

OMAHA PUBLIC SCHOOLS

SCIENCE SAFETY RULES - STUDENT

GENERAL SAFETY RULES

1. No laboratory work shall be performed by a student without the direct supervision of the teacher. Under no circumstances is a student allowed to work in the laboratory alone.
2. You will be instructed at the beginning of each laboratory period, as to the potential dangers that may be encountered and the proper precautions that are required to eliminate or reduce such hazards.
3. You will become familiar with the instructions of laboratory procedure prior to the initiation of any related activity. **Read all directions for the experiment at least two times.** Ask questions if you don't understand any part of the directions. No changes from the instructions will be allowed without permission from the teacher or instructor.
4. Never perform any activity that is not authorized or supervised by the teacher or instructor.
5. Do not operate equipment without operating instructions or specific permission from the teacher or instructor (i.e. Bunsen burner or centrifuge).
6. No eating, drinking or application of cosmetics is allowed in the laboratory.
7. Always wash hands after handling chemicals, plants, animals, or dissection tools.
8. Careless behavior in a laboratory can cause accidents. Horseplay, teasing, loud talking or tossing objects are not allowed in a laboratory.
9. All personal possessions such as books, coats, and papers, that are not related to the laboratory procedure should be stored away from the laboratory work area.
10. Each laboratory student will be made aware of the use and location of all safety equipment (i.e. goggles, gloves, apron, fume hood, eyewash, etc.).
11. Never reach over a Bunsen burner, chemical reagents or other laboratory equipment.
12. At the completion of the laboratory period or when an experiment is complete, return all equipment to proper storage and clean the work area.

DRESS CODE

13. Long sleeved shirt and pants offer the best protection in a laboratory. Shorts and short skirts will not adequately protect your legs.
14. Loose fitting clothing, oversized clothing, coats and long hair may create a potential fire hazard when burners are in use. Long hair should be secured with a tie (rubber band), pins or barrette.
15. Sandals and open-toed shoes should not be worn in the laboratory.
16. Clothing, such as ties, or long jewelry which could dangle in chemicals or flame should be removed or tied back.
17. The wearing of rings, bracelets, watches (especially those with absorbent bands) is discouraged in the laboratory. The chemicals in a lab may become trapped under the jewelry and irritate the skin or damage the jewelry itself.
18. Hair spray and hair mousse is highly flammable and should not be used in laboratory class or directly before coming to class.
19. Synthetic fingernails are highly flammable and should not be worn in laboratory class. Organic solvents will also dissolve these fingernails.

EMERGENCY PROCEDURES

20. Each laboratory student will be made aware of emergency procedures, such as:
 - a. Fire drill exits and procedures
 - b. Severe weather procedures
 - c. First Aid kit location or location of school nurse
 - d. Location and proper use of fire extinguisher, fire blankets, eye wash stations, chemical spill absorbents, chemical showers, etc.
 - e. Procedure for summoning help in the event of an emergency, injury or fire
21. Spills are to be cleaned-up as soon as possible. Students should ask the teacher or instructor for proper clean-up procedures for spilled chemicals. Unless specific permission is given, do not dispose of chemicals by pouring or dumping into the sink or general trash container.
22. A plan will be developed for stopping work including the extinction of burners, securing chemicals, and/or instruments (sharp objects) in the event of an emergency.

FIRST AID

23. Report all accidents to the teacher immediately. Only the teacher should administer first aid or refer you to the school nurse.
24. Know what to do in an emergency such as splashing acid on your skin or in your eyes. (Be sure to rinse the area with clean water for a period of 15 minutes.)

PERSONAL PROTECTIVE EQUIPMENT

25. Protective eye goggles and/or clothing will be required during certain laboratory procedures. Goggles *must* be worn covering the eyes during all laboratory procedures that involve the use of chemicals, heated materials or dissection. Lab coats or chemical aprons should be worn when working with chemicals or heated materials.
26. The wearing of contact lenses in the laboratory should be avoided, even if goggles are worn.

SHARPS

27. All dissecting tools should be considered dangerous.
28. Notify your teacher or instructor immediately if you are cut.
29. Handle razor blades and scalpels with extreme caution. Always cut away from you, never toward yourself or another person.
30. Used sharps (razor blades, scalpels and lancets) should be discarded in a designated container.
31. Dissection specimens should be properly mounted in the dissection pan before cutting.

GLASSWARE SAFETY

32. A soap solution of glycerin or other lubricant should be used on the ends of glass rods or tubing before inserting into a stopper. The rod or tubing should be inserted into the stopper with a turning motion--never forced. Always aim the rod or tubing away from the palm of the hand which holds the stopper.
33. Broken or cut glass tubing should be finished by fire polishing the ends, to remove sharp edges. Allow to cool completely before handling.

34. Glassware which is to be heated should be Pyrex or a similar heat-resistant type. Always protect the glassware from direct flame with a wire or ceramic pad or screen. Heated glassware should be cooled for several minutes before handling.
35. Glassware should be free of cracks or chipped edges.
36. Laboratory glassware is not to be used for drinking or eating.
37. Broken glassware should be disposed of in a separate container, marked "Broken Glass", or as designated by the teacher.

FIRE/HEAT SAFETY

38. Goggles should always be worn when working with heated materials.
39. Know how to properly light your heat source such as a candle, alcohol burner, Bunsen burner. For example, always have the flint lighter ready or the match lit before turning on the gas to the Bunsen burner.
40. Keep the work area clear of clutter. Work materials should be kept a safe distance away from fire or heat.
41. Never leave a flame or heat source unattended. Always extinguish a burner or turn off a heat source when not in use.
42. At the end of the class period or experiment, be sure to check that the gas line to the Bunsen burner is off or the hot plate has been unplugged.
43. Whenever heating test tubes or other glassware, be sure the mouth or base is not pointed toward a person. The contents of the tube or container may spew out or the glass itself may break.
44. Never reach over an open flame or any other heat source such as a hot plate.
45. Never heat a liquid or a solid which emits a gas when heated, in a closed container.
46. Use tongs, clamps or heat resistant mitts when working with heated glassware. Before handling heated glassware, hold the back side of the hand close to the glassware to check the temperature. If you can feel heat coming from the glassware, it is probably too hot to handle.
47. Bunsen burner hoses should be checked frequently for cracks and holes.
48. Electric heat is a safer source of heat and is preferred over an open flame. Open flame should not be used when working with volatile liquids such as ether, carbon disulfide, alcohol, benzene, etc.

ELECTRICAL SAFETY

49. Check all electrical batteries for leakage.
50. Use electronic equipment only on an ungrounded surface.
51. Never deliberately shock yourself or other persons.
52. Never use metal objects such as metal rulers, pencils or pens when working with electricity.
53. Use extreme caution when working with electricity. Rings, metal watchbands, bracelets and other metallic objects should not be worn.
54. Set all power supply controls to "Zero" or "Off" before connecting to the power source. Do not work on electronic circuits when the power is on, except when absolutely necessary.
55. Allow electrical equipment to cool before handling or storing.

56. Check all power cords for wear and fraying. Use grounded 3-prong plugs. Always pull the plug, not the wire when disconnecting electrical equipment.
57. Never connect, disconnect or operate electrical equipment with wet hands or if the counter or floor is wet.

CHEMICAL SAFETY

58. Never touch or taste any chemical. Smelling of any chemical should be performed only by gently waving your hand over the opening of the container, directing the fumes toward your nose. Don't inhale directly from the container.
59. When removing the stopper from a bottle, do not lay the stopper on the desk or work area. Hold the stopper between your fingers. Hold the bottle so that the label is in the palm of your hand, protected from drips and runs. Both the stopper and the bottle can be held in one hand. Wipe any residue from the exterior of the bottle before returning it to its storage location.
60. Immediately replace all stoppers or lids when you are finished. Return the proper stopper or lid to the container. Be careful that the lids or stoppers from two similar containers are not interchanged.
61. Use *only* those chemicals your teacher or instructor indicate are needed for the activity. Keep all other chemicals stored away when not in use.
62. Read the chemical name at least twice before using. Many chemical names are similar and cannot be substituted for one another.
63. Pipetting bulbs will be used to draw liquids into the pipette for transfer to another container. Mouth pipetting is *not* allowed under any circumstances. Air must not be bubbled through a pipette. This may cause the liquid to splatter.
64. Pipettes should only be used for one chemical solution. Using the pipette in different solutions causes cross contamination.
65. Spatulas should be used to transfer only one chemical. Never use the same spatula for more than one chemical as cross contamination will occur.
66. Remove from the stock container, only that quantity of chemical or reagent necessary. Never return the excess to the stock container as this practice may cause cross contamination.
67. Extra precaution is needed when working with acids or bases. Pour either chemical over a sink or basin.
68. Always pour acids or bases into water -- *never* the reverse.
69. Spills of acids or bases on the skin should be rinsed immediately in cool running water. Have your lab partner or another student notify your teacher or instructor as soon as possible. Acids or bases in the eyes should be rinsed for 15 minutes under cool running water. Hold the lids of the eyes open to allow for adequate rinsing of the eye surface.
70. Notify your teacher or instructor immediately in the event of a chemical spill. He or she will instruct you as to the proper clean-up procedure.
71. Mercury spills must be cleaned up immediately by your teacher. Mercury will flow to the lowest point possible, and can easily become trapped in the small opening between the floor and the wall.

**Omaha Public Schools
SCIENCE SAFETY AGREEMENT**

Student Name _____
(Please Print)

- I WILL:
1. Follow all written and oral instructions given by the teacher.
 2. Ask questions, or state concerns before beginning a lab procedure.
 3. Behave in a manner that will ensure the health & safety of all students in the laboratory/classroom at all times.
 4. Use/Wear adequate protective devices for eyes, face, hands, body and clothing during laboratory activities.
 5. Know the location and use of first aid and fire extinguishing equipment.
 6. Refrain from eating, drinking, chewing gum or applying cosmetics in the laboratory.
 7. Keep work areas clean and free of clutter during lab class.

I wear contact lenses Yes _____ No _____

I understand and realize that many accidents are caused by carelessness and being in a hurry. I will come to class prepared to be responsible so that the safety and welfare of myself and others is not jeopardized. I have read the set of written science safety rules prepared by my teacher and agree to follow these and any other rules.

Date _____ Student _____
(Continue on back)

PSOFT ITEM NO. 1645

303

* Contact lenses should not be worn in the laboratory as certain chemical fumes or small particulate may become lodged under the lens. If this student has no other option but to wear contact lenses for vision correction, non-vented splash goggles are recommended. All students are required to wear goggles covering their eyes, during procedures which involve the use of chemicals, dissection or projectiles. Please be aware of the slight increase of eye damage for contact wearers as compared to students in similar situations without contact lenses.
In case of accident or emergency contact:

Name: _____ Phone # _____

Name: _____ Phone # _____

Please list any known allergies or health problems: (If additional space is needed, please attach)

* Your signature also gives your permission for your child to wear contact lenses (with goggles) in science lab unless otherwise noted. I understand the rules of the science laboratory and will support the teacher in the enforcement of these rules.