

UNIT VII - BASIC HOME AND FARMSTEAD SAFETY AND MAINTENANCE

Lesson 4: Personal Safety Practices

Competency/Objective: Identify personal safety practices when using hand and power tools.

Study Questions

1. **How do I protect my eyes?**
2. **What must be worn to be safe?**
3. **Why is cleanliness important to safety?**
4. **How do I use hand tools safely?**
5. **How do I use power tools safely?**

References

1. *Exploring Agriculture in America* (Student Reference). University of Missouri-Columbia: Instructional Materials Laboratory, 2000, Unit VII.
2. *Safety First: Wood Shop Safety* (T&I Video 149). Missouri Resource Center for Career & Technical Education, University of Missouri-Columbia.

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Lesson 4: Personal Safety Practices

TEACHING PROCEDURES

A. **Review**

Review the previous lesson, identifying common tools and their uses. Students should be able to identify a tool and describe the appropriate use for that tool. The next step in becoming familiar with hand and power tools is to become familiar with safe tool use and personal safety practices. Tools are ineffective and dangerous if not used in a safe and proper manner.

B. **Motivation**

Begin by viewing the safety video entitled *Safety First. Wood Shop Safety* (T&I Video 149) and discuss the importance of using hand and power tools safely. Ask students to share examples of people that they know who have been injured in accidents involving hand or power tools. Discuss how they think these accidents could have been prevented.

C. **Assignment**

D. **Supervised Study**

E. **Discussion**

Q1. How do I protect my eyes?

A1. **Safety glasses/goggles should be used. These should have side shields to protect the eyes from debris that could enter from the side.**

Explain to the students that safety glasses/goggles should be used. Ask students to predict what would occur without these safety glasses/goggles.

Q2. What must be worn to be safe?

A2.

- a) **Clothing must fit well and be free from tears. Loose, baggy, or frayed clothing is a safety hazard.**
- b) **Protective clothing such as coveralls, shop aprons, or shop coats are highly recommended to protect clothing from damage.**
- c) **If hair is long, hair restraints must be worn to keep hair out of the way of machines that have moving parts.**
- d) **Leather shoes with steel toes and high tops are recommended to protect feet from injury.**
- c) **Face masks should be worn when working around fumes or dust.**

Ask students to describe clothing of professionals in various machine shops. What do they have in common.

Q3. Why is cleanliness important to safety?

A3. **Cleanliness is important to safety for a number of reasons.**

- a) **Materials strewn about a shop are obstacles.**
- b) **People risk falling over tools or materials on the floor.**
- c) **Debris can be a fire hazard.**

Ask students why cleanliness is important to safety. List their responses on the board.

Q4. How do I use hand tools safely?

A4.

- a) **Protect eyes and clothing.**
- b) **Be certain that the operator is using the correct tool for the job.**
- c) **Before using a hand tool, be certain that the tool is not damaged in any way.**
- d) **Understand the operation of the tool and conduct the operation correctly and carefully.**
- e) **Store hand tools in their proper place after use to keep the shop clear from hazards.**
- f) **Be sure that the tool is clean and undamaged before storage. A damaged tool should be repaired, not put away for the unsuspecting person to use later.**

Ask students to restate the major points they observed in the video shown during the Motivation about using hand tools safely.

Q5. How do I use power tools safely?

A5.

- a) **Obtain permission from the instructor before using any power tool.**
- b) **Conduct an inspection of the tool to meet the following standards:**
 - 1) **The blade or cutter is clean and sharp.**
 - 2) **The power cord and switch are in good condition.**
 - 3) **All guards are in place.**
- c) **Protect eyes and clothing properly.**
- d) **The operator should use a power tool only after obtaining instruction in and mastering a safety test on the proper use of the tool.**
- e) **Be sure to let others in the shop know when a tool is in use.**
- f) **Make any adjustments to a power tool when the switch is off and the tool is unplugged.**
- g) **After use, power tools should be properly cleaned and stored.**

Ask students to restate the major points they observed in the video shown during the Motivation about using power tools safely.

F. *Other Activities*

1. Instruct students in the proper and safe use of each of the hand and power tools mentioned in the previous lesson.
2. Administer a general safety test, a hand tool safety test, and a safety test on the power tools mentioned in the previous lesson. Have students retake the test to 100% competency.
3. Have a guest speaker from a local machine shop, agri-business, or Cooperative Extension office speak on shop safety.
4. Have students create general, hand tool, or power tool safety posters to display around the classroom and shop.

G. *Conclusion*

Once students have attained knowledge of hand and power tools, it is essential that they know the safety practices associated with working with or around such types of tools. Safety not only

prevents injury to the operator, it also prevents injury to others in the area and extends the life of the equipment.

H. ***Answers to Activity Sheets***

I. ***Answers to Evaluation***

A unit test is provided at the end of this unit. If a lesson quiz is needed, use questions pertaining to this lesson from the unit test.

