

## **SAFETY RULES AND EQUIPMENT GUIDELINES**

**Purpose:** Science is a hands-on laboratory class. You will be doing many laboratory activities which require the use of hazardous chemicals. Safety in the science classroom is the #1 priority for students, teachers, and parents. To ensure a safe science classroom, a list of rules has been developed and provided to you in this student handout. These rules must be followed at all times.

### **General Guidelines**

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all written and verbal instruction carefully. If you do not understand a direction or part of a procedure, ask your lab partner or your instructor.
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 material in the laboratory area until you are instructed to do so.
5. Do not eat food, drink beverages or chew gum in the laboratory. Do not use laboratory glassware as containers for food or beverages.
6. Perform only those experiments authorized by the instructor. Unauthorized experiments are prohibited.
7. Be prepared for your work in the laboratory. Read all procedures thoroughly before entering the lab.
8. Never fool around in the lab. Horseplay, practical jokes and pranks are dangerous and prohibited.
9. Observe good housekeeping practices. Work areas should

be kept clean and tidy at all times. Backpacks, purses etc. should be stored in another designated area in the classroom.

10. Keep aisles clear. Push your chair under the table when not in use (or when standing during a lab.)
11. Know the locations and operating procedures of all safety equipment including the eye wash station, fire extinguisher, and fire blanket. Know where the exits are located.
12. Be alert and proceed with caution at all times in the laboratory. Notify the instructor immediately of unsafe conditions you observe.
13. Dispose of all chemical waste properly. Sinks are used only for water and those chemicals designated by the instructor. Solids such as metals, matches, filter paper and all other insoluble materials are to be disposed of in the proper waste containers, not in the sink.
14. Set up and use the prescribed apparatus as directed in the lab instructions.
15. 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.
16. Clean, rinse, and wipe dry all work surfaces and apparatus at the end of the experiment. Return all equipment clean and in working order to the proper storage area.
17. 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.
18. Students are not permitted in any cabinets or storage areas.

19. Know what to do if there is a fire drill during a laboratory period: containers must be closed, gas turned off, electrical equipment turned off.

### **Clothing**

20. Any time chemicals, heat, or glassware are used, students will wear laboratory goggles. There will be no exceptions to this rule!!
21. Dress properly during a laboratory activity. Long hair, dangling jewelry, and loose or baggy clothing are a hazard in the lab. Long hair must be tied back and dangling jewelry and loose or baggy clothing must be secured.
22. Lab aprons have been provided for your use and should be worn during lab 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 you or your lab partner is hurt, immediately notify the teacher.
25. If a chemical should splash into your eye(s) or on your skin, immediately flush with running water from the eyewash station for at least 20 minutes. Notify the instructor immediately.

### **Handling Chemicals**

26. All chemicals in the laboratory are to be considered dangerous. Do not touch, taste, or smell any chemicals unless specifically instructed to do so. The proper techniques for smelling chemical fumes will be demonstrated for you.

27. Take only as much chemical as you need.
28. When transferring chemicals from one container to another, hold the container away from the body.
29. Acids must be handled with extreme care. Always add acid to water! Stir the solution carefully because of the heat produced – esp. with sulfuric acid.
30. Handle flammable hazardous liquids with care. Never dispense flammable liquids near an open flame.
31. NEVER remove chemicals or other materials from the lab area/classroom.
32. Take great care when transferring chemicals from one part of the room to another. Hold them securely and walk carefully.

### **Handling Glassware and Equipment**

33. Carry glass tubing and stirring rods in a vertical position to minimize the likelihood of breakage and injury.
34. Never handle broken glass with your bare hands. Use a brush and dustpan to clean up broken glass. Place broken glassware in the designated glass disposal container.
35. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
36. If you do not understand how to use the equipment ask the teacher for help.
37. DO NOT immerse hot glassware in cold water; it may shatter.

### **Heating Substances**

38. Exercise extreme caution when using a 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 burners only as instructed by the teacher.
39. Never leave a lit burner unattended. Never leave anything that is being heated or is visibly reacting unattended. Always turn the burner or hot plate off when not in use.
40. You will be instructed in the proper method of heating and boiling liquids in test tubes. DO NOT point the open end of a test tube being heated at yourself or anyone else.
41. 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.
42. Never look directly into a container that is being heated.
43. Do not place hot apparatus on the lab desks. Allow plenty of time for hot apparatus to cool before touching it.