ENBRIDGE **STAO Partnership Project 2014**

Introduction:

This document was designed as an external resource for JH&SC, administrators and science teachers to assist in the establishment of a safe workplace. We recommend that school boards review the items listed against the current monthly H&S inspections as required by the Ministry of Labour and include items which best apply to their facilities. Although some of the items, such as fire extinguishers, are required by legislation many others are optional and may or may not be appropriate for a specific educational institution. We recommend that this list be part of a board's collaborative consultation process with its H&S Officer, JH&SC and science departments. As well, the list does not distinguish between the functions and responsibilities which are under the board and those under teaching staff. This list is used for scoping of facility risk assessment purposes only, not as an inspection checklist.

Science Inspection & Observation scoping document

SECTION I SPACE & CLASS SIZE
A. Room design / layout is appropriate and safe for students assigned (class size)
B. # of functional Sinks in the classroom
SECTION II COMMUNICATION SYSTEM
A. Phone
1. Accessible phone located nearby
2. Current emergency phone numbers posted
B. Intercom System
C. Cooperative plan with nearby colleague, other required postings
SECTION III SAFETY INSTRUCTION
A. Teachers have appropriate safety training (e.g. WHIMIS = 1/ + other = 2)
B. Teacher familiar with STAO Safe ON Science – access to copy = 1 "Safer Use of Chemicals" – access to copy - access to both = 2
C. Teachers looking for specific follow up training
D. Safety rules posted (copy should be provided to each student)
E. Appropriate warning signs posted (hazardous material)
F. Safety contract between teacher & student/parent signed & on file
G. Teacher includes safety as part of pre-lab instructions
H. Appropriate facilities for special needs students
I. Safer chemicals substituted in lab activities when possible
J. Hot plates substituted for open flames when possible
K. Students instructed in proper handling of glass tubing
L. Students instructed on biohazards in live specimen handling
SECTION IV MASTER SHUT-OFFS
A. Master control shut-off valve available, location known and accessible to teachers, administrators, and custodians
1. Gas
2. Electricity
3. Water
B. Mater control cut-off clearly labeled
1. Gas
2. Electricity
3. Water
C. Gas valves inspected for closure at end of each day
Proper working condition for each....enter rows

D. Gas shut off: has automatic shut off with timer (solenoid)

SECTION V FIRE CONTROL

A. ULC Listed 2A1OBC dry chemical fire extinguisher
   1. Suitable size, easily handled
   2. Evidence of monthly check
   3. Safety seal intact
   4. Easily visible location & unobstructed from view
   5. In every storeroom or prep room
   6. Located near escape route of lab

B. Presence of 5-10 L container of clean, dry sand for class D (flammable solids, i.e., sodium, potassium, etc. in each)
   1. Physics room
   2. Any area where chemicals are stored or used
   3. Teacher has knowledge of when & how to use

C. Fire exits and drills
   1. Two fire exits in each storeroom/prep room
   2. Unobstructed and unlocked fire exits
   3. Labeled and functioning doors on exits
   4. Posted and practiced fire drill procedures

D. Smoke Alarm

SECTION VI AVAILABILITY OF FIRST AID TREATMENT

A. Established first-aid policy (e.g., protect; treat only major injuries)
B. First Aid kit in each classroom and storeroom/prep room
C. Date of last inspection and restocking of kit
D. First Aid kit visible and accessible
E. Instructions for emergency action/first aid posters displayed prominently
F. Teacher trained in CPR within the last year
G. Teacher trained in first-aid within the last year

SECTION VII VENTILATION

A. Forced ventilation capability in each laboratory with manual control (fume hood or air conditioner not acceptable to evacuate room air at rate of 5 air changes per hour (preferably at floor level))
B. Continuous ventilation in storeroom
C. Fume hood
   1. Ventilation to roof (away from intake)
   2. Not used as a storage area
   3. Access by every chemistry laboratory for use with hazardous, vaporous chemicals
   4. Evidence of maintenance (for exhaust rate and leakage)
      Please indicate most recent date
   5. Provides minimum of 0.5 m/s of air movement at hood face with sash open 20 cm. above bench ASHRAE measured by qualified personnel

SECTION VIII LIGHTING

A. Adequate light level in classrooms

SECTION IX PERSONAL PROTECTION

A. Safety Shower
   1. One in each chemistry laboratory
   2. Functional (with water turned on) unobstructed shower and valve handle
   3. Rigidly fixed valve handle (no chains unless provided with large ring)
   4. Plainly labeled valve handle
   5. Sufficient water pressure
   6. Floor drain
   7. Large enough to accommodate more than one person
   8. Evidence of maintenance on a regular basis (Please indicate date)

B. Eye Wash
   1. Available and visible in each laboratory
   2. Training in eye wash procedures within last year

3. Signage
4. Equipment to treat both eyes simultaneously with instant, gentle, flow of aerated water for 10-15 minutes
5. Evidence of maintenance of eye wash equipment (Please indicate date) Please indicate date for:
    a) check for pressure
    b) check for breakage

C. Protective Clothing
1. Presence of aprons/lab coats (with Velcro snaps)
2. Presence of gloves
    a) heat resistant gloves
    b) chemical resistant gloves for teacher use
3. Presence of safety goggles/eye protectors for each student when needed
4. System for disinfecting goggles/eye protectors
5. Presence of face and safety shields
6. Are standard procedures for use of protective gear enforced?
7. Eye protectors/goggles are clean and in good condition

D. Carriers available for carrying chemicals and acids
E. Belt guards on all belt driven equipment (e.g. rock saw)

SECTION X STORAGE

A. Chemicals
1. Regular inventory and disposal of unused hazardous chemicals
2. Chemicals not stored in areas regularly traveled by students
3. Correctly labeled when transferred from original container
4. Quantity of chemicals stored not excessive (1 or 2 semesters):...if so.... list/explain/comment
5. Properly and clearly labeled by WHMIS standards (can be Supplier of Workplace labels)
    a) SDSs properly filed and easily accessible
6. Stored in compatible chemical families (not alphabetical or other unsafe methods)
7. Acids stored separately on non-metal, non-wood shelves, cabinets
8. Flammables in dedicated and approved cabinet and containers
9. Chemicals under lock at all times
10. Alkali metals (Li, Na, K) topped up with immersion fluids, mineral oils or kerosene
11. Stored in a regulated area with entry allowed only for authorized personnel
12. There is an “authorized persons only” sign on the door
13. Inside of storage rooms sufficiently fire resistant

B. Cabinets
1. Secured to floor and/or wall and free from corrosion
2. Presence of lockable cabinets for off season security
3. Are the following items kept locked in cabinets?
    a) Hazardous chemicals
4. Presence of lab refrigerator
    Does it store
    a) Only chemicals and living cultures (no food)

C. Shelves
1. Are equipped with lip edge to prevent bottle roll off
2. Portable shelves are secured to wall or ceiling
3. Chemicals stored at or below eye level
4. Chemicals raised off the floor
5. Larger containers stored in a tray to contain spillages
6. Storage of tall items at back of shelf and dewy glassware on lower shelves, no chemical containers stacked double
7. Glass rods and tubing stored horizontally with no pieces protruding over edge

D. Gas Cylinders
1. Capped when not in use
2. Supported to prevent rolling or tipping
3. Placed away from heat sources and open flames
4. Clamped tightly in place after being positioned for use

SECTION XI ANIMAL CAGES/TANKS

A. Cleaned regularly
B. Animals have adequate food and water
C. Animals appear to be in healthy condition
D. Could animals pose a threat or health hazard to people in the room?
SECTION XII GENERAL STOREROOM OR LAB SAFETY
A. Electrical
1. Outlets carry grounding connections
2. Sufficient electrical outlets are provided so as to eliminate the use of extension cords or overlapping wires or multiple plugs
3. No outlets close to faucets, etc.
4. All major lines fused or on circuit breakers
5. Location of circuit breakers is known to teachers, custodians, and administrators
6. Outlets secured
7. No extension cords across aisles
8. Sockets and switches securely screwed without cracks
9. No loose or exposed wires
B. Preparation/Workroom
1. Large sink
2. Hot water
3. Posted rules for safe: handling, clean-up, disposal, protective equipment, conduct
C. Presence of
1. Bulb (not mouth) pipits
2. Fans properly guarded
3. Materials Safety Data Sheets (MSDS) for each hazardous chemical present
4. Aisles wide enough so teachers and students can move freely without interfering with others (no books and coats on floor)
5. Work surfaces made of non-porous and chemical resistant materials
6. Non-reactive chemical waste container(s) available
E. Clean-up materials for chemical spills
1. Chemical spill kit available
2. Protective clothing
3. Approved wasted disposal practiced
F. Presence of laboratory chemical and biological wastes disposal system for
1. Glass
2. Dry chemicals/reagents
3. Liquid chemicals/reagents
4. Biological wastes
5. Sharps
G. If respirator available must be fit tested
H. Hazardous chemicals in original containers (not available for student use)
SECTION XIII HOUSEKEEPING
A. Labs, storage, and prep rooms are organized and clean
B. Aisles are clear
C. Supplies and equipment (cleaned) are returned to proper storage area
D. Work surfaces are clear and clean
E. Floor in safe condition
F. Adequate number and size of garbage containers
G. Glassware is free of cracks, chips and sharp edges
H. Bunsen burner tubes are free from leaks
I. Large/heavy items stored below eye level

School _____ Classroom _____

Inspection by _____ Date _____

Actions taken and other recommendations

Teacher Signature _____ Date _____