

SCHOOL SHOP INJURIES

Facts about school shop injuries* in Utah

- ▶ On average, 160 students are injured and 86 school days are missed because of school shop injuries every school year.
- ▶ Over half (56%) of the injuries were to fingers.
- ▶ Misuse of equipment accounted for 39% of equipment-related shop injuries.
- ▶ Band saws and table saws were the most common equipment involved in shop injuries.

UTAH STUDENT INJURY REPORT DATA, SCHOOL YEARS 2001-02 TO 2005-06, GRADES 7-12

SCOPE OF THE PROBLEM

WHO

- Injuries occur more often to males (87%).
- Shop injuries occur almost equally among 8th through 12th graders. 7th graders had the lowest numbers.

WHAT

- 793 students injured.*
- 430 missed days of school.
- 285 students received stitches.
- 28 students required surgery.
- Cuts are the most common shop injury reported (65%), followed by burns (7%) and broken bones (6%).

WHEN

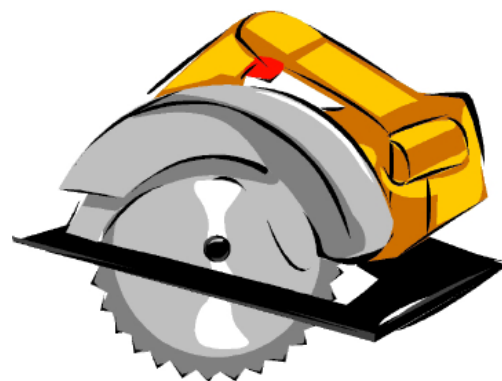
- Most injuries happened during class time (95%), with 5% occurring at other times (before or after school, between classes, etc.).

WHERE

- The most common body parts injured were: fingers (56%), wrist (16%), eye (7%), and head (5%).

WHY

- Most injuries occurred as part of classroom activities, however 4% occurred when students were roughhousing.
- Most injuries involved equipment (90%).
- The most common equipment involved in injuries were: band saw (13%), table saw (11%), other saw (7%), knife (6%), welding equipment (5%), sander (4%), router (4%), and chisel (3%).



PREVENTION TIPS

- Establish and enforce safety policies and procedures.
- Train students in the safe use of equipment.
- Emphasize safety instructions.
- Provide adequate supervision. Reducing the number of students per shop class allows for closer supervision.
- Provide and enforce marked safety areas around each piece of equipment.
- Properly maintain equipment.
- Remove all jewelry, tie back hair, and tuck in loose clothing before using equipment.
- Maintain cleanliness in the shop area. Keep pathways uncluttered and properly store unneeded tools and materials.

UTAH SCHOOL SHOP INJURY EXAMPLES

EXAMPLE 1: While working with a power saw before school, a 10th grader was not using a push stick for 1" cuts when he severed two fingers. Doctors were able to reattach one finger but couldn't save the other.

PREVENTION: Ensure proper supervision of students while working with equipment. Establish and enforce safety policies. Properly train students on the safe use of equipment.

EXAMPLE 2: A teacher was cutting a student's project on a table saw when the 7th grader reached in and grabbed the scrap that was just cut off. The teacher tried to stop the student but was too late. Two of the student's fingers were cut off. The student was absent 6 days.

PREVENTION: Establish and enforce safety policies. Properly train students on the safe use of equipment.

EXAMPLE 3: A 12th grader was chipping slag without wearing safety goggles and got a small piece in her eye, scratching her cornea.

PREVENTION: Wear safety goggles at all times while in the shop area, reducing injury to bystanders as well as those using the equipment.

EXAMPLE 4: While cutting on a band saw, an 8th grader was bumped from behind by another student and cut his finger on the saw. He required stitches and was absent 5 days.

PREVENTION: Provide and enforce marked safety areas around each piece of equipment.

EXAMPLE 5: A 10th grader was turning off the table saw when he pulled his hand across the blade and cut his fingers. The safety guard was not in place. 9-1-1 was called. The student was taken to the emergency room.

PREVENTION: Make sure all equipment, especially table saws, has appropriate safety guards and safety features in place.

EXAMPLE 6: An 8th grader got her hair got caught in the motor while she was turning off the wood lathe. She received 10 staples to her scalp.

PREVENTION: Remove all jewelry, tie back hair, and tuck in loose clothing before using equipment.

SAW SAFETY

General

- Reduce the number of students per shop class to allow for closer supervision.
- Make sure all equipment has appropriate safety guards and safety features in place.
- Provide adequate light for safe cutting.

Band Saw Safety

- Select the correct blade for the job.
- Check the blade tension regularly and carefully.
- Don't force material through the saw.
- Keep hands away from the blade.



Table Saw Safety

- Keep the saw table free of tools and debris.
- The blade should not project more than 1/4" above the material being cut.
- Never reach over or behind the blade with the table saw operating.
- Make sure the blade and fence are parallel to each other.
- Keep blades sharp.



SHOP SAFETY FOR SCHOOL STAFF

Shop Teachers

An instructor who does not instruct properly could place a student in a dangerous situation where the lack of appropriate information might contribute to an injury. A prudent instructor must anticipate and explain proper safety concerning any problems that may arise. Instructors are responsible for appropriate behavior on the student's part. It is the instructor's responsibility to keep the equipment in safe working order.¹

Principals

Principals should be involved in shop safety by: 1) Talking with the shop teacher about the importance of teaching and enforcing safety; 2) Reviewing safety procedures with the shop teacher; 3) Frequently recognizing shop teachers' good safety record, and; 4) Conducting drop in visits to observe safety practices.

All data is from the Utah Department of Health VIPP Student Injury Report Database.

*All reportable injuries meet the following criteria: Any injury that is severe enough to cause the loss of one-half day or more of school and/or warrants medical attention and professional treatment (e.g., nurse, M.D., ER staff, etc.). Shop injuries were defined as injuries that occurred in industrial art classes, vocational educational classes, or automotive classes.

1. Utah State Office for Applied Technology Education. (2002). *Safety Program and Management Guide*. Retrieved from www.usoe.k12.ut.us/ate/Teched/CTESafety/SafetyManual2002.pdf on July 10, 2007.