

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

**Teacher – Science
Biology, Chemistry,
Earth Science and Physics**

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

- This employee classification is exposed to a wide variety of chemicals in the course of their work. To minimize health risks due to toxic exposure, be familiar with the hazards of all chemicals you or your students use. Attend lab safety training and keep informed on how to use chemicals safely.
- Always use proper personal protective equipment.
- For your own personal safety, always enforce lab safety rules/procedures for your students.
- Keep classroom and storage areas clean and well organized to reduce hazards from trips, falls, earthquakes and chemical accidents.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Lab Accidents

- Establish and enforce safety procedures for students.
- Review safety procedures with students before any lab work commences.
- Insure that students understand safety procedures by requiring a written test or sign-off sheet.
- Supervise lab classes to maintain order. Be present and available at all times to assist students.
- Set a good example for students by following lab safety procedures yourself, (i.e., not eating in lab, wearing personal protective equipment and not joking around).
- Do not allow students to perform unauthorized experiments.
- Do not horseplay in the lab.
- Maintain good housekeeping practices in labs and chemical storage areas.
- Lock laboratories and chemical storage areas when not occupied or in use. Do not allow unauthorized persons to enter.
- When performing any potentially hazardous work in a lab, work with a partner or at least have someone check in on you.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Cuts, Abrasions, Burns and Other Bodily Injuries

- Never use cracked chipped or broken glassware.
 - Inspect mirrors, prisms and glass before use for sharp edges that may cut. Remove sharp edges by grinding with emery cloth or carbide stone, or painting edges with quick drying enamel.
 - When washing laboratory glassware, always use strong rubber gloves. Be careful with awkward or pointed objects. Do not leave items with sharp edges under soapy water where they are not visible.
 - Wash all sharp implements separately from other items. Store in area designated for sharp objects.
 - Provide separate waste container for broken glass items.
 - When inserting glass tubing or thermometers into rubber stoppers, always use glycerin or soapy water as a lubricant. Protect hands by wrapping glass tubing and stopper with a towel.
 - When dissecting, use a scalpel. If a razor blade must be used, use only single-edged blades.
 - When hammering or chipping rocks, as in a geology experiments, use eye protection, and cover rocks with a cloth to reduce the hazards of flying particles.
 - When grinding rocks, use goggles and a face shield for protection.
 - Do not heat non-heat resistant glassware, not in regular glass, which may shatter.
 - If acid or alkali contacts you skin, rinse the affected area for a minimum of 15 minutes with cool water.
-

Fire Injury

- Know fire extinguisher location and operation.
- Know emergency procedures for fire, chemical burns, spills, etc.
- Mount an emergency fire blanket in a chemical use area and make sure it is visible.
- If more than 10 gallons of flammables are stored, store them in an approved flammables cabinet.
- Store extremely flammable, volatile chemicals (boiling point less than 73C) and peroxides in an explosion proof refrigerator. Do not store household refrigerators for storage because of the potential for sparks.
- Stored compressed gas cylinders should be secured upright to the wall, with caps in place.
- Oxygen cylinders should not be stored within 10 feet of fuel cylinders (unless on a welding cart). If closer than 20 feet, cylinders should be separated by a fire resistant partition at least 5 feet high with a fire resistant rating of at least one hour.
- Know the locations for master controls of all utilities in your lab (electric, gas and water). Color-code them for quick identification in an emergency.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Fire Injury *cont.*

- Turn off the lab's master gas shut off after your teaching assignment is completed.
 - Do not reach over an open flame. Turn off Bunsen burner when not in use.
 - Never heat alcohol, ether or other volatile or flammable substance over an open flame.
 - Use non-sparking induction type motor since sparks can ignite flammable vapors that may be present in the lab.
 - Use extreme caution when using or storing the following potentially explosive chemicals. Find substitutes if possible. Avoid creating explosive mixtures at all times.
 - Benzyl peroxide** – may explode with heat, shock, friction.
 - Carbon Disulfide** – vapors are extremely flammable and explosive. Vapors may be ignited by contact with ordinary light bulb.
 - Diisopropyl ether** – may form explosive peroxides if stored more than 12 months.
 - Ethyl ether/Diethyl ether** – same as diisopropyl ether.
 - Nitrogen Trioxide** – when dry, it can explode upon touch. May be stored in wet ether.
 - Perchloric Acid** – 70% solution is not explosive, but explosive perchlorates can form when it is used.
 - Picric Acid** – dry picric acid can explode with shock or heat. Always store with minimum 10-20% water.
 - Potassium metal** – becomes dangerous with age. Forms explosive peroxides if not stored under kerosene.
 - Sodium Azide** – unstable and explosive. Keep away from heavy metals.
-

Electrical Shock Injuries

- If electrical appliance or cord gives a shock, appears defective or sparks/smokes, turn it off, unplug and report. Do not use it until it has been repaired.
- Keep water away from cords and equipment.
- Use only UL listed equipment.
- If electrical current is constantly used near any metal object, the object should be permanently protected with an insulating cover to avoid possible contact.
- All AC circuits above 12 volts should be shielded to avoid direct contact.
- Be sure that there is a bleeder (high resistance) across the output of a power supply; otherwise, a severe shock from a charged condenser may result.
- Induction coils of any type should be clearly marked for low voltage and high voltage connections in order to avoid shocks.
- Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Electrical Shocks *cont.*

- Unplug all electrical equipment before working on it.
- To prevent an electrical shock when wiring any portable electrical apparatus, make the live plug-in or turn-on switch the last act in assembling and the first at in disassembling.
- Avoid bringing both hands into contact with the live sections of an electric circuit. If possible, use only one hand at a time when manipulating an electric circuit.
- Be careful that live wires do not contact grounded metallic objects.
- Always operated electrical devices with dry hands in a dry location.
- Never stand on metal or other conducting surfaces when using electrical device.
- Use extreme care around aquariums when they have an electrically operated pump or light.
- Be careful handling lead/acid batteries. A large current can be drawn from it on a short circuit. Battery sparks have enough energy to ignite flammable vapors. Only charge batteries in a well-ventilated area since hydrogen is formed during the process.

Misc. Injuries

- Insure that all lab apparatuses are secure and are put together well (i.e., clamps are tight, joints fit correctly etc.)
- If a pressurized vessel (such as a pressure cooker) is used, insure that the safety valve is in working order before use. Do not exceed maximum safe pressure for the system (20lb/sq. inch for pressure cooker).

Toxic Chemical Substance Injuries

- Insure that chemical containers and lids are in good condition and are appropriate for the chemical being stored.
- Chemicals should be stored according to storage compatibility categories. See Appendix A.
- Do not store chemicals alphabetically unless properly segregated.
- Insure that both pure and waste chemicals are labeled with the name of the contents and hazard warning.
- Maintain an accurate chemical inventory including quantity, location, date of purchase and shelf life.
- Outdated and waste chemicals should be disposed of in a timely manner in keeping with federal, state and local regulations.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Toxic Chemical Substance

Injuries *cont.*

- Design (or redesign) experiments to use the least amount of chemicals possible. Order only the quantity of chemicals needed; excess may someday become hazardous waste.
- Chemicals that are stored should be used within the school year.
- Chemicals should not be stored on the floor or above eye level.
- Chemical storage shelves should be secured firmly to walls.
- Install barriers or lips to insure that chemicals do not fly off shelves in an earthquake.
- Chemicals should be stored so that if containers break, the spill will be contained. Use tubs, liners, or specially designed cabinets.
- Maintain moderate room temperatures in chemical storage areas.
- Insure that the chemical storeroom door is self-closing and is locked.
- Inspect and flush sink drains periodically to insure that they are in proper working order.
- Eyewash stations and deluge showers should be provided in every location where corrosives are used. These stations should be tested periodically to assure proper operation.

Handling Section

- Make sure you understand the chemical properties of chemicals you store and use.
- Don't mix incompatible chemicals.
- Don't add water to concentrated acid.
- Don't mix oxidizers and reducing agents.
- Don't mix oxidizers and combustibles (i.e. nitric acid and paper).
- Don't mix concentrated acid and concentrated base.
- Always store sodium metal under kerosene or oil.
- When boiling organic chemicals, use boiling chips to avoid bumping of solutions.
- When moving chemicals, insure that there is secondary containment in care of a spill, (i.e. chemical carts should have lip. Chemical bottles should be carried in over pack buckets or trays.)
- If potentially dangerous chemical contacts your skin (even if no apparent burn), flush it off thoroughly with water.
- Never cap or use a solid stopper in a bottle containing dry ice or cryogenic liquids. Always plug loosely with cotton or use a stopper with a hole.
- Demonstrations involving potentially explosive substances must be arranged to shield both students and instructors from injury. All parties should wear protective equipment.
- First aid kits should be easily accessible and appropriately stocked.
- Do not use chemicals that have been designated in the Science Safety Handbook as unsafe for high school laboratory use. See Appendix B.
- When heating a test tube, point the mouth of the test tube away from your face, slant the test tube and apply heat along the length of the tube, not just at the very bottom.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Toxic Chemical Substance
Injuries *cont.*

Spill Section

- Any spilled chemical should be cleaned up immediately and the clean up residues disposed of properly as hazardous waste.
- Put together hazardous material spill kits for all chemicals used in your laboratory. Replace items as they are used. Spill kits should include:
 - Absorbent pillows, sheets or kitty litter;
 - Scoops, brooms, or squeegees to pick up spilled material;
 - Bucket or gab to hold used absorbents and contaminated items. Items should be labeled “hazardous waste”;
 - Protective equipment, including coverall suits, lab coats, aprons, gloves goggles and a respirator, if necessary;
 - Neutralizing agent, sodium bicarbonate (baking soda) neutralizes both acids and bases;
 - pH paper.
- Clear the area after a spill of mercury from a thermometer or other source. Remove all mercury residues using a mercury vacuum, absorbent sponge or suction bulb. Save mercury and contaminated items and dispose of as hazardous waste.
- Hydrofluoric acid is extremely corrosive to human tissue and should not be used. Students should never be allowed to use this chemical.

Infectious Disease or Health Conditions

- Biohazard tags or labels should be used to signify the potential or actual presence of material capable of presenting a risk to humans (bloody waste, infectious cultures, contaminated sharps, needles or lancets, etc.)
- Limit the use of drugs or hypodermic needles used in experiments. Keep any drugs or hypodermic equipment in a safe, locked place.
- Use latex rubber gloves when contact is likely with human body fluids (blood, vomit, urine, feces, etc.).
- Blood and other fluids should be cleaned up with soap and water.
- Use only sterile techniques if blood is to be drawn for an experiment. Only use new, individually packaged sterile lancets or needles. Use only once and then discard properly. Dipping a used lancet in alcohol does not sterilize it.
- See Appendix C for proper disposal procedures of bloodied waste products and sharps waste.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS

Infectious Disease or Health Conditions *cont.*

- If you or a student has an eye infection, do not use microscopes or hand lenses.
 - Pathogenic bacteria should not be cultured for classroom use.
 - When working with live animals, use proper techniques to avoid bites, scratches or cuts.
 - When cleaning animal cages, wear protective gloves and always be sure to wash hands afterwards.
 - Contact your local health department for additional information on biowaste regulations.
-

Toxic Substance Illnesses

- Be aware of the hazards of the chemicals you use via Material Safety Data Sheets, chemical reference books, journals, newsletters or databases.
- Wear proper personal protective equipment when handling chemicals: appropriate gloves, approved splash proof goggles, lab coat and closed toe shoes.
- Check personal protective equipment, such as gloves, for holes or leaks periodically while in use, and before you use them.
- Avoid wearing sandals, cloth shoes, baggy sleeves, jewelry, contact lenses, or other items that may increase your risk of being exposed to chemicals or burns. Keep long hair tied back.
- Periodically test the emergency eyewashes and showers are functioning properly.
- Use a velometer to check laboratory hoods periodically to insure they meet the OSHA flow rates of 100 linear feet per minute with a minimum of 70 linear feet per minute, at any position.
- Affix colored tape to the side of the hood to indicate the sash height, which allows the airflow of 100 linear feet per minute.
- A flexible tag (such as thin plastic) should be taped on each hood sash to indicate whether the hood is pulling air or not.
- Hood exhaust pipe should be positioned so that air currents do not draw fumes from the hood into the room.
- Position portable hoods so that air currents do not draw fumes from hood into the room.
- Fume hoods are never to be used for storage of books, supplies or chemicals.
- Mix volatile, hazardous chemicals in the hoods.
- Never pipet by mouth.
- When sizing sand grains by sifting, work under hood or wear a dust mask to prevent exposure to silica dusts.

JOB CATEGORY: TEACHER - SCIENCE
Type of Facility: Classroom/Lab

SAFE WORK PRACTICE

POTENTIAL HAZARDS**Toxic Substances Illnesses *cont.***

- Replace any asbestos containing clamp sleeves, wire gauze, gloves, pads or other products with ceramic or glass fiber products.
- When using a centrifuge, beware of aerosols that may form. They can spread disease and toxic materials easily.
- Adequate ventilation should be provided whenever preservative fumes are present.
- Wear rubber gloves and eye protection and use forceps or tongs when removing specimens from preservation solution and when dissecting.
- Even though many biological specimens are preserved in formaldehyde, order only specimens that are shipped in alternative low toxicity preservatives.
- Preserved specimens should be thoroughly washed (including abdominal cavities of large specimens) before being handled by a class.
- Store lunches and food away from sources of chemical contamination. Do not eat in chemical use areas.
- One refrigerator should not be used to store both food and chemicals. Separate refrigerators should be used.

Misc. Illnesses**Radiation Hazards**

- Understand state, local and district regulations on the use and disposal of equipment and materials, which produce x-rays, microwaves and alpha, beta and gamma radiation. Refer to State Science Safety Handbook for additional information.
- Exercise extreme caution when removing tubes of television receivers or cathode ray oscilloscopes from their protective housing. Such tube should be removed only when necessary for the experiment.
- Use shields or protective equipment during the use or productions of x-rays, microwaves, lasers, or ultraviolet radiation.
- Radioactive materials use in biological research should be properly marked when not in use, and stored in a secure place where access is limited.

APPENDIX A

CHEMICAL STORAGE COMPATIBILITY CATEGORIES

1. **Metals.** All metals, except mercury (see item No. 8 below). Phosphorus (red only; white or yellow phosphorus not recommended for school usage) should also be stored here.
LOCATION: Separate from oxidizers (including ammonium nitrate), halogens, organic compounds, and moisture.
2. **Oxidizers, except Ammonium Nitrate.** Including nitrates, nitrites, permanganates, chromates, dichromates, chlorates, perchlorates, peroxides, and hydrogen peroxide 30 percent or greater.
LOCATION: Separate from metals, acids, organic materials and ammonium nitrate. Preferable isolate from flammable liquids storage cabinet by a minimum of eight meters (25 feet) or a one-hour firewall.
3. **Ammonium Nitrate.** Store in isolation from all other chemicals, especially acids, powdered metals, flammable liquids, chlorates, nitrites, sulfur, finely divided organic combustible materials.
4. **Bases.** Strong bases – Sodium Hydroxide, Potassium Hydroxide, and other regulated bases and Ammonium Hydroxide. Store in a dedicated corrosive chemicals storage cabinet with the inside constructed entirely of corrosion-resistant materials.
5. **Acids – Inorganic** (except Nitric Acid) and regulated organic acids. Store in a dedicated corrosive chemicals storage cabinet with the inside constructed entirely of corrosion-resistant materials.

NOTE: Items 4 and 5 may be stored in the same storage cabinet if necessary; however, fumes from acids and bases combine to produce various salt crystals, which coat the walls and the containers.

6. **Nitric Acid.** Must be stored separately from Acetic Acid. Store either in isolated compartment in the acids cabinet or in a special Styrofoam container available for that purpose from vendors of chemicals. Fuming nitric acid should never be used.
7. **Flammables (and Formaldehyde).** Store in a dedicated wood flammables storage cabinet with heat/flame retardant paint. Preferably, isolate from all oxidizers by a minimum of eight meters (25 feet) or a one-hour firewall.
8. **Poisons:** Cyanides (no longer recommended for school programs), mercury and mercury compounds, nicotine, and other poisons. LOCATION: Use a lockable drawer remote from the acids storage cabinet.
9. **Compressed gases.** Store chained/strapped to wall with caps on tight. LOCATION:
 - a) Oxidizing gases remote from flammable liquids, metals, and flammable gases.
 - b) Flammable gases remote from oxidizers and oxidizing gases by eight meters (25 feet) or a one-hour firewall.
10. **Low Hazard Chemicals.** Store on open shelves with earthquake barriers. Include many of the salts not otherwise specified (of course, *not* the nitrates), weak bases, oxides, carbonates, sulfides, dyes, indicators, stains, non-corrosive organic acids, amino acids, sugars, etc.

APPENDIX C
CALIFORNIA MEDICAL (BIOLOGICAL) WASTE
MANAGEMENT ACT
HEALTH AND SAFETY CODE, CHAPTER 6.1
SMALL QUANTITY AND NO TREATMENT COMPLIANCE

The following only covers compliance for medical waste generators that generate less than 200 lbs. per month of regulated medical waste, and do not use on-site treatment to dispose of the medical waste.

WHAT IS MEDICAL WASTE? Medical Waste (Biological Waste, Infectious Waste, and Biowaste) is regulated under Chapter 6.1 of the California Health and Safety Code, and is defined as being Biohazard Waste and Sharps Waste.

WHAT IS BIOHAZARD WASTE? Biohazard Waste typically generated at a school is comprised of the following:

1. Discard biological laboratory wastes:
 - a) Cultures, specimens, disposable lab ware, etc. If they contain or are suspected of containing infectious agents. "Infectious agent" means a type of microorganism, bacteria, mold, parasite or virus, which normally causes or significantly contributes to the cause of increased morbidity (disease) or mortality (death) of human beings.
 - b) Animal carcasses, body parts, fluids, and tissues that are stored in a preserving solution or that contain an infectious agent.
 - c) Material contaminated with human blood or other body fluids, whether or not they contain an infectious agent.
2. Discarded material from the nurse's office, or generated while providing first aid that is contaminated with human blood or other body fluids, whether or not they contain an infectious agent.

WHAT IS SHARPS WASTE? Sharps waste is any discarded item that has, contains, or may easily be broken or disassembled to yield acute rigid corners, edges, or protuberances capable of cutting or piercing. Sharps waste may be subcategorized into two classes:

1. Regulated Medical Sharps Waste. These items would typically be used in a setting of procedure that could expose that to infectious agents. Items a) b) and c) are considered medical waste whether or not they contain an infectious agent. **All four of these items must be disposed of as medical waste.**
 - a) Hypodermic needles (with or without the syringe).
 - b) Syringes (with or without the needles).
 - c) Scalpels and razorblades.
 - d) Glass that contains infectious agents, or is otherwise classified under the definition of biohazard waste.
2. Non-Medical Sharps Waste (NO Infectious Agents Present). The items that are not typically used in a setting or procedure that could expose them to infectious agents.

APPENDIX C (continued)
CALIFORNIA MEDICAL (BIOLOGICAL) WASTE
MANAGEMENT ACT

HEALTH AND SAFETY CODE, CHAPTER 6.1
SMALL QUANTITY AND NO TREATMENT COMPLIANCE

3. These items do not have to be disposed of as a medical waste, but there are special procedures that must be followed before throwing this type of waste into a garbage can.
 - a) Pins and non-hypodermic needles (e.g. sewing needles, pushpins).
 - b) Very sharp knives and blades (e.g. exacto, kitchen, steak, etc.)
 - c) Sharp blades from tools (e.g. band saw, scrapers, etc.).
 - d) Glass that may easily be broken while in a garbage can (e.g. Pasteur pipets, microscope slides, glass tubing, but not soda bottles or container jugs unless they are already broken).
 - e) Glass that may easily cut a custodian or another person once discarded into a garbage can. This would include all glass, pottery, etc. that is broken before being put into the garbage can.

Non-Medical sharps waste must be disposed of by containing the sharps in a rigid outer container. Once the container is full, it must be closed securely and then put into a garbage can. The usual container consists of a cardboard box lined with one or two plastic bags. The inner bags are tied shut, and the box is taped closed. Then the box is discarded into a dumpster.

These special procedures are very important when the non-medical sharps waste is being disposed of into an office wastebasket, or any other garbage can that custodians routinely empty.

DOES MY SCHOOL GENERATE MEDICAL WASTE? To answer this question, you must identify all generators according to the above definitions. If there is no medical waste being generated now, or in the future, then there is nothing to worry about. You are in compliance.

HOW MUCH MEDICAL WASTE DOES MY SCHOOL GENERATE? Once you have identified the generators of medical waste, you have to quantify the medical waste that is generated. This is a good point to ask if all medical waste generation can be stopped. If not, try to minimize the amount generated (e.g. do not mix non-medial wastes together with medical wastes, change a class to study non-infectious cultures, etc.). The rate of generation must be determined in pounds per month.

DOES THE SCHOOL GENERATE LESS THAN 200 LBS. OF MEDICAL WASTE PER MONTH? If the school generates less than 200 lbs. per month, then the school is a small quantity generator and must comply with Article 4 of the Medical Waste Management Act. If the school generates more than 200 lbs. per month, then the school is a large quantity generator and must comply with Article 5 of the Medical Waste Management Act. Article 5 is much harder to comply with. It is so important to reduce the quantity of medical waste that is generated to a bare minimum. If your school is a large quantity generator, seek immediate assistance from the County Public Health Department or the State Department of Health Services.

APPENDIX C (continued)
CALIFORNIA MEDICAL (BIOLOGICAL) WASTE
MANAGEMENT ACT
HEALTH AND SAFETY CODE, CHAPTER 6.1
SMALL QUANTITY AND NO TREATMENT COMPLIANCE

THE SCHOOL GENERATES LESS THAN 200 LBS OF MEDICAL WASTE PER MONTH. HOW MUCH OF ARTICLE 4 DOES THE SCHOOL NEED TO COMPLY WITH? If the medical waste that is generated is not treated (incinerated, autoclaved, etc.) at the school, then the school only needs to comply with Article 4, Section 25045.1 to Section 25047. If the waste is being treated on-site, the treatment must be stopped or the school must comply with Article 4 in its entirety.

HOW DOES THE SCHOOL DISPOSE OF MEDICAL WASTE IF THERE IS NO ON-SITE TREATMENT? Options include:

1. Contact a Biowaste Disposal Facility. They can provide approved boxes and red bags for collection of medical wastes. Their services also include the pick up of filled boxes and destruction of medical wastes. For very small quantity generators, small amounts of Biowaste can be shipped through the mail in approved containers to the disposal facility.
2. Contact a local hospital with approved Biowaste destruction facilities. They may be able to accept your wastes. Get prior approval from the County Health Department before making any transfers.

Read Sections 25045.1 to Section 25047 of Article 4. Contact your local County Health Department once you have selected a method to insure that your procedures meet their approval. The state agency that regulates medical wastes is the Department of Health Services, Medical Waste Management Program is 916-322-2042.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

Teacher – Physical Education

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER, PHYSICAL EDUCATION
Type of Facility: Locker Room, Gym, Playing Field

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls On Same Level

- Keep walkways clear of equipment, debris, and other unnecessary clutter.
 - Inspect field or play area prior to use for holes, cracks, raised asphalt or concrete, raised sprinkler heads, etc.
 - Use caution in locker rooms because of water/moisture on floors.
 - Wear appropriate footwear.
-

Falls from High Places

- Always use appropriate ladders or step stools when attempting to reach high items.
-

Back Injuries

- Do stretching exercises prior to instructing, demonstrating, or participating in any physical activities.
 - Attend back safety classes.
 - Learn and use proper lifting techniques and good body mechanics.
-

Being Hit by Falling Objects Caught In or Between

- Make sure that equipment storage areas are well organized to prevent build up of clutter.
- Do not store heavy items on high shelves.
- When supervising sports activities, keep your full attention on the activity to prevent injury from stray balls, etc.

JOB CATEGORY: TEACHER, PHYSICAL EDUCATION
Type of Facility: Locker Room, Gym, Playing Field

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Cuts, Abrasions, Burns and
Other Bodily Injuries**

- Regularly check equipment to insure that it is in proper working condition.
-

Misc. Injuries

- Wear proper apparel and/or use a sun block to prevent excessive exposure to the sun's ultraviolet rays.
 - Be aware of your physical capabilities/limitations when demonstrating or participating in sports activities with students.
 - Do not allow students to participate in unauthorized activities.
 - When supervising activities that have the potential for serious injury, such as archery or shot put, keep your attention focused on the students at all times.
-

**Infectious Diseases or
Health Conditions**

- Learn first aid and CPR.
- Use latex rubber gloves when contact is likely with human body fluids (blood, vomit, urine, feces, etc.).
- Blood and other bodily fluids should be cleaned up with soap and water or District approved disinfectant.
- Schedule alternative indoor activities during periods of excessive heat or cold. Be careful of heat stroke.
- Refer to Appendix F in the General Safe Work Practices for additional information on universal precautions and bloodborne pathogens.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

Teacher – Photography
(Black and White)

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER – PHOTOGRAPHY (BLACK AND WHITE)

Type of Facility: Photography Laboratory

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

Color processing is much more complicated than black and white processing. It is not recommended K-12 due to additional hazards associated with the chemicals. Other specific processes, which should be avoided because the educational value does not warrant the risk, are:

Cibachrome – highly toxic chemicals used in this process are suspected of affecting the female reproductive system, possibly resulting in birth defects and miscarriages.

Gum Printing – requires specific ventilation; dust mask must be worn when using powders.

Cyanotype – Exposure by carbon arc light on potassium ferricyanide can release hydrogen cyanide gas. Eyes and skin are especially sensitive to U.V. radiation.

Daguerreotype - Exposure to highly toxic mercury vapor is possible.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls on Same Level

- Maintain good housekeeping in the darkroom; particularly at the floor level.
 - Clean up all spills immediately.
 - Work carefully in the darkened conditions of the darkroom in order to avoid accidents.
 - Wear non-slip footwear.
-

Back Injuries

- Materials stored on low shelves should be in manageable quantities.
- When working at a bench or worktable for extended period, switch positions often.
- Wear comfortable, low-heeled footwear.
- Do not bend forward with legs straight.

JOB CATEGORY: TEACHER – PHOTOGRAPHY (BLACK AND WHITE)

Type of Facility: Photography Laboratory

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Being Hit By Falling Objects
Caught In Or Between**

- Storage above the counter should be in closed shelving or designed to keep materials from falling.
-

**Cuts, Abrasions, Burns
And Other Bodily Injuries**

- Sharp tools should be stored where they are readily identifiable with points or edges pointed away from user.
 - Replace plastic cover on exacto knives when not in use.
-

Fire Injury

- Oily or solvent-soaked rags should be placed in a U.L. approved oily waste can with a self-closing lid and should be emptied at least once daily.
 - If solvent-containing products are used, they should be in limited quantities and stored in an approved flammable liquid storage cabinet.
 - Know fire extinguisher location and operation.
 - Use a glow in the dark label on the wall to identify the location of the fire extinguisher in the darkroom.
-

Electrical Shock Injuries

- Darkroom electrical systems should meet electrical code standards.
 - Extension cords should not be used for permanent installation.
 - Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
-

Eye Injuries

- When using chemicals, wear goggles.

JOB CATEGORY: TEACHER – PHOTOGRAPHY (BLACK AND WHITE)**Type of Facility: Photography Laboratory****SAFE WORK PRACTICE**

POTENTIAL HAZARD**Eye Injuries *Cont.***

- If eyes are exposed to chemicals, flush with cold water for 15 minutes and check MSDS's for specific emergency procedures.
- Install eyewash and periodically test to insure that it is working properly.
- Whenever possible, store photo chemicals in their original containers.
- If using secondary container, label properly with name and hazard warning.
- Never store chemicals in glass bottles or above eye level.
- Be especially careful when emptying trays to avoid splashing.
- Wear safety glasses when using exacto knife.
- Identify hazards to the eyes and face (chemicals, dust, heat, impact and optical radiation.)
- Reduce hazards.
- Specify proper eye protection in accordance with ANSI Z87.1 – 1989.
- Require that proper eye protection be worn at all times in hazardous areas.
- Use eye protection in conjunction with other appropriate safeguards: machine guards, engineering controls, etc.
- Always read labels on all products and follow directions.

Toxic Chemical Substance Injuries

- Use gloves, which are appropriate to the process being used.
- Wash gloves thoroughly inside and out after use.
- Use tongs when developing film.
- Post emergency procedures, be prepared to handle spills and have chemical spill absorbents available.
- Dangerous chemical reactions may occur if certain chemicals are mixed. Thoroughly flush trays and/or sinks with water between different processes or disposals.
- Never use any chemical without being aware of its hazards. Always review MSDS before using any new chemical.
- Darkroom should have external exhaust system that provides adequate ventilation.
- An exhaust system should be used in any areas where toners, intensifiers, or solvent-containing products are used.
- Do not use materials containing chromic acid, lead, mercury, uranium or cyanide. (This includes chromic acid tray cleaners.)
- Do not allow chemical splashes on clothing or skin to remain until dry. Flush skin or clothing with large amounts of water.
- MSDS sheets should be on file for all chemicals used or stored in the photography lab/dark room.

Misc.

- See Appendix J for information on chemical disposal.

APPENDIX J

DISPOSAL RECOMMENDATIONS FOR ARTISTS

Many artists' materials contain potentially dangerous chemicals; in fact, most of artists' waste products will fall under the hazardous waste category. If not used and disposed of safely, they may cause injury to artists themselves, or cause damage to the general environment. Improper disposal can injure sanitation workers or contaminate water supplies.

WHAT ARE EXAMPLES OF HAZARDOUS WASTE PRODUCTS?

Hazardous waste generated by artists includes left over acrylic and oil paints, cans of paint thinner and stripper, photographic chemicals, aerosol cans, rubber cement, and wood products treated with preservatives. The following points are a valuable checklist when buying or discarding art materials.

- Buy only what you need and plan to use.
- Never mix different waste products together in the same container. Explosive or poisonous chemical reactions may occur.
- Read and follow the label's directions on how to use and dispose of the product. Do not remove labels.
- Store unused products in a safe place away from children, pets, or sources of ignition.
- Use non-toxic materials whenever possible.
- Recycle used hazardous substances whenever possible. For example, let paint particles settle in paint thinner and decant the clear thinner to use again.
- Use up or give to fellow artists, hazardous materials rather than throwing them out.
- Take advantage of household hazardous waste (HHW) collection programs in your county. Call your county environmental health department for information.
- Consider pooling wastes with other nearby school districts for disposal by a licensed hazardous waste hauler in order to reduce costs. Remember, however, never mix different hazardous materials together and always label the storage container.

Attached is a list of particular kinds of waste products and instructions for correct disposal.

PAINTS

Latex-Based Paints

- Think reuse. Can another artist use the material? Can you use the leftover latex paint as an undercoat?
- Disposal may vary from community to community. Some landfills will allow dry latex paint to be disposed of; others may recommend mixing the latex with a dry absorbent such as kitty litter. Check with your local landfill for their recommendation.
- Do not dispose of liquid latex paint with your household trash.

APPENDIX J (continued) DISPOSAL RECOMMENDATIONS FOR ARTISTS

Oil-Based Paint and Products

- Think reuse.
- Disposal of hardened paint may be allowed along with household trash. Check with your local landfill for their recommendation.
- Lead-based paints should be treated as a hazardous waste. Follow your District's waste disposal procedures.

Artists' Oil, Acrylics

- Non-toxic paints can be dried and disposed of in regular trash.
- Paints containing antimony, barium, cadmium, chrome, cobalt, lead, manganese, molybdenum, strontium and zinc should be disposed of according to your District's waste disposal procedures.

Sprays Paints, Adhesives or Lacquers

- Dispose of EMPTY aerosol cans in the regular trash.
- Spray unused portion, allow to dry.
- Avoid clogging spray nozzles.

Paint Strippers

- Think recycle/reuse.
- Lye-based strippers can be diluted greatly and flushed into a water treatment system, but not into septic tanks.
- Solvent-based strippers often contain methylene chloride and require special hazardous waste handling. Dispose of according to your District's waste disposal procedures.

Paint Sludges

- Completely dry out sludge.
- Those sludge containing heavy metals should be disposed of according to your District's waste disposal procedures.

SOLVENTS AND THINNERS

- Combine only like materials for disposal and label contents clearly.
- Transport less than 5 gallon quantities to hazardous waste collection site or directly to solvent recycler.
- Do not transport in passenger compartment of vehicle.
- Methylene chloride products should be disposed of according to your District's waste disposal procedures.

APPENDIX J (continued)
DISPOSAL RECOMMENDATIONS FOR ARTISTS

GLUES AND EPOXY RESINS

- Harden in well-ventilated and secure area and dispose as solid waste in regular trash.

TREATED WOOD

- Pentachlorophenol, creosote (PCP, Penta-20 ,etc.) and other treated woods should not be burned.
- Consult your local HHW collection program for disposal information. Some programs are not accepting pentachlorophenol due to the problem with dioxin contamination and the unavailability of disposal facilities.
- Consult your local landfill for information on disposal of treated wood.

ASBESTOS

- Small asbestos-containing items such as gloves, pads, and boards should be wet thoroughly, wrapped in heavy plastic bags and placed directly in sanitary landfill.
- (Garbage pickups often involve compaction, which may release fibers from material.)
- Consult your local landfill for information on disposal of asbestos containing material.

PHOTOGRAPHIC CHEMICALS

- Of the chemicals found in photographic solutions, including used solutions, silver, hexavalent, chromium (present usually as chromate), and ferrocyanide are of major concern. The remainder of the chemicals, if disposed in small amounts, can be generally be discharged to a water treatment plant. (Silverion is present in the used photo chemical solutions, especially fixers and may be recovered with the appropriate equipment.
- Consult the Material Safety Data Sheet (MSDS) which is required by law to provide health and safety information on a product, and supplier for disposal information on a product and supplier for disposal information, especially regarding silver recovery.
- Unused selenium toners, chromium and cyanide containing products should be delivered to a hazardous waste collection program or provided to other photographers.
- Solutions may require special disposal. Consult "Disposal of Small Volumes of Photographic Processing Solutions", Eastman Kodak publication J-52, 343 State Street, Rochester, NY-14650.

APPENDIX J (continued)
DISPOSAL RECOMMENDATIONS FOR ARTISTS

CERAMIC GLAZES

- Heavy metal containing glazes should be solidified by firing and disposed with regular trash. If it is not possible to solidify by firing, dispose of as a hazardous waste according to your District's waste disposal procedures.
- Prevent airborne exposure to custodians or refuse personnel by bagging ceramic wastes, wetting or solidifying prior to disposal.

PRINTMAKING SOLUTIONS

- Acid etching solutions containing metals, i.e. zinc or aluminum, require special handling. Dispose of according to your District's waste disposal procedures.
- Industrial shops may have similar waste for consolidation.

SOLVENT CONTAMINATED RAGS

- Flammability of rags is a prime concern. For safe storage, utilize a ventilated container or aerate the rags. Separate from incompatible materials such as TSP bleaches, acids and ammonia and dispose of according to your District's waste disposal procedures.
- If an industrial rag service is used, store solvent contaminated rags in a UL listed rag container with a self-closing lid. Make sure that the rags are removed on a regular basis to avoid overfilling the container.
- Regularly exchange used rags for fresh rags.
- Do not wash solvent contaminated rags in home washing machines.

NOTE: The definition of hazardous waste and how to dispose of it can be a complicated discussion. While Federal law provides for a distinction between hazardous wastes generated by large generators (over 100kg/month) and hazardous wastes generated by "small quantity generators", (under 100kg/month) California makes no such distinction: all hazardous wastes must be disposed of at a permitted hazardous waste facility. Due to the diversity of artists themselves, some artists will produce wastes, which are commensurate with small quantity generator status; other artists will parallel the household hazardous waste stream. Recent EPA correspondence indicates that household wastes are currently excluded from regulation under Federal hazardous waste laws. (Non-household sources are subject to these laws.)

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES
Teacher – Music

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER - Music
Type of Facility: Classroom/Music Room/Auditorium

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls

On Same Level

- Every floor or attic opening should be guarded by a cover, a guardrail, a person, or equivalent to insure that no one can fall in.
 - Tape down cords and other tripping hazards.
 - Use of powders, smoke, etc. to create special effects can cause slip or fall hazards and should be evaluated prior to use.
-

Falls From

High Places

- Never use a broken ladder.
 - Never stand on chairs, tables or desks to reach high items. Always use an appropriate step stool or ladder.
 - Keep stairways free of debris, water or other slip hazards.
 - Be aware of the edge of the stage and poorly lighted stairways during performances and rehearsals.
 - Gaining access by climbing on structures or walking on undecked floor supports is prohibited. Use a ladder.
-

Being Hit By Falling

Objects/ Caught In or

Between

- Make sure overhead lighting and other overhead items are secure and installed properly.
- Limit high storage of musical instruments and other items.
- Employees working in areas where there is possible danger of head injury from impact, or falling objects, should wear non-conductive/ hard hats.

JOB CATEGORY: TEACHER - MUSIC
Type of Facility: Classroom/Music Room/Auditorium

SAFE WORK PRACTICE

POTENTIAL HAZARD

Fire Injury

- Know fire extinguisher location and operation.
 - Electrical devices used for simulating waterfalls, lighting, etc., should be constructed to keep flames, sparks or hot particles away from combustible materials.
 - Smoking should not be allowed in the vicinity of any operation which constitutes a fire hazard (i.e., welding, painting, sawdust areas, etc.).
 - Flammable liquids, such as gasoline, solvents or acetone should be properly labeled and stored in approved safety cans.
 - Maintain and store appropriate type fire extinguishers within 75 feet of any work area.
 - Have extinguisher immediately available in locations of high hazard operations, such as welding/cutting, flammable liquid use areas, etc.
 - Use water based paints instead of oil based paints.
 - Temporary construction, such as scenery, should be either non-combustible or have a fire resistant rating of not less than one hour. Treat with flame retardant if necessary. Follow all local fire department regulations in the construction of stage props and materials.
 - Do not block exits, exit lights, fire alarms, hose cabinets, or fire extinguishers. They must be clearly visible.
 - Clean up areas where combustible dusts (i.e., sawdust) can accumulate.
 - Oily or solvent-soaked rags should be placed in a U.L. approved oily waste can with a self-closing lid and should be emptied at least once daily.
 - Torches shall be lighted by friction lighters or other approved devices, not by matches or from hot work.
 - Use maximum ventilation when mixing or using hazardous materials.
 - Inspect torches before each use for leaks in valves, hose couplings, or tip connectors. Remove from service and tag if defects are found.
 - Do not tamper with safety devices.
-

Misc. Injuries

- Be familiar with emergency call numbers and procedures.
- Be aware of basic ergonomic guidelines for the prevention of repetitive motion injuries.
- Use hearing protection when it is not possible to reduce noise levels.
- When constructing scenery and other stage props, be aware of the potential for earthquakes and do not create additional hazards from falling materials or blocked exits.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORKING PRACTICES

Teacher
Industrial Education
Metal Shop

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, METAL SHOP

Type of Facility: Classroom, Metal Shop

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

Because of the inherent dangers involved in metal shop, it is in the best interest of the teacher that all students be trained and certified in the use of all of the Metal Shop equipment before they are allowed to do any work. They should also be required to sign a contract affirming that they will follow the proper safe work practices at all times while in the shop.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls on Same Level

- Keep work area clean and free of metal scraps, filings, etc.
 - Wear non-slip footwear.
 - Mark aisles/walkways and safety zones.
 - Immediately clean up any spills; oil, grease, etc.
 - Electrical extension and power cords should not pose a tripping hazard.
 - Provide proper lighting in work area.
-

Back Injuries

- Cylinders weighing more than 40 pounds should be transported by a hand truck/cart and should be securely fastened.
 - Always use proper lifting techniques and good body mechanics.
-

Being Hit By Falling Objects Caught In or Between

- Wear safety-toed footwear.
- Return bar and sheet metal stock to proper storage rack and secure.
- Cylinders may be rolled on the bottom edge but never dragged.
- Store cylinders in upright position in a secure, dry, well-ventilated area.

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, METAL SHOP
Type of Facility: Classroom, Metal Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Cuts, Abrasions, Burns and
Other Bodily Injuries**

- When welding, wear leather gloves, apron, jacket or pants.
- When steam cleaning or using dip tank use rubber apron and gloves.
- Cut away from your body while using sharp-edged tools.
- Secure work in a vise or clamp during cutting, fabrication, filing, etc.
- Properly maintain hand tools: clean, oil, sharpen, file and store.
- Store sharp hand tools so they are visible and edges are pointed away from user.
- Secure long hair back.
- Do not pick up or touch work piece/parts, which may have become hot because of friction.

HAND INJURIES:

- Keep hands and the handles of tools clean of oil and grease.
- Do not slide fingers over edges of sheet metal.
- Remove “burrs” and “fish hooks” before working on the metal.
- Keep hands clear of the movable parts of all hand operated equipment or tools.
- Do not hold small objects in hand while screwing, bolting, assembling, prying, or doing similar activities.
- Use tools, which have tight handles in good condition.
- Select proper wrench and always pull rather than push.
- Use palm of hand on wrench when tightening or loosening nuts to avoid smashed fingers.
- Do not use wrenches that are cracked, sprung or have worn jaws.
- Turn adjustable wrench so handle moves toward the moveable jaw of wrench.
- Do not permit handle of vice to drop and pinch fingers.
- Hold chisels and punches securely to minimize slipping.
- Do not clean chips or slivers from machine with bare hands. Use a brush.
- Do not handle metal turnings from lathe with bare hands.

**Cuts, Lacerations, And
Eye Injuries from Power
Equipment**

- Do not wear jewelry while operating power equipment.
- Wait until machine has come to a complete dead stop before making adjustments, cleaning, etc.
- Follow lock-out/tag out procedures before making any adjustments, or performing regular maintenance.

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, METAL SHOP
Type of Facility: Classroom, Metal Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Cuts, Lacerations, And
Eye Injuries from Power
Equipment *cont.***

- Use designated traffic zones.
 - Use caution when moving stock/material past a person operating a machine or power tool.
 - Always use machine guards.
 - Report any machine or tool that is not functioning properly or needs maintenance.
-

Fire Injury

- Know fire extinguisher location and operation.
 - Oily or solvent-soaked rags should be placed in a U.L. approved oily waste can with a self-closing lid and should be emptied at least once daily.
 - Smoking should not be allowed in shop.
 - Follow good housekeeping practices and clean up regularly.
 - Do not grind magnesium (explosive).
 - Do not carry matches, butane lighter, etc. when working around furnaces or when welding.
 - Store all flammable liquids in a U.L. approved flammable liquid storage cabinet.
 - Keep oil and grease from making contact with oxygen cylinder when welding.
 - Remove combustible materials from welding area.
 - Keep solvent tank lid closed when not in use.
 - Do not use gasoline for cleaning.
 - Oxygen cylinders should not be stored within 10ft. of fuel cylinders (Unless on a welding cart). If closer than 20 feet, cylinders should be separated by a fire-resistant partition at least 5 ft. high with a fire-resistant rating of at least 1 hour. (NFPA51, Oxygen fuel, Gas Systems for Welding, Cutting and Allied Processes.)
-

Electrical Shock Injuries

- Make sure hands are dry before operating power tools.
 - Power tools and machinery should be grounded.
 - Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
-

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, METAL SHOP
Type of Facility: Classroom, Metal Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

Misc. Injuries

- Do not use air hose to clean yourself or others.
 - Install a safety tip on all air nozzles.
 - Do not sweep the floor or clean machines with an air hose.
 - Hearing protection may be needed in noisy areas of the shop or in welding and cutting operations.
-

Eye Injuries

- Wear eye protection while performing any activity in the metal shop (drilling, grinding, etc.) or using any hazardous substances likely to cause injury to the eyes. **Note: Face shields are to be used only as secondary protection. Goggles must be worn as primary protection. (ANSI Standard Z87.1)**
 - When arc welding, use helmet or shield with a filter lens shade of 10-14.
 - When gas cutting/ welding or torch brazing, use a filter lens shade of 3-8.
 - When torch soldering, use a filter lens shade of 1.5-3. (ANSI Standard, Z87.1)
 - Use flash curtains when welding.
 - Identify hazards to the eyes and face (chemicals, dust, heat, impact and optical radiation.)
 - Reduce hazards.
 - Specify proper eye protection in accordance with ANSI Z87.1.
 - Require that proper eye protection be worn at all times in hazardous areas.
 - Use in conjunction with other appropriate safeguards: machine guards, engineering controls, etc.
 - Always read labels on all products and follow directions.
-

Dermatitis

- Use cutting fluids, oils, etc. of low toxicity/irritant potential.
 - Follow “good housekeeping” practices. Clean machinery, floors, etc.
 - Follow good personal hygiene. Wash hands frequently.
 - Use personal protective equipment when possible, such as gloves, barrier creams (least effective).
-

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, METAL SHOP
Type of Facility: Classroom, Metal Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

Respiratory Illnesses

- See attached information on respiratory protection (Appendix L).
- Do not weld, braze, or cut galvanized metals due to zinc oxide fumes, which are formed. Exposure to these fumes can result in zinc chills, metal fume fever, brass chills and brass founders fever.
- Whenever the materials listed below are encountered as designated constituents in welding, brazing or cutting operations, ventilation precautions should be taken to assure the level of contaminants in the atmosphere is below the limit allowed for exposure:
 - ❖ Antimony
 - ❖ Arsenic
 - ❖ Barium
 - ❖ Beryllium
 - ❖ Cadmium
 - ❖ Chromium
 - ❖ Cobalt
 - ❖ Copper
 - ❖ Lead
 - ❖ Manganese
 - ❖ Mercury
 - ❖ Nickel
 - ❖ Selenium
 - ❖ Silver
 - ❖ Vanadium

(Refer to Material Safety Data Sheets to identify any of the materials listed above.)

- Provide ventilation, which directs the plume away from the welder's breathing area. Reposition the work or yourself in order to accomplish this.

APPENDIX L

OSHA'S REQUIREMENTS FOR A MINIMAL RESPIRATOR PROGRAM

1. "Written standard operating procedures (S.O.P.) governing the selection use of respirators shall be established."
2. "Respirators shall be selected on the basis of the hazards to which the worker is exposed.
3. "The user shall be instructed and trained in the proper use of respirators and their limitations."
4. "(Reserved) "where practicable, the respirators should be assigned to individual workers for their exclusive use." (OSHA recommended only)
5. "Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use."
6. "Respirators shall be stored in a convenient, clean, and sanitary location.
7. "Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use, such as self-contained breathing devices, shall be thoroughly inspected at least once a month and after each use.
8. "Appropriate surveillance of work area conditions and degrees of employee exposure or stress shall be maintained.
9. "There shall be regular inspections and evaluations to determine the continued effectiveness of the program."
10. "Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed annually.
11. "Approved or accepted respirators shall be used when they are available."

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORKING PRACTICES

**Teacher
Industrial Education
Wood Shop**

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, WOOD SHOP

Type of Facility: Classroom, Wood Shop

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

Because of the inherent dangers involved in wood shop, it is in the best interest of the teacher that all students be trained and certified in the use of all of the Wood Shop equipment before they are allowed to do any work. They should also be required to sign a contract affirming that they will follow the proper safe work practices at all times while in the shop.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Fall on Same Level

- Electrical extension and power cords should not pose a tripping hazard.
 - Clean up sawdust, scrap lumber, and other material.
 - Keep work areas clean and free from scraps, excess sawdust, oils, and other materials.
 - Wear non-slip footwear.
 - Mark aisles/walkways and safety zones.
-

Back Injuries

- Get help when working with large pieces of wood.
 - Do not stand at a workbench in one position too long.
 - When working at a bench, stand with one foot elevated to a comfortable level. Switch position often.
 - Wear comfortable, low-heeled footwear.
 - Always use proper lifting techniques and use good body mechanics.
-

Being Hit By Falling Objects Caught In Or Between

- Wear safety-toed footwear. (Open toed shoes, sandals and tennis shoes are not appropriate)
- Keep materials stacked/stored neatly.
- Stationary equipment should be bolted to the floor.

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, WOOD SHOP
Type of Facility: Classroom, Wood Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Cuts, Abrasions, Burns and
Other Bodily Injuries**

- When possible, use vises or clamps to hold lumber, project, etc., during cutting, fabrication or sanding.
- Wear protective clothing; aprons, gloves, or shop coats. (Keep shop coats buttoned.)
- Use care when handling lumber or objects with rough edges.
- Properly maintain hand tools: clean, oil, sharpen, file and store.
- Store chisels, knives, and/or other sharp hand tools so they are visible and edges point away from user.
- Do not carry tools in pockets.
- Carry sharp tools/pointed objects away from you and other people.
- Keep hands free of oil and grease.
- Do not wear loose fitting clothing or jewelry.
- Secure long hair back.
- Check/remove nails and /or other objects from lumber and other materials, which are donated or are received from remodels.
- Use caution when moving stock/material past a person using hand tools or equipment.
- Do not clean wood chips, sawdust, etc., with bare hands.
- Select proper wrench and always pull rather than push.

**Cut, Lacerations, And Eye
Injuries From Power Equipment**

- Make sure machine has come to a complete, dead stop before cleaning scraps.
 - Follow lock-out/tag-out procedures before making adjustments, changing blades or performing regular maintenance.
 - Use traffic zones.
 - Use caution when moving stock/material past a person using machine or power tools.
 - Always use machine guards.
 - Use clamps and push sticks.
 - Report any machines or tools that do not function properly or need maintenance.
 - Safety zones should be clearly marked on floor around stationary power equipment (minimum of 3 feet, with 4 feet preferred.)
-

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, WOOD SHOP
Type of Facility: Classroom, Wood Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

Fire Injury

- Oily or solvent-soaked rags should be placed in a U.L. approved oily waste can with a self-closing lid and should be emptied at least once daily.
 - Paints, stains, thinners, etc., should be stored in a U.L. listed flammable liquid storage cabinet.
 - Quantity of flammable liquids should be limited to the maximum permitted by the local fire department or 10 gallons (NFPA 30).
 - Smoking should not be allowed in shop.
 - Know fire extinguisher location and operation.
 - Extinguishers should be unobstructed.
 - Follow good housekeeping, regularly clean up and remove sawdust, scraps and waste.
 - Dust collection should be provided and vented to outside rather than return air to shop.
 - Schedule regular pick up and disposal of dust collection system.
-

Electrical Shock Injuries

- Power hand tools and machinery should be grounded.
 - Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
-

Misc. Injuries

- Install safety tips on all air nozzles.
 - Do not use air hose to clean yourself or other people.
 - Grind “mushroomed” heads off chisels, punches and hammers.
 - Do not use hand tools with loose or cracked handles.
 - Wear appropriate hearing protection when operating wood working equipment.
-

Eye Injuries

- Wear safety glasses/goggles.
- Wear face shield in addition to safety glasses. Face shields are to be used only as secondary protection. Primary protection must be provided by approved safety glasses (ANSI Z87.1).
- Identify hazards to the eyes and face (chemicals, dust, heat, impact and optical radiation.)

JOB CATEGORY: TEACHER – INDUSTRIAL EDUCATION, WOOD SHOP
Type of Facility: Classroom, Wood Shop

SAFE WORK PRACTICE

POTENTIAL HAZARD

Eye Injuries *cont.*

- Reduce hazards.
 - Specify proper eye protection in accordance with ANSI Z87.1.
 - Require that proper eye protection be worn at all times in hazardous areas.
 - Use in conjunction with other appropriate safeguards: machine guards, engineering controls, etc.
 - Always read labels on all products and follow directions.
-

Toxic Substance Illnesses

- Never use any chemical without being aware of its hazards. Always review MSDS before using any new chemical.
- Use a disposable type mask to avoid nuisance dust created during sanding, etc.
- Use appropriate respirator when spray painting and receive proper training prior to use.
- To prevent respiratory illnesses, woodworking machines should be provided with a dust collection system. (As an alternative, portable collectors can be used.)
- Follow good personal hygiene. Do not eat, drink or smoke while handling or applying paints, stains or other chemicals.
- Provide good ventilation when using solvent based products (i.e. adhesives, finishes, paints, pain removers, etc.).
- Obtain Material Safety Data Sheets (MSDS) on all wood shop products, adhesives, finishes, paints etc. (Hazard Communication Program) and receive proper training.
- Avoid wood treated with PCP, arsenic or creosote.
- See attached information on respiratory protection. Appendix L.

APPENDIX L

OSHA'S REQUIREMENTS FOR A MINIMAL RESPIRATOR PROGRAM

1. "Written standard operating procedures (S.O.P.) governing the selection use of respirators shall be established."
2. "Respirators shall be selected on the basis of the hazards to which the worker is exposed."
3. "The user shall be instructed and trained in the proper use of respirators and their limitations."
4. "(Reserved) "where practicable, the respirators should be assigned to individual workers for their exclusive use." (OSHA recommended only)
5. "Respirators shall be regularly cleaned and disinfected. Those used by more than one worker shall be thoroughly cleaned and disinfected after each use."
6. "Respirators shall be stored in a convenient, clean, and sanitary location."
7. "Respirators used routinely shall be inspected during cleaning. Worn or deteriorated parts shall be replaced. Respirators for emergency use, such as self-contained breathing devices, shall be thoroughly inspected at least once a month and after each use."
8. "Appropriate surveillance of work area conditions and degrees of employee exposure or stress shall be maintained."
9. "There shall be regular inspections and evaluations to determine the continued effectiveness of the program."
10. "Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment. The local physician shall determine what health and physical conditions are pertinent. The respirator user's medical status should be reviewed annually."
11. "Approved or accepted respirators shall be used when they are available."

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

Teacher-Home Economics

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER - HOME ECONOMICS
Type of Facility: Home Economics Classroom

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

SAFE WORK PRACTICES

POTENTIAL HAZARD

Slip and Falls On Same Level

- Clean up all spills immediately.
 - Do not place cords across walkways.
 - Wear appropriate footwear.
-

Falls From High Places

- When using a step stool to reach high cupboards, make sure it is properly positioned and will not fold up or tip over.
 - Do not use a chair or table to reach high objects. Use step stool or ladder.
-

Back Injuries

- Carry no more than two bags of groceries at a time. Use a cart if available.
 - Get help for heavy items.
 - Safe lifting in service is strongly recommended for this job classification.
 - Use proper lifting techniques when loading and unloading ovens.
-

Cuts, Abrasions, Burns And Other Bodily Injuries

- Use extreme caution when using a sewing machine equipped with a fabric cutter.
- Use extreme caution when using a seam ripper.
- Carry scissors point down at your side.
- Make sure scissors are properly stored with points away from the user.
- Make sure sewing machine needles are straight and not broken.

JOB CATEGORY: TEACHER - HOME ECONOMICS
Type of Facility: Home Economics Classroom

SAFE WORK PRACTICES

POTENTIAL HAZARD

Fire Injuries *cont.*

- Make sure that stove hoods and vents are regularly cleaned to prevent the build-up of grease.
 - Make sure that clothes dryer vent ducts are regularly cleaned to prevent the build-up of lint.
 - On gas stoves, make sure that all pilot lights are lit and gas is shut off to the burners before leaving for the day.
 - Make sure that all electric appliances are turned off before leaving for the day.
-

Electrical Shocks

- Check and maintain electric cords in good condition.
 - Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
-

Misc. Injuries

- Store only food in refrigerators. Do not store chemicals or other hazardous materials in the refrigerator.
 - Never store cleansers and chemicals in unmarked containers or in food storage areas.
 - Wear proper safety equipment and ensure that the area is well ventilated when using chemical oven cleaners.
-

JOB CATEGORY: TEACHER - HOME ECONOMICS
Type of Facility: Home Economics Classroom

SAFE WORK PRACTICES

POTENTIAL HAZARD

Cuts, Abrasions Burns And Other Bodily Injuries

- Do not allow needle to hit straight pins when sewing.
 - Make sure pins and needles are stored properly and not left lying around.
 - Knives:**
 - Always watch what you are doing. Do not look away from knife while cutting,
 - Keep knives sharp so that excessive pressure is not required to cut.
 - Never leave knife under any other object.
 - Move with caution when taking knives to and from their storage area.
 - Knives should never be stored in a drawer or on a rack with any other implement.
 - Always store knives with the points away from user.
 - The use of magnetic, wall mount knife holders is not recommended.
 - Knives shall be washed separately, one at a time, and should never be released in the dishwasher.
 - When finished with a knife, put it away.
 - Use extreme care when working around stoves or ovens. Do not touch their surfaces without knowing if they are hot or cold.
 - Use extreme care when carrying or pouring hot liquids or grease.
 - Turn pots and pans so their handles do not protrude beyond cooking surfaces or over a heating unit.
 - Use potholders when handling utensils, which may be hot.
 - Due to heat retention, do not wear wool clothing in kitchen area.
-

Fire Injuries

- Know fire extinguisher location and operation.
- Do not locate fire extinguisher over or near stoves.
- Never leave food cooking unattended on stovetop.
- In case of a stove top fire, extinguish a small fire by carefully sliding a lid over the burning pot or pan. If unable to approach fire, use a fire extinguisher. Baking soda should not be used as an extinguisher in schools.
- In case of an oven fire, close the oven door and turn off the heat.
- Keep all combustibles away from cooking surfaces.
- If possible, use irons that automatically shut off when not used.
- Before lighting a gas stove after the pilot light has gone out, turn the gas off and ventilate the stove and room thoroughly.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES
Teacher – Drama

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER - DRAMA
Type of Facility: Theater

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls

On Same Level

- Every floor or attic opening should be guarded by a cover, a guardrail, a person, or equivalent to insure that no one can fall in.
 - Tape down cords and other tripping hazards.
 - Use of powders, smoke, etc. to create special effects can cause slip or fall hazards and should be evaluated prior to use.
-

Falls From

High Places

- Never use a broken ladder.
 - Keep stairways free of debris, water or other slip hazards.
 - Be aware of the edge of the stage and poorly lighted stairways during performances and rehearsals.
 - Gaining access by climbing on structures or walking on undecked floor supports is prohibited. Use a ladder.
 - Riding on material handling devices, such as forklifts, which are not designed for human transport is prohibited.
 - Never ride a moving scaffold.
 - See Appendix M for additional information on ramps, elevated platforms, ladders and scaffolds.
-

Being Hit By Falling

Objects/ Caught In or

Between

- Arrange storage of materials so that aisles are created which are at least 24" wide with headroom of at least 6'8".
- Make sure overhead lighting and other overhead items are secure and installed properly.
- All materials stored in tiers should be stacked, racked, blocked or interlocked, or otherwise secured to prevent sliding, falling or collapse.
- Employees working in areas where there is possible danger of head injury from impact, or falling objects, should wear non-conductive/ hard hats.

JOB CATEGORY: TEACHER - DRAMA
Type of Facility: Theater

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Cuts, Abrasions,
Burns and Other
Bodily Injuries**

- Remove nails from used lumber before stacking. Do not simply bend nails over.
 - Knives and other sharp instruments should be sheathed when carried.
 - Wedges, hammers and chisels should be kept clean, sharp and dressed.
 - Do not use broken tools or equipment.
 - The wooden handles of tools should not be splintered or cracked and should be set firmly in the tool.
 - Sharp tools should be put away in designated areas after use.
-

**Cuts, Lacerations, And
Eye Injuries From
Power Equipment**

- Never use any power tools without training in proper use.
 - Wear gloves, safety glasses and other protective devices when using power tools.
 - Impact type tools, such as drift pins, wedges and chisels should be kept free of mushroom heads.
 - Inspect equipment for damage and other hazards before starting.
 - Follow manufacturer's safe operation procedures for each piece of equipment.
 - Start up switches should be covered by guards to prevent inadvertent start-ups.
 - Safety zones should be clearly marked on floor around stationary power equipment (minimum of three feet, with four feet preferred.)
 - Be sure machine guards are in place.
 - Clean up debris and cuttings when machine is at a dead stop.
 - When using power tools and equipment ensure that loose clothing, hair, jewelry, etc. are tied back or secured so they cannot become entangled in moving parts.
 - Follow lockout-out/tag-out procedures when repairing or adjusting equipment.
-

Fire Injury

- Know fire extinguisher location and operation.
- Electrical devices used for simulating waterfalls, lighting, etc., should be constructed to keep flames, sparks or hot particles away from combustible materials.
- Smoking should not be allowed in the vicinity of any operation which constitutes a fire hazard (i.e., welding, painting, sawdust areas, etc.).

JOB CATEGORY: TEACHER-DRAMA
Type of Facility: Theater

SAFE WORK PRACTICE

POTENTIAL HAZARD

Fire Injury, *cont.*

- Flammable liquids, such as gasoline, solvents or acetone should be properly labeled and stored in approved safety cans.
 - Maintain and store appropriate type fire extinguishers within 75 feet of any work area.
 - Have extinguisher immediately available in locations of high hazard operations, such as welding/cutting, flammable liquid use areas, etc.
 - Use water based paints instead of oil based paints.
 - Temporary construction, such as scenery, should be either non-combustible or have a fire resistant rating of not less than one hour. Treat with flame retardant if necessary. Follow all local fire department regulations in the construction of stage props and materials.
 - Do not block exits, exit lights, fire alarms, hose cabinets, or fire extinguishers. They must be clearly visible.
 - Clean up areas where combustible dusts (i.e., sawdust) can accumulate.
 - Oily or solvent-soaked rags should be placed in a U.L. approved oily waste can with a self-closing lid and should be emptied at least once daily.
 - Torches shall be lighted by friction lighters or other approved devices, not by matches or from hot work.
 - Use maximum ventilation when mixing or using hazardous materials.
 - Inspect torches before each use for leaks in valves, hose couplings, or tip connectors. Remove from service and tag if defects are found.
 - Do not tamper with safety devices.
-

Electrical Shock Injuries

- Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
- Clearly label power shut offs.
- Install temporary barricades around energized electrical equipment that is open to passers-by.
- Use only three prong extension cords with portable electrical tools.
- Protect electric cables from breakage due to traffic, sharp corners, pinching in doors, etc.
- Do not fasten electric cords with staples, hang from nails, or suspend with wire.
- No bare conductors can be used on stage for temporary use. Use insulated single conductors.
- Fixtures, lamp holders, and receptacles should have no live parts exposed to contact.
- Portable stage switchboards should be supplied only from outlets of sufficient voltage and amp rating with externally operable enclosed fused switches or circuit breakers.
- All electrical equipment should be marked with voltage, current, wattage, or other rating to indicate purpose.
- All AC circuits and systems must be grounded.
- Do not hoist or lower electric tools by their cords.
- Only qualified persons should work on electrical equipment or systems.

JOB CATEGORY**TEACHER - DRAMA****Type of Facility:****Theater**

SAFE WORK PRACTICE

POTENTIAL HAZARD**Electrical Shock Injuries *cont.***

- When working on electrical systems, wear rubber soled shoes and use insulated tools.
 - Temporary lights should be equipped with a guard to prevent contact with the bulb.
 - Construct all lighting systems according to approved electrical and building codes.
 - All electrical equipment and systems should be treated as energized until tested or otherwise proven to be de-energized.
 - Back feeding of circuits is prohibited.
 - Maintain all electrical equipment in safe working order.
 - Follow lock-out/tag-out procedures when working on any electrical system or equipment.
-

Eye Injuries

- Compressed air should not be used for cleaning purposes except where reduced to less than 30 p.s.i. Use with effective chip guarding and personal protective equipment (goggles).
 - Eye protection (goggles, safety glasses with side shields, etc.) is required where there is an inherent probability of injury from flying particles such as sawing, grinding, sanding, etc.
 - Identify hazards to the eyes and face (chemicals, dust, heat, impact, and optical radiation).
 - Reduce hazards.
 - Specify proper eye protection in accordance with ANSI Z87.1.
 - Require that proper eye protection be worn at all times in hazardous areas.
 - Use eye protection in conjunction with other appropriate safeguards: machine guards, engineering controls, etc.
 - Always read labels on all products and follow directions.
-

Misc. Injuries

- Be familiar with emergency call numbers and procedures.
 - Use hearing protection when it is not possible to reduce noise levels.
 - When constructing scenery and other stage props, be aware of the potential for earthquakes and do not create additional hazards from falling materials or blocked exits.
-

**Toxic Chemical
Substance Injuries**

- Report any asbestos-like materials to your supervisor. Do not handle them.
- Know location of Material Safety Data Sheet (MSDS) for products in use and how to read them.

JOB CATEGORY
Type of Facility:

TEACHER - DRAMA
Theater

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Toxic Chemical
Substance Injuries**

- All chemicals, either in original or secondary containers, should be marked with identity and hazard warning.
- If corrosives or other eye-damaging chemicals are used, an eyewash and/or safety shower should be available.
- Maintain and periodically test eyewash stations and safety showers.
- Insure that protective clothing and equipment are in good repair, fit properly, and are used when needed.
- If clothing becomes contaminated, remove and change immediately.
- Use maximum ventilation when mixing or using hazardous materials.

APPENDIX M

RAMPS

1. Insure that ramps are firmly secured against displacement.
 2. Construct ramps in accordance with California Code (CA08 3233/CA24 2-3306) which requires that an industrial ramp not exceed 1 vertical to 8 horizontal. Ramp must be at least 2 feet wider than the largest vehicle or cart used on it. Ramps exceeding 1 vertical to 15 horizontal should have handrails and curbs (at least 8" high) to prevent cart wheels from running off path.
-

STAIRS

1. Stairways with four or more risers should have handrails on each side.
 2. Temporary stairs must be at least 24" wide and equipped with treads and handrails. A landing 30" deep must be placed for every 12 feet of vertical rise.
 3. If stairs do not have headroom clearance of 6'6" or more, place warning signs on or near the obstruction.
-

ELEVATED PLATFORMS

1. On elevated locations in excess of 30" above the floor, working area, or ground, guardrails or other means to protect people from falling should be provided on all open sides.
 2. When working at elevations over 15' (i.e., walking on open beams sliding down beams, or working on thrust outs), a safety belt is required. No exceptions.
-

LADDERS

1. Do not use ladders with broken or missing rungs or steps, broken or split side rails, or other defective construction.
2. When defective ladders are discovered they should immediately be withdrawn from service and tagged "Dangerous, Do Not Use."
3. Ladders should be maintained in good condition at all times: the joint between the steps and side rails should be tight, all hardware fittings should be securely attached, and all movable parts should operate freely without binding or undue play.
4. Keep ladder steps free of grease or oil.
5. Store ladders by lashing or securing them in position.
6. If using a ladder in a doorway, make sure the door cannot hit the ladder. Block the door open, lock it or guard it.
7. Tops of ordinary ladders should not be used as guys, braces, skids, or for other than their intended purpose.
8. Ladders are not to be used as horizontal scaffolds.
9. Short ladders should not be spliced together to create longer sections.
10. Face the ladder when ascending or descending.
11. Climb ladder without heavy loads.
12. Use both hands when ascending or descending a ladder.
13. Lift heavy tools and materials with ropes.

LADDERS *cont.*

14. An extension ladder should be set at a four (4) to one (1) ratio. (Four vertical feet to every one foot at base of ladder.)
 15. Extension ladder overlap is a minimum of three (3) feet.
 16. All ladders must extend at least three feet above elevated surface.
 17. Make sure the extension ladder is facing the right direction.
 18. Adjust extension ladder only from below, not from top or while on ladder.
 19. Do not stand on the top step of any ladder.
 20. Never have more than one person at a time on the ladder.
 21. Do not work leaning off the side of a ladder.
 22. Prior to ascending or descending the ladder, make sure it is stable.
 23. Only use stepladders with legs fully extended and brackets securely locked.
-

SCAFFOLDS

1. Unstable objects, such as barrels, boxes, loose brick, or concrete blocks, should not be used to support scaffolds or planks.
2. Guardrails and toe boards should be installed on all open sides and ends of scaffold platforms more than 10 feet above the ground or floor.
3. Inspect all scaffolds before initial use and after alteration or moving.
4. Do not overload scaffolds. Bring up materials as needed.
5. Scaffolds must not be loaded in excess of one-fourth of their rated capacity.
6. When freestanding mobile scaffold towers are used, the height should not exceed four times the minimum base dimension.
7. Use mobile scaffolds only on level floors that are free of obstructions.
8. Caster brakes must be locked when the scaffold is not in motion.
9. Never ride a moving scaffold.
10. A Cal-Osha permit is required for the assembly of scaffolding more than 30' in height. Failure to acquire permit can be prosecuted as a misdemeanor.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

**Teacher - Arts and Crafts,
Ceramics, Drawing and Painting,
Jewelry and Printmaking**

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: TEACHER - ARTS AND CRAFTS, CERAMICS, DRAWING
AND PAINTING, JEWELRY & PRINTMAKING
Typing of Facility: Arts and Crafts Room

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

Arts and crafts courses can expose both teachers and students to a wide variety of hazardous materials, processes and equipment, which are not typically associated with academic classes.

- Fresco painting involves the use of highly corrosive limewater (calcium hydroxide) and therefore, should be avoided.
- Silk-screening in grades 7 to 12 should be done with water-based inks because of the many hazards involved in using solvent-based inks.
- Lithography using stone and metal plate processing requires extensive safety training.
- Intaglio should be limited to grades 9 to 12. Certain chemicals such as xylene should not be used.

Carbon arc lamps, developers and ammonia photolithographic processes are inappropriate to the classroom and should be avoided.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls On Same Level

- Always keep walkways clear.
 - Do not allow debris to accumulate on floors and in aisles.
-

Falls from High Places

- Always use appropriate ladder to reach high items; never use a desk or chair.

JOB CATEGORY
Type of Facility:

TEACHER - ARTS AND CRAFTS, CERAMICS, ETC.
Arts and Crafts Room

SAFE WORK PRACTICE

POTENTIAL HAZARD

Back Injuries

- Always use proper lifting techniques and proper body mechanics.
- Do not stand in one position too long. Switch position often.
- Order supplies in container sizes that can be handled easily.
- Wear comfortable, low-heeled shoes.
- Do not bend forward with legs straight.
- When working on bench, stand with one foot elevated to a comfortable level and alternate feet often.

**Being Hit By Falling Objects
Caught In or Between**

- Remove jewelry, eliminate loose clothing and tie back long hair when operating equipment with moving parts.
- Equip shelves with lips or wires to prevent items from falling in an earthquake.
- When storing materials, store heaviest items on lower shelves.

**Cuts, Abrasions, Burns, and
Other Bodily Injuries**

- Store knives and sharp tools so they are visible and sharp edges are pointed away from user.
- Keep all knives and cutting tools sharpened.
- When appropriate, use proper eye protection in accordance with ANSI Z87.1.
- Always replace plastic cover on exacto knives when not in use.
- For jewelry/ceramics projects: Wear insulated gloves, not made of asbestos or leather, when handling hot items in the kiln.
- Make sure all blade type paper cutters are equipped with a finger guard and a lock to hold blade down when not in use. Spring should be adjusted to hold the blade in "up" position.

**Cuts, Lacerations, and Eye
Injuries from Power Equipment**

- Power equipment should be properly guarded and tool rests properly adjusted. (Tool rests on grinders should be no more than 1/8" from grinding wheel).
- Grinders should be anchored to work bench or floor.
- Face shields, in addition to impact resistant goggles, should be worn when buffing, polishing or grinding.
- Read and understand manufacturer's instructions on proper and safe operation of all power equipment.

JOB CATEGORY**TEACHER - ARTS AND CRAFTS, CERAMICS, ETC.****Type of Facility:****Arts and Crafts Room**

SAFE WORK PRACTICE

POTENTIAL HAZARD**Fire Injury**

- Know fire extinguisher location and operation.
- Oily and solvent soaked rags should be placed in a U.L. listed approved oily waste can with a self-closing lid and should be emptied at least once daily.
- Do not allow any open flames or smoking in any area where solvents, flammable or combustible chemicals are used.
- Store all flammable solvents in approved safety cans.
- Fuel/oxygen cylinders should be separated by 20 feet or a 1 hour fire resistant wall 5 ft. high and secured in upright position. (Unless on a welding cart.)
- Do not store oxygen cylinders near combustible materials, i.e., oil, grease, fuel gas cylinders.
- Always provide adequate ventilation when working with chemicals.
- Use non-combustible tables and work benches.
- Be familiar with special handling requirements for all chemicals in use through reading MSDS.
- Spraying of any flammable materials, such as enamel, should be done in a properly equipped spray booth.
- On torches used in jewelry making, ignite only with friction lighter, store torches properly and regularly check torches and hoses and leaks.
- In printmaking: when using rosin, use only spark proof rosin boxes. Rosin is explosive in enclosed places.
- In ceramics/jewelry: Locate kilns away from combustible or flammable materials and make sure the kiln is properly wired and ventilated.
- Flammable materials in quantities greater than 10 gallons (NFPA Code 30) should be stored in a U.L. approved flammables cabinet.

Electrical Shock**Injuries**

- Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
- Check all cords regularly for breaks, damage and wear.
- Keep water and wet clay away from electrical outlets used for pottery wheels.
- If equipment gives a shock, appears defective, sparks or smokes, unplug and notify supervisor immediately.

JOB CATEGORY**TEACHER - ARTS AND CRAFTS, CERAMICS, ETC.**

Type of Facility:

Arts and Crafts Room

SAFE WORK PRACTICE

POTENTIAL HAZARD**Miscellaneous
Injuries**

- Always read labels on all products and follow directions for safe use.
 - Always label primary and secondary containers with proper hazard warning and chemical identification.
 - Dispose of waste solvents, paints and other toxic materials in accordance with health, safety and environmental regulations. See Appendix J.
-

**Toxic Chemical
Substance Injury**

- Always use proper personal protective equipment when handling hazardous materials.
 - Do not use hydrofluoric acid for etching. It is highly corrosive and is absorbed readily through the skin, effects do not appear for several hours after exposure. This chemical is never to be used by students.
 - Emergency shower and eyewash should be available in any area chemicals are used and should be checked regularly.
 - Add water to acid...never the reverse.
 - Never use any chemical without being aware of its hazards. Always review the MSDS before using any new chemical.
-

**Toxic Substance
Illnesses**

- Do not use any materials, which are found on the "Art and craft materials which cannot be purchased for use in Kindergarten and grades one through six" list. This list is also recommended for use in grades 7-12. Maintain current list from Dept. of Health Services.
 - Adequate ventilation should be provided for all arts and crafts projects.
 - Always use the least toxic materials possible.
 - Do not wash hands with solvents.
 - Avoid dusty procedures whenever possible. Provide respiratory protection when necessary.
 - Do not consume food or drink in the arts and crafts room.
 - Do not use glazes or under glazes, which contain lead or fritted lead. Use only those glazes labeled as non-toxic.
 - Use water based products instead of solvent-based ones whenever possible.
-

JOB CATEGORY

TEACHER - ARTS AND CRAFTS, CERAMICS, ETC.

Type of Facility:

Arts and Crafts Room

SAFE WORK PRACTICE

POTENTIAL HAZARD

**Repetitive Motion Injury
(Cumulative Trauma)**

- Do not make repetitive or forceful movements of the hands and arms for long periods of time and take frequent rests.
- In ceramics, when wedging, keep your wrists in neutral or mid-joint position and use the weight of the body rather than just the muscles of the upper limbs.
- Maintain good posture.

APPENDIX J

DISPOSAL RECOMMENDATIONS FOR ARTISTS

Many artists' materials contain potentially dangerous chemicals; in fact, most of artists' waste products will fall under the hazardous waste category. If not used and disposed of safely, they may cause injury to artists themselves, or cause damage to the general environment. Improper disposal can injure sanitation workers or contaminate water supplies.

WHAT ARE EXAMPLES OF HAZARDOUS WASTE PRODUCTS?

Hazardous waste generated by artists includes left over acrylic and oil paints, cans of paint thinner and stripper, photographic chemicals, aerosol cans, rubber cement, and wood products treated with preservatives. The following points are a valuable checklist when buying or discarding art materials.

- Buy only what you need and plan to use.
- Never mix different waste products together in the same container. Explosive or poisonous chemical reactions may occur.
- Read and follow the label's directions on how to use and dispose of the product. Do not remove labels.
- Store unused products in a safe place away from children, pets, or sources of ignition.
- Use non-toxic materials whenever possible.
- Recycle used hazardous substances whenever possible. For example, let paint particles settle in paint thinner and decant the clear thinner to use again.
- Use up or give to fellow artists, hazardous materials rather than throwing them out.
- Take advantage of household hazardous waste (HHW) collection programs in your county. Call your county environmental health department for information.
- Consider pooling wastes with other nearby school districts for disposal by a licensed hazardous waste hauler in order to reduce costs. Remember, however, never mix different hazardous materials together and always label the storage container.

Attached is a list of particular kinds of waste products and instructions for correct disposal.

PAINTS

Latex-Based Paints

- Think reuse. Can another artist use the material? Can you use the leftover latex paint as an undercoat?
- Disposal may vary from community to community. Some landfills will allow dry latex paint to be disposed of; others may recommend mixing the latex with a dry absorbent such as kitty litter. Check with your local landfill for their recommendation.
- Do not dispose of liquid latex paint with your household trash.

APPENDIX J (continued)

DISPOSAL RECOMMENDATIONS FOR ARTISTS

Oil-Based Paint and Products

- Think reuse.
- Disposal of hardened paint may be allowed along with household trash. Check with your local landfill for their recommendation.
- Lead-based paints should be treated as a hazardous waste. Follow your District's waste disposal procedures.

Artists' Oil, Acrylics

- Non-toxic paints can be dried and disposed of in regular trash.
- Paints containing antimony, barium, cadmium, chrome, cobalt, lead, manganese, molybdenum, strontium and zinc should be disposed of according to your District's waste disposal procedures.

Sprays Paints, Adhesives or Lacquers

- Dispose of EMPTY aerosol cans in the regular trash.
- Spray unused portion, allow to dry.
- Avoid clogging spray nozzles.

Paint Strippers

- Think recycle/reuse.
- Lye-based strippers can be diluted greatly and flushed into a water treatment system, but not into septic tanks.
- Solvent-based strippers often contain methylene chloride and require special hazardous waste handling. Dispose of according to your District's waste disposal procedures.

Paint Sludges

- Completely dry out sludge.
- Those sludge containing heavy metals should be disposed of according to your District's waste disposal procedures.

SOLVENTS AND THINNERS

- Combine only like materials for disposal and label contents clearly.
- Transport less than 5 gallon quantities to hazardous waste collection site or directly to solvent recycler.
- Do not transport in passenger compartment of vehicle.
- Methylene chloride products should be disposed of according to your District's waste disposal procedures.

APPENDIX J (continued)
DISPOSAL RECOMMENDATIONS FOR ARTISTS

GLUES AND EPOXY RESINS

- Harden in well-ventilated and secure area and dispose as solid waste in regular trash.

TREATED WOOD

- Pentachlorophenol, creosote (PCP, Penta-20 ,etc.) and other treated woods should not be burned.
- Consult your local HHW collection program for disposal information. Some programs are not accepting pentachlorophenol due to the problem with dioxin contamination and the unavailability of disposal facilities.
- Consult your local landfill for information on disposal of treated wood.

ASBESTOS

- Small asbestos-containing items such as gloves, pads, and boards should be wet thoroughly, wrapped in heavy plastic bags and placed directly in sanitary landfill.
- (Garbage pickups often involve compaction, which may release fibers from material.)
- Consult your local landfill for information on disposal of asbestos containing material.

PHOTOGRAPHIC CHEMICALS

- Of the chemicals found in photographic solutions, including used solutions, silver, hexavalent, chromium (present usually as chromate), and ferrocyanide are of major concern. The remainder of the chemicals, if disposed in small amounts, can be generally be discharged to a water treatment plant. (Silverion is present in the used photo chemical solutions, especially fixers and may be recovered with the appropriate equipment.
- Consult the Material Safety Data Sheet (MSDS) which is required by law to provide health and safety information on a product, and supplier for disposal information on a product, especially regarding silver recovery.
- Unused selenium toners, chromium and cyanide containing products should be delivered to a hazardous waste collection program or provided to other photographers.
- Solutions may require special disposal. Consult "Disposal of Small Volumes of Photographic Processing Solutions", Eastman Kodak publication J-52, 343 State Street, Rochester, NY-14650.

APPENDIX J (continued)
DISPOSAL RECOMMENDATIONS FOR ARTISTS

CERAMIC GLAZES

- Heavy metal containing glazes should be solidified by firing and disposing with regular trash. If it is not possible to solidify by firing, dispose of as a hazardous waste according to your District's waste disposal procedures.
- Prevent airborne exposure to custodians or refuse personnel by bagging ceramic wastes, wetting or solidifying prior to disposal.

PRINTMAKING SOLUTIONS

- Acid etching solutions containing metals, i.e. zinc or aluminum, require special handling. Dispose of according to your District's waste disposal procedures.
- Industrial shops may have similar waste for consolidation.

SOLVENT CONTAMINATED RAGS

- Flammability of rags is a prime concern. For safe storage, utilize a ventilated container or aerate the rags. Separate from incompatible materials such as TSP bleaches, acids and ammonia and dispose of according to your District's waste disposal procedures.
- If an industrial rag service is used, store solvent contaminated rags in a UL listed rag container with a self-closing lid. Make sure that the rags are removed on a regular basis to avoid overfilling the container.
- Regularly exchange used rags for fresh rags.
- Do not wash solvent contaminated rags in home washing machines.

NOTE: The definition of hazardous waste and how to dispose of it can be a complicated discussion. While Federal law provides for a distinction between hazardous wastes generated by large generators (over 100kg/month) and hazardous wastes generated by "small quantity generators", (under 100kg/month) California makes no such distinction: all hazardous wastes must be disposed of at a permitted hazardous waste facility. Due to the diversity of artists themselves, some artists will produce wastes, which are commensurate with small quantity generator status; other artists will parallel the household hazardous waste stream. Recent EPA correspondence indicates that household wastes are currently excluded from regulation under Federal hazardous waste laws. (Non-household sources are subject to these laws.)

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES

**Instructional Assistant
Special Education**

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: INSTRUCTIONAL ASSISTANT - SPECIAL EDUCATION

Type of Facility: Classroom

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

Special Caution

- This employee classification experiences a high rate of back injuries. To minimize exposure, always use proper lifting techniques and good body mechanics. Get help when needed. It is highly recommended to attend back safety classes. Special consideration should be given to receiving training in assault behavior management and self-defense strategies to minimize injuries due to student aggression.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Slips and Falls on Same Level

- Pay particular attention to wet/slippery floors around sink areas at all times.
 - Use caution near entry areas and on cement walkways during rainy or icy weather.
 - Do not place electrical cords across walkways.
 - Unplug and roll up long cords to equipment when not in immediate use.
-

Falls From High Places

- Never stand on chairs, tables or desks when attempting to reach high items or when hanging displays - use ladder or step stool.
 - Use overhead display wires across room to hang artwork verses hanging from ceiling.
-

Back Injuries

- Safe lifting in service is strongly recommended for this job classification.
- Learn proper use of mechanical lift. Make sure the student is properly balanced in the sling to avoid having to catch them in an awkward or off balance position. Get assistance when needed.

JOB CATEGORY: INSTRUCTIONAL ASSISTANT - SPECIAL EDUCATION
Type of Facility: Classroom

SAFE WORK PRACTICE

POTENTIAL HAZARD

Back Injuries *cont.*

- Before beginning to lift a student:
 - a) make sure you have adequate space;
 - b) properly position student;
 - c) make sure adequate personnel are available.
 - Do all lifting in the “power zone,” the area directly in front of the body that extends from the floor up to the shoulder height. The maximum “power zone” is located between knees and the waist.
 - Always use proper lifting techniques and good body mechanics.
-

Fire Injury

- Do not hang artwork or other materials from light fixtures.
 - Know fire extinguisher location and operation.
 - Make sure there is an evacuation plan developed for handicapped individuals. Be familiar with the plan and participate in practice drills.
 - Do not block exits in classrooms.
-

Electrical Shock Injuries

- Any outlets near water/liquid sources should be Ground Fault Circuit Interrupter (GFCI) type outlets. Report any unprotected outlets.
 - Do not hang artwork or other materials from light fixtures.
-

Vehicle Accidents

- Use only properly equipped vehicles when transporting handicapped students.

JOB CATEGORY: INSTRUCTIONAL ASSISTANT - SPECIAL EDUCATION
Type of Facility: Classroom

SAFE WORK PRACTICE

POTENTIAL HAZARD

Misc. Injuries Illnesses

- Watch out for fingers when operating a mechanical lift to avoid crushing them between the machine and the wall.
- Be aware of proper use of hydraulic lifts on specially equipped buses. Keep feet out from under the lift and wheelchair.
- Maintain control in the classroom to minimize intentional and accidental striking and biting by the students. Learn and practice assault behavior management techniques and practice self-defense strategies.
- Anticipate potential problems.
- Maintain ventilation in areas where toileting occurs. Report ventilation problems to your supervisor.
- Do not work alone whenever possible.
- Wear long sleeves in programs with students prone to scratching behaviors.

Infectious Diseases Or Health Conditions

- Hand washing is the single most effective technique for preventing the spread of infectious diseases.
- Learn and follow good sanitary practices including the proper use of gloves and disinfectant materials.
- Report any unsatisfactory hygiene conditions to your supervisor.
- Therapy equipment, tables, toys, etc. should be disinfected, not simply wiped off.
- Use latex rubber gloves when contact is likely with human body fluids (blood, vomit, urine, feces, etc.)
- Blood and other bodily fluids should be cleaned up with soap and water.
- Report any exposure to infectious diseases to your supervisor.
- Use latex rubber gloves when administering authorized medicines, feeding students, performing approved medical procedures, etc.
- Refer to Appendix F in the General Safe Work Practices for information on universal precautions against exposure to blood borne pathogens.
- Maintain close communications with the medical professionals who deal with your students. Learn the special problems and medications of each of your students.
- Isolate ill students from general population.
- Contact local health professionals for additional information on biological waste disposal.

INJURY AND ILLNESS
PREVENTION PROGRAM
SPECIFIC SAFE WORK PRACTICES
Campus/Playground Supervisor

SPECIFIC SAFE WORK PRACTICES

JOB CATEGORY: CAMPUS/PLAYGROUND SUPERVISOR
Type of Facility: School Campus/Playground

General and specific safe work practices are integrated. Review the general safe work practices in conjunction with these specific safe work practices.

SAFE WORK PRACTICE

POTENTIAL HAZARD

Misc. Injuries

- Receive proper training in student behavior, control and supervising methodology before beginning work with students.
 - Always project a positive image with individual students and groups.
 - When directing traffic, wear bright clothing or vest for better visibility.
 - Learn basic phrases related to campus safety in the non-English languages that are normally spoken by the students.
 - When possible, carry walkie-talkie type radios for instant communication with central office or with other campus supervisors.
 - When breaking up fights on campus, do not step between combatants. Get help when needed.
 - If a student is armed with a weapon, call for help and the police. Do not attempt to disarm the student yourself.
 - Attempt to keep student activities in front of you when supervising activities to avoid being inadvertently hit by stray balls, etc.
 - Establish a contingency plan for dealing with student conduct when there is a possibility that it may escalate to violence; always attempt to keep students in front of you and be alert for physical aggression.
-

Infectious Diseases or Health Conditions

- Wear a fanny pack to carry latex rubber gloves, basic first aid items and other necessary supplies during duty.
- Use latex rubber gloves when contact is likely with human body fluids (blood, vomit, urine, feces, etc.)
- Blood and other bodily fluids should be cleaned up with soap and water.
- Learn First Aid and CPR.