

Laboratory Safety Module

Laboratories provide an opportunity for students to learn by doing and are often the best-liked part of a course. Laboratory procedures are designed to allow students to conduct experiments in a safe fashion; however, some materials and objects in a laboratory can be hazardous if misused.

The following laboratory rules are precautions to protect the safety of everyone in the laboratory.

Before You Start to Work

1. Students are not allowed to work unless an instructor is present in the laboratory and has given the instructions needed for the day's exercises.
2. Do not bring food or drinks into the laboratory.
3. For some exercises, on entering the lab, you should wash down your bench space with the disinfectant provided. Your instructor will tell you which exercises require this precaution.
4. Clear your bench space of unnecessary items, such as books other than your lab manual. Your instructor will designate the proper place for personal items.
5. Keep the floor clear. Do not block exits.
6. If you have an uncovered open cut, notify your laboratory instructor. Bandages and gloves will be available.
7. Students must wear shoes to enter the laboratory.
8. Tie back long hair when instructed or whenever loose long hair is a hazard.
9. Your instructor will point out the location of emergency equipment, including an emergency shower, an eyewash station, and a fire extinguisher. Be sure you know where these are. Know also where the room exits are.

While You Are Working in the Laboratory

1. Protect yourself—do not put anything (e.g., hands, pencils, laboratory equipment) in your mouth. Do not handle your contact lenses or apply cosmetics. Do not eat or drink anything.
2. Clean up spills immediately.
3. Notify your instructor immediately in case of an accident, such as a hazardous spill, a fire, a cut, a burn, or a possible injury to your eye. Your instructor is there to help you.
4. Discard used materials as instructed. You will be given special instructions for discarding broken glass, chemicals, and any other hazardous materials.
5. If you do not understand something while working in the laboratory, ask your instructor.
6. Before leaving lab, clean up your bench space and, if instructed, wipe it down with disinfectant. Wash your hands.

Guests

Children are not allowed in the laboratories. Adult guests may be present with special permission of the instructor.

I understand the laboratory rules and agree to abide by them.

___ yes

___ no

Questions

Note to the Instructor: Alternate questions are provided, which the instructor can use to construct a set of different quizzes.

Choose the best answer.

1. For your safety, you should know the location of . . .
 - a. a fire extinguisher.
 - b. an eyewash station.
 - c. an emergency shower.
 - d. a, b and c
 - e. a and b

1. _____ should know the location of emergency equipment.
 - a. One student in the laboratory designated as Safety Officer
 - b. Either you or your lab partner
 - c. One student in each group
 - d. All students
 - e. None of the above. The instructor is the only person responsible for knowing the location of safety equipment.

2. In the laboratory, you are allowed to . . .
 - a. apply cosmetics.
 - b. drink soft drinks in cans.
 - c. put in your contact lenses.
 - d. both a and c
 - e. none of the above

2. The only food allowed to be eaten in the laboratory is food . . .
 - a. purchased on the school grounds.
 - b. that will not leave crumbs or other food waste in the laboratory.
 - c. in disposable containers, such as paper or throw-away cartons.
 - d. that can be finished before the laboratory period begins.
 - e. none of the above. No food is to be eaten in the laboratory.

3. You would like to finish early. You may enter the laboratory and begin work before your instructor arrives if you . . .
 - a. have read the exercise and know what to do.
 - b. have left a message for your laboratory instructor that you will begin work early.
 - c. are making at least a B in the class.
 - d. have a laboratory partner working with you.
 - e. none of the above. You may not work in the laboratory until the laboratory instructor arrives and has given instructions.

3. Your laboratory instructor is late arriving. You should go ahead with the exercise if . . .
 - a. you know what to do.
 - b. your laboratory instructor discussed the day's exercise previously.
 - c. your laboratory partner is present and ready to work.
 - d. your laboratory instructor has sent a message that he or she will arrive shortly.
 - e. none of the above; students may not work in the laboratory unless an instructor is present.

4. To work in the laboratory, you are routinely required to wear . . .
 - a. shoes.
 - b. clothing covering your legs to at least below your knees.
 - c. a long sleeved garment, such as a lab coat.
 - d. a headband if you have long hair.
 - e. a fireproof apron.

4. Students who are not wearing shoes . . .
 - a. may not work in the laboratory.
 - b. will be asked to wear shoes to the next laboratory period.
 - c. will have points deducted from the laboratory report.
 - d. should inform the laboratory instructor and sign a waiver in case of injury to his or her foot.
 - e. will be allowed to work in the lab only in hot weather.

5. You may keep on your bench space your . . .
 - a. textbooks.
 - b. laboratory manual.
 - c. cell phone.
 - d. a & b
 - e. a, b & c

5. Your bench space should . . .
 - a. not contain many personal items, although a purse or backpack can be left there.
 - b. be left clean and when appropriate wiped with a disinfectant before leaving lab.
 - c. have a plastic or paper cover to make clean-up easy.
 - d. a and b
 - e. none of the above. Your bench space is your personal area, and you can decide how to use it.

6. You may store your backpack . . .
 - a. on the floor in front of your bench space.
 - b. on the floor near an exit.
 - c. on your bench space but away from your working area.
 - d. either a or b
 - e. none of the above. Your instructor will designate the proper place for personal items.

6. Which of the following should be stored on the floor?
 - a. your backpack
 - b. all books except your laboratory manual
 - c. coats, umbrellas and other personal items
 - d. all of the above
 - e. none of the above. The floor should be kept clear.

7. Your instructor has announced that the next lab exercise involves some biological materials and has asked students to use disinfectants to be sure the lab benches are safe to work on. In that lab period, you should . . .
 - a. wipe down your bench space with the disinfectant provided at the beginning of the lab period.
 - b. wipe down your bench space with the disinfectant provided at the end of the laboratory period.
 - c. both a and b
 - d. wipe down your bench space about every 15 minutes.
 - e. none of the above. Disinfectants are needed only if you spill something.

7. Your bench space should be wiped down with disinfectant . . .
 - a. if a liquid is spilled on it; otherwise it is not necessary.
 - b. if you are working with animals; otherwise it is not necessary.
 - c. at the beginning and end of each laboratory period when instructed.
 - d. about every half hour during each laboratory period.
 - e. none of the above. Your bench space should be cleaned with soap and water when it is dirty, but disinfectants should not be used.

8. You are responsible for the care of a child during the time of your laboratory period. You may bring the child with you to laboratory if . . .
 - a. the child is at least six years old.
 - b. the laboratory exercise for the day is one you feel is not hazardous.
 - c. the laboratory is usually kept clean and orderly.
 - d. no other arrangements can be conveniently made for the care of the child.
 - e. none of the above. You must make other arrangements for the child while you are in laboratory.

8. Children are allowed in the laboratory . . .
 - a. if the laboratory is not crowded.
 - b. if the laboratory exercise for the day will be short.
 - c. in the second half of the semester, after students know how to work safely in the laboratory.
 - d. If the child is responsible and will not interfere with the laboratory work.
 - e. none of the above. Children are not allowed in the laboratory.

9. You cut your hand shortly before your laboratory period. The cut is minor, but it is an open wound. You should . . .
 - a. try not to let your laboratory instructor see your hand until after the laboratory period has started.
 - b. cover the cut with a bandage, and keep it covered during the period. If you don't have a bandage available, tell your laboratory instructor about the cut. Bandages to cover the cut will be available in the laboratory.
 - c. assume you cannot attend the laboratory period and stay home.
 - d. go to the health service; explain that laboratory rules require the cut to be treated by a professional before you can attend lab.
 - e. cover the cut with a bandage and remove it during the laboratory period if it is awkward to work with it on.

9. You fall on the way to lab. When you arrive at lab, you find you have a small open scratch on your arm. You should . . .
 - a. ignore the scratch since it is not serious.
 - b. ask your instructor for a bandage to cover the scratch.
 - c. not go to lab but go the health service.
 - d. not go to lab but go home.
 - e. Any of the above is acceptable.

10. You break a glass item, such as a test tube. It should be . . .
 - a. discarded in the tray for used glassware.
 - b. discarded in the wastebasket.
 - c. left on your instructor's desk.
 - d. discarded in a special container for broken glass; if you are not sure where that is, you should ask your instructor
 - e. left on your workbench with a note attached.

10. Which of the following should be discarded in special locations?
- broken glass
 - hazardous chemicals
 - items designated as hazardous by your laboratory instructor
 - all of the above
 - none of the above; no special locations are needed for any of the items above.
11. If you cut your hand while working in the laboratory, you should . . .
- ask your laboratory partner to finish the day's work.
 - wash the cut with soap and water.
 - wipe the cut thoroughly with the disinfectant provided in the laboratory.
 - notify your instructor. Bandages will be available in the laboratory.
 - check the cut when you go home to see if anything got into it during lab.
11. Your laboratory instructor should be notified . . .
- if you cut your hand, burn yourself, or may have injured your eye.
 - if there is a hazardous spill.
 - in case of a fire.
 - all of the above
 - none of the above; each student is responsible for handling these incidents.
12. Your laboratory partner's loose long hair is dangling very close to an open flame. Your partner . . .
- should refuse to do this exercise.
 - can just watch his or her hair and try to keep it out of the flames.
 - must tie back his or her hair.
 - might want to have a fire extinguisher or container of water handy in case his or her hair catches on fire.
 - none of the above; if his or her hair catches on fire, it will go out quickly and will not cause a problem.
12. During an exercise in which a student's loose long hair is hazardous, he or she may . . .
- be given an alternative laboratory assignment.
 - not work in the lab during that lab period.
 - be required to tie back his or her hair.
 - be required cut his or her hair.
 - none of the above; how a student handles his or her hair is a personal choice.

Answers (for the instructor):

These answers are correct for both of the alternate questions for each number.

1. d
2. e
3. e
4. a
5. b
6. e
7. c
8. e
9. b
10. d
11. d
12. c