

Hazard Assessment and Control Form

Date:	January 2022	Dept.:	All Sites	Position:	CTS Construction Teacher
Assessment Team:		Divisional Joint Health and Safety Committee			
Risk:		Medium			
There are four classifications of hazards:		Physical, Psychological, Biological and Chemical			

Likelihood: Likelihood is best determined by asking the question, "What is the likelihood of something going wrong during the performance of this task".

1. **Inconceivable** – Unlikely to occur
2. **Remote** – Unusual, but possible to occur
3. **Conceivable** – May occur at some point
4. **Possible** – Likely to occur
5. **Most Likely** – Will occur

Exposure: How often is the task performed?

1. **Rarely** – Occurs less than 3 times per year
2. **Infrequently** – Occurs less than 12 times per year
3. **Occasionally** – Occurs on a monthly basis
4. **Frequently** – Occurs weekly
5. **Continuously** – Occurs throughout the workday

Consequence: How serious could the consequences of an uncontrolled hazard be?

1. **Negligible** – no injury, illness or damage
2. **Minor** – minor injury, illness, or damage (no loss time)
3. **Moderate** – moderate injury, illness, or damage (medical aid or lost time)
4. **Serious** – severe injury, serious illness, property and equipment damage
5. **Imminent Danger** - Causing deaths, widespread occupational illness, and loss of facilities

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING <u>L-E-C</u> 3	HAZARD CONTROL(S) IN PLACE
Working in a School Community	<i>Biological:</i> Pandemic virus'	3	5	4	4	Engineering: Plexi barriers/sneeze guards Administrative: Administrative Procedures GEN #08 – Communicable Diseases; Follow all protocols as dictated by Alberta Health Services and Public Health.

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING <u>L-E-C</u> 3	HAZARD CONTROL(S) IN PLACE
						<p>Regular and effective hand hygiene such as hand sanitizer and respiratory etiquette, physical distancing and assess their own health by completing health check questionnaire and staying home when sick (AHS self-assessment or Health Link 811).</p> <p>Personal Protective Equipment: As directed by Public Health and Alberta Health Services and may include: disposable gloves, masks, face shields</p>
Working Alone	<i>Physical Hazards:</i> intruder	3	4	5	4	Attached: Best Practices, Emergency Response Protocols
Computer use:	<i>Physical Hazards:</i> MSI, carpal tunnel, eye strain, headaches, fatigue	3	5	2	3.3	Attached: SWP,
One on One assist Students	<i>Physical Hazards:</i> MSI, cuts, bruises, unpredictable body movements, aggressive student behaviour (bites, kicks, hits, scratches, falling objects)	3	5	2	3.3	Attached: SWP, Best Practices, personal protective equipment. Behavioural Plan in place, de-escalating volatile situation training, may require MANDT training

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING $\frac{L-E-C}{3}$	HAZARD CONTROL(S) IN PLACE
	<i>Biological Hazards:</i> Lice, virus, germs, <i>Psychological Hazards:</i> Stress, aggressive behaviour, mental health	3 3	5 5	2 2	3.3 3.3	
Lifting/moving equipment and students	<i>Physical Hazards:</i> Muscular skeletal Injury (MSI, strain, falling objects, pinch points, slips, trips and falls,	3	4	3	3.3	Attached: Safe Work Practices (SWP)
Construction Instructions and Projects	<i>Physical Hazards:</i> Slips trips and falls, MSI, electricity, burns, cuts bruises, pinch points, moving parts, dust, noise, compressed air, dust <i>Chemical Hazards:</i>	3 3	4 4	3 4	3.3 3.3	Attached: SWP, Best Practices, WHMIS training, PPE, inspections, engineering controls Construction/Woodshop teachers must review and participate in CTR Hearing Conservation Program available on MyCTR or by contacting the OHS Officer, and wear appropriate PPE

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING <u>L-E-C</u> 3	HAZARD CONTROL(S) IN PLACE
	Chemical usage and flammable products					
Specialty Area: (Drama, Art): Working at heights, overhead work, lighting adjustments, stage prop construction, paint, hand and power tools including knives	<i>Physical Hazards:</i> Slips trips and falls, MSI, electricity, burns, cuts bruises, pinch points, moving parts, dust, noise <i>Chemical Hazards:</i> Chemical usage	3 3	4 4	3 3	3.3 3.3	Attached: Safe Work Practices, Best Practices, WHMIS training, PPE
Specialty Area: Band Instruction	<i>Physical Hazards:</i> Noise	3	3	3	3.3	Band teachers must review and participate in CTR Hearing Conservation Program available on MyCTR or by contacting the OHS Officer, appropriate PPE
Specialty Area: Media	<i>Physical Hazards:</i> Slips trips and falls, MSI, electricity, burns, cuts bruises, pinch points, moving parts, dust, noise <i>Chemical Hazards:</i> Chemical usage	3 3	4 4	3 3	3.3 3.3	Attached: Safe Work Practices, Best Practices, WHMIS training, PPE

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING $\frac{L-E-C}{3}$	HAZARD CONTROL(S) IN PLACE
Specialty Area: Science	<i>Physical Hazards:</i> Burns, cuts, hot open flame, pinch points, electricity	3	4	3	3.3	Attached: SWP, Best Practices, engineering controls, WHMIS training, Alberta Education: Health and Safety in the Science Classroom K-12 (current year)
	<i>Biological Hazards:</i> <i>Fungi, bacteria, mould, animal parts</i>	3	4	3	3.3	
	<i>Chemical Hazards:</i> Chemical handling	3	4	3	3.3	
Photocopier (including audio or visual equipment)	<i>Physical Hazards:</i> Burns, pinch points, moving parts, electric shock	2	5	2	3.0	Attached: SWP, engineering controls, Personal Protective Equipment, WHMIS training
	<i>Chemical Hazards:</i> air quality, chemical (toner cartridges)	2	5	2	3.0	
Physical Education Activities including coaching	<i>Physical Hazards:</i> Muscular skeletal Injury (MSI), strain, falling objects, pinch points, slips, trips and	3	3	3	3.0	Attached: SWP , Best Practices - Housekeeping

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING $\frac{L-E-C}{3}$	HAZARD CONTROL(S) IN PLACE
	falls,					
Supervision including lunch time and food preparation	<i>Physical Hazards:</i> Slips, trips, falls, cold and hot temps, pinch points, cuts, bruises, <i>Biological Hazards:</i> Virus, lice, insect bites	2 2	5 5	2 2	3.0 3.0	Attached: SWP, Personal Protective Equipment,
General Office Duties including filing, mail sorting, telephone, counting money, bulletin boards, organizing workspace, paper cutter, paper shredder	<i>Physical Hazards:</i> Muscular skeletal Injury (MSI), strain, pinch points, slips, trips, falls, ergonomic, cuts, cruises, scrapes, reaching, dust, catch points (air/ties)	2	5	2	3.0	Attached: Safe Work Practices (SWP), Engineering controls, Best Practices
Interaction with students, staff, parents and community members	<i>Psychological Hazards:</i> Workplace Violence, physical/mental abuse, Harassment, stress, anxiety,	2	5	2	3.0	Admin. Procedures on Harassment and Workplace Violence, Employee Assistance programs. May include Non-violent crisis intervention or Mandt training.

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING $\frac{L-E-C}{3}$	HAZARD CONTROL(S) IN PLACE
	compassion fatigue					
Field Trips including extra-curricular activities and outdoor studies	<i>Physical Hazards:</i> Slips, trips and falls, MSI, cold and hot temps, pinch points, bus accident, cuts, bruises	3	3	3	3.0	Attached: SWP, Personal Protective Equipment, Best Practices, Administrative Procedures/Emergency Response
	<i>Psychological Hazards:</i> Stress, aggressive behaviour, mental health	3	3	3	3.0	Attached: SWP, Admin. Procedures on Harassment and Workplace Violence, Employee Assistance programs.
	<i>Biological Hazards:</i> Virus, lice, insect bites	3	3	3	3.0	
Food Preparation and Instruction including kitchen equipment and utensils	<i>Physical Hazards:</i> burns, electric shock, cuts, punctures	2	2	4	2.7	Attached: Safe Work Practices, WHMIS training, Engineering controls, PPE; and may include Safe Food handling courses
	<i>Biological Hazards:</i> salmonella, E.coli, blood	2	2	4	2.7	

TASK	SAFETY HAZARD	LIKELIHOOD	EXPOSURE	CONSEQUENCE	PRIORITY RISK RATING $\frac{L-E-C}{3}$	HAZARD CONTROL(S) IN PLACE
Cleaning bodily fluids	<i>Biological Hazards:</i> bodily fluids	3	3	2	2.6	Attached: SWP, personal protective equipment, WHMIS training
	<i>Chemical Hazards:</i> cleaning products	3	3	2	2.6	
Chemical Handling:	<i>Chemical Hazards:</i> Corrosive, chemical handling and exposure, air quality	3	3	2	2.6	Attached: SWP, personal protective equipment. WHMIS training
Ladder Usage	<i>Physical Hazards:</i> Slips, trip and falls, MSI	2	3	2	2.3	Attached SWP
Overall Job Risk Rating					3.0	

1.2 Assignment of Responsibilities

Responsibility can be defined as an individual's obligation to carry out assigned duties. For our Health and Safety Management System to achieve its desired results, everyone in the organization must know their responsibilities, according to their authority and control. While the Health and Safety Objective contains a general reference to responsibilities, the administration has set out specific responsibilities for themselves and for everyone in the

organization.

There are three fundamental rights of all workers:

- 1.2.1. The right to know
- 1.2.2. The right to participate
- 1.2.3. The right to refuse dangerous work

All worksite parties can exercise their Health and Safety rights and fulfil their duties without fear of reprisal (discriminatory actions).

1.3. Superintendent and Associate Superintendents

- 1.3.1. Are aware of and comply with the Division's Responsibilities under the Occupational Health and Safety Act, Regulations and Code.
- 1.3.2. Are accountable and responsible for the Division's healthy and safety program.
- 1.3.3. Develop health and safety policy and administrative procedures.
- 1.3.4. Set goals and objectives to continually improve health and safety management and ensure it is integrated into Division operations and planning.
- 1.3.5. Provide supervisors with the direction, training, support and resources necessary to fulfil their health and safety roles and responsibilities.
- 1.3.6. Ensure workers are supervised by supervisors who are competent and are aware of their responsibilities under the Occupational Health and Safety Act, Regulation and Code.
- 1.3.7. Ensure that employees are aware of their rights and duties under the Alberta Occupational Health and Safety Act, Regulation and Code.
- 1.3.8. Ensure that all employees are adequately trained in all matters necessary to protect their health and safety. Annually approve the OHS training plan.
- 1.3.9. Ensure that employees are not subjected to or participate in harassment or violence at the work site.
- 1.3.10. Ensure health and safety concerns raised are resolved in a timely manner
- 1.3.11. Communicate to employees at least annually the Division's commitment to health and safety; and set a positive example for health and safety.
- 1.3.12. Require the annual reporting of the Division's safety performance (e.g. compliance, training, orientation, incidents, WCB rates, etc.).
- 1.3.13. Consult and cooperate with the joint work site health and safety committees to exchange information and resolve health and safety concerns.

1.4. The Associate Superintendent of Corporate Services (or designate)

- a) Develops and maintains an occupational health and safety program that contains the ten elements from the Partnerships in Injury Reduction standard as approved by Alberta Labour and section 37 of the Occupational Health and Safety Act.
- b) Facilitates the annual review of the occupational health and safety program by the Superintendent and Associate Superintendents.
- c) Solicits feedback and revises associated forms biannually.
- d) Supports the occupational health and safety program through the CTR Catholic website, web base applications and other technological means.
- e) Provides an orientation of the OHS program for new employees.
- f) Develops and reviews codes of practices, review safe work procedures and provide onsite support for school administrators and supervisors.

1.5. Supervisors (Principals, Vice-Principals, Managers, Directors, Coordinators, Supervisors, Head Custodians and other staff on a management / supervisory pay grid)

- a) Ensure the division health and safety program is implemented and monitored at their school or within their department.
- b) Be aware of and comply with the OHS Act, Regulations, code and follow CTR Catholic policies, administrative procedures, health and safety program, codes of practices, safe work practices and safe work procedures.
- c) Ensure they are competent to supervise employees under their supervision.
- d) Take the precautions necessary to protect the health and safety of employees under their supervision.

- e) Ensure employees under their supervision works in a manner and in accordance with procedures and measures from the OHS Act, Regulations and Code.
- f) Advise employees under their supervision of all known hazards to health and safety in the area where the employee is performing work
- g) Ensure employees under their supervision use all hazard controls, and properly uses or wears personal protective equipment designated or provided by the employer or required to be used by the OHS Act Regulations and Code.
- h) Ensure that none of the employees under their supervision are subjected to or participate in harassment or violence at the work site.
- i) Ensure general and site-specific health and safety orientation is completed for all employees including new and transferred employees.
- j) Report concerns about unsafe or harmful work site act that occurs or has occurred
- k) Report safety concerns, unsafe conditions, work-related injuries, illnesses, and near misses.
- l) Ensure site emergency plans are prepared, implemented (AP GEN #17).
- m) Ensure appropriate first aid supplies and trained staff to address immediate illness or injury are available at the worksite.
- n) Ensure a site visitor protocol and orientation is implemented.
- o) Implement a site or department specific protocol for staff that work alone.
- p) Implement management practices to control/monitor the purchase, inventory, use, storage, transport, and disposal of chemicals and hazardous waste.

1.6. All employees: (teachers and all staff on a pay grid)

- a) Work safely and take reasonable care to protect their own health and safety and that of all others present at the worksite.
- b) Be aware of and comply with the OHS Act, Regulations, and Code and follow CTR Catholic policies, administrative procedures, health and safety program, codes of practices, safe work practices and safe work procedures.
- c) Refrain from causing or participating in harassment or violence.
- d) Know the hazards of their job, refuse unsafe work and participate in training, meetings, hazard assessments, inspections and investigations when required.
- e) Wear and maintain appropriate personal protective equipment as required.
- f) Report to his/her supervisor safety concerns, unsafe conditions, work-related injuries, illnesses, and near misses.

1.8 Health and Safety Enforcement:

Compliance with the CTR health and safety management system and the Alberta Occupational Health and Safety legislation is necessary to maintain a healthy and safe work environment. As with any program, corrective disciplinary measures may be required to deal with non-compliance issues. Furthermore, all non-compliance issues shall be documented and placed within the individuals personnel file.

In general, the following disciplinary actions will be considered depending on the frequency and severity of the offence:

- 1) Coaching for improvement
- 2) Verbal warning
- 3) Written warning
- 4) Suspension
- 5) Termination

You should be aware that if you do anything to endanger another staff member or a student at any time, you will be asked to a meeting with the superintendent or their representative to discuss your future with the division

It should be noted that the provisions outlined in any *Collective Agreement* shall apply.

Housekeeping

Alberta OHS Regulations: OH&S Part 12 Section 185

Definition/Explanation:

Good housekeeping practices lead to a healthy and safe work environment. By training employees in proper housekeeping practices and by conducting routine inspections, correct housekeeping is promoted throughout the work sites.

“A clean work site is a healthy and safe work site”

Identified Hazards:

- Slip/trip and/or fall
- Cuts
- Noise Exposure
- Eye injury
- Back Strain
- Vibration
- Exposure to harmful substances, chemical residue and biological waste.

Best Practices and Procedures:

- Work locations, vehicles and buildings **shall be kept** clean and orderly at all times.
- Combustible materials such as oil soaked rags and waste **shall be kept** in approved metal containers.
- Flammable liquids such as gasoline, benzene, naphtha and paint thinner, **shall not be** used for cleaning purposes.
- **All solvents shall be kept in UL/CSA approved, properly labeled containers.** Gasoline, benzene, naphtha, paint thinner and other solvents of this class shall be handled and dispensed only from approved, properly labeled containers.
- Floors and platforms **shall be kept free** of dangerous projections or obstructions and shall be maintained reasonably free from oil, grease or water. Where the type of operation produces slippery conditions, the area shall be cleaned immediately, or mats, grates, cleats or other methods shall be used to reduce the hazard of slipping.
- Materials and supplies **shall be stored** in an orderly manner so as to prevent their falling or spreading and to eliminate tripping and stumbling.
- Emergency exits, stairways, aisles, permanent roadways, walkways and material storage areas **shall be identified** and kept clear at all times.
- Materials and supplies shall not be stored in walkways, access doors and fire exits or block access to fire equipment.
- Not more than 20% of each wall surface can have combustible decorative materials.
- **Clothing** shall be kept to a minimum behind doors as they are combustible and may impede egress.
- **No matches shall be** left in clothes placed in lockers. Rubbish and unused clothing shall not be allowed to accumulate in lockers.
- Waste material and debris **shall be removed** from work and access areas on a regular basis.
- In any building, except one provided for their storage, flammable liquids such as gasoline, benzene, naphtha, and lacquer thinner **shall be limited to 22.7 litres or five imperial gallons**, UL/CSA approved property labeled containers. This does not apply to kerosene and cleaning agents of the “Stoddard” solvent class, however, **not more than 4.54 litres or one imperial gallon** of such liquids shall be kept in any open container. The container shall be provided with a proper cover and be kept securely covered except when in actual use.
- When pouring or pumping gasoline or other flammable liquids from one container to another, **metallic contact shall be maintained between the pouring container and receiving containers.**
- **Strict adherence shall be paid to “non smoking” and “stop your motor” signs at fuel dispensing locations.**
- Nails protruding from lumber intended for re-use **must be removed or bent over** flush as soon as possible after initial

disassembly

Personal Protective Equipment Care and Maintenance

Alberta OHS Regulations: OH&S Code 12 Part 18

Explanation:

Personal Protective Equipment (PPE) is the last line of defense against hazards in the workplace. We encourage one time use disposable PPE which are available at each work site. Employees use PPE on a regular basis (that is non-disposable), and this Best Practice would be applicable.

Overview:

The care and maintenance of your personal protective equipment (PPE) is integral in maintaining your personal health and safety. The best practices and procedures have been divided into the following categories:

1. Head protection
2. Foot protection
3. Limb and body protection
4. Eye and face protection
5. Hearing protection
6. Respiratory protection

Head Protection

Safety headgear is designed to protect the head from impact from falling objects, bumps, splashes from chemicals or harmful substances, and contact with energized objects and equipment

In the management of workplace health and safety within CTR, there are several different types of head protection that can be utilized which is dependent upon the type of work activity. The typical types of head protection used are hard hats in construction areas, helmets for vehicle users, and bicycle helmets. Furthermore, the standard to which the head protection must meet has been outlined in Part 18 of the Alberta OH&S Code and should always be referenced prior to purchasing new head protection or if determining existing head protection is adequate.

All head protection should be maintained on a regular basis and in accordance to the manufacturer's instructions. If attachments are used with headgear, they must be designed specifically for use with the specific headgear used. Bump caps are not considered a helmet.

Inspections and Maintenance

Proper care is required for headgear to perform efficiently. Many factors including temperature, chemical, sunlight and ultraviolet radiation (welding) affect the service life. The usual maintenance for headgear is simply washing with a mild detergent and rinsing thoroughly.

The Do's:

- Replace head protection that is pitted, holed, cracked or brittle
- Replace head protection that has been subjected to a blow even though damage cannot be seen
- Remove from service any head protection if its serviceability is in doubt
- Replace headgear and components according to manufacturer's instructions
- If you have questions regarding the head protection, contact the manufacturer or distributor.

- Clean the head protection on a regular basis
- Inspect the head protection prior to each use
- Tag out defective head protection and obtain replacement immediately.

The Don'ts:

- Drill or remove peaks of the head protection in any way
- Use solvents or paints on the shells of the head protection – may cause shell integrity to decrease
- Put stickers on shell of the head protection – may cause shell integrity to decrease
- Use any head protection that has a defective chin strap, harness or padding
- Use head protection that has been modified in any way

Foot Protection

Safety footwear is designed to protect against foot hazards in the workplace. Safety footwear protects against compression, puncture injuries, and impact.

Safety footwear is divided into three grades, which are indicated by coloured tags and symbols.

- The tag colour tells the amount of resistance the toe will supply to different weights dropped from different heights.
- The symbol indicates the strength of the sole. For example, a triangle means puncture-resistant sole able to stand 135 kg (300 ft. lbs.) of pressure without being punctured by a 5 cm (2" nail). For more information, look at OH&S Regulations or CSA Standard "Protective Footwear".
- In the management of workplace health and safety within CTR, it is recommended that only the green triangle grade of footwear, which also gives ankle support, be used.

In closing, your protective footwear should always over protect, not under protect.

The Do's

- Choose footwear according to job hazard and CSA Standards
- Lace up boot and tie laces securely; boots don't protect if they are a tripping hazard or fall off
- Use a protective boot dressing to help the boot last longer and provide greater water resistance – wet boots conduct current
- Choose a high cut boot to provide ankle support – may lesson amount of less injuries
- Clean regularly
- Inspect footwear for defects at the start of each day

The Don'ts

- Wear defective safety footwear (i.e., exposed steel toecaps)
- Under protect your feet or modify safety footwear

Limb and body Protection

Due to the nature of the work conducted throughout CTR, and the number of different hazards, it is not possible to cover specialized limb and body protection in detail. These types of hazards are known as “job exposures” (exposure to fire, temperature, extremes, body impacts, corrosives, molten metals, cuts and sharp or abrasive materials.)

PPE in the category would be items such as:

- Leg, arm, chin and belly guards
- Specialty hand pads and grips
- Leather and rubber based aprons
- Flame and chemical resistant clothing

For more information on the type of specialty PPE you require, check with workplace health and safety. With all PPE, following the manufacturer’s instructions on its use, care and cleaning is critical and will help you get the full service life from your specialty PPE.

Hand PPE (Gloves and Mitts)

PPE for the hands include: finger guards, thimbles and cots, hand pads, mitts, gloves, and barrier creams. Choose hand PPE that will protect against the job hazard. Gloves should fit well and be comfortable. This type of PPE has to protect against chemicals, scrapes, abrasions, heat and cold, punctures and electrical shocks.

Types

PPE for the hands come in many forms, each designed to protect against certain hazards. Gloves most commonly used are made from leather, cotton, rubber, synthetic rubbers and other manmade materials, or combinations of materials.

Vinyl coated or leather gloves are good for providing protection while handling wood or metal objects. When selecting hand PPE, keep the following in mind; look for anything at the job site that may be a hazard to the hands. If gloves are to be used, select the proper type for the job to be done. Inspect and maintain hand PPE regularly. If in doubt about the selection or need for glove or hand PPE, consult your safety supplier, MSDS, or Workplace Health and Safety.

The Do’s

- Inspect hand PPE for defects before each use
- Wash all chemical and fluids off of gloves before removing them
- Use the proper hand PPE for the job
- Follow manufacturer’s instructions on the care and use of the hand PPE you are using
- Ensure exposed skin is covered – no gap between the sleeve and the hand PPE

The Don’ts

- Wear gloves when working with moving machinery – gloves can get tangled or caught
- Wear hand PPE with metal parts near electrical equipment
- Use gloves or hand protection that is worn out or defective

Eye and face protection

This PPE is designed to protect the worker from such hazards as:

- Flying objects and particles
- Molten metals
- Splashing liquids
- Ultraviolet, infrared and visible radiation (welding)

The PPE has two types.

1. Basic Eye Protection:

- Eyecup goggles
- Mono-frame goggles and spectacles with or without side shields
- CSA approved prescription spectacles with or without side shields

2. Face Protection:

- Metal mesh face shields for radiant heat or hot and humid conditions
- Chemical and impact resistant (plastic) face shields
- Welders shields or helmets with specified cover

Hardened glass prescription lenses and sport glasses are not an acceptable substitute for proper, required industrial safety eye protection.

Comfort and fit are very important in the selection of safety eyewear. Lens coating, venting or fittings may be needed to prevent fogging or to fit with regular prescription eyeglasses.

Contact lens should NOT be worn at the work site. Contact lens may trap or absorb particles or gases causing eye irritation or blindness. Hard contact lens may break into the eye when hit.

Basic eye protection should be worn with face shields. Face shields alone often aren't enough to fully protect the eyes from work hazards. When eye and face protection are required, advice from the OH&S office, MSDS, or your supplier will help in your selection.

The Do's

- Ensure your eye protection fits properly – close to the face
- Clean safety glasses daily, more often if needed
- Store safety glasses in a safe, clean, dry place when not in use
- Replace pitted, scratched, bent or poorly fitted PPE – damaged face-eye protection that interferes with vision and will not provide the protection it was designed to deliver

The Don'ts

- Modify eye/face protection
- Use eye/face protection which does not have a CSA certification – CSA stamp for safety glasses is usually on the frame inside the temple near the hinges or the glasses

Hearing protection

Hearing Protection is designed to reduce the level of sound energy reaching the inner.

The “rule of thumb? For hearing protection is to use it when you can’t carry on a conversation at a normal volume of voice when you are three feet apart.

Remember, this is only a rule of thumb. Any sound over 85 dBA requires hearing protection. Hearing loss can be very gradual, usually happening over a number of years.

The most common types of hearing protection within CTR are earplugs and earmuffs. If you choose to use the other types of hearing protection, ask your safety supplier or Workplace Health and Safety for further information.

It is important to have different styles of hearing protection available. Different types allow a better chance of a good fit. Each person’s head, ear shape and size are different. One style may not fit every person on your crew. If hearing PPE does not fit properly or is painful to use, the person will not likely use it. If the hearing protection is not properly fitted, it will not supply the level of protection it was designed to deliver.

Most earplugs, if properly fitted, generally reduce noise to the point where it is comfortable (takes the sharp edge off the noise).

If your hearing protection does not take the sharp edge off the noise, or if workers have ringing, pain, headaches or discomfort in the ears, your operation required the advice of an expert.

Note:

An audiometric testing program must be established for employees who work in areas where noise exceeds 85 dBA on a regular basis. Band teachers must participate in Christ the Redeemer’s Hearing Conservation Program. Refer to Part 16 of the OH&S Code for further information.

Respiratory protection

Respiratory protection is designed to eliminate the exposure from hazardous materials that can result in acute and chronic health effects. When an employee or contractor has the potential or knowingly will be exposed to airborne contaminants or a mixture of airborne contaminants in a concentration exceeding the Occupational Exposure Limit (OEL) or if the atmosphere has an oxygen level less than 19.5%, respiratory protection equipment must be utilized.

The information that should be considered in determining the need for respiratory protection equipment includes an analysis of:

- The nature, toxicity, and the warning properties of the contaminants – detailed review of the MSDS is required
- The concentration or likely concentration of the airborne contaminants
- The duration or likely duration of the worker’s exposure to the contaminants
- The concentration of oxygen
- Availability of local and/or central exhaust systems
- Emergency response procedures.

Selection

When an employee or contractor has the potential or knowingly will be exposed to a hazard that could negatively affect the respiratory system, respiratory protection meeting a minimum standard as outlined in Part 18 Section 247 of the OH&S Code shall be utilized.

In addition, once the characteristics of the contaminants are known, contacting a supplier/manufacturer of respiratory

equipment may assist in determining the best device for the employee or contractor in relation to the task being performed.

Use

Respiratory protective equipment should be used in accordance to the manufacturer's specifications and on-the-job training activities. Furthermore, the equipment should never be shared even after it has been cleaned.

Storage

The storage of respiratory protection equipment should be carried out as per the manufacturer's specifications as well as demonstrated through on-the-job training.

Inspection

Prior to each use of respiratory protective equipment, the user shall inspect the device for any defects. If defects are noticed, the device should be tagged and removed from active service.

Maintenance

When conducting maintenance on respiratory protection equipment, the person conducting the maintenance should refer to the manufacturer's specifications as some cleaning products may destroy the equipment.

Note:

Additional information surrounding respiratory protective equipment can be found in Part 18 Section 244-250 of the OH&S Code. CTR does not own this equipment. If a service is to be performed, the service is contracted out.

Working Alone

Alberta OHS Regulations: OH&S Code Part 28 and Working Alone

Definition / Explanation:

These working alone best practices and procedures are designed to provide guidance and assistance to employees when they are required to perform tasks alone within CTR as related to the following:

1. Employees who meet clients away from their base office;
2. Employees who perform hazardous work;
3. Employees who work or travel alone; or

Working Alone:

To work alone means being the only employee at a work site and assistance is not “readily available” should the employee be injured, fall ill, or face some other emergency.

Buddy System:

A system of organizing work so the employee can be seen or heard by another employee that is working in close proximity to his or her work area.

Safety Visit Plan:

This is a plan designed to outline communication procedures and methodologies, contact personnel, check-in times, purpose of meeting and attendees.

Travel Plan:

This is a plan that outlines travel route(s), travel schedule, call-in procedures and times, all applicable contact numbers, designated check-in times, location of work sites, and a brief description of works being performed.

Call-in Failure:

When an employee fails to call-in at a designated time.

1. Employees who meet Clients away from their Base Office Potential Hazards

- Assault
- Harassment and Violence
- Robbery
- Verbal abuse

Best Practices

- Follow safe work procedures.
- Use the buddy system when possible.
- If potential for violence exists, change meeting location to a more friendly environment.
- Use a **Safety Visit Plan**.
- Establish a code word to confirm help is needed.
- If an incident occurs, always investigate so recurrence of similar situations is minimized or eliminated.

Safe Work Procedures

- Arrange meeting with client in a safe location.
- If you determine you may be placed in a potentially unsafe situation develop your safety visit plan, which should include:
 - Description of communication procedures
 - Description of communication method
 - Location of meeting
 - Purpose of meeting
 - Who you are meeting with
 - Intended time of arrival and departure
 - Check in/out schedule
 - Travel to meeting location.
 - Ensure communication devices are fully operational prior to attending the meeting.
 - Check-in with your contact and advise them of your plans.
 - Complete hazard assessment prior to starting work.
 - Conduct meeting.
 - Check-in with your contact and inform them your meeting is over and what your plans are.
 - Travel to next meeting location or back to the office.

2. Employees Who perform hazardous Work

Potential Hazards

- Various bodily injuries from improper use of equipment or equipment failure
- Exposure to hot or cold temperatures
- Assault

Best Practices

- Follow the safe work procedures.
- Use the buddy system when possible.
- Ensure the appropriate clothing, PPE and tools are available to do the job safely.
- Develop a **Travel Plan**.
- Always develop and follow check-in procedures.
- Always utilize two people during search activities related to **Call-in Failure**.

Safe Work Procedures

- Determine work activities and refer to hazard assessment for activity being performed.
- Develop a travel plan, which should include:
 - Travel route(s);
 - Travel schedule;
 - Call-in procedures and designated check-in times;
 - All applicable contact numbers;
 - Location of work sites; and
 - Brief description of works being performed.
- Travel to work site and call in when you arrive.
- Conduct hazard assessment if hazard assessment has not been done or hazards have changed.
- Perform task(s).
- Call-in as per designated call-in times.
- Complete task(s).
- Call-in and inform contact of your plans

- Travel to next work site or return to the CTR facility you are based out of.
- Call-in upon arrival at next worksite or CTR facility.

In the event of a Call-in failure:

1. Contact person shall attempt to contact employee.
2. If the employee is not reached within 15 minutes of the first call by the contact person, the contact person shall arrange for someone to travel to the work site to check on the employee.
3. As step 2 is progressing, the contact person shall continue to contact the employee.

Note: All call-in failures should be investigated as they, at a minimum, would be considered a near miss. Therefore, the Health and Safety Officer shall be informed of all call-in failures.

4. Employees Who Work or Travels Alone

Potential Hazards

- Automotive accident
- Exposure to hot or cold temperatures
- Vehicle breakdown
- Assistance is not “readily available”

Best Practices

- Follow the safe work procedures.
- Follow Administrative Regulations on Vehicles
- Ensure the appropriate clothing, emergency equipment, and PPE is available.
- Ensure vehicle is in good operating condition prior to travel
- Ensure first aid kit and emergencies supplies (applicable to the weather conditions) are present prior to travel.
- Develop a **Travel Plan**
- Always develop and follow check-in procedures.
- Always utilize two people during search activities related to Call-in Failure.
- Utilize Working Alone Call-out system through United Technologies

Safe Work Procedures

- Determine type of road that will be traveled on.
- Develop a travel plan, which should include:
 - Travel route(s);
 - Travel schedule;
 - Call-in procedures and designated check-in times;
 - All applicable contact numbers;
 - Location of work sites; and
 - Brief description of works being performed.
- Travel to work site and call in when you arrive.
- Perform task(s).
- Call-in as per designated call-in times.
- Complete task(s).
- Call-in and inform contact of your plans
- Travel to next work site or return to the CTR facility you are based out of.
- Call-in upon arrival at next worksite or the CTR facility.

Christ the Redeemer Catholic Schools
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In the event of a Call-in failure:

1. Contact person shall attempt to contact employee.
2. If the employee is not reached within 15 minutes of the first call by the contact person, the contact person shall arrange for someone to travel to the work site to check on the employee. United Tech to contact STC Emergency Number
3. As step 2 is progressing, the contact person shall continue to contact the employee.

Note: All call-in failures should be investigated as they, at a minimum, would be considered a near miss. Therefore, the Health and Safety Officer shall be informed of all call-in failures.

SAFE WORK PROCEDURES

ABRASIVE CUT OFF SAW

ABRASIVE CUT OFF SAW	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, steel toe boots/shoes, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Ensure material is clamped in place with the saw vice before cutting.• Only use blades that are specifically designed for this equipment.• Before use, conduct a visual inspection for a damaged blade (cracks, chips).• Ensure flammable materials are kept away from the work area.• Issue a warning about sparks to other individuals in the area.• Stand to the side (left or right) when you use the saw.• Ensure fingers are kept well back from the blade.• Ensure appropriate cutting block is used.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Follow manufacturer's instructions for use and maintenance.• Never wear gloves, loose clothing, and jewelry or have long, loose hair that could be caught in moving parts.• Never allow students to use this equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Never turn the machine "on" before clearing the table of all objects (tools, scraps of wood, etc).• Do not remove material until blade has stopped.• Do not perform a crossed arm operation.• Do not crowd or distract machine operator.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Kickback• Cuts• Sparks• Entanglement• Pinch points• Dust• Noise	

BAND SAW

BAND SAW	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery (Section 378, 379)
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield, hearing protection, respiratory protection (if needed), manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is. • Look for knots and nails in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade. • Wear appropriate personal protective equipment (impact glasses, ear muffs or plugs for extended use). • Refer to MSDS for wood dust. • Follow manufacturer's instructions for use and maintenance. • Have an anti-skid surface on the floor where the operator would stand to prevent slips. • Check to see that guards are in place, secured, and working correctly. • Use proper blade size and type. • Adjust the upper blade/guard to within 1/8" (0.3 cm) above the material you are cutting. • Ensure the blade tension tracking, blade guides, and blade support bearings are properly adjusted. • Use a push stick to keep your hands clear of the blade. • Avoid awkward operations and hand positions where a sudden slip could cause a hand to move into the blade. • Hold the material you are cutting firmly against the table. • Hold the material you are cutting firmly and feed into blade at a moderate speed. • Turn the machine "off" to back out of an incomplete or jammed cut. • Make "relief" cuts prior to cutting long curves. • Turn the machine "off" and wait for the blade to stop prior to cleaning the blade area, removing debris near the blade, removing or securing materials, or changing the angle of the table. • Ensure dust collecting system is used. • Ensure all band wheels are enclosed. • Never wear gloves, loose clothing, and jewelry or have long loose hair that could be caught in moving parts. • Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant. • Do not try to remove waste/cutoffs while machine is running. • Never start the machine before clearing the table of all objects (tools, scrap pieces, etc.). • Never start the machine with the material against the blade. • Never reach under the table while the machine is running. • Do not attempt to back material away from the blade while the saw is in motion if work binds or pinches on the blades. • Do not leave saw running if unattended. • Do not remove sawdust or cuttings from the table by hand. Use a stick or brush. 	

Potential Hazards:

- Cuts to hands, arms and other parts of the body
- Eye damage due to flying debris
- Inhalation of potentially harmful dust from wood and composite materials like MDF and plywood
- Noise

BASIC BACK SAFETY	
Alberta OHS Regulations:	Part 14 - Lifting and Handling Loads
Adopted:	
Revised and Adopted:	
Manpower:	1 person; more for heavier loads
Safety Equipment:	Dependent on load
Tools:	n/a
<u>Procedure:</u>	
<ul style="list-style-type: none">• Maintain good posture.• Use of proper lifting techniques.• Regular exercise• Control body weight	
Maintain Good Posture (Standing)	
<ul style="list-style-type: none">• Balance your weight evenly on both feet.• Tuck buttocks in to help straighten their spine.• Pull in abdomen.• Hold head straight.• Relax their arms at their side.	
Maintain Good Posture (Sitting)	
<ul style="list-style-type: none">• Sit in straight backed chairs with a firm seat (to avoid slouching);• Keep their knees bent.• To maintain good posture while sleeping all students and staff should:• Sleep on their side with your knees bent (this is proven to be the best position);• Make sure they have a firm mattress.	
Lifting	
<ul style="list-style-type: none">• Balance your feet (have them shoulder width apart with one foot slightly ahead of the other)• Bend your knees• Keep your back straight• Get a good grip on the load with your palms• Keep the load close to your body• Turn with your feet, not your body, and avoid twisting while lifting• When lifting heavy loads, students are required to find assistance. Students are not allowed to catch loads.• Students and staff should maintain their health and good physical condition by keeping up with a regular exercise program (at least three to four times a week for about 20 to 25 minutes).• Students and staff involved in a lot of standing have to adjust their work space to ensure that they are not putting any undue strain on their backs. If students and staff find that they have to stoop to work, their work space must be adjusted so they can work standing straight.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Muscle strain, pulls, tears, etc.• Recurrent back pain	

BENCH/PEDESTAL GRINDER

BENCH/PEDESTAL GRINDER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, steel toe boots/shoes, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Wear appropriate personal protective equipment. • Follow manufacturer's instructions for use, maintenance and installation of wheels. • Locate cooling bucket close to grinder. • Use vice grips for small work pieces. • Keep area clean of debris. • Ensure adequate lighting is available. • Use only wheels suitable for the speed of the machine. • Use only wheels that have a bore exactly equal to the arbors of the machine. • Conduct a visual inspection of the wheels for cracks or fragments before starting the machine. Replace damaged wheels immediately. • Adjust shields close to the grinding wheel, and re-adjust as the wheel wears down. • Always make sure that the shields are in place, properly adjusted, and secured before each use. • Adjust tool rests to within 1/8" (0.3 cm) of the grinding wheel. • Hold the material firmly against the tool rest. • Tighten the tool rest securely to prevent shifting positions, and re-adjust as the wheel wears down. • Stand to one side before turning the machine "on". • Avoid awkward operations and hand positions. • Properly support long or wide materials. • Only use the face of the grinding wheel for grinding materials. • Pay close attention to the location of hands and fingers while grinding. • Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is. • Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts. • Do not grind on side of wheels. • Do not set rest below centre line of the wheel. • Do not over-tighten the wheel nut. • Do not use a wheel that vibrates. Dress the grinding wheel or replace it. • Never start the machine with the material against the grinding wheel. • Never grind near flammable materials. • Never apply coolant directly to the grinding wheel. Dip the material in water to cool it. • Do not attempt to machine an undersized wheel to fit an arbor. • Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant. • Do not crowd or distract machine operator. 	

Potential Hazards:

- Kickback
- Cuts
- Sparks
- Entanglement
- Pinch points
- Metal dust
- Noise

BRAD NAILER

BRAD NAILER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Never remove or bypass safety mechanism on nailer.• Always point the nailer away from yourself and others.• Never carry nailer with the trigger depressed, bumping the safety into someone or something could accidentally fire the nailer.• Point directional exhaust deflector on top of nailer away from operator when in use.• Always use safety glasses when using a brad nailer.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Puncture injuries from nails• Eye and skin injuries from flying debris• Damage to ears/eyes from compressed air	

CELL PHONE USAGE WHILE DRIVING

CELL PHONE USAGE WHILE DRIVING	
Alberta OHS Regulations:	N/A
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	
Tools:	
 <u>Procedures:</u> <ul style="list-style-type: none">• Ensure hands-free device is operational.• Inspect cell phone and ensure it is free of defects.• If defects are noted, tag out the phone and inform your supervisor.• Always make driving your first priority.• Is possible, allow the voice mail to take the phone call.• In the event that you answer a call while driving, safely pull off the road and continue the call.• Ensure hazard lights are engaged while pulled off an active roadway.• Take the necessary precautions when re-entering the flow of traffic.• When possible, utilize hands-free feature.• Avoid engaging in stressful or emotional conversations.• Avoid looking up phone numbers on your cellular phone while driving.• Avoid taking notes while driving.	
 <u>Potential Hazards:</u> <ul style="list-style-type: none">• Vehicle Collision• Damage to vehicle• Personal injury	

CHEMICAL HAZARDS

CHEMICAL HAZARDS	
Alberta OHS Regulations:	Part 4 - Chemical Hazards, Biological Hazards, and Harmful Substances; Part 10 - Fire and Explosion Hazards; Part 18 - Personal Protective Equipment; Part 29 - Workplace Hazardous Information System (WHMIS); Schedule 1 - Chemical Substances
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, protective gloves, apron, respirator (dependent on material)
Tools:	
<u>Procedures:</u>	
Solvent Use in the Art Studios	
<ul style="list-style-type: none"> Solvent are used in all media areas as thinners, cleaners and mediums and they present risks of inhalation, absorption and fire. In most instances, safer, low-risk solvents can be substituted for ones that are more hazardous and small quantities are adequate to do the job. When a solvent must be used, odourless paint thinners are preferred. In choosing approved solvents, look at the following criteria: <ol style="list-style-type: none"> A high flash point A low evaporation rate A high TLV (concentration of parts per million that can be breathed for an extended period without adverse effects) Low toxicity (such as removal of aromatic hydrocarbons) Read and follow posted Solvent Usage and Printmaking Cleaning Procedures to keep solvent usage to a minimum. Avoid skin contact with solvents by wearing solvent-resistant gloves or barrier creams. Never use solvents to clean inks from hands. Never use solvents near sources of heat or spark. Solvents must be stored in cabinets designed for flammable materials when not in use. 	
General Precautions	
<ul style="list-style-type: none"> Read and familiarize yourself with the posted Safety Rules and Material Safety Data Sheets (MSDS) provided for all chemicals you will use. Always wear the proper Personal Protective Equipment for the chemicals you are using. Substitute safer products and processes whenever possible. Consult the CHRIST THE REDEEMER technician or instructor. Check that ventilation system is functioning properly. Consult instructor or technician before altering or experimenting with new processes. Heating or combining some substances can increase their potential hazards. Sanding, grinding and polishing some materials can release toxins. Follow Safe Work Procedures for the chemicals you will be using. If students/staff bring in chemicals from an outside source they MUST provide the CHRIST THE REDEEMER staff with a current MSDS for any potential material or substances that are not on file. This must be done prior to the use of the product. Consult with your instructor or technician for information and safe substitution of aerosol spray products. 	

- Before using AEROSOL spray products, verify the spray nozzle is pointed away from the user and if used outside, protective eye wear should be worn
- CHRIST THE REDEEMER has a strict disposal policy that is posted in all studios. This policy must be followed at all times.
- DO NOT POUR SOLVENTS DOWN SINKS.
- When in doubt, ask your instructor or the instructor or technician for assistance.

Potential Hazards:

- Inhalation
- Fire and/or Explosions
- Absorption through skin
- Dusts (sawdust, charcoal, pastel, rosin)
- Welding Fumes
- Environmental damage
- All solvents can cause dermatitis and defatting of the skin from prolonged or repeated exposure
- Inhalation of high concentrations of turpentine or mineral spirits can cause respiratory irritation and narcosis (dizziness, nausea, fatigue, loss of coordination, coma, etc.)
- Chronic inhalation of large amounts of mineral spirits could cause brain damage
- Some solvents may cause photosensitization of the skin
- Ingestion of solvents can be fatal

CIRCULAR SAWS

CIRCULAR SAWS	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery (Section 377, 380)
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield, hearing protection, respiratory protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Refer to MSDS for wood dust.• Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade.• Ensure guard moves freely and operates correctly before connecting the saw to a power source.• Ensure material is secure when cutting.• Keep fingers away from blades.• Do not set the saw down until the blade has stopped.• Use wooden splitters when ripping.• Allow off-cuts to fall.• Avoid cutting small pieces.• Ensure power cord is clear of cut.• Ensure adequate length of power cord is available to fully complete cut.• Ensure material is adequately supported before and after the cut.• Use two hands to operate saw: one on trigger switch and the other on front knob handle.• Disconnect power before changing blade.• Turn the machine "off" to back out of an incomplete or jammed cut.• Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts.• Never set blade depth to more than ½" (1.3 cm) beyond the lower face of material.• Never reach under the saw or material while the blade is turning.• Do not force cut.• Do not hold or fix retracting guard in the open position.• Do not carry saw with finger on the trigger.• Do not rip material without using a wedge or guide that is clamped or nailed to stock.• Do not allow junior high students to use the circular saw.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.	

Potential Hazards:

- Serious cuts to hands, fingers, other parts of the body
- Eye injuries from flying debris
- Accidental cutting of electrical cord or work surface
- Noise

COMPRESSED AIR

COMPRESSED AIR	
Alberta OHS Regulations:	Part 10 - Fire and Explosion Hazards, Section 171; Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment (impact glasses).• Regulate air pressure to match tools used.• Ensure all air hoses are in good repair and connections are functioning properly.• Point air hose away from body when connecting or disconnecting tools or air hose.• Follow manufacturer's instructions for use and maintenance.• Ensure proper pressure regulator and relief device is in place to maintain proper pressure.• Use appropriate tools for the task performed.• Review all safety procedures prior to allowing individuals to use compressed air for the first time.• Do not use for general purpose cleaning.• Do not clean self or others with compressed air.• Do not use damaged or faulty hoses or tools.• Do not use tools without training.• Do not alter tools in any way.• Do not use to clean brake pads.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Flying objects• Skin penetration• Dust	

DRILL PRESS

DRILL PRESS	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Refer to MSDS for wood dust.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Have an anti-skid surface on the floor where the operator would stand to prevent slips.• Secure material before drilling.• Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade.• Ensure bits are tightened in chuck.• Keep hands away from running bits.• Use appropriate speed for the material.• Stop the machine and step back if problems arise.• Ensure drill press is secured to floor or bench.• Use keyless chucks or spring loaded keys.• Never wear gloves, loose clothing, and jewellery or have long, loose hair that could be caught in moving parts.• Never turn the machine "on" before clearing the table of all objects (tools, scraps of wood, etc).• Do not remove material or debris while bit is spinning.• Do not leave the drill press running if unattended.• Do not leave key in chuck.• Do not place hands under material being drilled.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris• Accidental cutting of electrical cord or work surface• Noise	

ELECTRICAL DEVICES	
Alberta OHS Regulations:	Part 15 - Managing the Control of Hazardous Energy; Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	n/a
Tools:	n/a
<u>Procedure:</u>	
<ul style="list-style-type: none">• Read instructions before using any electrical device.• Notify your instructor or technician of any faulty, damaged or frayed cords.• Never plug too many cords into one outlet. If using more than two devices, use an approved power bar so that the equipment is grounded properly.• Make sure your hands are dry before plugging in an appliance.• Do not string cords across work areas. Tape them down to the floor.• Unplug an electrical device before starting to work on it.• Use three prong plugs.• Pull the plug – not the cord.• Keep cords free from water, oil and heat.• Use extension cords for temporary jobs only.• Do not use light duty cords for heavy-duty work.• Do not tie cords in knots.• Do not carry devices by the cord.• Never break the third prong off the plug.• Switch the device off before connecting to a power source.• Turn off, disconnect and then adjust the device.• Do not use electrical devices when an area contains explosive vapours or gases.• Do not clean devices with flammable or toxic substances.	
<u>Maintenance and Repair:</u>	
<ul style="list-style-type: none">• Inspect cords and plugs on a regular basis.• Leave repairs to a competent technician.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Electrocution• Fire	

ERGONOMICS	
Alberta OHS Regulations:	n/a
Adopted:	
Revised and Adopted:	
Manpower:	1 person; more for lifting heavy loads or objects
Safety Equipment:	Wrist supports (typing, vibration dampening equipment (for vibratory tools)
Tools:	n/a
<u>Procedure:</u>	
<ul style="list-style-type: none">• Ensure that all machine controls are reachable and easily accessible prior to operation.• Ensure that lighting is adequate to perform task activities.• Arrange work spaces and areas to avoid the need for carrying objects overhead and for overreaching.• Vibration dampening products should be used on vibratory type tools and equipment where applicable.• Plan work activities to reduce or eliminate repeated manual lifting where possible.	
Chair Guidelines	
<ul style="list-style-type: none">• Thigh should be parallel to floor.• Feet should be on floor.• 2-3 finger breadth between knee and front edge of seat pan.• Adequate back support.• Shoulders relaxed and level.• Elbows at 90 degrees.• Seat pan well padded.• Know how to adjust and operate your chair.	
Desk Guidelines	
<ul style="list-style-type: none">• Desk height is equal to seated elbow height.• Adequate space.• Minimal reaching above and below shoulder.	
Keyboard & Mouse Guidelines	
<ul style="list-style-type: none">• Relaxed arm position during keyboarding.• Wrists in neutral flexion/extension.• Neutral wrist deviation.• Relaxed fingers.• Do not slouch forward. Maintain natural S-curve in back.	
Monitor & Document Guidelines	
<ul style="list-style-type: none">• Posture of head should be neutral.• Eyes looking forward.• Monitor should be arm's length.• Upper torso relaxed against chair back.• Document and monitor should be the same distance and height from eyes.	

- Minimize glare.

Telephone & Job Variety

- Neck and head are centered and easy to reach.
- Visual rest every 30 minutes.
- Regular stretch breaks and alternate task schedule.

Potential Hazards:

- Muscle strain
- Eye strain
- Back pain

Note: An ergonomic assessment may be requested provided it is supported by a medical doctor.

HAND AND POWER TOOL OPERATION

HAND AND POWER TOOL OPERATION	
Alberta OHS Regulations: OH&S Code Part 18 Section 229, 233, 234,242,244	
Adopted:	
Revised and Adopted:	
Manpower:	
Safety Equipment:	CSA approved hard hat, CSA approved eye protection, face shield, CSA approved hearing protection, CSA approved respirator, leather gloves, fire retardant coveralls, close fitting, and CSA approved Steel-toed footwear. <i>Note: Some of the PPE outlined above will only be required depending on the hazards encountered while using a specific tool</i>
Tools:	Screwdriver or wrench to make tool adjustments.
<ul style="list-style-type: none"> Procedures: Tools Prior to setting up and using portable power tools or hand tools, inspect all components by looking for signs of wear and tear as this could result in a failure of the tool. A pre-use inspection should be completed before each use or when you feel the integrity of the equipment being used has been compromised. If defects are noted, do not use the tool and tag it out. Once the tag out is complete, inform your supervisor immediately. Ensure all outlined PPE is available prior to use. Ensure power cords, tools and work material area is in an area that will minimize the tripping potential. Inform co-workers of activity prior to the commencement of work. Keep work area free of bystanders at all times. Use correct tool for the job – DO NOT IMPROVISE! Keep tools in good repair and inspect prior to each use. Keep cutting tool edges sharp and store with edges protected. Files, chisels, hammers, screwdrivers, etc. must have appropriate handles. Use brass or non-sparking tools in flammable or explosive dusts area, if possible. Carry sharp tools in a sheath or box. Avoid laying tools on platforms where they can fall on individuals working below. Never throw tools; use a rope and bucket to move tools to a higher or lower area. Do not force tools beyond their capability or use “cheaters” to increase their capability. Only use tools intended as pry bars. Always maintain safe working distances between workers. Portable Power Tools If unfamiliar with power tool – obtain training prior to use. Each tool must be equipped with an on/off switch that cuts off when pressure on the switch is released. Avoid using power tools in close proximity to water. Always unplug the power cord by grasping the plug, not by jerking the cord. Use the GFI at the power source when possible Prior to making any adjustments to an electrical powered tool, ensure the tool is unplugged from the power source. All power tools must have appropriate guards in place when being used. Never remove or tamper with a guard that was installed by the manufacturer. Flying objects can result from operating almost any power tool, so you must always; Keep the work area clear of bystanders 	

- Use proper eye protection (i.e. goggles or face shield).
- To assist in preventing injury resulting from contact of moving parts, you should:
 - Keep moving parts directed away from your body.
- Never touch a powered part unless the power source is disconnected (such as drills, chucks, blades, and bits).
- Allow power tool to completely stop moving prior to maintaining tool
- Allow power tool to cool down prior to conducting maintenance.
- Always maintain safe working distances between works.
- Always follow proper housekeeping practices after use of the tool and its associated components is completed.
- Always put tools and power equipment back in their correct storage location after each use.

Potential Hazards:

- Slips, trip and/or fall
- Noise exposure
- Cuts
- Burns
- Back Strain
- Exposure to heat and cold
- Fire
- Explosion
- Electrocution
- Overhead hazards
-

HAND DRILLS (CORDED, CORDLESS, HAMMER)

HAND DRILLS (CORDED, CORDLESS, HAMMER)	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Always wear safety glasses while using drills.• Disconnect the air and electrical supplies when replacing drill bits.• Disconnect the power source when replacing drill bits.• Always inspect drill bits before use; never use a dull or damaged drill bit.• Make sure drill bit is tightly in chuck before drilling.• Use the right drill bit for the right material. Not all drill bits can be used in metal, wood or masonry.• Always remove chuck key before drilling.• Hold the drill securely with one or both hands; do not force the drill with too much pressure, as you could break the bit.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Cut and stab injuries from drill bit• Eye and skin injuries from flying debris• Twisting of the wrist	

HAND TOOLS

HAND TOOLS	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, hearing protection (as needed)
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• The improper use of hand tools is a major cause of many minor but painful injuries.• Use the proper tools.• Replace worn parts such as ratchet cogs, dies, handles and shields.• Keep chisels, screwdrivers and punches properly dressed.• Discard defective tools which cannot be repaired.• Always put tools away clean and in their proper storage location.• Chainsaws must be kept clean and sharp.• Never remove guards or safety devices and always use them properly by following proper procedures.	
Defective Tools:	
<ul style="list-style-type: none">• Defective tools can cause serious and painful injuries. If a tool is defective in some way, DON'T USE IT.• Split or cracked handles.• Chipped or broken drill bits.• Wrenches with worn out jaws.• Tools which are not complete, such as files without handles.• Never use a defective tool.• Double check all tools prior to use.• Ensure defective tools are removed from service and repaired.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Hitting your own hand or fingers.• Flying debris.• Cuts• Crush injuries	

JIGSAW

JIGSAW	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, apron, face shield, hearing protection, respiratory protection (if necessary)
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Always wear safety glasses while using jigsaws.• Disconnect the power source when replacing saw blades.• Always inspect saw blades before use; never use a dull or damaged saw blade.• Use the right saw blade for the right material; not all blades can be used for cutting metal and wood.• Always securely clamp your work down so it does not move or vibrate. Make sure you know where the work top or saw horse is to avoid accidental cutting.• Do not start the saw until you know that the power cord will not become tangled in your work or with the saw blade while cutting.• Keep a well-balanced position on both feet.• Always stand to one side of the cutting line, so that if you slip the blade will go past you.• Never pull the jigsaw towards you while cutting, keep your free hand out of the path of the blade at all times while cutting.• Wear a dust mask and hearing protection if needed.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris, including broken saw blades• Accidental cutting of electrical cord or work surface	

JOINTER

JOINTER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Machine safety features are inspected and made safe according to manufacturer's specifications.• Inspect range shields, guards, and power leads.• Cutters are inspected for damage according to manufacturer's specifications.• Range broken teeth, cutter damage.• Replace cutters.• When maintaining and/or cleaning machine, ensure it is isolated from power source.• Tools selected are suitable for use on the machine according to manufacturer's specifications.• Machine is disassembled without damage according to manufacturer's specifications.• Cutter is chosen, and the machine reassembled, according to manufacturer's specifications.• Set up cutting adjustments for accurate duplication.• Key guides are adjusted in both X and Y directions to provide accurate duplication.• Accuracy of adjustment is verified according to industry practice.• Ensure machine is lubricated according to manufacturer's specifications.• Ensure bearings and other moving parts are checked for wear and if necessary replaced, according to manufacturer's specifications.• Ensure swarf is removed and the machine is cleaned according to manufacturer's specifications.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris• Accidental cutting of electrical cord or work surface• Noise	

KNIVES and OTHER UTENSILS

KNIVES	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective gloves (depending on task); protective eyewear (depending on task)
Tools:	Knives, knife sharpener
<u>Procedures:</u>	
<ul style="list-style-type: none">• Knives cause more disabling injuries than any other hand tool.• Always keep knives sharp and utensils in good repair.• Always cut away from the body. If not possible, keep hands clear of the knife and utensils path.• Always cut with a smooth, non-jerky motion.• Never store knives in your pocket.• While working, keep knives with edge or point down in knife pouch.• Store knives and cleavers in a designated area when not in use and never store with the blades exposed.• NEVER extend the blade fully on a retractable blade knife.• Knives must be sheathed, kept in a block or stored in a manner that discourages an inadvertent cut when not in use.• Always keep free hand clear of knife. Keep your fingers and thumbs out of the way of the cutting line.• Always ensure hands are dry while cutting.• All cuts must be disinfected and bandaged immediately. All cutting equipment which has been exposed to human blood must be sanitized immediately.• Never try and catch a falling knife.• Knives must be kept sharp so that excessive pressure is not required to cut.• Never leave a knife under any other object.• Move with caution when taking knives to and from their storage area. Carry knives with the cutting edge angled slightly away from your body with tip pointed down to your side.• Knives should never be stored in a drawer or on a rack with any other utensil. Always store with the points away from the user.• Knives should be washed separately, one at a time, and should never be released in the dishwasher.• When finished with a knife, put it away.• Place a knife down on a clean surface for another person to use versus handing the knife to that person.• Never place a dirty knife in the sink after usage. You or someone else may reach into the sink and get cut unknowingly. You may place them in a dishwasher in a “knives only” compartment.• Do not interrupt or talk with others who are using knives or other sharp utensils. They may get distracted and accidentally hurt themselves.	
<u>Maintenance and Repair:</u>	
<ul style="list-style-type: none">• Removed damaged knives and utensils from service and have them replaced and/or repaired by a qualified individual.	

Potential Hazards:

- Cuts
- Loss of body parts (i.e. fingers, hands, limbs, etc.)
- Blood borne pathogens (i.e. hepatitis)

MITRE SAW (COMPOUND AND SLIDING COMPOUND)

MITRE SAW (COMPOUND AND SLIDING COMPOUND)	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, apron, face shield, hearing protection, respiratory protection (if necessary)
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Refer to MSDS for wood dust.• Ensure material is secure before cutting.• Ensure the wood is in contact with the fence and the table before cutting.• Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade.• Ensure operator's arms are always parallel to the direction of the cut.• Ensure blade is at full speed before commencing cutting.• Keep blade sharp and free of rust and pitch.• Ensure dust collecting system is used.• For sliding compound mitre saw, pull the saw out fully then down into material. Make cut towards the fence.• Never wear gloves, loose clothing, and jewelry or have long, loose hair that could be caught in moving parts.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Never turn the machine "on" before clearing the table of all objects (tools, scraps of wood, etc).• Do not remove material until blade is stopped.• Do not perform a crossed arm operation.• Do not cut bowed or warped material.• Do not use mitre saw for ripping material.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris• Accidental cutting of electrical cord or work surface• Noise	

OFFICE GENERAL SAFETY

Alberta OHS Regulations:

Adopted:

Revised and Adopted:

Manpower: 1 person
Safety Equipment:
Tools:

Procedures:

- Keep the area under the desk clear of obstructions.
- Check power cords, extension cords & other wiring for fraying, broken connections & other wear & tear.
 - Keep cords & wiring from becoming entangled & creating a trip hazard.
 - Keep surfaces as dry & clean as possible. Wipe up spills or call Building Services to have the janitor mop up if necessary.
- Keep area mats & other floor coverings in place and in good condition to prevent slip, trip and fall hazards.
- Portable space heaters must be approved by your TL or manager before use.
 - They must have an "anti-tip" shut off feature.
 - They must be shut off if left unattended for more than 15 minutes or when you leave your station for your shift.
- Keep any combustible materials a safe distance from the heater at all times.
- Inspect your work area for sharp corners or edges or points that could cause cuts. If you discover any of these hazards report these to your TL or manager for repair.
 - Scissors, paper cutters, pins, staples, utility knives & blades, letter openers are all examples of items commonly used in any office that require care when using to avoid cuts.
- Hot surfaces on laminators, copiers & other equipment. Look for labels, decals and other indicators that show where components or surfaces may be hot before touching.
- Filing cabinets:
 - Load from bottom to top and back to front to keep cabinets stable.
 - Open only 1 drawer at a time to avoid tip-over.
 - Watch your toes as you open bottom drawers.

Potential Hazards:

- Slips, trips and falls
- Electrocution
- Fire
- Cuts
- Burns

PAINT AND PAINT STORAGE

PAINT AND PAINT STORAGE	
Alberta OHS Regulations:	Part 4 - Chemical Hazards, Biological Hazards, and Harmful Substances; Part 10 - Fire and Explosion Hazards; Part 29 - Workplace Hazardous Information System (WHMIS); Schedule 1 - Chemical Substances
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Depending on paints: Gloves, barrier cream, eye protection, apron, respiratory protection, ventilation system
Tools:	Brushes
<u>Procedures:</u>	
<ul style="list-style-type: none">• Review MSDS and follow recommendations for personal protective equipment, storage and handling practices.• When painting with a brush, on or near energized parts at 600 volts or above, the brush shall be attached to an approved insulated handle.• Adequate ventilation shall be maintained in enclosed areas when painting.• Only approved solvents shall be used to clean brushes. The solvent shall be disposed of properly in approved containers in accordance with environmental procedures.• Before using AEROSOL spray products, verify the spray nozzle is pointed away from the user and if used outside, protective eye wear should be worn.• Open flames shall not be permitted in the area where painting is being done.• Approved respirators shall be worn when spray painting is being done.• Don't wear contact lenses while painting; they can hold harmful chemical splashes against your eyes.• Never eat, drink or smoke while painting.• Air pressure to paint spray guns shall be properly regulated.• Oil-based paint, varnishes and paint thinners shall be kept and transported in approved containers.• When oil-based paint is kept in the original container, the lid shall be properly sealed so vapors do not escape. When not in use, containers of paint, lacquer, varnish, and thinners shall not be left open.• Oil-based paint, lacquers, and thinners shall be stored in an approved storage area, where there is adequate ventilation and no excessive heat.• Pressurized cans of paint lacquer, etc. shall not be left in direct sunlight or where there is excessive heat. When not in use, pressurized cans with recoverable product shall be stored in an approved storage area. Empty cans and cans with non-recoverable product shall be disposed of properly. They shall not be punctured or placed in a fire.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Eye injury/irritation• Headaches• Fire• Explosion• Toxic fumes• Poisoning via skin contact, inhalation, ingestion	

PAPER CUTTER	
Alberta OHS Regulations:	n/a
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Never put fingers or objects other than paper (like paper clips or staples) into the paper cutter.• Keep fingers away from the cutting edge.• Never try to transport a cutter by the handle or the blade.• Make sure that the cutting guard is in place.• Concentrate on the cutting task and be sure that your hands, fingers and clothing are clear from the blade.• Secure the cutter with a locking device after use.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Cuts• Amputations	

PAPER SHREDDER	
Alberta OHS Regulations:	n/a
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Never put fingers or objects other than paper (like paper clips or staples) into the shredded feed opening.• Keep jewelry, long hair, ties, lanyards, etc. away from the paper shredder feed opening.• Feed paper smoothly into the shredder; do not force the paper in.• If there is a paper jam, and forward and reverse buttons don't move the paper, disconnect the power source before attempting to remove the jammed paper.• If the shredded motor overheats, turn off the shredder for at least 15 minutes, allowing the motor to cool before using again.• Locate the paper shredder and its power cord outside of foot traffic areas.• Always be aware and focus on the shredding task when using a paper shredder.• Shred paper in small quantities.• Always disconnect the power source before removing and emptying the waste box.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Cuts• Entangling loose hair/objects in machine• Jams	

PNEUMATIC AND HYDRAULIC TOOLS

PNEUMATIC AND HYDRAULIC TOOLS	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, face shield, hearing protection
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment (impact glasses, ear muffs or plugs for extended use).• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Follow manufacturer's instructions for use and maintenance.• Use the correct air pressure for the tool as identified by manufacturer.• Always use the appropriate attachments for the tool.• Use caution when connecting tools to the compressed air supply to ensure proper connection.• Refer to Compressed Air - Safe Work Practice.• Do not modify pneumatic tools.• Do not use a pneumatic tool for the wrong application.• Do not use damaged or defective tools.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Flying objects• Moving parts• Noise	

PORTABLE LADDERS

PORTABLE LADDERS	
Alberta OHS Regulations:	OH&S Code Part 8 – Sections 133- 137 and Part 18
Adopted:	
Revised and Adopted:	
Manpower:	1 person OR 2
Safety Equipment:	Proper footwear, including steel toed boots or flat shoes with good soles (no heels higher than 1 inch).
Tools:	
Procedures:	<ul style="list-style-type: none"> • All ladders should be CSA approved • Prior to setting up the ladder, inspect it by looking for any signs of wear or damage that may cause it to collapse or tip. Check each day prior to use, or if you feel something may be affected, the soundness of the ladder • Use the right ladder for the right job. Check manufacturer's specifications • Use extreme caution when around electrical power lines or near electrical sources. • Surface should be level and dry • Carefully lift the ladder into place keeping it balanced, watch for other workers nearby and any power sources in the area • Once extension ladder is in place, the ladder must be secured to side of building. Tie off to flashing using a bungee cord. It should be secure enough so that when the work is complete on the roof, you are able to come back down the ladder. • Best case would involve 2 employees , one on the bottom while one climbs to perform their function and ties off • Extension ladder should be at proper angle – 75 degrees or one horizontal foot to every four vertical feet • Step ladder should be fully apart with hinges locked. • The minimum overlap on an extension ladder is three feet unless otherwise specified by the manufacturer. • Protect the ladder with barricades if it could be struck by pedestrians or moving equipment. • Never place a ladder in front of a door opening towards the ladder unless the door is open, locked or guarded. • Never use last two rungs of extension ladder or the top step of a step ladder. • When climbing up or down ladder, worker shall face the ladder using the • 3 point grip method. • Never over reach so as to unbalance the ladder. Climb down fully and move the ladder, never “walk” or “jump” the ladder into place • Never carry heavy equipment or materials, or large bulky objects up a ladder • Use a rope to pull materials and tools up to work area. • Always lower materials and tools by using a rope. • Never more than one person on a ladder at one time. • When in position the ladder should protrude 3 feet or three rungs above the intended landing site. • Never use a wooden ladder that has been painted. • If reasonable and practical, the employee should wear a personal fall arrest system when working at heights greater than 3 metres. • If the use of a personal fall arrest system is not reasonable and practical, the employee may work at heights greater than 3 metres if: • The work is light duty and for a short duration;

- The Workers centre of balance is at the centre of the ladder at all times even when extending arms; and
- The worker has one hand available to hold onto the ladder

Potential Hazards:

- Slips/falls due to reaching too far, slippery steps, set up on slippery or uneven surface
- Pinches
- Electrocution due to ladder touching overhead power lines or electrical sources
- Faulty equipment causing collapse or tipping
- Skids work down or missing causing ladder to slide or tip
- Equipment damage due to improper storage

RADIAL ARM SAW

RADIAL ARM SAW	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 or more persons
Safety Equipment:	Eye protection, face shields, apron, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Wear appropriate personal protective equipment. • Follow manufacturer's instructions for use and maintenance. • Refer to MSDS for wood dust. • Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is. • Have an anti-skid surface on the floor where the operator would stand to prevent slips. • Ensure blade is installed to rotate in the proper direction. • Ensure blade cannot extend beyond the saw table in any operation. • Check to see that guards are in place, secured, working correctly and used. • Ensure that end plates are securely fastened to track arm prior to use. • Tighten all clamp handles prior to use except for the motor carriage clamp. Tighten this clamp only for ripping operations. • Avoid kickback by: <ul style="list-style-type: none"> - Keeping blade sharp and free of rust and pitch. - Keeping blade parallel to the fence when ripping. - Using anti-kickback fingers when ripping. Lower the guard on the infeed and adjust the anti-kickback attachment properly. • Follow all ripping warnings on the machine. Never feed the material into the anti-kickback end of the machine. • Feed material against blade rotation. • Use push stick(s) for ripping a narrow material. • Return the cutterhead to the full rear position behind the fence after each crosscut operation. • Turn the machine "off" and disconnect the machine from the power source before installing or removing blades. • Ensure dust collecting system is used. • Replace Radial Arm Saw with Sliding Compound Mitre Saw if possible. • Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts. • Never turn the machine "on" before clearing the table of all objects (tools, scraps of wood, etc). • Do not cut material that is embedded with foreign objects (nails, staples, etc.) • Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant. • Do not allow junior high students to use this piece of equipment. • Never reach around the saw blade when operating. • Never perform a "crossed arm" operation when using this tool. 	

Potential Hazards:

- Serious cuts to hands, fingers, other parts of the body
- Eye injuries from flying debris
- Accidental cutting of electrical cord or work surface
- Noise

ROUTERS

ROUTERS	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Refer to MSDS for wood dust.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Install router bits securely, and according to the manufacturer's instructions.• Always use the wrenches provided with the router to change router bits.• Keep a firm grip with both hands on your router at all times. Failure to do so could result in loss of control, leading to possible serious injury.• Always face the cutter blade opening away from your body.• Only hold those gripping surfaces of the router designated by the manufacturer.• Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade.• Cut counterclockwise on freehand cutting.• Keep your hands away from bits or cutter areas when the router is plugged in.• Always disconnect the plug from the electrical outlet before changing bits or making any adjustments. If you are changing a bit immediately after use, be careful not to touch the bit or the collet with your hands or fingers. Burns could result from the heat build-up from cutting.• Always secure clamping devices on the material you are cutting before operating the router.• Ensure switch is in the "off" position before plugging into the power outlet.• For greater control, always allow the motor to reach full speed before feeding the router into the material.• Never wear gloves, loose clothing, and jewelry or have long loose hair that could be caught in moving parts.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Do not reach underneath the material while bits are rotating.• Never attempt to remove debris while the router is operating.• Do not attempt to route material embedded with foreign objects (nails, staples, etc.)• Never force a router.• When removing a router from your material, do not turn the base and bit toward you.	

Potential Hazards:

- Serious cuts to hands, fingers, other parts of the body
- Eye injuries from flying debris
- Hot machine parts
- Accidental cutting of electrical cord or work surface
- Noise

ROUTER TABLE

ROUTER TABLE	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Always use the router table with the proper guards in place.• Always wear safety glasses and a face shield while using the router table.• Make all adjustments and measurements before turning on router table.• Router bits move at a speed of 20-25,000 revolutions per minute. At this speed, the edges of the cutter almost disappear. Keep hands well clear of the router bit while it is in operation.• Tighten all router bits securely, making sure there is at least ½ of the router bit shaft is inside the chuck.• Stand to one side when first turning on router table to make sure bit is secure and centered.• Always keep arms, hands and fingers away from blade.• Avoid awkward operations and hand positions where a sudden slip could cause a hand to move into the blade.• Always feed work piece into the router from right to left.• Never wear gloves when operating the router table.• Never wear gloves, loose clothing, and jewelry or have long loose hair that could be caught in moving parts.• Never turn the machine “on” before clearing the table of all objects (tools, scraps of wood, etc).• Do not attempt to route material embedded with foreign objects (nails, staples, etc.)• Never allow any student to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris• Hot machine parts• Accidental cutting of electrical cord or work surface• Noise	

SAFE LIFTING TECHNIQUES

Alberta OHS Regulations: Part 14 - Lifting and Handling Loads; Part 18 - Personal Protective Equipment

Adopted:

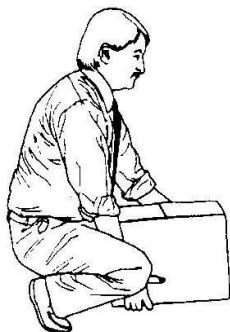
Revised and Adopted:

Manpower: 1 person
Safety Equipment: Safety footwear
Tools:

Procedures:

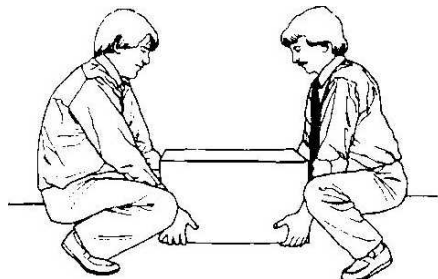
- Whenever possible warm up or stretch before lifting for the first time or after a break. Make sure your muscles are limber.
- Clear debris in your path before lifting or travelling.
- Estimate the best technique before you attempt to lift. Get help if you need it.
- If team lifting co-ordinate with each other and agree who is leading before you lift.
- Keep the load close to yourself through all stages of the lift.
- If the load is unevenly balanced keep the heaviest part closest to you. TV's are a good example. Keep the screen side closest to you.
- Lift with a good base of support.
- Feet should be shoulder width apart, one foot slightly ahead of the other. The heel of the forward foot should be parallel with the instep of the other foot.
- Lift smoothly in one motion, do not jerk the load.
- Avoid twisting at all costs. Reposition yourself and/or feet before moving the load instead.
- Keep your upper body upright.
- Keep your chin level and look straight ahead. Tilting the chin upward will increase the stresses on your spine.
- Use leg strength to do most of the work.
- Tighten abdominal muscles during the lift by exhaling to counteract the pressure placed on your lower back.
- Keep the load at waist height if possible both when picking up and placing.
- Breathe naturally.

Two-Handed Lift:



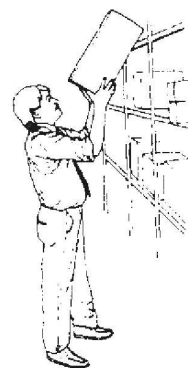
- While facing the load, squat close to it and test its weight and weight distribution.
- Firmly grip the object.
- Lift the object to waist level.
- Rise to a standing position while holding the object near waist level.

Two Person Two-Handed Lift:



- Plan the lift. One person should co-ordinate.
- If possible both persons should be the same height to equalize the travel distance and weight lifted by each.
- Communicate during the entire process to avoid sudden unexpected movements and load shifting.
- Simultaneously lift the object to waist height.
- Simultaneously rise to a standing position, using your legs for the primary force.

Overhead Lifting or Placement:



- Whenever possible use a step or platform to reach a comfortable position to lift or place objects. Do not over-stretch your arms to accomplish the job.

Lifting:

- Stand with one foot in front of the other for improved stability.
- Tilt the load slightly to test its' weight.
- Slide the load to the edge and raise it with the arms while keeping the natural curve of the back.
- Lower the load slowly.
- Rest the load on a shelf or another structure that is halfway down from the start point. Then readjust your position and complete the task.

Placing:

- Ensure sufficient space is available in the location you wish to place the object.
- Make sure the object will be secure once placed and not pose a risk of falling back onto you or someone else.
- Make sure the object is not going to become damage or cause damage to other merchandise due to it's

position or possible movement.

- Reach a comfortable position in front of the location you wish to place the object.
- Lift with the arms and place the back edge of the object in place at the front of the storage location.
- Slide the object into its space.
- Double check its stability before proceeding to the next task.

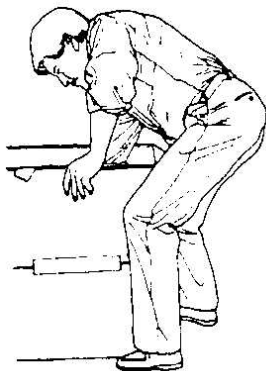
One Hand, One Person Lifts:



- Support your upper body weight on a stable surface or on your thigh or knee as shown.
- Bend forward to pick up the object with your free hand, bending the weight bearing leg slightly and kicking back the other leg off the floor.
- Firmly grasp the object.
- Lift the object keeping it close to waist level.
- Rise to a straight and natural position while holding the object near waist level.

Lifting From Containers:

Option 1



- Face the container opening.
- Bend forward, placing the farthest hand on the side of the container nearest the body.
- Lift the object with the closer, free hand, supporting the weight of the upper body with the other hand on the container.

Option 2

- Stand close to, but sideways to the container.
- Squat, placing the farthest hand on the container edge, nearest the body.
- Lift the object with the closer, free hand, supporting the weight of the upper body with the other hand on the container.

Potential Hazards:

- Muscle strain
- Back injuries

SANDER - MOUNTED (DISC/BELT)

SANDER - MOUNTED (DISC/BELT)	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Respiratory protection, eye protection, hearing protection, face shield, apron, filtering system
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Refer to MSDS for wood dust.• Ensure you are trained in the use of this equipment.• Have an anti-skid surface on the floor where the operator would stand to prevent slips.• Have dust collection connected and operational.• Clean the machine and dust collector thoroughly when processing different types of materials (wood, steel, or aluminum).• Prevent the material from contacting the sanding surface before starting the tool.• Maintain a maximum clearance of 1/16" between the table and the sanding surface.• Support the material firmly with a mitre gauge, backstop, or work table when sanding with a belt. Hold the material firmly.• Avoid awkward operations and hand positions.• Avoid kickback. Feed the material against the downward rotation side of the disc or the forward rotation of the belt.• Turn the machine "off," disconnect the machine from the power source, and clean the table/work area before leaving the machine. Lock the switch in the "off" position to prevent unauthorized use.• Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Do not sand very small or very thin materials that cannot be safely controlled.• Do not sand or polish magnesium. Fire could result.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Serious cuts to hands, fingers, other parts of the body• Eye injuries from flying debris• Kickback• Noise	

SHOP VACUUM

SHOP VACUUM	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Use the following on an as-needed basis: Protective eyewear, hearing protection, gloves, non-slip footwear
Tools:	
<p><u>Procedures:</u></p> <ul style="list-style-type: none"> • All vacuums present a risk to the upper body from repeated wrist and elbow movements. • Keep elbows at or near the sides to minimize shoulder movement. • Avoid movements where the elbows are behind the body. • Adjust the location of your grip on the vacuum cleaner wand so that your hands are level with your forearm. • 'Walk' the vacuum cleaner to reduce repetitive motion. <p>Vacuuming Motions</p> <ul style="list-style-type: none"> • Maintain a neutral spine while working comfortably. • Use neutral ranges in your shoulders. • Avoid extreme ranges in your wrists. • Keep arms close to your body to encourage neutral posture. • Use both hands, one to pull and one to push. • Avoid overreaching. • Stand upright and avoid bending forward. • Move the legs and not the back. • Move light furniture out of the way to make a clear path for you and the vacuum. • Change or empty the vacuum bag frequently – a full bag can add 10-20 pounds to the overall weight of the bag. <p>Dry Head</p> <ul style="list-style-type: none"> • Select a light brush. • Use swivel cuffs to ensure easy rotation of the vacuum head. <p>Wet Head</p> <ul style="list-style-type: none"> • Avoid using a wet vacuum over dry areas because it's heavier and has more 'drag' – this produces more resistance and may cause muscle fatigue. • Adjust the height of the head when doing wet pick-up to allow efficient water pick-up while minimizing 'drag.' <p>Power Head</p> <ul style="list-style-type: none"> • Effective over large carpeted areas. • Move wand slowly when working with power head. • Power head will assist by 'pulling' in one direction. • Power head will hinder by 'dragging' in the other direction. <p>Hose Length</p> <ul style="list-style-type: none"> • Avoid using the hose as a leash to drag the vacuum. • Use a long hose to eliminate the need to 'drag' the unit behind you. 	

Potential Hazards:

- Muscle strain
- Slips, trips and falls

SOLDERING

SOLDERING AND BRAZING	
Alberta OHS Regulations:	Part 4 - Chemical Hazards, Biological Hazards, and Harmful Substances; Part 10 - Fire and Explosion Hazards; Part 18 - Personal Protective Equipment; Part 29 - Workplace Hazardous Materials Information System (WHMIS); Schedule 1 - Chemical Substances
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Protective eyewear, protective gloves, apron, respirator (dependent on material)
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Wear appropriate personal protective equipment (impact glasses).• Wear gloves if appropriate.• Ensure adequate ventilation equipment is available and used.• Ensure required MSDS for all hazardous materials are readily available.• Pay close attention to the location of hands and fingers while soldering.• Move combustibles a safe distance from where soldering operations are performed.• Have fire extinguisher available in the work area.• When work is complete, inspect the area for possible fires or smoldering materials.• Follow manufacturer's instructions for use and maintenance.• Ensure hot metals are identified appropriately.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Do not overheat base metal.• Do not wear open toed shoes.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Never wear jewelry, loose clothing or have long, loose hair.• Do not crowd equipment operator.	
<u>Potential Hazards:</u>	
<ul style="list-style-type: none">• Heat• Fumes	

STATIONARY WOODWORKING MACHINERY

STATIONARY WOODWORKING MACHINERY	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, apron, face shield, hearing protection, respiratory protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Woodworking equipment can cause serious injuries if used incorrectly. Mistakes can be deadly. • Only use equipment that you have been properly trained to use. • If you do not know how to use a machine - don't use it. Ask your instructor or a technician to show you how. • Wearing CSA-approved impact-resistant safety glasses is mandatory whenever using stationary power equipment tools. • Do not use any stationary power equipment until you are trained to do so. Operating procedures refreshers for these machines are mandatory every year for students. • Tie long hair back and remove loose clothing, mp3 players or jewellery before using machines. • Never operate machinery if you feel ill, fatigued or under the influence of alcohol or drugs. You must be able to concentrate on the task at hand. • Never deviate from posted safe operating procedures. • Do not start any machine without knowing how to stop it in case of an emergency. • Don't chat or talk to other people while using a power tool. Its operation needs your full concentration. • Check that all adjusting keys are removed before switching on machinery. • Never interrupt anyone operating a machine. If there is immediate danger approach in operator's field of vision. • Never remove machine guards. If a process requires the removal of a guard, the instructor or technician MUST remove the guard, and be present during the operation. • Never adjust guards, blade height, or machines while blades and cutters are moving and the machine is in the on position. • Check your machine setting and run through the procedure in your mind before switching machines on. • All wood must be free of nails, screws or foreign objects before being used with machinery. Carefully check all wood yourself before using. • Keep fingers clear of blades, using Push Sticks whenever necessary. • Never reach over, behind a moving blade to remove waste, or off cuts. • Always feed material against the rotation of the blade. Never pull work through the table saw from behind. • Never attempt to free a stalled blade or material while machine is on and the blade is turning. • Inspect wood for nails, screws or other foreign objects that could damage saw blades. • Make sure machine guard in the proper location for the procedure. • Make sure the outfeed table and machine beds are clear of debris. • Check for people around you that you should ask to move or put on PPE before you turn on the equipment. • Ensure the floor is clean and free of sawdust or other debris so that you have proper footing. 	
<u>Potential Hazards:</u> <ul style="list-style-type: none"> • Cuts to hands, arms and other parts of the body • Eye damage due to flying debris • Inhalation of potentially harmful dust from wood and composite materials like MDF and plywood 	

TABLE SAW

TABLE SAW	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 or more persons
Safety Equipment:	Eye protection, face shields, apron, steel toe boots/shoes, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Wear appropriate personal protective equipment. • Follow manufacturer's instructions for use and maintenance. • Refer to MSDS for wood dust. • Use the correct blade and ensure it is sharp (dull blades bind and overheat). • Ensure that the blade is properly seated, tightened and aligned. • Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade. • Start the blade before pushing the material into the blade. • Have both feet planted firmly on the floor. • Have an anti-skid surface on the floor where the operator would stand to prevent slips. • Stand to the side (left or right) when you use the saw, in case the wood is kicked back. • Use a push stick to keep your hands clear of the blade. • Press the material firmly against the guide fence as you cut. • Always use the blade guard, a splitter and an anti-kickback device. • Specific safety cautions must be in place when it is not possible to use a guard for special cuts. This operation should only be done by a teacher or under the direct supervision of a teacher. • Wait for the blade to stop before removing material. • Ensure the fence is locked before cutting. • Ensure fence is parallel with the blade. • Lower blade after use. • Pay attention to the location of hands while cutting. • Pay attention to the material, making sure the material is always touching the fence (This is the main reason for kickbacks and most mistakes). • Have outfeed support (table, person or rollers) set up before beginning the cut. • Push material completely past blade when cutting. • Never wear gloves, loose clothing, and jewelry or have long loose hair that could be caught in moving parts. • Never set the blade height to more than 1/2" (1.3 cm) above the material. • Never reach over the saw blade while it is operating. • Never force the material into the blade. Feed the material into the blade with a little pressure. • Do not attempt to route material embedded with foreign objects (nails, staples, etc.) • Do not cross over hands while cutting. • Never allow junior high students to use this piece of equipment. • Never allow any student to use this piece of equipment unless there is active, in the area, supervision by a teacher or a teaching assistant. • Do not let a person who is on the outfeed side of the table saw pull the material when the operator is feeding the material into the saw. Outfeed pulling might draw the operator into the saw. The person on the 	

outfeed side is only there for the purpose of supporting the object from falling.

- Do not let the person who is on the outfeed side of the table saw squeeze the split pieces of material together as this will cause the material to bind at the saw blade.
- Never turn the machine “on” before clearing the table of all objects (tools, scraps of wood, etc).
- Do not run warped or crooked stock through the table saw. The sides facing the table fence should be straight.
- Do not use the saw table to stack material as you use it.
- Do not allow freehand cuts.
- Never pull material back after entering the blade cutting area.

Potential Hazards:

- Kickback. If the wood moves sideways in any direction, it can be caught by the rotation of the blade and thrown back at the operator causing injury
- Serious injuries from rotating blade including cuts to hands, arms and other parts of the body
- Eye damage due to flying debris
- Inhalation of potentially harmful dust from wood and composite materials like MDF and plywood

THICKNESS PLANER

THICKNESS PLANER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, steel toe boots/shoes, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Wear appropriate personal protective equipment. • Follow manufacturer's instructions for use and maintenance. • Refer to MSDS for wood dust. • Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is. • Have an anti-skid surface on the floor where the operator would stand to prevent slips. • Check to see if guards (if applicable) are in place, secured and working correctly. • Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade. • Ensure push stick is available and thinner than material being planed and long enough to prevent hand entry into machine. Preferred method is to move to other side of machine and pull material through. • Follow manufacturer's guidelines for minimum length of material to plane. • Set depth of cut to thickest part of material. • Ensure dust collecting system is used. • Keep knives sharp and free from rust and pitch. • Never turn the machine "on" with the material touching the cutterhead. • Properly secure the knives in the cutterhead before turning the power "on". • Lock the speed setting securely before feeding the material through the machine. • Keep arms, hands, and fingers away from the cutterheads, the feed rollers and the chip exhaust opening. • Allow the cutterhead to reach full speed before feeding in the material. • Stand to the side (left or right) when you use the planer in case the wood is kicked back. • When planing bowed stock, place the concave (cup down) side of the stock on the table and cut with the grain. • Remove shavings only with the machine "off" and disconnected from the power source. • For longer pieces of material push material completely past the blade when cutting. • Properly support long or wide materials. • Turn the machine "off" and disconnect from the power source before installing or removing accessories, or adjusting or changing set-ups. • Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant. • Do not reach into machine when connected to power source. • Do not use dull blades. • Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts. • Never turn the machine "on" before clearing the table of all objects (tools, scraps of wood, etc.). • Do not let a person who is on the outfeed side of the table saw pull the material when the operator is feeding the material into the saw. Outfeed pulling might draw the operator into the saw. The person on the outfeed side is only there for the purpose of supporting the object from falling. • Do not feed a material that is warped, contains knots, or is embedded with foreign objects (nails, staples, etc.). • Do not feed a short, thin, or narrow material into the machine. 	

- Do not feed a material into the outfeed end of the machine.

Potential Hazards:

- Kickback
- Cuts
- Entanglement
- Pinch points
- Dust
- Noise

VEHICLE MOVEMENT

VEHICLE MOVEMENT	
Alberta OHS Regulations:	Part 12 - General Safety Precautions (Section 194)
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Valid driver's license
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Perform a walk around inspection prior to moving vehicle.• Only allow mechanics teacher or aid to move vehicles inside the shop and compound area.• Have a spotter for moving any vehicle when one or more students are present. The spotter role is to ensure that no one moves into the path of the moving vehicle.• Sound car horn before starting movement.• Check and test braking system prior to moving vehicles.• Check tire wheel torque (if applicable).• Secure vehicle with wheel chocks.• Whenever possible avoid vehicle movement when students are present.• Do not allow untrained (i.e., unlicensed) persons to steer and brake vehicles being pushed in the shop or compound area.• Do not allow persons to be in close proximity to solid object when pushing vehicle.• Do not test drive unlicensed/unregistered vehicles. Check owner documentation prior to test drive.• Do not allow students to move or test drive vehicles.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Collision	

WIRE WHEEL/BUFFER

WIRE WHEEL/BUFFER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none">• Wear appropriate personal protective equipment.• Follow manufacturer's instructions for use and maintenance.• Prevent the material from contacting the wheel before starting the equipment. Ensure you are holding the material firmly during the process.• Buff on bottom half of material.• Remove tool rest on wire wheel.• Keep area clean of debris.• Ensure adequate lighting is available.• Ensure shields are in place, properly adjusted and secured before each use.• Stand to one side before turning the machine "on".• Avoid awkward operations and hand positions.• Properly support long or wide materials.• Pay attention to the location of hands and finger while buffing.• Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is.• Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts.• Never allow students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant.• Do not store combustible or flammable materials in the work area; keep them at a safe distance.• Do not crowd equipment operator.	
<u>Potential Hazards:</u> <ul style="list-style-type: none">• Kickback• Cuts• Sparks• Entanglement• Pinch points• Metal dust• Noise	

WOOD SHAPER

WOOD SHAPER	
Alberta OHS Regulations:	Part 18 - Personal Protective Equipment; Part 22 - Safeguards; Part 25 - Tools, Equipment and Machinery
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	Eye protection, face shields, apron, steel toe boots/shoes, hearing protection, manual power-off switch
Tools:	
<u>Procedures:</u> <ul style="list-style-type: none"> • Wear appropriate personal protective equipment. • Follow manufacturer's instructions for use and maintenance. • Refer to MSDS for wood dust. • Ensure you are trained in the use of this equipment or are working under the direct supervision of someone who is. • Have anti-skid surface on the floor where the operator would stand to prevent slips. • Check to see that guards are in place, secured, and working correctly. • Feed material in proper direction. • Look for knots in material before you begin. Avoid them if possible; if they cannot be avoided, be cautious when approaching these areas with the blade. • Use caution when shaping small pieces • Turn the machine "off" and disconnect from the power source before installing or removing accessories, adjusting or changing set-ups, or when making repairs. • Install bits securely and according to manufacturer's instructions. • Use appropriate wrenches to change bits. • When feeding, position cutters so that material is above. • Check feed direction on shapers that rotate in both directions. • Keep cutters sharp and free from rust and pitch. • Adjust the fence halves so that the cutter opening is never more than is required to clear the cutter. • Keep the front motor access panel closed while the machine is running. • Ensure dust collecting system is used. • Never wear gloves, loose clothing, and jewellery or have long loose hair that could be caught in moving parts. • Never allow high school students to use this piece of equipment unless there is active, in the area, supervision by a teacher or teaching assistant. • Do not allow junior high students to use this tool. • Do not feed a material that is warped, contains knots, or is embedded with foreign objects (nails, staples, etc.). • Never run material without using a fence. 	

Potential Hazards:

- Kickback
- Cuts
- Entanglement
- Pinch points
- Dust
- Noise

WORK STATIONS

WORK STATIONS	
Alberta OHS Regulations:	
Adopted:	
Revised and Adopted:	
Manpower:	1 person
Safety Equipment:	
Tools:	
<u>Procedures:</u>	
<ul style="list-style-type: none">• Ideal Work Positions - Comfort Zones	
Vary Your Posture	
<i>Depending on your tasks, you may find a range of sitting and standing postures that are comfortable. Within your comfort zone, change postures often throughout the day.</i>	
<i>Reclined</i>	<i>Upright</i>
	<i>Standing</i>
<ul style="list-style-type: none">• Adjust chair height to have feet flat on floor, minimal pressure on the bottom of the thighs. If you need a footrest or other supports ask your TL.	



RIGHT

Rest your feet firmly on the floor or a footrest.



WRONG!

Do not dangle your feet and compress your thighs.

Back Support:



RIGHT

Distribute your weight evenly and use the entire seat and backrest to support your body.



WRONG!

Do not slouch forward.

Arm Support:



RIGHT

Turn your chair to the side to help determine if your elbow height is near the height of your keyboard's home row.



RIGHT

Forearm supports are properly adjusted when your shoulders are relaxed, your forearms are supported (yet free to move while typing), and your wrists are in a comfortable, neutral position.

Forearms, Wrists:



RIGHT

Maintain a comfortable, neutral wrist position.



WRONG!

Do not rest your palms or bend your wrists markedly down while typing.



RIGHT

Maintain a comfortable, neutral wrist position.



WRONG!

Do not bend your wrists markedly inward.

- **Monitor:** The top edge of a text viewing monitor should be about even with your eye level. The monitor should be at arm's length from you.

Workspace Organization:



Glare Control:

Look away from your screen periodically to refocus your eyes. A good practice is the 20-20-20 guideline which is to look away from your computer screen every 20 minutes and look at something 20 feet away for 20 seconds

Glare is caused by the reflection of light off of surfaces and is a primary cause of eyestrain. You can get rid of glare by controlling the light source, adapting the surface reflecting it, or by filtering it before it reaches your eyes. Significant causes of eyestrain are staring at the same distance for a long period of time, such as at a computer monitor or other electronic device or because of driving long distances without a break. These environments can be adapted to be better for your eyes.

Adjust the Light Source

Direct light causes the most glare. Examine whether lighting that's overhead or behind is shining on your computer monitor and take steps to reduce it. Use a desk lamp for directed, diffused task lighting when needed instead of bright overhead light.

Use curtains or translucent plastic blinds on windows. Closing these will diffuse the incoming sunlight light instead of reflecting it, like metal or wood blinds do. You don't want to strain to see in dim light, though, either. Light that's too dim can lead to eyestrain as well.

Adjust the Surface

Shininess is measured by reflection and glare. That means the duller the surface, the less glare there will be. Use work surfaces that have matte finishes. Some items, like computer screens, are inherently smooth and therefore glossy. Use a glare filter over them.

Place your work surface at a right angle to the direct light source, such as a window. Items 90 degrees to the light have the least amount of reflection and glare. In addition, don't position your monitor in front of a bright white wall.

Keep your monitor clean of dust, as having a dirty monitor will lower its contrast, making it harder to read. Dark text on a light background is the easiest to read, so opt for that environment rather than funky color schemes for daily

work. And don't feel like you're a codger if you blow up text on your page to make it easier to read. Your eyes will thank you.

Adjust your brightness and contrast on your computer monitor, following Wired's advice when looking at a white background on your display: "If it looks like a light source in the room, it's too bright. If it seems dull and gray, it's probably too dark."

Shield Your Eyes

If you cannot eliminate the glare, then stop it before it gets to your eyes. Polarized lenses on sunglasses eliminate a lot of glare. Prescription lenses can be polarized as well. This is the best option when driving, because you cannot control the light source or the surface.

Anti-glare coatings for prescription lenses are worth the money for people who stare at computer screens all day. Even if you do not need corrective lenses but suffer from eyestrain, you can get all the benefits of anti-glare lenses without them being ground to a prescription. Consult your eye doctor for more information on this.

Phones:



WRONG!

Do not cradle your phone between your ear and shoulder.

Stand-up Work Stations:

- The same principles apply for body posture as for seated work stations. If you have a chair adjust it using the previous guidelines including the footrest supplied with the chair

WORKING IN SUMMER

Alberta OHS Regulations: Part 18 - Personal Protective Equipment

Adopted:

Revised and Adopted:

Manpower: 1 person

Safety Equipment: Appropriate clothing (hat, sunscreen, sunglasses, etc.)

Tools:

Procedures:

- Carry and drink lots of water throughout the day (i.e. 2-4 litres/day), at least twice an hour. You may be dehydrated even though you are not thirsty.
- Try not to drink liquids that are diuretics (i.e. coffee, tea, pop).
- Eat healthily; lots of food with good nutrients and minerals (i.e. fruits, vegetables).
- Carry and use sunscreen with a minimum of SPF 15.
- If possible, sit in the shade when taking a break.
- Layer your clothing. Wear clothes with breathable fabric (i.e. polypropylene).
- Pay attention to your co-workers. Signs of heat stroke are: confusion, irrational behaviour, nausea, shortness of breath or a rapid pulse.
- Heat exhaustion occurs before someone has a heat stroke. Signs may include: nausea, cramps, weakness, bewilderment or headache.

Potential Hazards:

- Dehydration
- Sunburn
- Heat stroke

WORKING IN WINTER

Alberta OHS Regulations: Part 18 - Personal Protective Equipment

Adopted:

Revised and Adopted:

Manpower: 1 person

Safety Equipment: Appropriate clothing (layers, gloves/mitts, boots, socks, toque, etc.)

Tools:

Procedures:

- Cold weather does present additional hazards during winter operations, but with awareness and good planning, injuries can be avoided.
- Wear appropriate cold weather clothing and personal protective equipment.
- The best method of staying warm in cold weather is to insulate the most exposed parts of the body.
- Do not engage controls or equipment when visibility is obscured by steam or snow.
- The accumulations of snow and ice on walkways, work areas and vehicle steps can become a slipping hazard, so more care needs to be taken.
- Exercise care when handling diesel fuel and gasoline during cold weather operations; the cold burn resulting from saturated clothing due to spillage can be severe.
- Commonly exposed parts of the body are the face, feet, wrists and hands. Always ensure that socks are of generous length and gloves come well up the forearm.
- Remember to always dress for the weather, and change to clean, dry clothing regularly.
- Winter operations require a liner in your hard hat.
- Wet gloves freeze the hands quickly so keep a dry pair handy.
- Keep sunglasses available for working in bright sunlight with snow cover.
- Superficial frostbite usually affects the ears, face fingers and toes. It is painless in the early stages and may not be noticed by the affected person. As freezing progresses the skin turns white and is numb to the touch. If you are working in cold weather and you notice your fellow workers with white spots, immediately tell them. Use your warm hands or get them inside to warm up for a few minutes. If more severe, take to medical help immediately.

Potential Hazards:

- Frostbite
- Hypothermia
- Slips, trips and falls