

SAFETY IN THE LAB

- 1 Choose the sensible alternative among the words in *italics* in the following safety rules, which apply to all laboratory activities. Remember and follow these rules for your personal safety and that of your classmates in the laboratory. Write any new word you meet in your indexed book.

RULES OF LABORATORY CONDUCT

1. Perform laboratory work only when your teacher is *absent* / *present*.
2. Your **concern** for safety should begin even before the first activity. Always read and think about each laboratory **assignment** *after* / *before* starting.
3. Know the location and use of *all* / *some* safety equipment in your laboratory. These should include the safety shower, eye wash, first-aid kit, fire extinguisher and blanket.
4. Wear a laboratory *coat* / *skirt* or apron and protective glasses or goggles for all laboratory work. *Disposable* / *Leather* gloves must be worn when working with cultures. Wear *boots* / *shoes* (rather than sandals) and tie back *blonde* / *loose* hair.
5. Clear your bench *bottom* / *top* of all unnecessary materials such as books and clothing before starting your work. Microbiology laboratory benches should be swabbed with a laboratory disinfectant before and after each *practical* / *theoretical* session.
6. Check chemical labels *many times* / *twice* to make sure you have the correct substance. Some chemical formulas and names differ by only a letter or number. Pay attention to the *gamble* / *hazard* classifications shown on the label
7. **Avoid** unnecessary movement and *gossip* / *talk* in the laboratory.
8. Never *smell* / *taste* laboratory materials. **Gum**, food, or drinks *should* / *should not* be brought into the laboratory. No hand-to-mouth operation should occur (e.g. chewing pencils, licking labels, mouth pipetting).
9. Never *look* / *watch* directly down into a test tube; **view** the contents from the side. Never **point** the open end of a test toward yourself or your **neighbour**.
10. *Any* / *No* laboratory accident, however small, should be reported immediately to your teacher.
11. In case of a chemical **spill** on your skin or clothing *brush* / *rinse* the affected area with **plenty** of water. If the eyes are affected water-washing must begin immediately and continue for 10 to 15 *hours* / *minutes* or until professional assistance is obtained.
12. Minor skin burns should be placed under *cold* / *hot*, running water.
13. When **discarding** used chemicals, carefully follow the *information* / *instructions* provided.
14. **Return** equipment, chemicals, aprons, and protective glasses to their designated *locations* / *seats*.
15. Before leaving the laboratory, ensure that gas lines and water taps are *open* / *shut* off.
16. If in doubt, *answer* / *ask*!

GLOSSARY



- assignment:** piece of work, task given to a person
to avoid: not to do
concern: interest, consideration
to discard: to throw away as useless
gum: chewing gum
neighbour: person working near you
plenty: a lot
to point: to direct
to return: to put back
spill: accidental pouring out
to view: to observe

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Complete the table FIRST AID IN THE LABORATORY (AND AT HOME!) choosing the proper steps to take in case of laboratory accident among those listed in the SAFE RESPONSE BANK.

FIRST AID IN THE LABORATORY (AND AT HOME!)	
SITUATION	SAFE RESPONSE
Burns	
Cuts and bruises	
Fainting or collapse	
Fire	
Foreign matter in eyes	
Poisoning	
Severe bleeding	
1. Spills, general 2. Acid burns 3. Base burns	

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Match the following terms used to describe the hazards of some chemicals with their meanings: carcinogen, corrosive, explosive, flammable, highly toxic, irritant, mutagen, volatile and copy adjectives and definitions in your indexed book.

HAZARD DIAGRAM

- Easily vaporized from the liquid, or solid state -
- A substance that on immediate, prolonged, or repeated contact with normal tissue will induce a local inflammatory reaction -
- A substance that causes destruction of tissue by chemical action on contact -
- Agents or substances that when inhaled, absorbed or ingested in small amounts can cause death, disablement, or severe illness -
- Burns easily -
- An unstable substance capable of rapid and violent energy release -
- A substance capable of causing cancer or cancerous growths in mammals -
- A substance capable of causing changes in the genetic material of a cell, which can be transmitted during cell division -

SAFE RESPONSE BANK

- Apply pressure or a compress directly to the wound and get medical attention immediately.
- Flush about 15 min with plenty of water, then go to the doctor.
- Flush with cold water.
- Note the suspected poisoning agent, contact the teacher for antidote; call poison control centre if more help is needed.
- Provide person with fresh air, have him/her recline in a position so that his head is lower than their body; if necessary, provide CPR¹.
- Treat as directed by instructions included with first aid kit.
- Turn off all flames and gas jets, wrap person in fire blanket; use fire extinguisher to put out fire. DO NOT use water to put out fire.
- 1. Wash area with plenty of water, use safety shower if needed.
 2. Use sodium hydrogen carbonate (baking soda)
 3. Use boric acid or vinegar.

¹ cardiopulmonary resuscitation.