

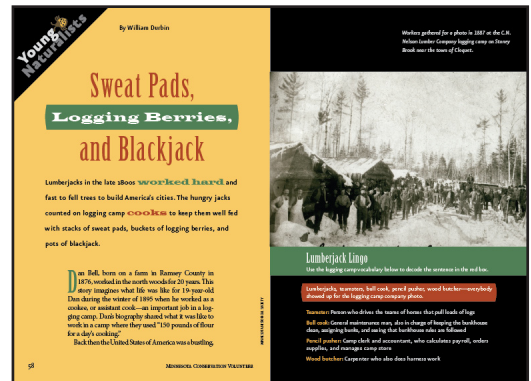
Teachers Guide

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“Sweat Pads, Logging Berries, and Blackjack” Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article “Sweat Pads, Logging Berries, and Blackjack” by William Durbin. Published in the Nov.–Dec. 2008 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/logging

Young Naturalists teachers guides are provided free of charge to classroom teachers, parents, and students. This guide contains a brief summary of the article, suggested independent reading levels, word count, materials list, estimates of preparation and instructional time, academic standards applications, preview strategies and study questions overview, adaptations for special needs students, assessment options, extension activities, Web resources (including related Conservation Volunteer articles), copy-ready study questions with answer key, and a copy-ready vocabulary sheet and vocabulary study cards. There is also a practice quiz (with answer key) in Minnesota Comprehensive Assessments format. Materials may be reproduced and/or modified a to suit user needs. Users are encouraged to provide feedback through an online survey at www.mdnr.gov/education/teachers/activities/ynstudyguides/survey.html.



Summary

“Sweat Pads, Logging Berries, and Blackjack” gives readers a taste of 1895 northern Minnesota logging camp life from the perspective of a 19-year-old cook’s assistant named Dan Bell. The article is rich in the vernacular of loggers, with a separate section devoted to “Lumberjack Lingo.” While the theme is the food loggers ate and how it was prepared and served, readers will also learn about other important jobs in a major Minnesota industry at the turn of the 20th century.

Suggested reading levels:

Total words:

intermediate through middle grades

1,923

“Sweat Pads, Logging Berries, and Blackjack” — Teachers Guide

Materials: Paper, poster board, pencils, pens, markers, and print resources from your media center, pine tree wafer with visible rings (optional), index cards

Preparation time: One to two hours, not including time for extension activities

Estimated instructional time: Two to three 50-minute class periods (not including extensions)

Minnesota Academic Standards applications: “Sweat Pads, Logging Berries, and Blackjack” may be applied to the following Minnesota Department of Education standards:

I. Reading and Literature

- A. Word Recognition, Analysis and Fluency
- B. Vocabulary Expansion
- C. Comprehension

II. Writing

- A. Types of Writing
- B. Elements of Composition
- C. Spelling
- D. Research
- E. Handwriting and Word Processing

III. Speaking, Listening and Viewing

- A. Speaking and Listening
- B. Media Literacy

Science

Grades 5 and 8

IV. Life Science

- F. Flow of Matter and Energy
- Grades 7

IV. Life Science

- F. Flow of Matter and Energy

Social Studies

Grades 4–8

II. Minnesota History

- E. Industrial Era 1865–1914: The student will know and understand Minnesota’s major industries and economic, social, political and technological changes that accompanied industrialization.

V. Geography

- D. Interconnections: The student will describe how humans influence the environment and in turn are influenced by it.

Arts

All grades

Artistic Expression

- D. Visual Arts

Complete Academic Standards are available at www.education.state.mn.us. Teachers who find other connections to academic standards are encouraged to contact *Minnesota Conservation Volunteer*.

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Preview Before you read, display a large pine wafer with clearly visible rings, or project the photo found at www-saps.plantsci.cam.ac.uk. Tell students the story is about a boy who lived in Minnesota over 100 years ago. Label the outermost ring 1950. Ask the students to find the ring for the year 1895. How old was the tree when it was cut? What can be learned from examining tree rings? (See extensions for an introduction to the science of dendrochronology.)

Following discussion ask students to survey the article. Examine the photos. Use the KWL strategy (Ogle, 1986) to find out what your students already know (K) about trees and logging, what (W) they would like to learn, and eventually, what they learned (L) while reading the article and related materials, and through participating in extension activities. You might begin by asking small groups to brainstorm their ideas. Then combine the groups’ data to make a class list. Display your K and W ideas on poster board or paper (see Vocabulary preview). Add to your L list as you read and discuss the article. See www.teach-nology.com/web_tools/graphic_org/kwl for a KWL generator that will produce individual organizers for your students. Individual organizers may be useful as students read the article for answers to W questions. KWL also gives you the opportunity to introduce interdisciplinary connections you will make during extension activities. For example, if you plan to use the article during social studies, science, or art, you may ask students to review their KWL for concepts that are specific to those disciplines.

If you have a school forest or are within walking distance of a wooded area, walk through the woods. Identify different species of trees. Estimate the age of the trees. Ask students if the trees appear mature. During your walk add items to the K and W categories.

Vocabulary preview

(1) See the copy-ready vocabulary list included in this guide. You may wish to modify the list based on your knowledge of your students’ needs. Pretesting vocabulary individually, in small groups, or with your entire class can be an effective vocabulary preview strategy. You may then post-test at the conclusion of this activity (see Assessment section below).

(2) Connections to vocabulary in the article may also be made during KWL. If students are not familiar with some of the terms, include them in the W list. Other terms may be added to the W list as they read the article. Eventually they can be moved to the L list. You may write vocabulary from the article in green ink, while other ideas are written in black. Note: Some of the words in the vocabulary list definitions may require further explanation. Also, preview the study questions for unfamiliar terms.

(3) You may wish to use the study cards found at the end of this guide. Cut along the horizontal line; fold in the middle and tape or staple. Study cards (see *Strategic Tutoring*, Hock, Deshler, and Schumaker, 2000) can be applied to any subject area. On one side of the card, in large letters, write a key word or phrase that students are expected to know. In smaller letters frame the word or phrase in a question or statement. On the other side of the card, in large letters, write the answer to the question. Finally, in smaller letters, frame the answer in a question or statement. Blanks are provided to allow you or your students to add new words or phrases.

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Vocabulary preview continued

(4) None of the italicized words or words from “Lumberjack Lingo” is on the vocabulary list or study cards. If you are using this article for Minnesota history you may wish to pair up students, give each pair a stack of index cards, and have them make a “Lumberjack Lingo” concentration game.

Study questions overview

Study questions parallel the story (the answer to the first question appears first in the article, followed by the second, and so on). Preview the entire guide with your class before you read the article. You may wish to read the story aloud and complete the study questions in class, in small groups, or as an independent activity. The questions may be assigned as homework, depending on the reading ability of your students. Inclusion teachers may provide more direct support to special needs students (see Adaptations section). The study questions may be also used as a quiz. Note: Items 1, 2, 6, 9, 12, 13, and 16 and the Challenge require varying degrees of analytical thinking.

Adaptations

Read aloud to special needs students. Abbreviate the study questions or highlight priority items to be completed first. If time allows, remaining items may be attempted. Peer helpers, paraprofessionals, or adult volunteers may lend a hand with the study questions. With close teacher supervision, cooperative groups can also offer effective support to special needs students, especially for extension activities.

Assessment

You may use all or part of the study guide, combined with vocabulary, as a quiz. Other assessment ideas include: (1) Students may write a letter home describing their life as cookees in a turn-of-the-century logging camp. (2) Students may write multiple-choice, short-answer, or true-false questions to test their classmates’ understanding of the story. Student-generated questions may be then used as an alternative to study questions. (3) Students may, based on the description in the story, draw a map of the camp and surrounding forest. (4) Poster presentations may describe one or more of the jobs in a logging camp.

Extension activities

1. Read “A Year in the Life of a Pine Tree” by Hal Fritts at www.ltrr.arizona.edu/~hal/. This article will introduce your students to dendrochronology.
2. Invite a DNR forester to your classroom. Possible topics may include tree identification, forest harvesting and management, disease and pest control, and fire prevention/fighting.
3. Visit one of Minnesota’s state parks (www.dnr.state.mn.us/state_parks/list.html). Park naturalists are eager to work with teachers on activities and presentations that connect with your curriculum.
4. Read *Blackwater Ben* by William Durbin, with reproducible study guide. Durbin’s book will challenge readers with a more developed plot and in-depth character study. Find the study guide at www.williamdurbin.com/assets/resources/blackwater_ben/Blackwater_Ben_study_guide.doc?PHPSESSID=23c66c2ada68a9ff093c6a2d4475dda6
5. Invite a logger to visit your classroom, or take your class to a logging site near your school. See the Forest History Center (www.mnhs.org/places/sites/fhc/) in Grand Rapids, Minnesota, for an exceptional field trip opportunity.
6. “Tree Guardians,” the Young Naturalists article in the September–October 2008 *Volunteer*, is an excellent companion piece for “Sweat Pads, Logging Berries, and Blackjack.”

Web resources

Minnesota DNR Division of Forestry

www.dnr.state.mn.us/forestry/index.html

www.dnr.state.mn.us/faq/mnfacts/forests.html

University of Minnesota Forestry

www.forestry.umn.edu/

Dendrochronology

web.utk.edu/~grissino/resources.htm

www.plantbio.ohiou.edu/dendro/

Minnesota logging history

www.mnhs.org/places/sites/fhc/logging.html

www.americaslibrary.gov/cgi-bin/page.cgi/es/mn/logging_1

Teacher resources

www.dnr.state.mn.us/education/teachers/index.html

www.williamdurbin.com/resources.htm Many related Minnesota Conservation

Related articles

Many related *Minnesota Conservation Volunteer* articles are available online at www.dnr.state.mn.us/volunteer/articles/index.html, including:

March–April 1999

“Tremendously Marvelous Trees” (YN article with Teachers Guide)

www.dnr.state.mn.us/young_naturalists/trees/index.html

September–October 2001

“What Should a Forest Be?”

www.dnr.state.mn.us/volunteer/sepoct01/fieldnotes.html

March–April 2003

“Partners in Forest Conservation”

www.dnr.state.mn.us/volunteer/marapr03/fnpartners.html

November–December 2004

“The Real Story of the Chippewa National Forest”

www.dnr.state.mn.us/volunteer/novdec04/chippewanf.html

November–December 2005

“Fire Planes Pay Off”

www.dnr.state.mn.us/volunteer/novdec05/fire_planes.html

May–June 2005

“The Strike Tree”

www.dnr.state.mn.us/volunteer/mayjun05/spstriketree.html

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Related articles continued

January–February 2006

“Breaking Up the Forest”

www.dnr.state.mn.us/volunteer/janfeb06/breaking_up.html

March–April 2006

“Green as Money”

www.dnr.state.mn.us/volunteer/marapr06/green_money.html

May–June 2006

“Look Down in the Woods” (YN article with Teachers Guide)

www.dnr.state.mn.us/young_naturalists/forest_floor/index.html

“Stamped and Certified”

www.dnr.state.mn.us/volunteer/mayjun06/forestry_certification.html

November–December 2007

“Walks in the Old Woods”

www.dnr.state.mn.us/volunteer/novdec07/old_woods.html

March–April 2008

“In the Woods with . . . Dave Epperly”

www.dnr.state.mn.us/volunteer/marapr08/in_the_woods.html

September–October 2008

“Tree Guardians”

www.dnr.state.mn.us/young_naturalists/tree_guardians/index.html

Note: Hundreds of articles about forestry and forests have been published in the Volunteer and are available in hard copy at: www.dnr.state.mn.us/volunteer/article_index/subject.html

References

Durbin, W. *Blackwater Ben*. New York: Yearling Books, 2005.

Hock, M.F., Deshler, D.D., and Schumaker, J.B. *Strategic Tutoring*. Lawrence, Kan.: Edge Enterprises, 2000.

Ogle, D.S. *K-W-L Group instructional strategy*.

In A.S. Palincsar, D.S. Ogle, B.F. Jones, and E.G. Carr (Eds.), *Teaching Reading as Thinking: Teleconference Resource Guide*, pp.11–17. Alexandria, Va.: Association for Supervision and Curriculum Development, 1986.

“Sweat Pads, Logging Berries, and Blackjack” — Teachers Guide

Study Questions

Teachers guide for the Young Naturalists article “Sweat Pads, Logging Berries, and Blackjack” by William Durbin. Published in the Nov.–Dec. 2008 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/logging

Name _____ Period _____ Date _____

1. How old was Dan Bell when he stopped working in logging camps? _____

2. Why was Dan’s job important? _____

3. What kinds of trees were logging companies most interested in? _____

4. How were logs moved from the north woods to mills in other parts of the country? _____

5. How much money did Dan save by walking 25 miles? _____ What would you have done in his place?

6. How much was Dan paid per day? _____

7. Describe the building where Dan worked. _____

8. What was Dan’s first task as an inexperienced cookee? _____

9. Who helped Dan learn the ropes? _____

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10. Why do you suppose Dan gagged at the smell of a cook shack full of loggers? _____

11. How long was Dan’s workday? _____

12. Why do you think jacks were not allowed to talk during meals? _____

13. Lumberjacks did not eat as much on Sundays. Why not? _____

14. Describe the “double-track” system for moving logs. _____

15. Lumberjacks ate lunch even faster than breakfast. Why? _____

16. Why do you think Dan decided not work on the log drive down the Mississippi? _____

Challenge: Estimate the diameter of the largest white pines near Dan’s logging camp. _____

Study Questions Answer Key

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Published in the Nov.–Dec. 2008 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/logging

1. How old was Dan Bell when he stopped working in logging camps? **39**
2. Why was Dan’s job important? **Lumberjacks worked hard and needed lots of good food for energy and good health.**
3. What kinds of trees were logging companies most interested in? **Large, old growth white and red pine.**
4. How were logs moved from the north woods to mills in other parts of the country? **On trains and down rivers.**
5. How much money did Dan save by walking 25 miles? **\$1.00** What would you have done in his place? **Answers will vary. Encourage students to compare the value of today’s dollar with a dollar in 1895.**
6. How much was Dan paid per day? **Less than \$1.00 per day.**
7. Describe the building where Dan worked. **Answers will vary, but should include details like the dimensions, log walls, four logs per wall and tarpaper roof.**
8. What was Dan’s first task as an inexperienced cookee? **Peeling potatoes.**
9. Who helped Dan learn the ropes? **Glen, another teenager with more experience as a cookee.**
10. Why do you suppose Dan gagged at the smell of a cook shack full of loggers? **Answers will vary. Loggers did not bathe or wash their clothes often. The body odor must have been awful.**
11. How long was Dan’s workday? **16–17 hours.**
12. Why do you think jacks were not allowed to talk during meals? **Answers will vary. The camp bosses wanted jacks working in the woods, not visiting over a leisurely breakfast.**
13. Lumberjacks did not eat as much on Sundays. Why not? **Jacks did not work on Sundays, so they did not need as much food. They burned fewer calories.**
14. Describe the “double-track” system for moving logs. **Answers will vary, but should include how tracks were cut in the snow and iced down so the logging sleds would slide easily and not move sideways.**
15. Lumberjacks ate lunch even faster than breakfast. Why? **It was very cold. If they did not eat quickly their food would get cold or even freeze.**
16. Why do you think Dan decided not work on the log drive down the Mississippi? **Answers will vary. Dan may have been homesick. He did not like Mac, his boss. He may have been needed on the family farm.**

Challenge: Estimate the diameter of the largest white pines near Dan’s logging camp. **Answers will vary. If an average man’s reach is six feet from fingertip to fingertip, then three men’s reach would be approximately 18 feet. Using 18 feet as the circumference, a white pine’s diameter would be about 5’9” (use the formula $C = \pi d$).**

Minnesota Comprehensive Assessments Practice Items

Teachers guide for the Young Naturalists article “Sweat Pads, Logging Berries, and Blackjack” by William Durbin.

Published in the Nov.–Dec. 2008 *Minnesota Conservation Volunteer*, or visit www.mndnr.gov/young_naturalists/logging

Name _____ Period _____ Date _____

1. What was kerosene used for in the cook shack? _____.
 - A. to polish glass
 - B. to wash dishes
 - C. for fuel in the lamps
 - D. to kill lice

2. Why do you think young farm boys often worked in logging camps during the winter? _____

3. The cook shack walls were made of _____.
 - A. tarpaper
 - B. birch bark
 - C. plywood
 - D. four large logs

4. Dan’s workday started at _____.
 - A. 4:00 a.m.
 - B. 4:00 p.m.
 - C. 7:00 a.m.
 - D. 9:00 p.m.

5. What was Dan’s last year in the logging camps? _____.
 - A. 1905
 - B. 1899
 - C. 1915
 - D. 1955

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1. What was kerosene used for in the cook shack? **C. for fuel in the lamps**
2. Why do you think young farm boys often worked in logging camps during the winter?

Answers will vary. Farm boys (and older men, too) did not have as much farm work to do in the winter. Their families needed the money the boys earned in the camps.

3. The cook shack walls were made of **D. four large logs.**
4. Dan’s workday started at **A. 4:00 a.m.**
5. What was Dan’s last year in the logging camps? **C. 1915**

“Sweat Pads, Logging Berries, and Blackjack” —Teachers Guide

Vocabulary

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biography the story of a person’s life

dawdle walk or move slowly

greenhorn someone who is inexperienced

laggard someone who can’t keep up with others

lollygag waste time

molasses thick, sweet syrup that is left over when sugar is produced

old growth trees growing in an area that had never been logged

paring knife a short, tapered knife for removing the skin of fruits and vegetables

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Vocabulary Study Cards

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Cut along the horizontal lines, fold on the dashed vertical line and tape or staple. Blanks are provided to allow you or your students to add new words or phrases.

A **biography** is

FOLD HERE

The story of a
person’s life is a

To **dawdle** is to

FOLD HERE

To **walk or move
slowly** is to

What is a
greenhorn?

FOLD HERE

Someone who is
inexperienced is called a

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A **laggard** is

FOLD HERE

Someone who can't keep up with others is called a

To **lollygag** means to

FOLD HERE

To **waste time** is to

What is **molasses**?

FOLD HERE

The thick, sweet syrup that is left over when sugar is produced is

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Cut along the horizontal lines, fold on the dashed vertical line and tape or staple. Blanks are provided to allow you or your students to add new words or phrases.

Old growth
trees grow in

FOLD HERE

Trees growing in
areas that have never been
logged are called

What is a
paring knife?

FOLD HERE

A short, tapered knife for
removing the skin of fruits
and vegetables is called a

FOLD HERE

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Cut along the horizontal lines, fold on the dashed vertical line and tape or staple. Blanks are provided to allow you or your students to add new words or phrases.

FOLD HERE

FOLD HERE

FOLD HERE