

Anoka-Hennepin District 11 Technology/Vocational Education Safety Manual

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Guide Intent

This guide is intended to be a reference document that compliments the other printed materials on this subject that are produced and made available at the state and national levels.

The task of overcoming the “it can’t happen to me” attitude is a big one and requires that safety awareness be an everyday part of the instruction program.

In addition to the traditional safety point of view in both personal and area safety, new emphasis should be considered in component safety. New, sophisticated and computerized equipment must be well cared for because of high replacement costs. One will find that safe operators save equipment as well as people.

A committee of Anoka-Hennepin teachers met to assemble this document from existing, commonly used safety information. This document is meant to be evolutionary in nature and will change over time to remain current.

This document is solely for informational purposes. It does not purport to be exhaustive of its subject matter. The authors of this material make no warranty as to the accuracy or completeness of the information contained in this document. The authors further assume no liability or responsibility for loss or damage suffered due to reliance on this material.

Thanks to the Washington State Safety Guide, May 2002, for allowing us to modify and use some of their information. Their full document may be obtained by calling 360.725.6241.

New CFL Safety Rules

Commencing in 2000, each school board shall ensure that a district annually inventories and reports the status of all "fixed equipment" used in ... industrial arts... with the October 16th submission and shall certify the status of whether or not each is OSHA code compliant. H&S funds may be used for repair or replacement, to bring the equipment into OSHA compliance. Commencing in 2001, CFL will require certification that shop instructors receive CFL certified safety training as a condition of H&S funding.

By June 2000, District 11 had completed the inventory/safety inspection of all of the middle schools and BHS. The other high schools should have been completed by mid August.

Anoka-Hennepin District 11 General Safety Expectations for all Technology/Vocational Education Laboratories

Proposed Role of the Instructor:

Ultimately the safety of the adults and students using equipment in the tech ed and vocational labs is the individual user's responsibility. However it is the responsibility of the instructor to establish and monitor the safety aspects of the laboratory environment by activities such as:

- Daily Monitoring the safe condition of equipment and tools
- Maintaining/repairing equipment as needed or arranging for the repair as needed
- Removing unsafe equipment and tools from use
- Monitoring the safe behavior and equipment operating habits of students
- Removing students from activities if they are not complying with safety rules
- Explaining about and demonstrating the safe operation of safety tools
- Modeling safe work practices
- Requiring students and parents to sign the student safety pledge
- Requiring students to complete safety tests
- Retaining safety records as appropriate, including completed safety pledges and tests, as well as recording student safety infractions (name, incident, date, action taken, etc.) and records of accidents
- Including safety as part of the requirements that students will be graded on in class
- Proper labeling and storage of hazardous materials
- Contacting parents – or arranging for school personnel to contact parents in the case of injuries that require a hospital or clinic visit
- Having conversations with other instructors of sequential classes so that safety aspects covered/expected are clearly communicated
- All major safety tests are retested in each sequential course; students from other districts are routinely retested

Anoka-Hennepin District 11 General Safety Expectations for all Technology/Vocational Education Laboratories

Proposed Role of the District:

The district role in maintaining a safe laboratory environment is:

- Providing funds to maintain equipment and a safe laboratory environment
- Ensuring that all new equipment and facilities meet current applicable OSHA or other safety specifications
- Providing safety training for staff
- Providing administrative support for the consequences assigned to students that have committed safety infractions
- Maintaining class size at reasonable levels according to the type of class and number of stations the lab was designed for (maximum of 24 students in machine-intensive classes and a maximum of 30 students in others)
- Annual inspections of the lab equipment and environment (including sound and air quality)
- Limiting the addition of new students to classes once the majority of the safety instruction has been completed
- Providing on-site medical staff (nurses) and supplies (first-aid material)
- Provide school nurses to assist with student injuries
- Providing legal support and liability protection in the event of accidents
- Clarifying the teacher and custodial roles in maintaining building-based safety apparatus (filters, fire extinguishers, welding flash-back suppressors, etc.)
- Arranging tech ed instructor extra duties (hall duty, etc.) to be in the vicinity of the lab(s) that they are responsible for so that they can monitor students in labs
- Provide instructors with a list of ESL students and students with medical problems
- Addressing safety issues in IEPs
- Adjust class sizes to account for the number of students on IEP
- Proper disposal of hazardous materials.

To: Anoka-Hennepin Staff
From: Technology Education Department
Re: Technology Laboratory assignments and usage

Dear Staff:

As we begin another year, the Technology Education Department would like to remind you of our job assignments and stress the need for safety in our facilities. In response to a WCCO "I-Team" report that aired, the State of Minnesota is in the process of updating tech ed facilities and will be installing machine guards and safety switches. Additionally, we are aware of lawsuits in other school districts that are the result of injuries that have occurred in Technology education labs outside of the school day. Because of this potential liability, we simply cannot allow Anoka-Hennepin laboratories to be used by either staff or citizens without direct instructor supervision. If you have questions regarding the new policy, please contact the staff member listed below, who is responsible for the program in question.

_____	Automotive Laboratory
_____	Metals Laboratory
_____	Graphics Laboratory
_____	Drafting Laboratory
_____	Internship and Construction Laboratory
_____	Woods Laboratory
_____	Electronics Laboratory
_____	Photo Laboratory
_____	Modular Laboratory
_____	Small Gas Engines Laboratory

When it comes to instruction and use of equipment, our primary responsibility is to assure that students have priority over staff. Because of this, we are asking that staff not request the use of Technology Education facilities and equipment while classes are using a lab. Anoka-Hennepin staff members must be supervised by a certified Technology Education instructor while working in the shop facilities. Unauthorized use of the Technology education facilities and equipment after the duty day is not permitted. These procedures will assure the safety of all concerned and provide for the proper maintenance of school equipment. Thank you for your cooperation regarding this issue.

Technology Education Staff,

Principal,

**Anoka-Hennepin School District 11
Technology Education Department
Tool and Machine Operation Permit
And Safety Pledge**

_____ (student) is enrolled in a Technology Education course and will, as part of his/her laboratory experience, operate power equipment, providing that his/her parent or guardian gives written permission.

Each student will be given proper instruction, both in the use of the equipment and in correct safety procedures concerning it, before being allowed to operate it themselves.

The student must assume responsibility for the following safety practices and we therefore ask that he/she adhere to the following safety pledge:

Safety Pledge

1. I promise to follow all the rules and regulations for the Technology Education Lab.
2. I promise never to use tools, chemicals or equipment without first obtaining permission from the instructor.
3. I will not ask to use, or attempt to use, any machine or equipment unless I have been instructed in its use.
4. I will report any accident, injury, or hazardous situations to the instructor immediately.
5. I will wear my safety glasses when I or others are working.
6. I promise not to operate any equipment while under the influence of any drug, alcohol or medication that may impair my ability to work safely.

Student's Signature _____ Date _____

Parent or Guardian

I have read and will encourage my son/daughter to follow the Safety Pledge and Power Machine Operation Permit. I give my consent to allow _____ (student) to operate all machines and equipment necessary in carrying out the requirements of the course in which the student is enrolled.

Parent's Signature _____ Date _____

Optional Student Information

Name: _____ Age _____ Period _____
Address: _____ Grade _____
City _____ Zip _____
Home Phone _____
Parent/Guardian's Name _____ Work Phone _____
Parent/Guardian's Name _____ Work Phone _____

General Laboratory Safety Rules

1. Do not use tools or equipment unless an instructor is present.
2. Eye protection is required (state law) when anyone is working in the lab.
3. Tie long hair back to prevent accidents.
4. Proper clothing must be worn. Jackets and jewelry should be removed, and loose sweaters or loose clothing should not be worn. (Wear aprons to protect your clothing when necessary.)
5. Absolutely no horseplay is allowed in the lab. You or others could be injured by your actions.
6. Give your undivided attention to the machine or tool you are using.
7. Tools and materials can be dangerous. Do not handle them unless your assignment requires their use and you have your instructor's permission.
8. When help is needed on an operation, ask for it - but limit it to only enough help to do the job.
9. Maintain an organized, safe work area and clean your area when you are through.
10. Turn machines off before making adjustments to them and unplug them before changing blades or bits.
11. Do not leave a machine until it has come to a complete stop.
12. Do not leave projects in vises unattended. Position vise handles down when not in use.
13. Finishing materials are often flammable and must be handled properly. Follow the instructions provided with these materials and avoid any open flames.
14. Gum, food and candy can be hazards. Do not bring them into the lab.
15. Students have the responsibility to protect and take care of the school's property and the property of others.
16. It is forbidden to throw tools and other materials.
17. Report broken tools or unsafe conditions to your instructor.
18. Report all cuts or injuries to your instructor.
19. Ask your instructor to review any safety rules or operation procedures you are unsure of.
20. Rubber gloves are to be used when treating all bleeding injuries.

Surveyed Best Practices for Safety

1. Present and supervising students.
2. Safety Tests
 - General
 - Specific Equipment
3. Instruction on safety to include:
 - Lectures
 - Reading
 - Videos
 - Worksheets
4. Student performance evaluation recorded via:
 - Check off sheet
 - Safety pledge
 - Grade book

How is student compliance documented?

- | | |
|---|---|
| <input type="checkbox"/> Check off sheet | <input type="checkbox"/> Retest to teacher's satisfaction |
| <input type="checkbox"/> Tests are kept | <input type="checkbox"/> Grade book is used to check off compliance |
| <input type="checkbox"/> Save safety test pledges | <input type="checkbox"/> Record safety violations |
| <input type="checkbox"/> Observation | <input type="checkbox"/> Accident report file |
| <input type="checkbox"/> Referrals | |

Surveyed results of which activities or pieces of equipment pose the greatest dangers to students or result in the most serious injuries.

- | | |
|---|---|
| <input type="checkbox"/> Skill saw | <input type="checkbox"/> Outlets/power strips |
| <input type="checkbox"/> Air nailers | <input type="checkbox"/> Power miter box |
| <input type="checkbox"/> Radial arm saw | <input type="checkbox"/> Disc sander |
| <input type="checkbox"/> Table saw | <input type="checkbox"/> Band saw |
| <input type="checkbox"/> Shaper | <input type="checkbox"/> Spindle sander |
| <input type="checkbox"/> Grinders | <input type="checkbox"/> Routers |
| <input type="checkbox"/> Sheet metal edges | <input type="checkbox"/> Radial arms |
| <input type="checkbox"/> Rotating Machinery: Engines, Bench Grinder, Power tools, Drill | <input type="checkbox"/> Table saw |
| <input type="checkbox"/> X-Acto knives | <input type="checkbox"/> Jointer |
| <input type="checkbox"/> Paper cutter | <input type="checkbox"/> Band saw |
| <input type="checkbox"/> Chemicals | <input type="checkbox"/> Disc sander |
| <input type="checkbox"/> Offset press | <input type="checkbox"/> Vehicle operation |
| | <input type="checkbox"/> Hand tool misuse |

SAFETY AUDIT

School _____ Room # _____ Date _____

Evaluators _____

GENERAL LAB	Excellent	Good	Needs Improvement	Needs Immediate Attention	N/A
Appearance/Cleanliness					
Room set up/organization					
<input type="checkbox"/> Safe machine operation					
<input type="checkbox"/> Danger zone					
<input type="checkbox"/> Logical/systematic room usage					

Recommendations:

MACHINES	Excellent	Good	Needs Improvement	Needs Immediate Attention	N/A
Guards in place					
Guards in working order					
Power cords in safe condition					
Emergency stops working					
Overhead drops					
Blade condition					

Recommendations:

STUDENTS	Excellent	Good	Needs Improvement	Needs Immediate Attention	N/A
Wearing safety glasses					
Wearing face protection					
Wearing hearing protection					
Wearing appropriate clothing					
Using appropriate behavior					

Recommendations:

STORAGE	Excellent	Good	Needs Improvement	Needs Immediate Attention	N/A
Materials					
Projects					
Supplies					
Chemicals					

Recommendations:

SAFETY PROGRAM	Excellent	Good	Needs Improvement	Needs Immediate Attention	N/A
Check lists					
Maintenance					
LO/TO program					
Individual/accident report file					
MSDS					
Safety concerns					

Recommendations:

First steps after an accident occurs:

Provide first aid and verify that medical attention is sought if necessary

- Communicate to parents – both a call from the teacher and from administration
- Make notes on the following issues/questions:
- Record the date, time and location.
- How did the accident happen?
- Who were the witnesses – do they have statements to contribute?
- How many students were in class at the time?
- What was the condition of the equipment being used?
- Were guards in place (if not, why)?
- Were safe procedures being followed?

Gather evidence of proper training and procedures such as:

- Safety handouts
- Safety tests (completed)
- Curriculum/lesson plans requiring safety demonstrations/discussions
- Signed safety sheets
- Video tapes of safety demonstrations

In addition to the accident victim, teachers and other students may need support...