

Unit C: Forest Management

Lesson 7: Applying Safe Practices in Forest Management

Student Learning Objectives: Instruction in this lesson should result in students achieving the following objectives:

1. Identify potential hazards in forest management.
2. Identify safety equipment used in forest management.

Recommended Teaching Time: 1.0 hour

Recommended Resources: The following resources may be useful in teaching this lesson:

- A PowerPoint has also been developed with use of this lesson plan
- <http://www.vtfpr.org/util/documents/ChainsawSafetyTipsforFirewoodCutters.pdf>
- http://www.msha.gov/DISTRICT/DIST_05/contract/logging.htm

List of Equipment, Tools, Supplies, and Facilities

Writing surface
PowerPoint Projector
PowerPoint slides
Transparency Masters

Terms: The following terms are presented in this lesson (shown in bold italics and on PowerPoint Slide #2):

- Kickback

Interest Approach: Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Ask students to make a list of the various dangers associated with forest management. Ask a few students to share the items on their list and write them on the board. Then ask students to think of ways in which the forester could reduce the risks associated with these dangers.

Summary of Content and Teaching Strategies

Objective 1: Identify potential hazards in forest management.

(PowerPoint Slide #3)

I. Safety is an issue that should be of concern for any one involved in the forestry industry. Anytime that a person enters the forest there are hazards. Some of the potential hazards are:

(PowerPoint Slide #4)

- A. Falling branches
- B. Bees and hornets
- C. Stinging nettle, briars, and thorns
- D. Chainsaw kickback –

(PowerPoint Slide #5)

Kickback is the sudden, unexpected upward and backward movement of the chain and guide bar. It occurs when the cutting teeth on the chain or the chain itself catches or binds in the cut. Because the chain is moving at very high speeds, if the chain or teeth strike a hard substance, or get pinched in the cut, the whole saw will move with great force. Some ways to avoid kickback are:

(PowerPoint Slide #6)

1. Avoid cutting with the tip or upper quarter of the bar.
2. Use a tip guard that covers the end of the bar.
3. Operate the saw in the correct cutting position, stand at an angle to the saw so that if a kickback were to occur the saw would miss your head and neck.

(PowerPoint Slide #7)

4. Keep both hands on the saw while cutting. Keep your left elbow stiff. This will help prevent the saw from striking you should it kickback.
5. Don't use a chainsaw to cut wood from old buildings, unless you are absolutely sure that all nails, screws, or other metal objects have been removed.

**** If possible ask a guest speaker to come in and talk to the class about forest management safety. If they have any personal experiences of events that may have happened when safety rules were not followed have them share the consequences of these actions with the class.**

Objective 2: Identify safety equipment used in forest management.

(PowerPoint Slide #8)

II. There are many pieces of safety equipment that a forester should have on hand and know how to properly use. Some of the basics are:

(PowerPoint Slide #9)

- A. Hardhat – A hardhat protects the forester's head from falling limbs, branches, and even the fruits of some trees.

(PowerPoint Slide #10)

- B. Safety glasses – These provide eye protection from low branches and shrubs when following a compass line. They also help keep shaving and saw dust out of the eye of a chainsaw operator.

(PowerPoint Slide #11)

C. Long-sleeved shirts – These are needed to provide protection to the skin from insect bites and from poisonous plants, such as poison ivy, poison oak, and poison sumac.

(PowerPoint Slide #12)

D. Heavy trouser or chaps – These items protect the legs from stinging nettle, briars, and thorns. Special chaps should be worn when operating a chainsaw to provide extra protection against injury.

(PowerPoint Slide #13)

E. High-top boots – This type of boot should be worn to provide good ankle support to reduce the chance of injury.

(PowerPoint Slide #14)

F. First-aid kit – A properly supplied first-aid kit should always be on hand when working in the forest.

**** If you have these types of safety items, bring them in to show the class. The guest speaker may be able to show their safety gear to the class.**

Review/Summary: Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. The objectives listed on PowerPoint Slide #15 can also be used.

Evaluation: Evaluation should be based on student comprehension of the learning objectives. This can be determined using the attached sample written test.

Answers to Sample Test:

Part One: Short Answer

1. See objective 1 for scoring this item.
2. See objective 2 for scoring this item.

