

Lab Safety Rules & Contract

Ms. Jensen's Science Class
Veribest ISD, 2019-2020

Science is hands-on. Some of the activities we do this year will require the use of equipment and chemicals that can be dangerous if not handled properly. Safety is the #1 priority for students, teachers, administrators, and parents. To ensure a safe science laboratory, a list of rules has been adapted from the Texas Education Agency (TEA) lab safety guidelines and provided to you in this student safety contract. **These rules must be followed at all times.** These rules contain a lot about safety when working with chemicals. When reading a pre-lab, the word "reagent" means it's a chemical. You have been given two copies of these rules & contract. One is to keep in your folder. **The second copy is for your parents to keep; you cannot participate in labs until the parent signature sheet is returned.**

Personal Protective Equipment

1. Many materials in the laboratory can cause eye injury. Protect yourself from possible injury by wearing the provided safety goggles when we are working with chemicals and/or fire. You must wear goggles even if you're wearing glasses. (It is strongly recommended that you avoid wearing contact lenses in the lab.)
2. Laboratory aprons are also provided and should be worn when working with chemicals or heated substances.
3. If protective gloves need to be worn, they will be provided.

Proper Dress

1. On days we will be working in the lab with chemicals, you are required to wear long sleeves. You may leave a long sleeve shirt in the designated area of the lab in case you do not wear one that day. You may wear a lab coat in addition to a lab apron if you are wearing short sleeves. (Make sure to write your name in any clothing items you leave in the lab.)
2. Shorts are not allowed in the lab when working with chemicals. Wear full length (to the ankle) pants or skirts on lab days with which we will use chemicals.
3. Long hair should be tied back to prevent it from coming into contact with chemicals or an open flame.
4. Open toed shoes and sandals do not protect your feet from spills or other injuries and should not be worn when working with chemicals.
5. Any article of clothing or jewelry that hangs down from your body can come into contact with chemicals or flames and should be removed or tied back during lab.

Some chemicals are not harmful but can stain clothing or shoes. You may want to avoid wearing your favorite clothes on lab days.

If you are not in proper dress, you will not be permitted to participate in the experiment.

General Laboratory Safety Rules

1. Read all directions for doing a laboratory investigation before beginning. Be alert in the laboratory and listen for the teacher's directions. Ask questions if you do not understand any part of the investigation.

2. Never perform activities that are not authorized by the teacher.
3. Do not handle equipment or materials without specific permission. (This goes for any classroom.)
4. Take extra precaution when handling chemicals. Never pour chemicals or other substances into the sink or trash container, unless instructed to do so. If a chemical spill occurs, notify the teacher immediately.
5. Never eat or drink in the laboratory. (You can keep water in water bottles in the designated area away from the lab tables. You must wash your hands before and after getting a drink.) Never drink from a beaker or other container used in the laboratory.
6. There should never be playing or roughhousing in the laboratory.
7. Handle cutting instruments carefully. Never cut materials toward you—use a cutting motion away from yourself.
8. When you have completed the investigation, clean up your work area, wash and dry equipment, and return equipment and supplies to their proper place.
9. Wash your hands with soap and water after every investigation.
10. Turn off all burners before leaving the lab.
11. Know the location and use of all safety equipment (fire extinguishers, eyewash station, safety shower, fire blanket, fume hood, and chemical spill kits).
12. Never work in the laboratory alone or without permission.
13. Do not enter the supply room without a teacher present or without the teacher's permission.

First Aid Procedures

1. Report all accidents to your teacher immediately.
2. Learn what to do in case of an accident such as an acid spilling on the body, materials in the eye, and cuts or burns.
 - For chemicals splashed on the body—rush to the safety shower and turn on the water. Remain in the shower for at least 15 minutes.
 - For materials entering your eye—rush to the eye wash station and flush the eyes with a continuous stream of water for at least 15 minutes. Hold your eyelids open

with your fingers or get your teacher to help you hold your eyes open.

- Minor cuts or burns should be reported to the teacher and first aid given in the laboratory. For cuts or burns that are more severe, general first aid should be given and then examined by the school nurse.
3. Be aware of the location of the first aid kit, but allow the teacher to administer first aid to an injured student.

Fire Safety

1. Do not use an open flame without first putting on safety goggles.
2. Know how to light and regulate the flame on a burner.
3. Never leave an open flame unattended. When the burner is not being used, turn it off.
4. Keep your area clean and free from clutter.
5. Do not reach across an open flame.
6. Always point the open end of a test tube away from others when heating liquids. Some chemicals can boil out of the test tube violently and unexpectedly when being heated.
7. Never heat chemicals in a closed container such as a corked test tube. The expanding gas inside will cause the test tube to explode or turn the stopper into a projectile with considerable force.
8. Do not pick up a container that has been heated. Hold the back of your hand near the container and check for heat. If you can feel heat, use a mitten or tongs to pick up the container.

Chemical Safety

1. Never touch, taste, or smell any chemical that you do not know is harmless. If you are instructed to smell fumes during an investigation, do so by gently waving (wafting) your hand over the container so that the fumes are brought to you. Do not bring the container to your nose. Do not inhale the fumes directly from the container, they may be too concentrated and cause you injury.
2. Only use chemicals that are listed in the investigation and do not substitute other chemicals for the ones listed.
3. Notify the teacher immediately if chemicals have been spilled.
4. Dispose of the chemicals properly as directed by the teacher.
5. Use extra precautions with acids and bases. Always pour acid into water. Do not pour water into acids.
6. Remember to wash any acid or base immediately from your skin and notify the teacher.
7. Use a pipette bulb. Never pipette liquids using your mouth.
8. Read the labels twice before using the chemical.

9. Do not pour extra chemicals back into the original container. This causes contamination of the chemical and may cause incorrect results to occur in future investigations.
10. Never use the same scoopula to remove chemicals from two different containers.
11. When removing a stopper from a bottle, do not lay it down on the lab table, but place the stopper between two fingers and hold the bottle so that the label is in the palm of your hand. Both the bottle and stopper will be held in one hand.
12. Replace all stoppers and caps on the correct bottle after you have finished using it.

Use Glassware Safely

1. Glass tubing should never be forced into a rubber stopper. Use a lubricant and a turning motion on the glass tubing when inserting it into a rubber stopper or rubber tubing.
2. When heating glassware, use a wire or ceramic screen to protect the glassware from the flame.
3. Never use broken or chipped glassware. If glassware breaks, notify your teacher and properly dispose of it in the broken glassware container.
4. Never eat or drink from laboratory glassware.
5. Clean and dry glassware thoroughly before returning it to storage.

Use Electrical Equipment Safely

1. Be careful not to shock yourself or intentionally shock another person.
2. Turn off all power sources when setting up circuits or repairing equipment.
3. Do not use metal articles such as rulers, metal pencils or writing pens; do not wear rings, metal watchbands, or bracelets when working with electrical equipment.
4. When disconnecting electrical equipment, pull the plug and not the wire.
5. Use caution when handling electrical equipment that has been in use. The equipment may be warm or hot from being used.
6. Never connect, disconnect, or operate a piece of electrical equipment with wet hands or standing on a wet floor.

Other Precautions

1. Do not use hair spray, hair mousse, or other flammable hair products during or just before doing laboratory work where an open flame is used.
2. Synthetic fingernails are highly flammable; it is strongly recommended not to wear them in the lab.