



Safety in Teaching Areas AP 400.35

Procedure for:	All School Staff	Adopted:	January 22, 2013
Submitted by:	Jamie McKinnon (Superintendent of Education)	Revised:	N/A
Category:	Operations		

Purpose

Health and Safety are of paramount importance in the technological, science, art, and physical education programs at the Brant Haldimand Norfolk Catholic District School Board. As part of every course, students must be made aware that health and safety is everyone's responsibility. Before using equipment, students must be able to demonstrate knowledge of the equipment being used and the procedures necessary for its safe use. Personal protective gear should be worn, as appropriate.

Responsibilities

All Board staff shall follow this administrative procedure. Specific direction is provided for principals and classroom teachers.

Information

School boards have an obligation to identify the foreseeable risks associated with any school activity, program or curriculum requirement and to take all reasonable steps to remove or manage those risks. Principals and teachers of technology, science, art, and physical education will act to minimize or manage the risks of injury in the shop, lab, art classroom or gymnasium.

Procedures

1.0 The principal shall ensure that all teachers of technology, science, art, and physical education:

- a) are provided with the opportunity for annual teacher in-servicing on shop, lab, art classroom, or gym safety; and
- b) that all teachers new to the subject are provided with an orientation session to reinforce safety procedures specific to their area.

2.0 All teachers of technology, science, art and physical education shall:

- a) Articulate general safety rules (and rules for specific pieces of equipment) for all students to follow and review expectations on a regular basis;
- b) ensure that safety procedures are tested on at the beginning of the course and require students to show sufficient level of knowledge of the material on the test prior to having access to the equipment/activity (see Appendices for samples);
- c) ensure that accurate records are maintained that document the attendance at safety training sessions and proof of sufficient knowledge of safety procedures prior to having access to equipment/activities;
- d) ensure that there is an allotted amount of time to be designated each month to review safety procedures with students;
- e) ensure that safety procedures and course outlines are sent home and returned signed by both parent and student before commencing course work;
- f) ensure that all students sign safety agreements (see Appendices for samples);
- g) teach and develop a safe and positive working attitude in the technology shop, science lab, art classroom, or gymnasium;



- h) ensure safety instruction is an integral part of the course of study and that the students are kept up to date on notes on these lessons;
- i) ensure safe handling and proper disposal of hazardous chemicals and other waste materials--hazardous materials are stored in a designated and secure place (WHMIS Material Safety Data Sheet Binder);
- j) not permit undisciplined and/or unsafe behaviour in a shop, lab, art classroom, or gymnasium;
- k) ensure that safety equipment and signs are clearly visible and identified within each shop, lab, art classroom, or gymnasium;
- l) ensure that appropriate protective wear is available and worn, where applicable, while working in the shop, lab, art classroom, or gym (as per OHS/A guidelines); and
- m) ensure that students are not permitted to work unsupervised in a shop, lab, art classroom or gym at any time.

3.0 In addition to the above requirements, all teachers of technology shall:

- a) ensure that difficult or unusual cuts or procedures be performed by the teacher;
- b) post safety signage;
- c) install emergency "STOP" buttons on all machines;
- d) retain copies of signed Shop Safety Agreements (Appendix A) for each student; and
- e) ensure that copies of completed "Tests" or "Safety Certificates" issued for each machine be retained for each student.

4.0 In addition to the above requirements, all teachers of science shall:

- a) request students who create unsafe conditions to correct the hazard; if persistent, review lab privileges of students who do not comply and report safety concerns to the proper administrator;
- b) be aware of the safety considerations for each laboratory activity and instruct the students in this area prior to the start of each process;
- c) review all laboratory manuals to determine the type and extent of hazards introduced by the various experiments and procedures;
- d) pre-check all devices and/or equipment brought into class by a student before allowing their use; and
- e) consult people with specialized knowledge or experience if unsure about using a new technique, chemical, or equipment.

5.0 In addition to the above requirements, all teachers of art shall:

- a) request students who create unsafe conditions to correct the hazard; if persistent, review art privileges of students who do not comply and report safety concerns to the proper administrator;
- b) know the ingredients of all of the materials;
- c) choose the safest materials possible;
- d) not use silver-solders, lead pottery glazes and enamels and asbestos;
- e) avoid dry powders - use prepared materials; and
- f) be aware of students with allergies and special needs.

5.0 In addition to the above requirements, all teachers of physical and health education shall:

- a) Follow OPHEA safety guidelines.

Definitions – N/A



References

OPHEA Safety Guidelines: <http://safety.ophea.net/safety-plan/169/all><http://safety.ophea.net/safety-plan/169/all>

The Occupational Health and Safety Act

The Education Act

The Workplace Hazardous Materials Information System (WHMIS)

Science Teachers' Association of Ontario

Ontario School Boards' Insurance Exchange (OSBIE)

Ontario Physical and Health Education Association (OPHEA)

Safety at Work Ontario

Public Services Health and Safety Association



Appendix A

Student Safety Agreement

- Students are not to enter the area unless a teacher is present.
- Power equipment must not be operated without the presence of a teacher.
- Horseplay will not be tolerated.
- Always keep hands and fingers behind the tool cutting edge.
- Safety glasses must be worn when using any power tools or machines.
- Long hair, loose clothing and jewelry must be restrained or removed.
- You must receive proper operating and safety instruction from your teacher prior to the use of any machines. If you are absent when instruction is given about the safe operation of a machine, you must then check personally with your teacher for this information when you return.
- Report to the teacher any damaged or defective tools or safety guards.
- Report any injury to the teacher immediately. Report any medical problems that you have.
- Only one operator per machine is permissible.
- Use compressed air with caution. Wear eye protection.
- Never use compressed air to clean dust from clothing.

I have read this agreement. I understand and will obey these rules.

Students Signature

Date

Parent (Guardian) Signature

Date



Appendix B – Sample Safety Test

Table Saw Safety Test

Use the correct heading and write the answer on your own paper. Using the BEST answer to complete the following:

1. Adjust the blade, just high enough to cut through the stock, **(Before OR After)** the power is turned on.
2. Keep fingers **(Away from OR Close to)** moving parts and never reach over the saw blade.
3. **(Always or Never)** make a cut without using the proper fences or gauges.
4. Be sure that the blade will clear both sides of the **(Fence OR Throat plate)** before turning on the power.
5. Make **(No or Any)** adjustments while the machine is running.
6. Never attempt to clear away scraps while the blade is **(Running OR Still)**.
7. Before beginning any “special” cuts, always have **(The instructor OR Another student)** check the setup.
8. Do not allow fingers to **(Come into direct line with OR Be on the side of)** the blade.
9. **(Get help or Just be careful)** when sawing large stock.
10. **(Do not OR Do)** cut cylindrical stock on this machine.
11. When starting work or on special setups, **(Cycle the switch quickly to see that everything is working properly OR Have your instructor check your set-up)**.
12. Clean the machine and the area around it with **(Your hands OR A brush)** when finished using.
13. List five (5) SAFETY procedures you should do before you operate this machine:
 - a) _____
 - b) _____
 - c) _____
 - d) _____
 - e) _____

_____ Signature of Parent/Guardian

_____ Date



Appendix C- Sample Consent Form for Science Safety

Science Student Safety Consent

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 safety contract. These rules must be followed at all times. Two copies of the contract are provided. One copy must be signed by both you and a parent or guardian before you can participate in the laboratory. The second copy is to be kept in your science notebook as a constant reminder of the safety rules.

General Guidelines

1. Conduct yourself in a responsible manner at all times in the laboratory.
2. Follow all written and verbal 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. 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. Never do anything in the laboratory that is not called for in the laboratory procedures or by your instructor. Carefully follow all instructions, both written and oral. 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 aisles clear. Push your chair under the desk when not in use.
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. Know where the fire alarm and the exits are located.
11. Always work in a well-ventilated area. Use the fume hood when working with volatile substances 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. Never mix chemicals in sink drains. 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. Check the label of all waste containers twice before adding your chemical waste to the container.
14. Labels and equipment instructions must be read carefully before use. Set up and use the prescribed apparatus as directed in the laboratory instructions or by your instructor.



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. Clean (with detergent), 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.
16. 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.
17. Students are never permitted in the science storage rooms or preparation areas unless given specific permission by their instructor.
18. 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.
19. Handle all living organisms used in a laboratory activity in a humane manner. Preserved biological materials are to be treated with respect and disposed of properly.
20. When using knives and other sharp instruments, always carry with tips 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

21. Any time chemicals, heat, or glassware are used, students will wear appropriate eye protection. There will be no exceptions to this rule!
22. Contact lenses should not be worn in the laboratory unless you have permission from your instructor.
23. 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 or baggy clothing must be secured. Shoes must completely cover the foot. No sandals allowed.
24. Lab aprons have been provided for your use and should be worn during laboratory activities.

Accidents and Injuries

25. Report any accident (spill, breakage, etc.) or injury (cut, burn, etc.) to the instructor immediately, no matter how trivial it may appear.
26. If you or your lab partner are hurt, immediately yell out "Code one, Code one" to get the instructor's attention.
27. If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 20 minutes. Notify the instructor immediately.
28. When mercury thermometers are broken, mercury must not be touched. Notify the instructor immediately.

Handling Chemicals

29. 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 technique for smelling chemical fumes will be demonstrated to you.
30. Check the label on chemical bottles twice before removing any of the contents. Take only as much chemical as you need.
31. Never return unused chemicals to their original containers.



32. Never use mouth suction to fill a pipet. Use a rubber bulb or pipet pump.
33. When transferring reagents from one container to another, hold the containers away from your body.
34. Acids must be handled with extreme care. You will be shown the proper method for diluting strong acids. Always add acid to water, swirl or stir the solution and be careful of the heat produced, particularly with sulfuric acid.
35. Handle flammable hazardous liquids over a pan to contain spills. Never dispense flammable liquids anywhere near an open flame or source of heat.
36. Never remove chemicals or other materials from the laboratory area.
37. Take great care when transferring acids and other chemicals from one part of the laboratory to another. Hold them securely and walk carefully.

Handling Glassware and Equipment

38. Carry glass tubing, especially long pieces, in a vertical position to minimize the likelihood of breakage and injury.
39. 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.
40. 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 towels or cotton gloves when inserting glass tubing into, or removing it from, a rubber stopper. If a piece of glassware becomes "frozen" in a stopper, take it to your instructor for removal.
41. Fill wash bottles only with distilled water and use only as intended, e.g., rinsing glassware and equipment, or adding water to a container.
42. 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.
43. Examine glassware before each use. Never use chipped or cracked glassware. Never use dirty glassware.
44. Report damaged electrical equipment immediately. Look for things such as frayed cords, exposed wires, and loose connections. Do not use damaged electrical equipment.
45. If you do not understand how to use a piece of equipment, ask the instructor for help.
46. Do not immerse hot glassware in cold water; it may shatter.

Heating Substances

47. 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.
48. 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.
49. 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.
50. 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.



51. Never look into a container that is being heated.
52. Do not place hot apparatus directly on the laboratory desk. Always use an insulating pad. Allow plenty of time for hot apparatus to cool before touching it.
53. 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.



Agreement

I, _____, (student's name) have read and agree to follow all of the safety rules set forth in this contract. I realize that I must obey these rules to insure my own safety, and that of my fellow students and instructors. I will cooperate to the fullest extent with my instructor and fellow students to maintain a safe lab environment. I will also closely follow the oral and written instructions provided by the instructor. I am aware that any violation of this safety contract that results in unsafe conduct in the laboratory or misbehavior on my part, may result in being removed from the laboratory, detention, receiving a failing grade, and/or dismissal from the course.

_____ Student Signature

_____ Date

Dear Parent or Guardian:

We feel that you should be informed regarding the school's effort to create and maintain a safe science classroom/laboratory environment.

With the cooperation of the instructors, parents, and students, a safety instruction program can eliminate, prevent, and correct possible hazards.

You should be aware of the safety instructions your son/daughter will receive before engaging in any laboratory work. Please read the list of safety rules above. No student will be permitted to perform laboratory activities unless this contract is signed by both the student and parent/guardian and is on file with the teacher.

Your signature on this contract indicates that you have read this Student Safety Contract, are aware of the measures taken to insure the safety of your son/daughter in the science laboratory, and will instruct your son/daughter to uphold his/her agreement to follow these rules and procedures in the laboratory.

_____ Parent/Guardian Signature

_____ Date