructed otherwise.
- 6. If chemicals come in contact with your skin or eyes, wash immediately with large amounts of water. Then consult with your laboratory instructor.
- 7. Any reactions involving dangerous chemicals or unpleasant odors are to be performed under a fume hood.
- 8. Clean up any spilled chemicals immediately. Consult your laboratory instructor if you are not sure what to do.
- 9. Clean up broken glassware immediately. Check out a broom and dust pan from the stockroom for this purpose.
- 10. Do not use flammable liquids near open flames. Most organic liquids are flammable. Diethyl ether is especially dangerous.
- 11. Never point the mouth of a test tube at yourself or your neighbor. It may erupt like a geyser.
- 12. Do not taste anything in the chemistry laboratory.
- 13. Be very careful when smelling anything in the chemistry laboratory. Waft odors towards your nose rather than sniffing directly.
- 14. Confine long hair when in the laboratory so that it will not catch on fire or come into contact with chemicals
- 15. Do not use mouth suction when filling pipettes with chemical reagents. Use a rubber suction bulb.
- 16. Do not force glass tubing or thermometers into rubber stoppers. The tubing or thermometer may break and cut you badly. Consult your laboratory instructor for assistance.

- 17. Sodium bicarbonate solution (baking soda solution) is usually available in a bottle with a red cross. The sodium bicarbonate solution is for neutralization of acids or bases which may come in contact with your skin or clothing. Do not waste time looking for the solution. Wash with water immediately.
- 18. Do not work in the laboratory if your laboratory instructor is not present. If you are injured in any way, immediately consult your laboratory instructor.
- 19. Use the proper trash receptacle. Waste baskets, placed around the room on the floor, are for paper, not waste chemicals or broken glassware.
  - a. Waste chemicals should be disposed of as directed by your laboratory instructor. Many chemicals are not to be thrown in the sink. Special waste receptacles will be provided for these chemicals.
  - b. The waste chemicals must be separated according to kind, not just mixed with other (different) waste chemicals.
  - c. If you do not see the proper waste receptacle, ask your laboratory instructor. Do not put waste chemicals of one particular type into a waste container provided for other (different) waste chemicals.
- 20. Do not perform unauthorized experiments. If you see others doing something which seems dangerous to you, tell them to stop and/or report the incident to your laboratory instructor. If another student tells you to stop doing something which the other student feels is unsafe, stop as directed. Consult with your laboratory instructor if there is a problem or difference of opinion.
- 21. The effects of chemical agents used in this course on human pregnancy are unknown, and pregnant women are advised to consult their physicians before taking this course.
- 22. The Safe Drinking Water and Toxic Enforcement Act of 1986 requires that the Governor revise and publish at least once per year the list of chemicals known to the State to cause cancer or reproductive toxicity. You may be exposed to one or more of these chemicals during this course. Please see your instructor for a list of these chemicals.

I have read the above listed rules for laboratory safety and agree to abide by them.					
Print Name					
(Signature)	(Date)				

Keep one copy of these regulations for your own reference. Turn the other copy into your chemistry laboratory instructor. Thank you.

## MAINTENANCE & REPAIR CURRICULUM GUIDELINES

For any District operating maintenance and repair programs, e.g., auto mechanics, a work order and a waiver of liability should be obtained from the owner of the equipment on which the work is to be done.

The cost of parts can be charged to the owner but there should be no charge for labor. The repair facility is for educational purposes and is not intended to be a commercial venture.

While in the repair facility, the equipment should not be taken off the premises by any unauthorized individuals, and automobiles should not be operated by unlicensed students.

In the case of auto repair programs:

- 1. The repair shop faculty should be aware that the owner's auto liability coverage is primary and the District's coverage is secondary. It is good risk management practice to be aware of the owner's auto insurance coverage.
- 2. While the vehicle is in the care, custody and control of the District, reasonable care must be exercised to protect the vehicle from loss.
- 3. Autos donated to the District should not be modified for use in speed contests or any other race activities. It is recommended that the donated vehicle's registration be returned to the Department of Motor Vehicles so that the vehicle is not licensed for road use.

The attached work order and waiver forms are written for automobile repair programs. These forms can be modified to apply to other similar programs.

# REPAIR WORK ORDER FORM

School		
Instructor		
Equipment/vehicle to be repaired	ed	
Odometer (if auto)	VIN#	Lic # (if auto)
Description of work to be perfo	ormed	
	ents, <u>DISTRICT</u> , its officers, agenty damage or any losses due to defect	
• I agree to pay for all paabove.	rts, materials and supplies required to	o perform the work described
completion of work, the	property is not claimed by me within no property will be deemed abandoned a such disposal reverting to the Distric	and disposed of as appropriate
Name (Print)	Phone	
Address	City	Zip
Signature	I	Date

### REPAIR WORK ORDER WAIVER - AUTO

I HEREBY request that the services/repairs described in the attached work order be made by the District's Auto Shop ("Auto Shop").

- 1. I understand that the Auto Shop is not a professional auto shop and that such work will be done as an instructional project by students under the supervision of District instructors.
- 2. I understand that the Auto Shop is used for instruction by many students and that the security normally found in a professional auto repair shop is not present.
- 3. I understand that space is limited and that the vehicle may be stored outside the Auto Shop. I agree to hold the District harmless for any loss due to theft, vandalism or damage of any kind to the vehicle or its contents while on the property or in possession of the District.
- 4. I authorize District personnel or students to operate the vehicle for purposes of testing, inspection or delivery at my risk.

In consideration of being allowed to participate in the auto shop program, I hereby agree that I, my heirs, distributees, guardians, legal representative and assigns will not make a claim against, sue, attach the property of, or prosecute District, its officers, agents, employees or students, for injury or damage resulting from the negligence or other acts, however caused, as a result of my participation in the Auto Shop instruction program and the services or repairs made by the Auto Shop.

In addition I hereby release and discharge District, its officers, agents, employees and students from all actions, claims or demands that I, my heirs, distributees, guardians, legal representatives or assigns now have or may hereafter have for injury or damage resulting from my participation in the Auto Shop instruction program.

I further agree to pay on demand standard list prices for all parts, materials and supplies furnished by the auto shop in making such repairs.

I have carefully read this agreement and fully understand its contents. I am aware that this is a release of liability and contract between myself and District.

Vehicle Owner	Date
District	Date

## SALE OF DONATED AUTOMOBILES/PROPERTY

Sometimes property will be donated to the District which will then be sold or auctioned to the public either after repairs have been made or in its donated condition. This could create a significant product liability exposure to the District, especially for items such as automobiles or mechanical equipment.

To help mitigate this exposure, it is important that the purchaser be advised of known relevant information of the condition of the property and to sign a form acknowledging the information.

## NOTICE TO BUYER - AUTOMOBILE SALES AGREEMENT

VEHICLE YEAR/MAKE:		
MODEL:	VIN:	
The above described vehicle was donated to t repairs. The vehicle was worked on and/or serv as a learning activity.		
The following work was performed on the vehi	icle by these students:	
1.		
2.		
3.		
4.		
5.		
6.		
No other repairs and/or body work and/or alters	rations were made to this vehicle	

## BUYER UNDERSTANDS AND AGREES TO THE FOLLOWING:

- 1. ALL REPAIRS AND/OR ALTERATIONS AND/OR MAINTENANCE AND/OR SYSTEM ANALYSIS WERE PERFORMED BY STUDENTS OF <u>DISTRICT</u> AS A LEARNING EXPERIENCE AND NOT BY PROFESSIONAL MECHANICS OR AUTOMOBILE CRAFTSMEN.
- 2. THE VEHICLE IS BEING PURCHASED "AS IS" WITH NO WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED.
- 3. THE VEHICLE SHOULD BE INSPECTED BY BUYER'S OWN MECHANIC PRIOR TO PURCHASE AND/OR OPERATION.

Buyer, by his/her signature below, indicates he/she has read the above and fully understands the conditions of the sale of this vehicle.

Purchase Price:		Purchase Date:	
Name of Buyer:			
, <u> </u>	(Print)	(Signature)	
Street Address (Cit	y, State, Zip):		
Phone:			