

Administrative Procedure 137

General Administration

APPROPRIATE AND SAFE USE OF TOOLS AND EQUIPMENT

BACKGROUND

The charter board recognizes the importance of the health, safety and overall well-being of its staff and students and is committed to taking steps to reduce the risk of injury. Appropriate training must be provided to staff and students to ensure safe and proper use of tools, equipment and materials. The scope of this administrative procedure applies to all tools, equipment and materials capable of causing injury to the user from simple hand tools to complex equipment including furniture, IT equipment and disposable materials.

The principal, as is reasonably practicable, is responsible for ensuring that staff and students adhere to the Alberta Occupational Health and Safety Regulations as they apply to the appropriate and safe use of tools, equipment and materials by staff and students. Also, refer to AP 136 Occupational Health and Safety.

COMPLIANCE

All employees are responsible for knowing, understanding and complying with this administrative procedure. Failure to comply could result in disciplinary action up to and including termination of employment.

REGULATIONS

1. Alberta Occupational Health and Safety Regulations state that:

1.1. An employer must ensure that all equipment used at a work site:

- 1.1.1 is maintained in a condition that will not compromise the health or safety of workers using or transporting it;
- 1.1.2 will safely perform the function for which it is intended or was designed;
- 1.1.3 is of adequate strength for its purpose; and
- 1.1.4 is free from obvious defects.

1.2. If a staff member or student is required to use or wear specific equipment, they must ensure that they use or wear the equipment at the work site.

1.3. The teacher, must ensure that a student is trained in the safe operation of tools and the equipment the student is required to use. A teacher must ensure that the training includes the following:

- 1.3.1 the selection of the appropriate equipment;
- 1.3.2 the use of the equipment; and
- 1.3.3 the hazards specific to the operation of the equipment at the work site.

DEFINITIONS

CT: means Career and Technology programs of study which include Career and Technology Foundations, Career and Technology Studies and Knowledge and Employability Occupational courses.

FPA: means Fine and Performing Arts programs of study

Teacher: means the Westmount employed teacher, the instructor responsible for delivering the CT or FPA Program of Studies

CSA standards: CSA standards are safety standards in Canada for electrical appliances, medical devices, machinery and equipment.

RESPONSIBILITIES

1. Principal:

- 1.1. The principal is responsible for allocating qualified teachers to CT and FPA programs based on the teacher's knowledge, skills or abilities that may be accredited by a post-secondary program, apprenticeship, board industry certification, demonstrated industry experience or training through an external safety program provider.
- 1.2. The principal is responsible for establishing class size with consideration being given to:
 - 1.2.1 the safety and supervision of the students;
 - 1.2.2 the integrity of the Program of Studies;
 - 1.2.3 maintaining a tactile and experience-based learning environment; and
 - 1.2.4 the number of students the equipment, facility, industry or business partnership environment can support. is free from obvious defects.

2. Teacher:

- 2.1. cooperate in obtaining any authorization or training required to use the tools, equipment and machinery;
- 2.2. ensure all equipment meets CSA (or equivalent) standards;
- 2.3. ensure students are not permitted to use tools, equipment, or machinery unless they have been authorized to do so;
- 2.4. the use of appropriate personal protective equipment (PPE) is enforced when required;
- 2.5. provide adequate supervision with tools that pose medium/high risk; and
- 2.6. maintain a documented record of student training for tools that pose medium/high risk.

3. Students:

- 3.1. cooperate in obtaining any authorization or training required to use the tools, equipment and machinery;
- 3.2. use only the tools, equipment and machinery that you have been trained and authorized to use;
- 3.3. ensure that loose clothing, long hair, dangling accessories and jewelry that are likely to be hazardous to safety are not worn around equipment unless tied, covered, or otherwise secured to prevent entrapment; and
- 3.4. wear/use the prescribed personal protective equipment.

PROCEDURES/GUIDELINES

1. Tools, Equipment, Material and General Tool Safety

1.1. Power equipment, tools and machinery used for instruction may only be operated by:

- 1.1.1 qualified teachers;
- 1.1.2 students deemed capable by and under the direct supervision of a qualified teacher; or
- 1.1.3 any other member of the school staff approved by the principal.
- 1.1.4 power equipment must only be turned on and used in the instructional space when the student is directly supervised by the teacher.

1.2. A substitute teacher may not teach a lesson that requires the operation of power equipment and tools unless:

- 1.2.1 they have the applicable qualifications; or
- 1.2.2 a qualified technician or journeyman provides instruction while the substitute teacher provides supervision.

1.3. Westmount employees must not use facilities, equipment or materials for personal use or financial gain.

1.4. Tools and equipment must be properly, safely and securely stored.

1.5. The teacher in conjunction with administration and facilities personnel must ensure that machines and equipment are properly installed in the facility:

- 1.5.1 with a safety zone around machines and equipment, and with a traction strip located where the student or instructor operates the machinery or equipment as a guideline for installation; and
- 1.5.2 that walkways and fire exits in the facility are clear and visible.

1.6. All tools, equipment and machinery must be inspected by a certified teacher in accordance with the manufacturer's guidelines.

1.7. Records of repair and maintenance of tools, equipment and machinery must be maintained using the current Westmount inventory system.

- 1.7.1 All tools and equipment should be inspected regularly. Defective and unsafe tools or equipment must be reported promptly to the supervisor, and repaired or replaced at once. Report any concerns as soon as possible. Do not use or operate defective or unguarded equipment.

1.8. The teacher must ensure that existing safety guards are in place at all times, and used in accordance with the Alberta *Occupational Health and Safety Act*, Regulations, Code and manufacturer's specifications.

- 1.9. Do not use a tool or a machine if you are unfamiliar with its use or if you feel that you need additional instruction in order to use the equipment safely and correctly.
- 1.10. Tools and equipment should be kept in an orderly fashion so that they may be easily found when needed. All tools should be cleaned after every use. Always clean the work area and put tools and equipment back in the correct storage location after each. Never perform any adjusting, cleaning, oiling or repairing of equipment and/or machinery while in motion.
- 1.11. Use all tools for their intended purpose only. Tools and equipment should always be used for their intended purpose and never be mishandled or used in a manner for which they were not designed.
- 1.12. Follow all equipment-specific safe work practices and procedures. Never force a hand or power tool to strain beyond its obvious capacity.
- 1.13. Cutting tools are safe and more efficient when their blades are kept sharp. Avoid using dull cutting tools.
- 1.14. Kilns may only be used when:
 - 1.14.1. Facility Operator, Janitor and admin will be notified when the kiln is in use;
 - 1.14.2. only trained staff may use the kiln.

2. Student Use of Equipment

- 2.1 Power equipment, tools and machinery used for instruction may only be operated by:
 - 2.1.1 Each teacher delivering the CT or FPA program of studies must ensure that:
 - 2.1.1.1 they are aware of and instructed in the safe use and limitation of the personal safety equipment;
 - 2.1.1.2 site-specific safety rules are present and understood;
 - 2.1.1.3 personal protective equipment must be worn at all times where the potential for hazards exists with the use of tools and equipment and that clothing for staff and students is available and worn properly; and
 - 2.1.1.4 ongoing safety instruction and supervision occur.
- 2.2 Students must satisfactorily complete a practical demonstration on the safe use of the CT and FPA equipment which must be documented and maintained according to Westmount records management guidelines.
- 2.3 The teacher may grant permission to use equipment and materials to:
 - 2.3.1 Each teacher delivering the CT or FPA program of studies must ensure that:
 - 2.3.1.1 individual students only; or

2.3.1.2 the entire class.

2.4 A student safety plan must be in place.

2.5 Students must:

- 2.5.1 have completed appropriate training outlined in the safety procedures checklist and signoff document;
- 2.5.2 demonstrate that they are capable of the safe set-up and use of equipment and materials before they are permitted to use the equipment and materials; and
- 2.5.3. obtain permission from the teacher or technician before they may use equipment, tools or hazardous materials.
- 2.5.4 Students are expected to use the materials and tools identified by the teacher to meet the learner outcomes identified in the Program of Studies.

2.6 Parents may formally request, in writing, that their child's use of certain machines, tools and materials in a program be restricted.

2.7 Equipment with high-powered rotary blades can only be used by students in grades 10, 11 and 12.

2.8 Students may only use matches, lighters or candles while under direct adult supervision.

3. Prohibited Activities

3.1 The following activities are prohibited on Westmount sites:

- 3.1.1 use of pyrotechnics;
- 3.1.2 repairs on gas tanks;
- 3.1.3 cutting of metal drums using tools and equipment capable of producing a spark or fire-producing heat;
- 3.1.4 service work on televisions, computer monitors, microwaves, or any other high-voltage equipment or applications;

4. Facilities

4.1 The teacher must ensure that:

- 4.1.1 the facility is clean, orderly and ready for safe and efficient instruction and work;
- 4.1.2 all equipment safety devices are in place and used according to manufacturer specifications and in accordance with the Alberta *Occupational Health and Safety Act*, Regulations and Code; and
- 4.1.3 all equipment with potential for accidental dislodgement or movement is securely anchored to the floor, bench, wall, or ceiling, or in some other manner.

4.1.4 ensure the work area is properly prepared and ensure the safety of any persons nearby prior to the commencement of work.

4.2 A CT or FPA facility not in use or unsupervised must have:

4.2.1 tools and equipment secured;

4.2.2 power supplies turned off or unplugged; and

4.2.3 the facility is locked.

4.3 Prior to the closing for summer break the teacher must ensure that:

4.3.1 equipment is unplugged;

4.3.2 all equipment is secured;

4.3.3 compressed air is turned off;

4.3.4 compressors are drained;

4.3.5 facility power panel is locked;

4.3.6 perishable products are disposed of;

4.3.7 supplies are stored correctly;

4.3.8 refrigerators and freezers are empty, clean; doors left open and power supply turned off; and

4.3.9 flammable materials are stored or disposed of appropriately.

5. Inventory

5.1 An electronic inventory of all CT equipment must be conducted, on-site, annually, using the current Westmount inventory system (contact administration for access).

5.2 Ensure all required PPE is available, appropriate and in good condition prior to use.

6. Fire hazards

6.1 The teacher must ensure that:

6.1.1 garbage or combustible material does not accumulate in teaching facilities or around equipment;

6.1.2 flammable materials and liquids are stored in an approved non-flammable safety cabinet; and

6.1.3 no gasoline will be kept indoors.

Supporting Guidelines and FAQs supporting AP 137 – Appropriate and Safe Use of Tools and Equipment

The topic of student use of equipment requires clarity. Certain tools, equipment and materials present identifiable hazards to users. Westmount's Health and Safety protocols include specifications for student use of equipment based on established practices of risk assessment and mitigation.

Why are some tools prohibited for use by students of certain grades?

Factors such as risk management, historical incident data and curricular requirements are taken into account.

Is it true that certain kinds of equipment cannot be used by students in the middle/junior high school setting?

This is true. It has been determined that certain tools, equipment and materials cannot be used by students until Grades 10, 11, and 12.

What are the specific pieces of equipment students cannot use until Grade 10?

AP 137 specifies that "equipment with high-powered rotary blades can only be used by students in grades 10, 11 and 12." Therefore, the following has instructional implications for middle/junior high schools.

Equipment and tools specified under AP 137 that students cannot use before Grade 10 are noted below:

The tools on this list may NOT be used by students before Grade 10:

- *Table saw*
- *Mitre saw*
- *Chop saw*
- *Handheld circular 'Skil' saw*
- *Jointer*
- *Electrical and compressed air-driven tools with cutting rotary blades and discs*

The tools on this list may be used at the professional discretion of the teacher/instructor in consultation with the principal. Both the instructor and student must be suitably trained in the safe use of all tools and equipment to be used. Student supervision must be in place.

- *Band saw*
- *Jigsaw*
- *Scroll saw*
- *Router table*
- *Planer*
- *Plate (biscuit) jointer*
- *Rotary 'Dremel' tools*
- *General Air tool attachments*

Note | All tools and equipment can be hazardous. Tools and equipment not deemed prohibited for use in a middle/junior school are used after specific training of the teacher and with professional judgment. This includes a consideration of the health and safety of the student(s), individual learner styles and needs, progressive, graduated and documented instruction and skills development, developmental and age-appropriate tasks, and so forth. Teachers must have these conversations with their administrators, who are the Instructional Leaders in each school.

Middle/junior high school principals may determine tool and equipment use policies for their building by considering:

1. *the safety and supervision of the students,*
2. *the integrity of the Program of Studies,*
3. *maintaining a tactile and experience-based learning environment, and*
4. *the number of students that the equipment, facility, industry or business partnership environment can support.*

All of this is in addition to any other consideration deemed appropriate for teaching and learning. Principals and teachers may authorize hand tools and/or machine tools. All tool use can be considered in light of a scope and sequence and in consideration of the general principle that “Not all tools are appropriate for all learners at all times.” This is particularly relevant in CTF, especially in earlier grade levels. Staff sharing these spaces must work together to ensure safety protocols are followed.

Prohibited Activities

Why are certain activities prohibited?

- *Pyrotechnics are prohibited because of this flammable content but ‘bottle rockets’ using compressed gas is an alternative.*
- *Repairs on gas tanks can result in an explosion.*
- *Metal drums may contain traces of hydrocarbons known to cause fires or explosions.*
- *Certain service work presents identifiable electrical and health hazards.*
- *Repairs or service work can only be performed by certified employees in compliance with legislation.*
- *Vehicle inspections cannot be done by Westmount students, teachers or instructors, even where the employee has the appropriate trade-specific certification. This ties to risk management.*
- *Lighters present a fire hazard. However, students may use a spark-producing tool, generally known as a ‘file spark lighter flint gun’ as appropriate to CTS, Science and other Programs of Study.*

Facilities and FAQ

The condition of instructional facilities is closely related to employee and student health and safety and compliance with legislation, regulations and codes.

Facilities are an essential part of learning. The maintenance and upkeep of facilities are crucial for learning, safety, stewardship and asset management. In an organization like WCS, both educators, administration and Facilities personnel play important roles.

As a teacher, what is my responsibility with respect to instructional facilities and equipment?

This is a conversation between the principal and the teacher. Generally, the teacher is responsible for the upkeep of the shop and the classroom within a shop. For example, shops are kept clean by teachers and students while the Facility Operator has specified daily duties.

The teacher or instructor is responsible for ensuring compliance with safety regulations and codes. For example, nothing can obstruct the fire exits. Sawdust, for instance, presents both breathing and fire hazards.

There is some variation in teacher duties depending on the type of school and due to contractual obligations.

Who can I speak to when I feel the facility needs improvement beyond what I can accomplish?

First and foremost speak to the Principal.

Why are we required to secure the instructional space when not in use?

This relates primarily to the ways we meet our due diligence responsibilities, asset protection, and prevent incidents that may close facilities, if not the entire school. When tools and equipment are secure they are less likely to be lost or stolen. Turning the power supply off is a measure to prevent unauthorized access to tools, equipment and materials.

What is the rationale behind the procedures I must do prior to summer break?

Securing equipment and locking out the power prevents unauthorized use during the summer. From the perspective of an educator, returning to find assets missing or misplaced is burdensome.

Perishable supplies (such as foodstuffs) are disposed of for public health and safety reasons. All supplies are to be stored according to pertinent regulations and codes.

Inventory and FAQ

Good stewardship of assets involves keeping up-to-date records. The electronic inventory system also serves to provide new tools, equipment and resources to schools in a timely fashion. CT equipment, musical instruments and kilns (among other assets) are to be inventoried.

Why must we place things in the electronic inventory?

Inventory control is part of the CT teacher's job mandated by Westmount. When items are placed in the inventory, and the condition of those assets is identified, then Westmount can budget for asset replacement as required.

Who can I speak to about replacing equipment I have identified as non-serviceable? Who can I ask to find out if a particular piece of equipment is suitable for supporting the Programs of Study?

First and foremost speak to the Principal.

Power Equipment and FAQ

Why must the power be turned off and the door locked when the instructor leaves the shop?

Locking the door to the instructional facility is essential to prevent unauthorized access and equipment use as well as turning off and unplugging any power tools.

Who do I speak to about the condition or acquisition of new equipment?

New equipment must be installed properly. The teacher in conjunction with administration and facilities personnel must ensure that machines and equipment are properly installed in the facility. Contact the Principal and facilities manager.

Emerging Questions & Considerations

The following questions and comments have been asked and stated following stakeholder engagement. Emerging questions will be added to this document from time to time.

What is meant by the term 'qualified' or 'certified' instructor?

Alberta Education asserts that certain Programs of Study can only be taught by individuals with established credentials or training. The determination of qualification and certification is a topic best explored with Human Resources and the Principal.

APPENDIX A

School Year-End Checklist for CTF/CTS Teachers

- Complete Equipment Inventory in Google Docs. For information and support, contact the Administration or Coordinator of Facilities Operations.
- Shop or Lab cleaned, organized and left in a safe condition.
- All portable equipment and hand tools are placed in storage and locked up.
- All wood in the shop or lab is put away properly and stored correctly.
- All countertops and shop benches are cleaned and free of any debris.
- Vices left in closed position.
- All equipment dusted off with shop vacuums.
- All paper products stored in filing cabinets or cupboards.
- All chemicals or paint properly stored in approved Flammable Cabinets.
- Remove all unused chemicals.
- Make arrangements to remove surplus equipment.
- Make arrangements to have dust collection bins emptied and leave keys to bins, storage compounds, or rooms clearly labelled and kept in the Coordinator of Facilities Operations office.
- Turn off lights.
- CTS/CTF labs left in a clean, organized and safe condition.
- All portable equipment and hand tools are placed in storage and locked up.
- All consumable materials used in the shop or lab are put away properly and stored correctly.
- All countertops, shop benches and tables should be cleaned and free of any debris.
- All equipment should be cleaned.
- All paper products stored in filing cabinets or cupboards.
- All chemicals or paint properly stored in approved Flammable Cabinets.
- Remove all unused chemicals.
- Make arrangements to remove surplus equipment
- Make arrangements to have any equipment repaired over the summer.
- Turn off all equipment.

This list may be updated periodically.

Legal Reference: *Education Act*
 Occupational Health and Safety Act
 Occupational Health and Safety Code
 Occupational Health and Safety Regulation

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