



Lab Safety

General Safety Rules



1. **Listen to or read** instructions carefully before attempting to do anything.
2. Wear **safety goggles** to protect your eyes from chemicals, heated materials, or things that might be able to shatter.
3. **Notify your teacher** if any spills or accidents occur.



General Safety Rules

4. After handling chemicals, always **wash your hands** with soap and water.



5. During lab work, **keep your hands away from your face.**

6. Tie back **long hair.**



General Safety Rules

7. Roll up **loose sleeves**.
8. Know the **location** of the fire extinguisher, fire blanket, eyewash station, and first aid kit.
9. Keep your **work area uncluttered**. Take to the lab station only what is necessary.



General Safety Rules



10. It is suggested that you wear **glasses** rather than contact lenses.
11. Never put anything into your **mouth** during a lab experiment.
12. **Clean up** your lab area at the conclusion of the laboratory period.
13. **Never "horse around"** or play practical jokes in the laboratory.



Glassware Safety



1. **Chipped or cracked glassware** should not be used. Show it to the teacher.
2. **Broken glassware** should not be disposed of in a classroom trashcan. There is a **special glass disposal** container for it.
3. When **pouring liquids into glassware**, make sure the container you are pouring into is resting on a table at least a hands breadth from the edge.



Glassware Safety



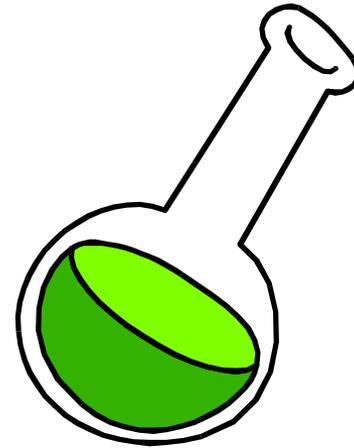
4. Pour down a **glass stirring rod** to prevent liquids from splattering.
5. If a piece of glassware gets broken, do not try to clean it up by yourself. **Notify the teacher.**
6. When **inserting glass tubing** into a rubber stopper, apply a lubricant like **glycerin** to the glass and use a twisting motion.



Glassware Safety



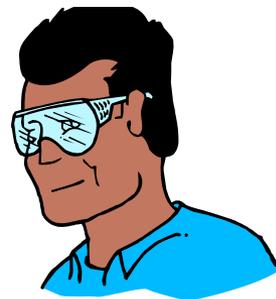
7. Do not place **hot glassware** in water. Rapid cooling may make it shatter.



Chemical Safety



1. Wear **protective goggles** and a lab apron whenever heating or pouring hazardous chemicals.
2. Never **mix chemicals** together unless you are told to do so (and then only in the manner specified).
3. **Never taste** any chemicals (you should never taste anything in the lab).



Chemical Safety



4. If you need to smell the odor of a chemical, **waft the fumes** toward your nose with one hand. Do not put your nose over the container and inhale the fumes.



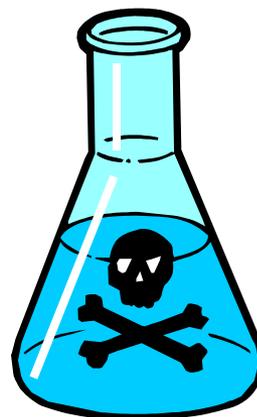
5. Never pour water into a concentrated acid. **Acid should be poured slowly into water.**



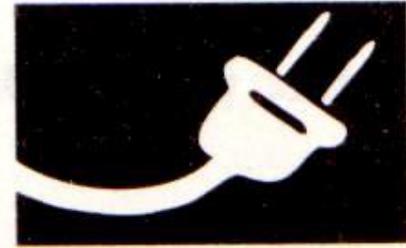
Chemical Safety



6. **Follow the instructions** of your teacher when disposing of all chemicals.
7. **Wash your hands** after handling hazardous chemicals.



Electrical Safety



1. Lay **electrical cords** where no one can trip on them or get caught in them.

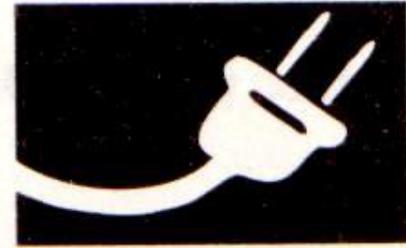


2. Be sure your **hands and your lab area are dry** before using electrical equipment.

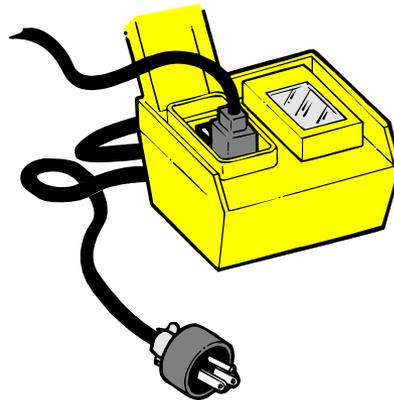
3. Never poke anything into **electrical outlets**.



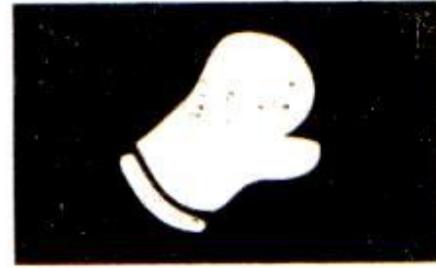
Electrical Safety



4. Unplug cords by **pulling the plug** and not the cord.
5. **Unplug** all electrical equipment at the **end of the lab period.**



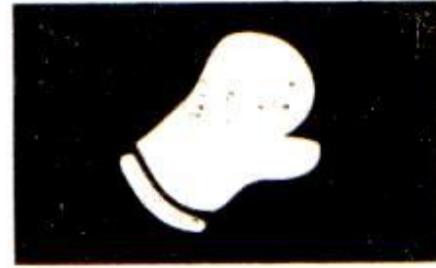
Heating Safety



1. Let **burners and hotplates cool** down before touching them. Test to see if they are cool enough by bringing the back of your hand close to them.
2. Use **tongs and/or protective gloves** to handle hot objects.
3. Never reach across an **open flame** or burner.



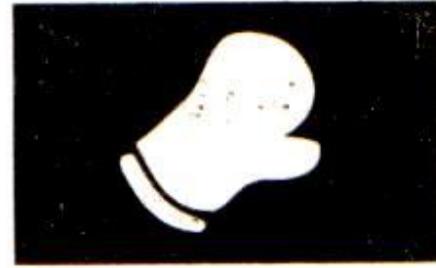
Heating Safety



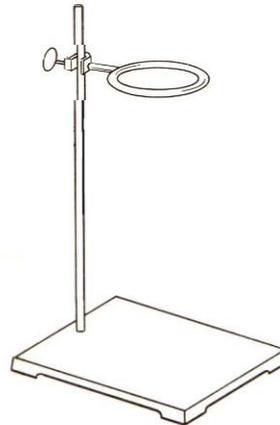
4. The only type of glassware that may safely be heated is either **Kimax** or **Pyrex**.
5. Always point the **top ends of test tubes** that are being heated **away** from people.
6. When heating a test tube, **move it** around slowly over the flame to distribute the heat evenly.



Heating Safety



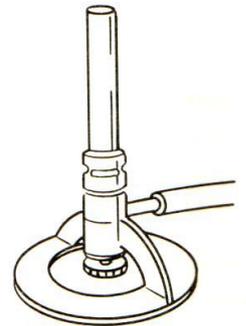
7. Only glassware that is thoroughly **dry should be heated.**
8. Heat glassware by placing it on a wire gauze **platform on a ring stand.** Do not hold it in your hand.



Heating Safety



9. **When lighting a burner**, wait until the striker is in place before you turn on the gas.
10. The **amount of air can be adjusted** by the air supply valve below the tube of the burner. This regulates the flame temperature and color.
11. Never leave a **burner or hotplate unattended**.



First Aid

Injury:

Burns

What To Do:

Immediately flush with cold water until burning sensation is lessened.



First Aid



Injury:

Cuts, bruises

What To Do: Do not touch an open wound without safety gloves.



Pressing directly on minor cuts will stop bleeding in a few minutes. Apply cold compress to bruises to reduce swelling.



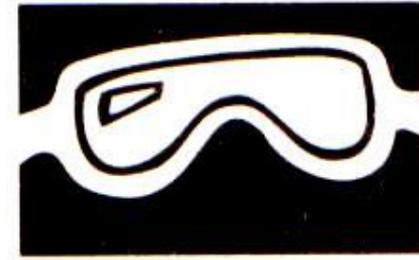
First Aid

Injury: Fainting

To Do: Provide fresh air and have the person recline so that their head is lower than the rest of their body.



First Aid



Injury:

Eyes

What To Do: **Flush eyes** immediately with plenty of water for several minutes. If a foreign object is lodged in the eye, do not allow the eye to be rubbed.



First Aid



Injury:

Poisoning

What To Do: Find out what substance was responsible for the poisoning and alert the teacher immediately.



First Aid



Injury:

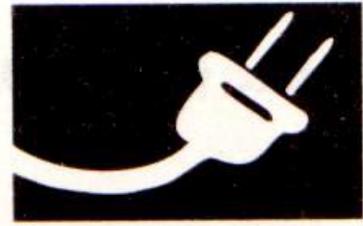
Spills on the skin

What To Do:

Flush with large quantities of water. For **acid spills**, apply baking soda solution. For **base spills**, apply vinegar or boric acid.



First Aid



Injury:

Electrical shock

What To Do: Shut off the current at the source. Remove wire with rubber gloves. Alert the teacher immediately.

