

APPENDIX 2: SAFETY IN MIDDLE YEARS HUMAN ECOLOGY CLASSROOM GUIDELINES

Introduction

Hands-on activities are a fundamental part of human ecology learning. Teaching human ecology requires students' active involvement in developing safe and efficient behaviours for lifelong personal and job-related skills development. Students progress into skills-based courses, such as Middle Years Human Ecology. They are introduced to independent skills training where there is a natural increase in the complexity of their hands-on skills development. Over time, students learn techniques of job-related skills and, through repetition and practice, develop even more sophisticated skills such as critical thinking, inquiry, and problem solving. Hands-on lab activities can provide important connections in students' understanding of the nature of human ecology as it relates to lifelong learning, creativity, and the interplay of education and job-training skills.

The nature of the adolescent makes safety a very important issue. When adolescents are focused on the situation at hand, they may not consider the consequences or effects of current actions on the future. Adolescents often have a certain egocentrism that leads them to the belief that they are unique, special, and invulnerable to harm. They may be unaware of the consequences of risk-taking behaviour. It is the teacher's responsibility to ensure that safety considerations are accounted for when planning activities.

The challenge for schools is to offer human ecology activities that are simultaneously educationally rewarding and relevant to job training, making it challenging to students yet ultimately safe. These desired goals may be achieved through team effort involving all of those who set and administer school policies, design and maintain the learning environment, plan and deliver human ecology lessons, and select and prepare the materials used.

The goal of this appendix is to bring together information that principals, planners, teachers, and support staff need to help them make sound decisions regarding safety. It identifies areas for decision making and action at a variety of levels, and it supports planning and action by providing information on safety legislation and standards, safety hazards, and examples of procedures for eliminating or minimizing hazards.

1. Importance of a Safety and Health Program

What is the Internal Responsibility System for Safety and Health?

The *Workplace Safety and Health Act* supports every worker's right to a safe and healthy workplace. The duty for creating and maintaining a safe and healthy workplace falls on every person in the workplace to the degree that he or she has the authority and ability to do so. Whether it is the superintendent or the newest teacher hired, everyone has a

personal and shared responsibility for working together cooperatively to prevent workplace injuries and illness.

Because employers have the greatest degree of control over the workplace, they also have the greatest degree of legal responsibility for safety and health. This, however, does not relieve principals and teachers from their duty to participate and co-operate in controlling workplace hazards and to take the necessary precautions to protect themselves and others from hazards.

The act also recognizes that only workers who are adequately informed and empowered can effectively fulfill their responsibilities. It grants three important rights to workers:

- **The Right to Know** about workplace hazards, including how to identify hazards and protect themselves from those hazards, and about the rights afforded to workers under the act.
- **The Right to Participate** in decisions related to workplace safety and health, free of reprisal for their participation. Participation, in part, is achieved through the committee or workers' representative.
- **The Right to Refuse** work that the worker believes to be dangerous to him or herself or the safety of others.

The act protects the rights by prohibiting employers from imposing discipline or other sanctions on workers for fulfilling their responsibilities or exercising their rights. This helps workers participate with employers and supervisors in preventing workplace injuries and illness.

Taken together, these components are often called the internal responsibility system (IRS) for workplace safety and health, but good safety and health cannot rely on the internal responsibility system alone. Ongoing monitoring and enforcement by the Workplace Safety and Health Division are also required.

The combination of internal monitoring by Workplace Safety and Health Committees and external monitoring and enforcement by the Workplace Safety and Health Division ensure better legislative compliance and a more effective internal responsibility system in the workplace.

Due Diligence: An Approach to Human Ecology Safety

What is Due Diligence?

Sections 5, 6, and 7 of the act set out due diligence responsibilities. The act is available online at www.gov.mb.ca/labour/safety.

Due diligence means everyone with responsibility for safety and health must “...take every precaution reasonable in the circumstances to avoid a work related injury or illness.” This concept of “reasonable care” holds individuals accountable for their acts (what they do) and omissions (what they fail to do). It goes beyond simple “regulatory compliance.”

Due diligence contains these concepts:

- **Reasonably practicable:** What is “reasonably practicable” is determined by asking what a reasonable person, in the same position and circumstance, would have done to prevent the incident. When making that determination, three main factors need to be taken into account:
 - foreseeability
 - preventability
 - control
- **Degree of risk:** The approach selected to carry out a task depends on the degree of risk. The higher the risk, the greater the safety measures that must be taken.

In the case of a workplace safety and health program, the criteria for due diligence requires employers to do the following:

- **Establish a program:** The program should systematically identify hazards and assess their risks. It must include plans within the program to manage those risks. The plans should reduce the likelihood of the identified hazards causing harm.
- **Ensure the program is adequate:** The program must meet the needs of the workplace and the workers. It is a good idea to compare your program with industry standards.
- **Monitor and evaluate the program’s effectiveness:** Competent staff must be able to regularly check the effectiveness of the program and judge how well it meets legislative requirements.

Understanding Negligence and Liability

Below is a segment from the *Administrative Handbook*, which includes a three-page section of reference on negligence and liability.

It is generally assumed, in law, that teachers and others placed in charge of students have a duty to be responsible for the safety and welfare of those students during school hours and also after school hours during any school-sponsored activities on or off school premises. Failure to act reasonably under the circumstances, if this failure causes injury or death to a student, can result in a possible action in negligence.

It is generally recognized that four conditions must exist for a negligence suit to be successful:

1. The person alleged to be negligent must have a legal duty to maintain a standard of conduct that will protect others against hazards.
2. This person must fail to conform to a reasonable standard of conduct in connection with this duty. (The accepted standard is that of a prudent parent of a large family. However at least one recent court decision made a clear departure from that standard, and adopted a higher “Professional” standard of care where a teacher needs specialized knowledge, training, and/or experience in order to carry out his/her duties, such as gymnastics instruction in a high school setting).
3. The person or persons to whom this obligation is owed must suffer a genuine loss or injury (which could be property loss or damage, or physical or psychological injury, or death).
4. There must be a definite causal connection between the first person’s failure to maintain a proper standard of conduct and the loss or injury suffered by the second person.

Where teachers and other school officials are concerned, there is little difficulty in proving that a duty of care is owed to students. In any school activity, school personnel are generally assumed to be responsible, within responsible limits, for the welfare of students.

The fact that a mishap takes place does not automatically mean that there has been negligence. Genuine accidents do take place, and while they are unfortunate, no one can be blamed for them. Only if a court decides that a reasonably prudent person in the teacher's situation would have anticipated the mishap and would have acted to prevent it might the teacher be found negligent.

If students are to be placed in situations where the potential for injury exists, appropriate skill training and safety briefing must take place, and safety regulations conscientiously enforced. In addition, school officials are legally obligated to see that any facilities and equipment used are in safe condition.

Liability in Middle Years Human Ecology

The prudent teacher should ensure that every precaution against injury is taken. This should include periodic inspection of equipment, due concern for good discipline and safety practices, and proper supervision and competent teaching. The human ecology teacher should recognize potentially dangerous surroundings in instructional areas. Any potentially hazardous situations should be avoided. In order to reduce the possibility of injury, human ecology teachers should

- understand the safety element involved in each activity
- ensure a safe teaching environment

- use safe and tested equipment with which he or she is familiar
- understand the safety measures of learning activities specific to human ecology
- avoid the teaching of highly specialized or difficult techniques that are beyond the ability of students
- control/manage and organize students to avoid accident or injury

General Goals

The purpose of this safety and health document is to help teachers develop and operate a program that will prevent and control incidents. Such a program will protect students and increase the effectiveness of instructional methods and facility operations.

This document is also intended to provide our students and future workers with the skills, knowledge, and attitudes needed to keep them free and safe from injury now and later on the job.

The skills acquired through an effective program can be transferred to students' daily activities and personal choices. Positive attitudes must be developed through education, beginning at a young age and reinforced throughout daily activities and teachings. For safety and health education to be effective, it is important that it be viewed as an ongoing partnership among the school, home, community, and workplace, focusing on the following:

- Lessening the risk of injuries

- Evaluating potentially dangerous situations and being innovative in safely dealing with such concerns
- Understanding safety and health as an integral part of life
- Practising sound decision-making and preventative techniques
- Demonstrating critical-thinking and problem-solving skills that will allow them to solve health and safety problems
- Recognizing risks and hazards
- Recognizing and responding appropriately to emergency situations
- Possessing the knowledge, confidence, and initiative that will enable them to recognize and change behaviours and practices in their work environment
- Demonstrating the ability to influence and communicate effectively with colleagues and employers in working together to maintain a healthy and injury-free work environment
- Recognizing safety and health warning signs and symbols (e.g., WHMIS)

The elimination or reduction of incidents should be of primary concern to everyone in the school. A formal safety and health program will provide a means for teachers and students to accomplish safety and health objectives.

Establishing Program Outcomes

Establishing outcomes and policy to guide the safety and health program's development is critical to its design and organization. The first step is to establish the following:

1. Gaining and maintaining support for the program
2. Motivating, educating, and training those involved in the program to recognize and correct or report hazards located in the labs/facilities
3. Incorporating hazard control into the design
4. Providing a program of inspection and maintenance for machinery, equipment, tools, and facilities
5. Incorporating hazard control into school teaching and educational techniques and methods
6. Complying with established safety and health standards

Policy Statement

Once the objectives have been formulated, the second step is establishing the policy statement with the active participation of all those involved in the program's operation. The policy statement should reflect the following:

1. The importance the teacher places on the health and well-being of his or her students
2. The emphasis the school places on efficient operations with a minimum of incidents and losses
3. The intention of integrating hazard control
4. The necessity for active leadership, direct participation, and support from the entire school organization

5. The intent of the school administration to bring its facilities, operations, machinery, equipment, tools, et cetera, within the compliance of health and safety standards and regulations

The Need for Adequate Budget

There can be no compromise when it comes to the safety of our children. Principals, in collaboration with their teachers and safety and health committees, should define their safety and health program needs and allocate a sufficient level of resources to meet those needs, along with those allocations traditionally associated with the training and education process.

Responsibilities for the Safety and Health Program

Responsibility for the safety and health program can be established at the following levels:

1. School administration
2. Safety and health committees
3. Teachers
4. Support staff
5. Students
6. Parents

Responsibilities of School Administration

Before any safety and health program gets underway, it is essential that such a program receive support and commitment from school administration. The school board, superintendent, principal, and others concerned with administration and supervision must accept full

responsibility for the safety and health program as it is established, furnish the drive to get the program started, and oversee its operations. Their responsibility is essential to the continuing obligation to carry out an effective safety and health program.

Furthermore, principals and supervisors must invite discussion with teachers and others in the program during pre-planning meetings and periodically throughout the school year. Such discussions may deal with program progress, specific needs, and a review of school safety and health procedures and alternatives for handling emergencies in the event of an incident. Specifically, responsibility at this level is to

- set objectives and policy
- ensure that the necessary information, facilities, tools, and equipment are available to conduct a safe program
- ensure sufficient funds are available for an effective safety budget
 - This would include providing continued EA support for students in need of adaptation or extra supervision for safe behaviour management, especially if support is already provided in other curricular areas.
- promote and support professional development regarding safety initiatives in human ecology

In consultation with the safety and health committee, the school principal must provide meaningful criteria to measure the success of the safety and health program and to provide information upon which to base future decisions.

Responsibilities of Teachers

Teachers have a professional responsibility to safeguard and educate those who have been placed under their supervision. Jointly with the principal, teachers are responsible for creating a safe and healthy instructional setting, integrating hazard identification, assessment of the risks, and control of the situation in all aspects of the facility.

For all practical purposes, the teachers are the eyes and ears of the facility control system. On a day-to-day basis, teachers must be aware of what is happening in their facilities, who is doing it, how various tasks are being performed, and under what conditions. They must be ready to change part of an operation or the entire operation if they perceive the immediate need for corrective action.

Human ecology teachers are to review school safety and health policies and regulations within their school/division. This may require teachers to have up-to-date training or certification in areas related to instruction, such as first aid and/or safe food handling certification courses.

The following are the primary safety and health responsibilities of teachers using human ecology facilities:

- To demonstrate and model safe work procedures
Note: Teachers are role models to their students and should use exemplary behaviour in a human ecology classroom by demonstrating and modelling safe work procedures. Clean, appropriate clothing allowing unrestricted movement is recommended for all hands-on activities. Since there is the possibility of personal injury

and food-borne illness, it is strongly recommended that teachers ensure that

- inappropriate jewelry be removed
- long hair be tied up/back
- appropriate footwear be worn with adequate foot coverage (e.g., avoid flip-flops)
- applicable protective equipment is used at all times
- To train and educate students in safe work methods and practices
- To actively participate in and support the school safety and health committees
- To supervise and evaluate student performance with consideration given to safe behaviour and work methods
- To monitor the facility on a daily basis for human, situational, and environmental factors capable of causing incidents
- To correct hazards detected while monitoring or to report such hazards to the persons who can take corrective action
- To investigate all incidents occurring within their labs/facilities to determine the cause
- To ensure that hazard recognition and control information is included in each instructional module and administration session
- To develop a positive student safety attitude for school, home, social settings, and workplace activities

Responsibility of Support Staff

Support staff (e.g., educational or instructional assistants, student services, etc.) play a significant role in helping to create and maintain a safe and productive learning environment, especially in a human ecology course. They are at the forefront of designing specialized programming and are often privy to information that a human ecology teacher is not.

Support staff may provide a variety of supports, from aiding in the development of basic fundamental life skills to practising advanced behaviour management. Support staff may be addressing a diversity of needs for one student or caring for several students, collectively, with a huge variety of unrelated needs – especially students who are in need of adaptations to human ecology courses. Physical limitations or behavioural challenges may increase risk for potential accidents. Because support staff members are such an integral component to a safe experience for the student(s) in their charge, they should be ready to contribute to all forms of safety in a human ecology course.

In general terms, their responsibility might be to assist in the preparation of human ecology lab materials as requested by teachers for students with special needs to allow students with physical limitations to actively participate (e.g., assisting special needs students with safe setup and/or cleaning of tools and equipment; ensuring all students [special needs or not] who are under their direct care are safe and on task). However, their role may also include promoting and maintaining safety standards in the lab and classroom activities, and ensuring that all human ecology tools and equipment are in good condition.

The following are the primary safety and health responsibilities of support staff:

- To demonstrate and model safe work procedures as demonstrated or instructed by the human ecology teacher

Note: Support staff, like teachers, are role models to their students and should use exemplary behaviour in a human ecology classroom by demonstrating and modelling safe work procedures. Clean, appropriate clothing allowing unrestricted movement is recommended for all hands-on activities. Since there is the possibility of personal injury and food-borne illness, it is strongly recommended that support staff ensure that

- inappropriate jewelry be removed
- long hair be tied up/back
- appropriate footwear be worn with adequate foot coverage (e.g., avoid flip-flops)
- applicable protective equipment is used at all times
- To demonstrate an active interest and to comply with school safety and health policies and regulations (as demonstrated or explained by the teacher)
- To monitor the facility for human, situational, and environmental factors capable of causing incidents to students with special needs (i.e., to educate students on the best ways to conduct safe work methods and practices)
- To correct hazards detected while monitoring or to report such hazards to the human ecology teacher, who can take corrective action

- To help maintain human ecology lab safety equipment during class time
- To ensure all human ecology equipment is in good working condition and to report equipment that needs repair or replacement
- To identify, document, and inform human ecology teachers of safety problems related to specific lab activities, and to recommend adaptations to activities when necessary to eliminate problems while still meeting curriculum goals
- To work with the human ecology teacher to promote safe procedures and maintain safety standards in all human ecology activities
- To communicate to the human ecology teacher any relevant information about students who are in need of course adaptations, preferably before the course begins

Note: Students who are at risk of putting themselves or others in harm's way should be reported to the human ecology teacher before the course begins, as they may require increased awareness by the teacher and special course adaptation. When students have educational assistants (e.g., support for cognitive, behavioural, EAL needs) at their home school for regular class instruction, the home school should provide continued support in the human ecology classroom.

At-risk conditions include, but are not limited to, any of the following:

- Students who have medical (e.g., seizures, severe allergies resulting in anaphylactic shock), emotional, social, cognitive, or other conditions.

- Students who have any allergies, sensitivities, and intolerances, especially those related to food products. These should be reported to the human ecology teacher before the course begins. This also includes any skin sensitivities (e.g., if a student is allergic to dish soap).
 - If the budget permits (or the student provides these items), appropriate ingredient substitutions and/or separate tools and equipment should be made available whenever possible. Appropriate care should be given to items that may need to be stored separately from normal classroom items (e.g., ingredients/tools for celiac disease).
- EAL students
 - In extreme EAL cases, a translator or translating device (e.g., Google translate on a tablet) should be provided to both the teacher and the student to ensure accurate safety guidelines and expectations are clearly communicated and followed.

Responsibilities of Students

Everyone has the right to a safe human ecology experience, especially students. Students constitute the largest segment of the school population and are responsible for making good safety and health decisions. Students who actively participate in safety training help in preventing injury and equipment damage. Sequential skill development is essential for the safety of students. Readiness is achieved through competence in previous levels and ongoing evaluation is necessary, particularly in high-risk activities such as cutting and stove usage.

Students have the following responsibilities:

- To follow school safety and health rules and regulations and to work according to standard facility practices (as demonstrated and explained by the teacher)

Note: Students should practise exemplary behaviour in a human ecology classroom, as instructed by the teacher. Clean, appropriate clothing allowing unrestricted movement is recommended for all hands-on activities. Since there is the possibility of personal injury and food-borne illness, it is strongly recommended that students ensure that

- inappropriate jewelry be removed
- long hair be tied up/back
- appropriate footwear be worn with adequate foot coverage (e.g., avoid flip-flops)
- applicable protective equipment is used at all times
- To interpret and demonstrate to the satisfaction of the teacher all safe operating procedures regarding materials, tools, mechanical, and personal safety
- To recognize and report to the teacher hazardous conditions or work practices
- To use PPE (personal protective equipment), safety equipment, tools, and machinery as they were designed.
- To report all injuries to the teacher
- To practise correct safety techniques, activity-specific behaviours, and etiquette, as demonstrated or explained by the teacher

Safety education should be an integral part of every instructional period and should be demonstrated in the lab area and when handling any tool or equipment.

Responsibilities of Maintenance

Those involved with the maintenance of equipment, machinery, and facilities play an important role in reducing incidents in the school lab/facility. The following are some of their responsibilities:

- To provide planned preventative maintenance on electrical systems, machinery, and equipment to prevent abnormal deterioration, loss of services, or safety and health hazards
- To provide for the timely collection and disposal of scrap materials and waste
- To ensure that equipment and facilities are of good quality and periodically safety-tested (Equipment designed to support student learning should be stable, secure, and supplied with appropriate accessories. Adequate and safe storage should be provided for all dangerous tools and equipment.)
 - Routine lab inspections (e.g., examining dishes to ensure they have been washed, dried, and stored properly; examining sewing machines and unplugging irons for safe storage, etc.) should be done before the end of every class.
 - Floors should be clean, smooth, and free of foreign objects.
 - Surfaces should be free of glass, cans, bottles, etc.

- Special care should be followed during the safe removal of broken dishes or shattered glass. For example, sharp objects should be wrapped in wads of paper before being discarded in the garbage for everyone’s safety, including custodians.

The Role of the Workplace Safety and Health Committee

The role of the committee must not be confused with the responsibilities of principals or teachers. The committee brings together workers’ in-depth practical knowledge of specific jobs and principal knowledge of the organization’s “big picture” to provide input and advice on safety and health matters. The committee should also monitor the workplace safety system (as determined by the safety and health program) to ensure that it is working properly. The school division remains ultimately accountable for the final decision.

The committee should be used to assess the effectiveness of the workplace safety and health program. The committee may conduct a safety and health inspection.

Responsibilities of Parents

Parents are thought of as an important part of an effective human ecology/technology education safety and health program, as their support and understanding will help strengthen such a program. Parents complement the school effort by placing a strong value on safety and health while their children are at home, at work, involved in recreation, or being transported.

Their responsibilities include the following:

- To inform the school of health concerns that may affect their child’s daily activities within the facility
- To be aware of the potential illness and injury their children are exposed to during their education and training
- To support the teacher and the principal when penalties must be assigned for violations of safety and health rules

2. Setting Up and Maintaining a Safe Human Ecology Facility

Achieving a Safe Facility

The intent of this section is to help the teacher achieve and maintain a safe facility.

Topics of this section include the following:

- Safety and health inspections
- Personal protective equipment
- Hazard analysis
- Incident investigation techniques

Safety and Health Inspections

Purpose

To provide the teacher with an understanding of the inspection process and the ability to carry out an effective safety and health inspection. This section will cover the following:

1. The purpose of inspections
2. The types of inspections
3. The persons involved in the inspection process
4. Techniques
5. Methods of recording

Introduction

Safety and health inspections are an important part of the hazard control process. Regular inspections play an important part in providing a safe environment for our students.

Mandatory Inspections

Every school facility and each of its processes and operations contain potential hazards, which come about through normal use or through changes and additions of new equipment. One way of keeping aware of hazards is through continuous inspections.

Purpose of Inspection

- To spot potential hazards before an incident occurs
- To assess the hazard
- To find improvements and corrections to improve overall operations and increase effectiveness
- To do all of the above, every day

Inspections may be classified as periodic or continuous.

Types of Inspection

Periodic Inspection

A safety and health inspection is thorough and systematic. These inspections can be conducted monthly or bi-monthly. This type of inspection covers all areas (e.g., operations, equipment, etc.).

Continuous Inspection

Continuous inspections should be conducted by students, teachers, support staff, department heads, or supervisors as part of their instructional, supervisory, or assigned duties. Continuous inspections provide an immediate chance to examine and, if necessary, to correct or to report any unsafe situations (if correction is not possible).

Who Should Make Inspections?

Teachers

Teachers must make continuous inspections and be aware of changing conditions, operations, and work methods. These inspections may have to be made several times a day (i.e., at the beginning of each day and, for certain equipment, at the beginning of each class).

Support Staff

Support staff must make preliminary inspections during their time in a human ecology classroom and lab. These inspections may have to be made several times throughout class time (i.e., during the setup, handling, and storage of tools and equipment; continuous behavioural and hygienic management).

Students

Student inspections allow students to take a major role in their lab/facility, thus giving them a sense of ownership of their lab/facility.

Department Head or Supervisors

A school/school division that has a department head or supervisor for human ecology has a further advantage in safety and health inspections. The department head or supervisor may record any unsafe conditions and practices and forward the information to the teacher and/or maintenance personnel if required.

Inspection Procedures

An inspection program requires that those conducting the inspections have

- a sound knowledge of the facility
- a systematic inspection process for the facility
- a method of reporting, evaluating, and using the data gathered

What Should Be Inspected?

When inspecting, the following should be considered:

- **Materials and substances:** Inspect those materials and substances that may cause injury, illness, fire, or other hazards.
- **Equipment and tools:** Ensure that they are free of defects and other hazards.
- **Personal protective and safety equipment:** Ensure that there is adequate protection for all students involved and that the equipment is in good shape (i.e., oven mitts, presser foot on sewing machine is securely in place, etc.).
- **Working and walking surfaces:** Areas must be clean and functionally safe.
- **Environmental factors:** Ensure lighting and ventilation (e.g., fans in a foods lab) are in place.
- **Housekeeping:** Material storage, waste disposal, floor, and counters should be neat and tidy.
- **First-aid kit:** Ensure the first-aid kit is stocked with adequate supplies and in plain sight.
- **Electrical:** Switches, breakers, fuses, cords, and plugs must be in compliance with regulations.
- **Chemical storage, handling, and use:** Ensure that materials (e.g., cleaning supplies with bleach) are stored properly.
- **Fire protection and extinguishing systems:** Fire blanket, fire exit doors, exit signs, etc., must be in good order and in working condition.

- **Preventative maintenance:** The teachers' consistent preventative maintenance in the lab/facility and with tools will help to ensure incident prevention and student safety.

Hazardous Equipment

In the process of inspection, various actions or corrections may have to take place. When a broken or damaged tool is found, the teacher should immediately remove it. Large equipment, however, may have to be properly tagged. The teacher may also need to perform an electrical lockout by placing a mini-padlock through one of the tines of the power cord plug to prevent unauthorized use of the tool (e.g., an electric mixer that has parts that jam).

Summary

Acting on the information gathered from an inspection is as important as conducting the inspection in the first place. It is necessary that the inspection team brings problems and recommendations for corrective action to the attention of those involved (i.e., teacher, principal, or workplace safety and health committee). Based on problems uncovered and recommendations by Workplace Safety and Health, they must decide on the best course of action.

Information from inspections should never be seen as fault-finding and criticism, but rather as fact-finding with an emphasis on locating potential hazards that may have an adverse effect on the safety of the operation. The information should be viewed as the basis for establishing priorities and implementing programs that will improve conditions to provide a safe environment for our students.

Personal Protection Equipment Requirements (PPE)

Education

Unless students are educated in the use and care of PPE, it may do little to fulfill its intended purpose. It is recommended that human ecology teachers instruct safety and be a role model for working safely at all times, which includes the use of protective clothing and equipment.

Head Protection

There is always a danger of hair becoming entangled in moving parts (e.g., electric mixer or embroidery machine that doesn't require the foot being on the foot control at all times) or dangling into food (hygiene safety). Students with long hair should have their hair tied back, secured, or tucked underneath their clothing.

Hand Protection

The hazards in the human ecology facilities include burns, scalds, cuts, etc. The use of heat protection, like oven mitts, is good work practice to prevent hand injuries during handling of hot tools and materials.

Foot and Leg Protection

Students may require protection from the hazards of broken shards of dishes or glasses, splashes of hot liquids, and mishandled cutting tools like knives and fabric scissors. Personal protective footwear in a human ecology lab may include footwear that has adequate foot coverage. This can protect feet against injuries, such as those from falling knives, hot spills, or irons that accidentally topple over.

Hazard Analysis

The benefit of hazard analysis is to increase the awareness of potential hazards.

Incident Investigation Techniques

The goal of facility operations hazard analysis is to identify and evaluate hazards in the facility before they result in incidents. The concept behind this is sound, however, there may be times when we will not be able to find and eliminate problems before incidents occur. When an incident occurs, we must be prepared to acquire through investigation as much information as possible about the cause so that similar incidents can be avoided.

Reasons for Investigation

Teachers should become familiar with school/school division policies regarding incident investigation. The following are important reasons for investigating incidents:

- To determine the cause of the incident
- To find out ways to prevent further similar incidents
- To uncover and reduce indirect incident causes

Fact-Finding not Fault-Finding

Remember, incident investigation is fact-finding rather than fault-finding. The intent of the investigation is to find the cause and/or reason of the error/defect and make the necessary corrections so further incidents can be avoided.

Investigation by the Teacher

The teacher is the best one to do the investigation. The teacher is the one who was in the room at the time of the incident. The teacher is

- familiar with the students, their abilities, and their personal characteristics
- aware of the equipment, tools, and operations

Key Points for Interviewing

When investigating an incident, the following key points are important:

- Conduct the interview as soon as possible.
- Interview one person at a time.
- Explain the purpose of the investigation.
- Make the witnesses feel at ease.
- Be diplomatic in your task.
- Keep the questions simple.
- Avoid leading questions.
- Allow students to explain in their own words, uninterrupted, their story of the situation.
- Review the information given.
- Allow students to explain how the same incident can be prevented in the future.

For more information, see the Manitoba Education and Training documents *Keeping Your Facilities SAFE: A Support Document for Industrial Arts Teachers* (available online at www.edu.gov.mb.ca/k12/docs/support/ia_safe/) and *Science and Safety: A Kindergarten to Grade 12 Resource Manual for Teachers, Schools, and School Divisions* (available online at www.edu.gov.mb.ca/k12/docs/support/scisafe/index.html).