

## Laboratory Safety Rules

Introductory Physical Science (IPS) is a laboratory science class with units specific to laboratory work involving chemicals. During the course of the year, you will do many such laboratory activities. Although we attempt to make each laboratory activity as safe as possible, there is always risk associated with these activities. To ensure the safety of you and every other student, the following rules will be strictly enforced. Failure to abide by these rules could result in your removal from the lab. You and a parent or guardian must sign a safety contract that states you have read and agree to abide by these rules before you will be permitted to participate in any laboratory activity. Keep this paper in your notebook for future reference.

### General rules

1. The science laboratory is not a place for dangerous or frivolous behavior. You may endanger other students by running, jumping, pushing, etc. Therefore, you must behave in a cautious and responsible manner during all laboratory activities.
2. You must provide your teacher with information about known medical conditions (including allergies, medication, contact lenses) and a daytime phone number where a parent or guardian can be reached.
3. Eating, drinking, chewing gum, and applying cosmetics are strictly prohibited in the chemistry lab.
4. Report all accidents to your teacher immediately, no matter how minor they may seem.
5. You must follow written and verbal instructions explicitly and carefully. Use only materials and equipment authorized by your teacher. Perform only procedures and activities authorized by your teacher. Do not perform any activity unless your teacher is present.
6. Clothing should be appropriate for laboratory work: roll up long sleeves; remove bulky outer clothing and jewelry; do not wear shorts or open-toed shoes.
7. You are responsible for knowing the location and proper use of the following safety equipment: fire extinguisher, fire blanket, emergency shower, eyewash, gas and water shut-off valves, telephone, fume hood.
8. You are responsible for knowing all room exits and evacuation procedures. In case of an emergency, evacuate the lab immediately by the safest exit.
9. Never work in the lab unless the instructor is present.
10. Never remove lab equipment or chemicals from the lab.

### Preparation for laboratories

1. Prepare for each activity by preparing your notebook, including the chemical data table and safety hazards from a Safety Data Sheet (SDS), before starting any experiment. If you are in doubt about a procedure, ask for help.
2. Do not touch any materials or equipment until given specific instructions to do so.
3. Your teacher will explain procedures and equipment as needed. Pay particular attention to use of new equipment, changes in procedure, specific chemical safety guidelines, and disposal of used chemicals.

### When working with equipment

1. Laboratory equipment is expensive and difficult to replace. You are responsible for checking out and returning equipment, and financially responsible for any damage occurring to that equipment.
2. When you enter the room at the beginning of the period, do not touch any equipment until you are instructed to do so.
3. Understand the operation of equipment before attempting to use it. If there is any doubt, ask your teacher.
4. Do not use glassware that is broken or cracked. Dispose of broken glassware in the specifically designated container.

### When working with chemicals

1. Do not touch or smell chemicals unless specifically instructed to do so by your teacher. **Never** taste chemicals in the laboratory.
2. You must wear chemical splash goggles when working with heat, chemicals or glassware. You will be reminded before lab. This includes clean-up time.
3. Carefully read--and then reread--chemical labels before using them to ensure that you are using the correct chemical.
4. Use only the instructed amount of each chemical. To avoid contamination, do not return excess chemicals to the stock bottle.
5. Keep your hands away from your face (especially eyes and mouth), and wash them thoroughly with soap before leaving the classroom.
6. If you wear contact lenses, you should consult your doctor about potential problems. Contact lenses can absorb vapors and cause eye irritation. They are also difficult to remove in case of injury.
7. Know the correct procedure for mixing acid solutions. **Always** add acid slowly to water. **Never** add water to a large amount of acid.
8. Handle toxic or combustible gases only under the direction of your teacher. Use the fume hood when such materials are present.
9. Your teacher will give specific directions for disposal of each chemical. Do not dispose of solid chemical waste along with ordinary trash. Do not automatically pour liquids down the sink.

## **When working with flames**

1. Note the location of the gas shut-off valves, fire extinguisher and fire blanket before lighting a Bunsen burner.
2. Exercise extreme caution when using Bunsen burners. Keep your hands, hair and clothing away from open flames. The most common injury in high school labs is burned fingers.
3. Long hair must be tied back when using any open flame (this includes boys).
4. Never use flammable materials near open flames (including paper and solvents).
5. When heating a substance in a test tube, be careful not to point the mouth of the test tube at another person or yourself.
6. Turn off Bunsen burners when not in use.

## **Housekeeping details**

1. Only lab instructions and data tables are permitted in your work area.
2. Keep your work area clean and tidy. Wipe and dry your work bench or table before leaving the laboratory.
3. Return glassware, materials, and equipment to its proper place before leaving the classroom. Be sure glassware is clean.
4. Do not throw trash or other objects in the sinks. Use the trash cans.

5. Keep flames, water, and chemicals away from computers and their keyboard

+ Report all injuries and emergencies to your teacher immediately.

## **First Aid in the Laboratory**

<b>emergency</b>	<b>safe response</b>
burns	flush with cool water
cuts and bruises	wash with soap and water, cover with a bandage; do not expose open wounds to chemicals
fire	wrap a person in fire blanket; use fire extinguisher on flames
splash in eyes	flush with plenty of water in eye wash
spills on skin or clothing	flush with water or safety shower
spills on workbench	apply baking soda or kitty litter to neutralize or absorb; clean with paper towel; rinse with clean water
allergic response	go outside for fresh air
poisoning	note the suspected poisoning agent

**KEEP THIS PAGE IN YOUR SCIENCE NOTEBOOK!  
SAFETY IS A GROUP PROJECT!**

## **Student Safety Contract – sign and return this copy**

*The following contract must be signed by each student and a parent or guardian before participating in laboratory activities.*

I have read **Chemistry Safety Rules** and agree to abide by them. Specifically, I will:

- behave responsibly in the laboratory;
- follow all written and verbal instructions;
- protect my eyes, face, hands, and body while working in the laboratory;
- act in a manner that will ensure my classmates are not placed in danger;
- know the location of appropriate safety equipment; and
- practice good housekeeping procedures.

I also agree to abide by any additional safety regulations set forth by my teacher and/or the school district. I understand that failure to abide by these rules endangers others and will result in my removal from the class.

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Signature of student      date

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Signature of parent or guardian      date

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