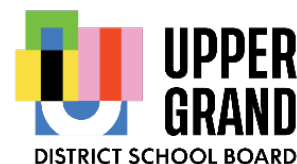


Safety in Science and Technological Education Procedures Manual 604-A



Category:	Program
Administered by:	Superintendent of Program, Superintendent of Student Success, Manager of Health and Safety
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1. General

These procedures set out the expectations to ensure safety in elementary and secondary science and technological education classes. The intent of a safe science or technological education program is not to put rigid restrictions on what teachers and students can experience; rather, a safe program minimizes unnecessary risk while ensuring the delivery of an engaging hands-on education.

2. Definitions

Student Safety Agreement

The Student Safety Agreement is a board-wide standardized list of rules that has been provided to, and signed by, students and parents to clearly communicate safety expectations and consequences.

Student Safety Passport (SSP)

The Student Safety Passport is a board-wide standardized online platform for use by secondary students for safety training. It is also used by teachers to track student safety training and to record any student safety notes or concerns.

UGDSB Student Machine and Tool Training Log

The UGDSB Student Machine and Tool Training Log is for use by elementary science and technology teachers to document safety training for each student.

UGDSB Restricted and Banned Chemical List

UGDSB Restricted and Banned Chemical List is adapted from the Science Teachers' Association of Ontario document "Safer Use of Chemicals". It

provides information about chemicals that are restricted for sale by the [Explosives Act](#) and/or banned by the board. Chemicals may be banned due to properties including but not limited to carcinogenic, mutagenic, toxic, reactivity and/or environmental hazard, and/or being a designated substance under Regulation 490/09 of the Occupational Health and Safety Act (OHSA).

Safety Data Sheet (SDS)

The Safety Data Sheet (SDS) on a hazardous substance provides detailed and comprehensive safety information about it. It covers proper handling and protection against overexposure, the health effects of overexposure, and emergency procedures. The SDS on each hazardous substance in a workplace (including household products) must be in the workplace and available to the workers.

Elementary Technological Education Safety Handbook

The Elementary Technological Education Safety Handbook outlines the expectations, processes and safety protocol necessary to enable teachers to work safely with students in science and technology classrooms equipped with powered machines and tools.

Equipment

Equipment is anything used in science or technological education to perform a task, often specialized and requiring training prior to use. This equipment requires regular maintenance and/or inspection (e.g. fume hood, drill press, Bunsen burner, oxy-acetylene torch etc.).

Personal Protective Equipment (PPE)

Specialized clothing or equipment worn or used by employees or students for the protection against a hazard (e.g., gloves, gowns, face shields, goggles, safety glasses, hearing protection, shoes, etc.)

Hazardous Waste

Hazardous waste is waste that, when present in quantities and concentrations that are high enough, poses a threat to human health or the environment if they are improperly stored, transported, treated or disposed.

Hazardous waste is regulated by the Ministry of the Environment and the board is registered as a hazardous waste generator under [Environmental Protection Act R.R.O. Regulation 347](#). The board, in compliance with regulations, has a system to identify, collect, store and dispose of hazardous waste (e.g. used

motor oil, chemical residue, unused cleaning chemicals, used batteries, etc.).

Safety Documentation Binder

A safety documentation binder is a specialized binder, specific to each science and technological education room. It contains completed Student Safety Agreements for class participants, as well as room checklists and, for secondary only, instructions on accessing the Student Safety Passport.

Secondary Science and Technological Education Safety Handbook

The Secondary Science and Technological Education Safety Handbook outlines the expectations, processes and safety protocol necessary to enable teachers to work safely with students in science and technology classrooms equipped with powered machines and tools.

3. Responsibilities of Senior Administration

It is the responsibility of the senior administration to ensure that:

- 3.1 school administrators, science and technological education department heads, and science and technological education teachers have access to the board's Safety in Science and Technological Education policy, procedures and health and safety resources
- 3.2 the procedures outlined in the Safety in Science and Technological Education Procedures Manual 604-A are implemented
- 3.3 science and technological education facilities and equipment are inspected and maintained in a safe condition
- 3.4 board staff is informed about relevant policies, procedures and changes in legislation
- 3.5 all applicable training is provided to staff, including orientation for new science and technological education staff

4. Responsibilities of the Manager of Health and Safety

It is the responsibility of the Manager of Health and Safety to ensure that:

- 4.1 the UGDSB Restricted and Banned Chemical List and health and safety resources are reviewed and updated as needed

- 4.2 assistance is provided to the schools for appropriate orientation, in-service and/or training on health and safety, and the safety resources
- 4.3 assistance is provided to schools for Ministry of Labour visits and accident investigations

5. Responsibilities of Plant Operations

It is the responsibility of Plant Operations to:

- 5.1 install equipment in science and technological education classrooms as per approved Installation of Equipment forms
- 5.2 ensure that repairs to equipment installed in science and technological education classrooms are completed
- 5.3 ensure that equipment in science and technological education classrooms is inspected annually and/or as required, and that inspection reports are sent to the school principal

6. Responsibilities of Principals/Vice-Principals

It is the responsibility of principals and vice-principals to ensure that:

- 6.1 all board safety policies and procedures related to students and staff are implemented in accordance with board policy
- 6.2 when allocating and timetabling staff, the need to assign qualified science teachers and technological education teachers to science and technological education courses is taken into account
- 6.3 science and technological courses are assigned to rooms and areas that comply with health and safety obligations and curriculum expectations for science and technological education.
- 6.4 for secondary schools, if occasional and/or on-call teachers are used for science or technological education classes, they are not to carry out assignments which involve the use of specialized science or technological education equipment unless they are qualified and trained as per board requirements. Alternative activities that do not require specialized equipment or training should always be provided by the classroom teacher. For elementary schools, occasional teachers are not permitted to use any equipment in the technological education rooms.

- 6.5 students and parents are provided with a copy of the Student Safety Agreement. No student will be permitted to perform hands-on activities unless the Student Safety Agreement form is signed by both the student and parent/guardian, and is on file in the Safety Documentation Binder.
- 6.6 dangerous situations and/or non-working equipment in science and technological education rooms are addressed
- 6.7 the purchase of science and technological education supplies and equipment complies with the board's Purchasing Policy 302, and if applicable, the requirements set out on the Request for Approval-Installation of Equipment form, and the UGDSB Restricted and Banned Chemical List
- 6.8 the board's science and technological education room checklists are submitted to the Health and Safety department and the original in the Safety Documentation Binder
 - Elementary:
 - [Elementary Technological Education Workshop Safety Checklist](#)
 - Secondary:
 - [Annual Chemical/Biology/Physics Storeroom Survey Checklist](#)
 - [Semester Science Safety Survey Checklist](#)
 - [Semester Tech Safety Survey Checklist](#)
- 6.9 as required, hazardous waste pick-up forms are completed, collected, and submitted to the board's Environmental Co-ordinator

7. Responsibilities of School Science and Technological Education Heads

It is the responsibility of school science and technological education heads to:

- 7.1 inform teachers how to access training in the Safety in Science and Technological Education policy, procedures manual, and safety resources prior to the commencement of hands-on activities
- 7.2 provide ongoing support to teachers, follow all board policies and procedures, and attend mandatory board training

- 7.3 assist the teacher to maintain and update the Safety Documentation Binder and other documents as required
- 7.4 ensure the science and technological education checklists are completed and submitted on time
- 7.5 immediately inform their principal in writing of any potentially dangerous situations and/or non-working equipment in science or technological education rooms
- 7.6 assist teachers to follow the curriculum expectations, which include relevant safety instruction, and locate equipment and materials required to do the activities

8. Responsibilities of All Science and Technological Education Teachers (including Summer and Night School Teachers)

Teachers are responsible for ensuring the safety of students during classroom, lab, and shop activities, and for encouraging and motivating students to assume responsibility for their own safety and the safety of others. Teachers must also ensure that students acquire the knowledge and skills needed for safe participation in all science and technology-related activities.

It is the responsibility of science and technological education teachers to:

- 8.1 complete required training
- 8.2 model safe practices at all times and communicate safety expectations to students
- 8.3 ensure that students and parents receive and understand the purpose of the Student Safety Agreement. Ensure all sections of the Student Safety Agreement are completed prior to the commencement of hands-on activities, and forms are filed as required.
- 8.4 ensure all students complete the Student Safety Passport
- 8.5 ensure students are always supervised, and rooms not in use are locked and, where possible, powered down so that equipment cannot be used
- 8.6 follow the curriculum expectations which includes relevant safety instruction

- 8.7 ensure that all students, including those with accommodation needs, are familiar with and able to implement all the required safety precautions, including:
- know about hazards and what to do about them
 - participate in solving safety problems
 - meet classroom and activities' safety expectations including using personal protective equipment (PPE)
 - work and act in a way that won't harm themselves or others
 - immediately report any hazards or injuries to their teacher
- 8.8 ensure at the beginning of the semester or prior to the first hands-on activity that every student is familiar with the routine to follow in case of an accident and/or emergencies, including the location of emergency equipment and exits
- 8.9 ensure the proper storage of chemicals
- 8.10 maintain and update the Safety Documentation Binder and other documents as required, including the completion of room and/or equipment checklists
- 8.11 immediately inform their principal and department head in writing of any potentially dangerous situations and/or non-working equipment in science or technological education rooms
- 8.12 remove student(s) from the hazardous situation(s) as soon as they become aware of a health or safety hazard and follow the steps in the staff training platform, which includes immediately reporting any student or staff incident or accident using the required forms and processes
- 8.13 provide an alternative lesson that does not require specialized equipment or training for daily occasional or on-call teachers.

9. Responsibilities of Occasional and On-Call Teachers (Secondary only)

It is the responsibility of the occasional and on-call teacher to ensure that:

- 9.1 they do not carry out assignments that involve the use of specialized science or technological education equipment unless they are qualified and trained as per board requirements. In the event that they do not have an alternate assignment or lesson, they are to contact the administration of the school.

10. Responsibilities of Students and Parents/Guardians

- 10.1 All students and parents/guardians are responsible for submitting a completed Student Safety Agreement.
- 10.2 All students are responsible for completing the Student Safety Passport and following the safety expectations in each classroom.