

Loss Control Services: SAFETY TOPIC OF THE MONTH

M.0811: Classroom Safety**Facilitator Outline**

Purpose: Monterey Educational Risk Management Authority - Loss Control Services provides these monthly topics to promote safety awareness, injury prevention and regulatory compliance for member districts. These topics may be adapted specifically to the needs of your district by editing and reformatting. If desired, the topic may be expanded with video/DVD, Powerpoint, or other media.

Instructions: Make copies of the handouts and quiz for those attending. As the facilitator for this training – please keep track of attendance in accordance with your district recordkeeping requirements. Thirty minutes should be allocated to allow for review/discussion of the handouts and the quiz – it is possible to condense the topic time to 15 minutes or less if time constraints are severe. You may use the quiz as a pre or post discussion topic; using it as a pre-quiz and then discussing the answers after review of the materials is a good way to assure an interactive session in a minimal amount of time.

Answers to Handout #2: PRE -QUIZ - Classroom Safety

1. Which of these terms is not part of the “Fire Triangle”?
a) ignition source b) fuel c) thermal layer d) oxygen e) low humidity **f) c and e**
2. Which term relates to a fire emergency?
a) spread the alarm b) evacuate c) headcount d) alternate route **e) all are correct**
3. Blocking the heating vent is a good way to cool down a warm classroom. **False**
4. House keeping is a prominent factor associated with classroom injuries. **True**
5. Periodic inspections may reveal electrical hazards that should be corrected by a qualified person. **True**
6. Hazard communication about chemicals is also called the “right to know”. **True**
7. Which term does not apply to walking and working surfaces enforced by Cal-OSHA?
a) clean b) orderly **c) nicely decorated** d) sanitary e) dry if possible f) good repair
8. Injury due to falling off of a chair used as a ladder is a 100 percent preventable incident. **True**
9. Which terms relate to Personal Protective Equipment (PPE)?
a) safety glasses b) respirators c) gloves
d) ear plugs/muffs **e) all of these are correct** f) none of these are correct
10. “Universal Precautions” are required to prevent exposure to hazardous chemicals. **False**
Universal Precautions refers to treating all blood and body fluids as contaminated with disease.
11. The “bonus” question adds extra feedback and interactive discussion from the group.

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Handout #1: Classroom Safety

1.0 FIRE PREVENTION AND SAFETY

“Know how fire works!” We need to work hard to prevent fires and we should be prepared to deal with them if they occur. Understanding the basics will help. Fire will be created if the following three elements are present:

- **Fuel:** Items such as wood, paper, or combustible liquid.
- **Heat:** Items will ignite if a sufficient temperature is reached.
- **Oxygen:** Is the life blood of fire.

If any one of these three elements is missing, fire cannot occur no matter how much of the other elements may be present.

“Know your Evacuation Routes!” If a fire does occur, you need to know how to react. If you are aware of a fire starting, **spread the alarm!** (If time permits, turn off any equipment in your area, take the roll book, close doors and windows and evacuate via your practiced evacuation routes.) Proceed to your evacuation point. When you have evacuated to the safe distance, wait for instructions from the incident commander. The incident commander is the person who is ultimately in authority. If the fire department is on scene, they are in charge of the incident. Always have the names of the students and staff that evacuated with your group. Practice your alternative routes. The number one cause of industrial fires in the nation is from smoking. The District has a **no smoking policy** that shall be followed. It only makes sense then that **incense, scented candles or any type of unauthorized open flames shall not be permitted.** Fire extinguishers are installed, inspected and maintained in accordance with local codes and Cal-OSHA regulations. Only authorized, trained persons shall use portable fire extinguishers or otherwise attempt to suppress a fire.

2.0 ERGONOMICS IN THE CLASSROOM

All too often ergonomic factors cause injuries that with simple planning and understanding can be avoided. As educators plan seating arrangements, the flow of entry and egress are sometimes overlooked. Are there tripping hazards associated with electric cords where students and staff walk to get to their seats? Are computer monitors lined up in a row facing windows? On bright sunny days, the stress placed on students attempting to look at the screens will create issues such as eye stress, causing headaches. Is the furniture in the room suited for the age group? Proper fitting furniture is paramount to ergonomic safety. Broken or damaged furniture presents a hazard to everyone who uses the classroom. Follow up by having furniture removed that may cause injury.

Does the ventilation system provide the proper amount of air circulation? In older buildings the windows may need to be opened to provide ventilation. In the newer buildings, the ventilation is provided with “unit ventilators,” “air handlers,” as well as gravity flow unit heaters. When the building was designed these units were tested for proper operation. It is important to make sure that these ventilation systems receive preventive maintenance on a regular basis. Check with the custodial staff for the answer. Do not accept an answer that they did not have time to maintain your ventilation unit. The ventilation systems shall be maintained on a regular basis to ensure proper ventilation. All too often the discharge grates are blocked with books and boxes. The unit ventilator is not a book shelf or a display area. If the discharge grating is blocked the ventilation process is stopped. **Do not block the ventilation system with cabinets, boxes or furniture.**

Do the lights work? A blinking fluorescent light that is about to burn out is not only distracting but a hazard to students and staff as well. Preparing paper work and reading text is difficult without sufficient lighting. As the fluorescent or incandescent light bulbs burn out make it a point to have them replaced.

3.0 HOUSE KEEPING

House keeping is a prominent factor associated with classroom injuries. Usually twice a year there is a marked increase in lifting injuries. Never overload a trash receptacle and leave it for an unsuspecting custodial worker to lift. It is your responsibility to notify the custodial staff that the container is heavy.

The Integrated Pest Management program instructs us that food and beverages may only be consumed in appropriate areas such as cafeterias, lunch rooms and assigned staff areas. If the students and staff are eating in classrooms there is a potential for pest infestation. Any time that students and staff are eating in classrooms, there shall be a concerted effort to clean up as soon as possible.

Graffiti should be removed on daily basis. Studies show that graffiti left on walls, furniture and other objects only precipitates more unsightly graffiti. Have a procedure to remove graffiti as it happens. Administrators will need to coordinate with the Custodial staff to have a plan to keep up with the removal of graffiti.

4.0 ELECTRICAL SAFETY

Electrical equipment is potentially hazardous and can cause serious shock and burn injuries if improperly used or maintained. Electricity travels through electrical conductors that may be in the form of wires or parts of the human body. Most metals and damp skin offer very little resistance to the flow of electrical current and can easily conduct electricity. Other substances such as dry wood, porcelain, or pottery offer a high resistance and can be used to prevent the flow of electrical current. If a part of the body comes in contact with the electrical circuit, a shock will occur. Periodic inspections may reveal electrical hazards that should be corrected by a qualified person:

- Ungrounded equipment, i.e. – a three wire cord on a computer plugged into a two wire extension cord.
- Overloaded circuits. A tripped circuit breaker is a signal that something is wrong.
- Unsafe/ Non-approved equipment. Only the employer should provide electrical equipment.
- Defective, frayed or improperly installed cords.
- Improper placement of cords and extension cords used as “permanent wiring”.
- Electrical cords across walkways and work areas.
- Live parts that are unguarded and working on or near “live equipment”.
- Pulling plugs from an outlet to shut off power when a switch should be used.
- Blocking electrical panel doors or using a circuit breaker as a switch for lights or equipment.

Only trained authorized persons shall work on electrical equipment or make repairs to mechanical equipment. The District has specific policies regarding fixed guards, safety interlocks as well as machine guarding. There are also procedures on how to apply Lock out / Tag procedures. Only approved extension cords shall be used in District buildings. Do not overlook the obvious tripping hazard from extension cords that run across traffic areas.

5.0 HAZARD COMMUNICATION “RIGHT TO KNOW”

Chemical safety is regulated by Title 8, Section 5194, Hazard Communication. Training shall be scheduled for all employees who may come into contact with hazardous chemicals during the course of their daily routine. The District has adopted a “Right to Know Policy” as part of the Injury and Illness Prevention Program, District employees shall know how to read the information listed on a Material Safety Data Sheet (MSDS). Each workplace in the District shall maintain the following:

- A program that describes how employees will be informed of the hazards of any non-routine tasks and the hazards associated with any chemicals contained in the unlabeled pipes in their work areas.
- The written program shall describe the methods to be used to inform employees of other employers (i.e., contractor on site) of access to Material Safety Data Sheets for each hazardous substance these employees may be exposed to while working.
- The written program shall describe the methods used to inform other employers of any precautionary measures to be taken to protect their employees during normal workplace operating, foreseeable emergencies and the labeling system used in the workplace.
- Records describing the training of each employee who might be exposed to hazardous chemicals as well as the signature form used during the training shall be maintained as a safety record.
- Ordering/purchase of any chemical is restricted to designated staff.
- Each building shall maintain an inventory of all authorized chemicals or substances used or stored in the building. Material Safety Data Sheets shall be available for all hazardous materials.
- All chemical inventories and records including training records shall be made available for inspection by regulatory authorities when requested.

6.0 WALKING AND WORKING SURFACES

Slips, trips, and falls constitute the majority of general industry accidents. They cause 15% of all accidental deaths, and are second only to motor vehicles as a cause of fatalities. The following are general safety requirements and most frequently cited violations by Cal-OSHA that involve housekeeping:

- All places of employment, passageways, storerooms, and service rooms shall be kept clean and orderly and in a sanitary condition.
- The floor of every workroom shall be maintained in a clean and, so far as possible, a dry condition. Where wet processes are used, drainage shall be maintained and grating mats, or raised platforms shall be provided.
- Every floor, working place and passageway shall be kept free from protruding nails, splinters, holes, or loose boards.
- Aisles and passageways shall be kept clear and in good repair with no obstruction across or in aisles that could create a hazard.
- Permanent aisles and passageways shall be appropriately marked.
- Where mechanical handling equipment is used, aisles shall be sufficiently wide. Improper aisle widths coupled with poor housekeeping and vehicle traffic can cause injury to employees, damage the equipment and material, and can limit egress in emergencies.

7.0 PORTABLE LADDERS AND SAFETY

District employees are prohibited from using chairs, desks or other forms of platforms in substitution for an appropriate portable ladder. The District has a policy to purchase and make available to all employees appropriate weight rated ladders that will support employees weighing up to 300 pounds. An injury because an employee fell off of a chair is a 100 percent preventable incident! The facilities maintenance department makes proper ladders available to District employees upon request. The chief hazard when using a ladder is falling. A poorly designed, maintained, or improperly used ladder may collapse under the load placed upon it and cause the employee to fall.

Various types of ladders in the District are:

- Stepladder* is a self-supporting portable ladder, non-adjustable in length, having flat steps and a hinged back. Stepladders shall be equipped with a metal spreader or locking device of sufficient size and strength to securely hold the front and back section in the open position.
- Single Ladder* is a non self-supporting portable ladder, nonadjustable in length, consisting of one section. Its size is designed by overall length of the side rails.
- Extension ladders* are a non self-supporting portable ladder, adjustable in length.
- Portable stepladders* longer than 20 feet shall not be used.
- Single ladders* longer than 30 feet shall not be used.
- Extension ladders* longer than 60 feet shall not be used.

Maintenance and Inspection of Ladders: Ladders shall be maintained in good condition at all times. A record of inspection of each ladder that is in the building will be kept for the life of the ladder. Each ladder should be numbered so as to identify each ladder during a regular hazard inspection. **Ladders shall be inspected frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use" until disposal is accomplished.**

8.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

Classrooms are as diverse in design as fingerprints. All employees should be aware of the hazards that may require personal protective equipment. Examples of personal protective equipment include the following:

- Hearing Protection:** The use of hearing protection should always be considered wherever noise is a problem. Observe posted signs that mandate hearing protection is required.
- Eye Protection:** Specific duties in the District may require eye protection and the rules to wear the designated eye protection shall be strictly observed.
- Respirators:** Any user of a respirator shall be fit tested and undergo a medical screening that shall be performed prior to their use by employees. Employees that wear a respirator in the performance of their jobs shall be trained and authorized to do so in accordance with Cal-OSHA regulations and District policy. Dust masks are not respirators and offer limited protection against small particulate matter - they should be worn in dusty environments.
- Gloves:** Latex, Nitrile, and Rubber gloves all offer some protection against absorption for employees. Some employees may have an allergic reaction to latex and will need to wear Nitrile. Any work where hazardous liquids are used should always have a sufficient supply of protective gloves on hand. Those employees who change diapers during their work or are responsible for the clean up of Bloodborne pathogens or other potentially infectious material shall follow the recommended procedure for this type of work. Heavy work gloves should be worn during activities that could injure the hands from rough materials.
- Other PPE:** Safety boots or shoes are examples of PPE that may be required to perform certain jobs. The District retains the authority to amend PPE requirements wherever necessary to maximize employee safety.

ALL PROTECTIVE EQUIPMENT SHALL BE APPROVED AND SUPPLIED BY THE DISTRICT! NO OTHER PERSONAL PROTECTIVE EQUIPMENT IS APPROVED FOR USE.

9.0 MATERIAL STORAGE

The issue of adequate material storage in schools is common. Overloaded storage cabinets and boxes of materials stacked in the corners of classrooms create hazards that can be reduced and eliminated. Most storage issues arise from poor planning and a reluctance to discard unused materials. Proper planning to move heavy items will be the key to reduce the risk of injuries. Look around your classroom or storage spaces. If you have not used the stored materials in a year, chances are you need to discard the contents. **Order only the materials that you can use within the school year in which they are ordered.**

Chemistry teachers are required to follow the procedures found in the Science Safety Handbook for California Schools. A complete inventory of items that are held in storage is a good starting place to get a handle on the items that will need to be either sent to other classrooms or to be discarded. Dispose of all materials properly and recycle wherever possible.

10.0 BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

As required by California safety regulations, Title 8, Section 5193, an exposure control plan shall be prepared for all employees who handle, store, use, process or dispose of any type of human body fluid. As contact with blood and other potentially infectious materials (OPIM) can lead to serious disease, all efforts shall be made to identify and control this exposure. It is the policy of the District for employees to treat all human fluids as potentially infected. The District requires an Exposure Control Plan at each facility in accordance with Cal-OSHA regulations. Annual training is provided to all employees covered by the plan.

The following procedures are known as Universal Precautions to prevent bloodborne pathogen exposure:

- Wearing protective equipment such as gloves, barrier mask, etc. when handling materials or administering emergency care.
- Regular hand washing after handling any materials contaminated with human fluids or other potentially infectious materials.

Surfaces that are likely infection sources (i.e. door handles, countertops) should be scheduled for cleaning and disinfecting on a daily basis. Infectious materials are a concern for all employees who may have the potential for exposure to infection. Infected blood can enter your system through several exposure routes:

- Open sores.
- Cuts and abrasions.
- Acne.
- Any sort of damaged or broken skin such as sunburn or blisters.

In an emergency situation involving exposure to blood or potentially infectious materials, **always use Universal Precautions** and try to minimize your exposure by wearing gloves, splash goggles, pocket mouth to mouth resuscitation masks, and other types of barriers – impromptu barriers can be used (clean plastic garbage bag or anything else that will prevent blood/body fluid contact). Clean up is a top priority and should be done by a trained and authorized person as soon as possible after the incident. **Universal Precautions shall be followed at all times to prevent contact with blood and bodily fluids:**

1. Wear protective gloves and other equipment.
2. Pick up any broken glass with a dustpan, brush, or tongs not by hand.
3. Do not use a mop and bucket unless specifically directed to do so. This can spread the contamination.
4. Clean soiled areas.
5. Use a scoop to pick up any contaminated material.
6. Disinfect the area using a fresh mixture of an appropriate germicidal cleaner.
7. Sanitize hands each time gloves are removed. Scrub exposed skin thoroughly with antibacterial soap and water and change soiled clothing before returning to work.
8. Place soiled disposable towels and disposable contaminated equipment in a sealed bag.
9. Contaminated instruments that are not thrown away shall be disinfected and washed with antibacterial soap and water. During the hand washing procedure make sure to give the soap time to disinfect your hands. An approximate time of at least 10 seconds will give the soap time to disinfect.
10. **Any skin or mucous membrane contact with blood or OPIM shall be reported immediately for medical evaluation.**

NOTES:

Handout #2: PRE -QUIZ - *Classroom Safety*

Name: _____ Date: _____

Department _____ Job Title _____

Instructions: Please provide the best answer for each question – the “best” answer may be open to discussion during review of the quiz!

- Which of these terms is not part of the “Fire Triangle”?
a) ignition source b) fuel c) thermal layer d) oxygen e) low humidity f) c and e
- Which term relates to a fire emergency?
a) spread the alarm b) evacuate c) headcount d) alternate route e) all are correct
- Blocking the heating vent is a good way to cool down a warm classroom. True False
- House keeping is a prominent factor associated with classroom injuries. True False
- Periodic inspections may reveal electrical hazards that should be corrected by a qualified person. True False
- Hazard communication about chemicals is also called the “right to know”. True False
- Which term does not apply to walking and working surfaces enforced by Cal-OSHA?
a) clean b) orderly c) nicely decorated d) sanitary e) dry if possible f) good repair
- Injury due to falling off of a chair used as a ladder is a 100 percent preventable incident. True False
- Which terms relate to Personal Protective Equipment (PPE)?
a) safety glasses b) respirators c) gloves
d) ear plugs/muffs e) all of these are correct f) none of these are correct
- “Universal Precautions” are required to prevent exposure to hazardous chemicals. True False
- Bonus Question: Do you have something to add to the discussion regarding your experience with situations involving classroom safety?

