

CODES OF SAFE PRACTICES – SCIENCE DEPARTMENTS

Classrooms

- A. **When entering different work areas**, familiarize yourself with any required safety precautions. Be aware of work going on around you.
- B. **Report any unsafe conditions or equipment to your supervisor.** Keep horseplay and rough housing away from the job. Practical jokes often become painful injuries.
- C. **Preventing accidents depends mostly on you, THINK SAFETY.** Work with care and good judgment at all times to avoid accidents.
- D. **Report any injuries immediately.** Even small cuts can become seriously infected. Rely on your supervisor's knowledge and experience if you do not understand any rule or work operation.
- E. **Intoxicants and non-prescribed drugs are NOT PERMITTED** and result in disciplinary action. Keep your mind on your job and your temper under control.
- F. **Teachers having specific concerns about safety conditions** related to facilities, equipment, supplies, curriculum, classroom occupant load, etc., should notify their site administrator immediately for assistance in relieving the condition.

Hazards

- A. **Be sure your footing is well supported before stepping.** Watch out for, slippery spots, spills, loose objects, etc.
- B. **Always have enough light on stairs, aisles, basements, work areas.** Place barricades and or signs to warn of traffic, and chemical dangers, etc. Have warning signs posted at entrance if necessary.
- C. **The use of approved eye protection devices** must be required of all persons performing science activities involving hazards to the eyes. All persons in dangerous proximity to a laboratory activity must also wear approved eye protection devices.
- C. **Wear clothing suitable for weather and your work.** Proper personal protective equipment shall be used whenever mixing, pouring or using chemicals (i.e. eye protection, rubber gloves, apron).
- D. **Chemical Storage.** Chemicals should be stored according to their compatibility group. Chemicals should not be stored directly on the floor. This precaution will prevent contact with water from flooding, mopping, condensation, or the puddling of liquid contents of defective or broken containers around adjacent stored chemicals. Large containers should be stored on the lowest shelves to minimize the danger of breakage or spillage when being removed or replaced.
- E. **Chemical Labels.** Chemicals must be properly labeled and stored in appropriate containers.
- F. **Material Safety data Sheets.** (MSDS) must be available for all hazardous chemicals.
- G. **Shelves or cabinets** shall be secured firmly to the walls
- H. **Earthquake lips/barriers** must be in place on storage shelves.
- I. **Flammable liquids.** Use approved storage cabinets for flammable liquids.
- J. **Ventilation.** Ensure that there is adequate ventilation (a fume hood, if needed), isolated from the rest of the building.

- K. **Compressed gas cylinders** are secured upright to the wall, with caps in place. Flammable gases are separated from oxidizing gases by a one-hour firewall or at least 20 feet.
- L. **Experiments.** In an experiment or demonstration involving any flammable liquid (such as alcohol), care must be taken that any flame in the room is an absolutely safe distance from the volatile liquid. Vapors may even flow along a table or countertop for long distances and then flash back. Beware of gas water heaters in or near science classrooms.
- M. **Utilities.** Teachers should be familiar with the location of all master controls for utilities, especially the master valve in each room for the gas outlets. Mark and/or color-code all services.
- N. **Gas.** The gas at student workstations should be turned off at the teachers main control valve and only be activated for the specific class period of usage.
- O. **Acids.** Water should never be added to concentrated acids. Acids should be stored below waist level.
- P. **Eyewash Station.** Know the location of your nearest eyewash and safety shower and know how to use them. All emergency eyewash stations and deluge showers should be regularly inspected to ensure proper operation of the equipment. All results should be documented.
- Q. **If you spill a chemical on your skin or clothing,** don't wait to see if the chemical will burn. Immediately rinse skin with plenty of water for at least 15 minutes. Remove clothing that has been contaminated and wash it before you put it back on.
- R. **Do not eat,** drink, smoke, or store foodstuffs or smoking materials in chemical storage or use areas. Always wash your hands after handling chemicals and before eating, drinking, or smoking.

Housekeeping

- A. **Maintain good housekeeping at the job.** Keep materials orderly. Prevent piles from falling or shifting (tie or support if necessary).
- B. **Provide safe access to work areas.** Do not block aisles, traffic lanes, fire exits and keep loose materials off stairs, walkways, ramps, and platforms. Avoid shortcuts, use ramps, stairs, walkways, and ladders.
- C. **Immediately clean up small chemical spills.** Always treat an unidentified liquid in a chemical area as if it were an acid.
- D. **The custodial staff** should be alerted to general hazards they may encounter in sciences areas and to special situations that arise.

Lifting Rules

- A. **Before you lift something, prepare yourself and plan the move.** Make sure you are limber and physically fit enough to do the task safely. Size up the load to make sure you can handle it safely. If you think the load is too bulky or too heavy, ask someone to help you or try to break it up into smaller, more manageable loads. Use a hand truck or dolly if necessary. Plan your route and make sure the path is clear of trip, slip, and fall hazards.

- B. **Use proper body mechanics when lifting.** Stand close to the object with your feet about shoulder width apart. Squat down, bending at the hips and knees. Keep your back straight and in a locked position. Be sure to keep the load close to your body. When you set the load down, squat down, bending at the hips and knees, keeping your lower back arched in.
- C. **Turn, don't twist.** Instead of twisting, turn your whole body in the direction that you want to go.
- D. **Push, don't pull.** Whenever you have to move something that's on a cart, a dolly, or a hand truck, push the load. Pushing puts less strain on your back.
- E. **Don't store heavy objects higher than your waist.** Lifting objects overhead puts a lot of undue stress on your back. It's one of the surest ways to injure your back.
- F. **Lift like a pro and avoid the pain.** Learning how to lift and carry safely is one of the most important things you can do for your back. It's not hard to put these suggestions to use, and the payoffs will be well worth the time and effort you put into it.

Machinery Safety Rules

- A. **Manufacturers supply manuals with machinery.** Read the manuals and become completely familiar with the equipment before using it, paying particular attention to the potential hazards of each piece of machinery. Keep the manuals handy for future reference. Have an experienced operator provide instructions and a demonstration of the equipment before you use it.
- B. **Learn safeguarding techniques for each machine.** Become familiar with the purpose and nature of each required guard, and how to inspect and use the guards. Do not remove the guards without the approval of the maintenance supervisor.
- C. **Prepare the equipment and yourself for work.** Thoroughly inspect the equipment prior to using it (most equipment manuals have inspection checklists). Make sure all the factory installed safety devices are operating properly, and don't use the equipment if they are not. Immediately report all equipment faults to your supervisor.
- D. **Review the Personal Protective Equipment (PPE) required for safe use of each machine.** Become familiar with and wear the protective clothing provided by your supervisor and recommended by the equipment manufacturer.
- E. **Be aware of the non-mechanical hazards.** Recognize other potential hazards; they include noise (wear hearing protection if recommended), possible chemical splashing, sparking and excessive heat.
- F. **Keep the area in and around the machine neat and well lit.** Poor housekeeping and lighting are factors in a number of machine injuries. Any limitations to vision or mobility are potentially dangerous.
- G. **Do not wear loose fitting clothes or jewelry.** Long hair also needs to be confined.
- H. **Follow lockout/tag out procedures when performing maintenance.** Review the procedures with your supervisor before disconnecting the machine from its source of power. Stay in control of that source of power.

Storeroom Safety Rules

- A. **Store chemicals safely.** All chemical containers must be properly labeled. Store chemicals according to instructions on container labels. Be aware of where the Material Safety Data Sheets (MSDS) are kept for all the chemicals you use. Store flammable materials in a properly vented flammable liquids cabinet away from sources of ignition like hot water heaters.
- B. **Store your equipment safely.** Equipment should have its place in the storeroom. The equipment should only be stored after inspecting them for safety hazards and cleaning them. Check electrical tools for frayed wires and defective plugs. Make sure the ground plug is in place. Cords should be neatly wrapped and secured on the tool. Keep extension cords in good repair.
- C. **Weight can be a safety hazard.** Heavier items should be stored on the lower shelves at about chest height or lower. Be careful not to overload shelves.
- D. **Electrical/water heater rooms are not storerooms.** Rooms with electrical panels are not designed as storerooms. However, if electrical rooms must be used for storage, make sure there is clear area at least 36" from electrical panels. Electrical rooms must be free of all liquids. A water heater is a source of ignition. Don't store flammable materials in rooms with water heaters.
- E. **Keep it neat.** Keep at least one aisle of your storage areas open at all times. Protruding nails, and torn or sharp corners can cause serious cuts and bruises. Remove or pad them. Be alert to the careless actions of others. Store all items such as hoses, electric extension cords, and ladders on appropriate hangers to reduce the potential trip hazards.