

## Safety Rules-Physiology

### General Guidelines:

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all verbal and written instructions carefully. If you do not understand a direction or part of a procedure, ask the instructor before proceeding.
3. Never work alone. No student may work in the laboratory without an instructor present.
4. When first entering a science room, do not touch any equipment, chemicals, or other materials in the laboratory area until you are instructed to do so.
5. **Never** eat food, drink beverages, or chew gum in the laboratory. Do not use the laboratory glassware as containers for food or beverages.
6. Perform only those experiments authorized by the instructor. Never do anything in the laboratory that is not called for in the laboratory procedures or by your instructor. Unauthorized experiments are prohibited.
7. Be prepared for your work in the laboratory. Read all procedures thoroughly before entering the laboratory. Never fool around in the laboratory. Horseplay, practical jokes, and pranks are dangerous and prohibited.
8. Observe good housekeeping practices. Work areas should be kept clean, and tidy at all times. Bring only your laboratory instructions, worksheets, and/or reports to the work area. Other materials (books, purses, backpacks, etc.) should be stored in the classroom area.
9. Keep isles clear. Place personal items, back pack, etc. under chair.
10. Know the locations and operating procedures of all safety equipment including the first aid kit, eyewash station, safety shower, fire extinguisher, and fire blanket.
11. Always work in a well ventilated area. Use the fume hood when working with volatile substance or poisonous vapors. Never place your head into the fume hood.
12. Be alert and proceed with caution at all times in the laboratory. Notify the instructor immediately of any unsafe conditions you observe.
13. Dispose of all chemical waste properly. Sinks are to be used only for water and those solutions designated by the instructor. Solid chemicals, metals, matches , filter paper, and all other insoluble materials are to be disposed of in the proper waste containers , not in the sink.
14. Keep hands away from face, eyes, mouth, and body while using chemicals or preserved specimens. Wash your hands with soap and water after performing all experiments. Clean, rinse, and wipe dry all work surfaces (including the sink) and apparatus at the end of the experiment. Return all equipment clean and in working order to the proper storage area.
15. Experiments must be personally monitored at all times. You will be assigned a laboratory station at which to work. Do not wander around the room, distract other students, or interfere with the laboratory experiments of others.
16. Students are **not** permitted in the science storage rooms or preparation areas unless in the presence of their instructor.
17. Know what to do if there is a fire drill during a laboratory period: containers must be closed, gas valves turned off, fume hoods turned off, and any electrical equipment turned off.
18. When using knives and other sharp instruments, always carry with tip and points pointing down and away. Always cut away from your body. Never try to catch falling sharp instruments. Grasp sharp instruments only by the handles.

### Clothing:

19. Any time chemicals, heat, or glassware are used, students will wear laboratory goggles. **There will be no exceptions to this rule!**
20. Contact lenses should not be worn in the laboratory unless you have special goggles designed for contact lenses.
21. Dress properly during a laboratory activity. Long hair, dangling jewelry, and loose or baggy clothing are a hazard in the laboratory. Long hair must be tied back and dangling jewelry and loose clothing must be secured. Shoes must completely cover the foot. No sandals allowed.
22. Lab aprons have been provided for your use and should be worn during laboratory activities.

### Accidents and Injuries:

23. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately, no matter how trivial it may appear.
24. If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from eye wash station or safety shower for at least 20 minutes. Notify the instructor immediately.

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25. All chemicals in the laboratory are to be considered dangerous. Do not taste, touch or smell any chemicals unless specifically instructed to do so. The proper technique for smelling chemical fumes will be demonstrated to you.
26. Check the label on chemical bottles twice before removing any of the contents. Take only as much chemical as you need.
27. Never return unused chemicals to their original containers.
28. Never use mouth suction to fill a pipette. Use a rubber bulb or a pipette pump
29. Never dispense flammable liquids anywhere near an open flame or source of heat.
30. Never remove chemicals or other materials from the laboratory area.
31. Take great care when transferring acids and other chemicals from one part of the laboratory to another. Hold them securely and walk carefully.

### **Handling Equipment and Glassware:**

32. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken or waste glassware in the designated glass disposal container.
33. Inserting and removing glass tubing from rubber stoppers can be dangerous. Always lubricate glassware (tubing, thistle tubes, thermometers, etc.) before attempting to insert it in a stopper. Always protect your hands with a towel or gloves when inserting glass tubing into, or removing it from, a rubber stopper. If a piece of glassware becomes "frozen" do not force it.
34. Fill wash bottles only with distilled water and use only as intended, e.g. rinsing glassware and equipment, or adding water to a container.
35. When removing an electrical plug from its socket, grasp the plug, not the electrical cord. Hands must be completely dry before touching an electrical switch, plug, or outlet.
36. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
37. Report damaged electrical equipment immediately. Look for things such as frayed cords, exposed wires, and loose connections. Do not use damaged electrical equipment.
38. If you do not understand how to use a piece of equipment, ask the instructor for help.
39. Do not immerse hot glassware in cold water; it may shatter.

### **Heating Substances:**

40. Exercise extreme caution when using a gas burner. Take care that hair, clothing and hands are a safe distance from the flame at all times. Do not put any substance into the flame unless specifically instructed to do so. Never reach over an exposed flame. Light gas (or alcohol) burners only as instructed by the teacher.
41. Never leave a lit burner unattended. Never leave anything that is being heated or is visibly reacting unattended. Always turn the burner or the hot plate off when not in use.
42. You will be instructed in the proper method for heating and boiling liquids in test tubes. Do not point the open end of the test tube being heated at yourself or anyone else.
43. Heated metals and glass remain very hot for a long time. They should be set aside to cool and picked up with caution. Use tongs or heat protective gloves if necessary.
44. Never look into a container that is being heated.
45. Do not place hot apparatus directly on the laboratory bench. Always use an insulating pad. Allow plenty of time for hot apparatus to cool before touching it.
46. When bending glass, allow time for the glass to cool before further handling. Hot and cold glass have the same visual appearance. Determine if an object is hot by bringing the back of your hand close to it prior to grasping it.