

THE BWCA WILDERNESS KIT

Lesson Plan
and Materials



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UNIT FIVE: LEAVE NO TRACE

OVERVIEW

GRADES: 5-8

AGES: 11-14

TIME: 50 minutes

MATERIALS NEEDED:

1. Only You Can Choose Game Boards (1 per participant)
2. Only You Can Choose Choice Cards (1 set per group of four)
3. Striped/Solid colored wedges for Only You Can Choose game
4. Bonus Chips
5. Copy of BWCAW permit
6. Leave No Trace Principles Banner
7. Unit Five Wilderness Passport (master in manual or on CD; make copies as needed)
8. Unit Five Wilderness Passport stamp and ink pad
9. Lakes Region LNT pamphlet

CONCEPTS AND KEY IDEAS:

1. Human activities can change the environment.
2. Humans can choose to lessen their impact to an environment.

GOALS:

1. Participants will understand that the choices they make can have positive or negative impacts on the environment and other people.
2. Participants will be able to list and explain the seven Leave No Trace principles.
3. Participants will understand the connections between Leave No Trace principles and Boundary Waters Canoe Area Wilderness rules and regulations.

SKILLS:

1. Decision-making
2. Working in a small group
3. Extrapolating from specific to general
4. Reading
5. Manipulating pieces
6. Making lists

UNIT FIVE: LEAVE NO TRACE



BACKGROUND

The **Wilderness Act** and other legislation have paved the way for conservation of the **BWCAW** and other wildlands. However, with approximately 200,000 visitors to the BWCAW each year, laws alone cannot ensure that wilderness areas will continue to exist in a **pristine** condition for future generations. Human activity will largely determine the continued health and stability of BWCAW **ecosystems**.

Every year people who love the BWCAW create problems for themselves, other visitors, and for the wilderness community. Trees and other vegetation are killed and damaged; soil is compacted so that seeds can no longer take root; trails are widened into broad muddy wallows; and water becomes polluted with fish entrails, soap, and dinner leftovers. People who come for solitude may find intolerably overcrowded conditions; those who seek the great silences may have to contend with a boom box blaring from across the lake. Wildlife change their behavior in unnatural and unhealthy ways in response to people who feed them, fail to pack out all their trash and garbage, or fail to maintain a respectful distance. Our cultural and historical heritage is diminished by those who vandalize, steal, or alter artifacts and other remains. All of these problems and more can be eliminated as people learn to *leave no trace*.

Leave No Trace (LNT) is an educational program designed to promote skills and ethics to support the sustainable use of wildlands and other natural areas. It originated in the United States in 1991 as a partnership between individuals, public agencies, and private organizations which use or manage wildlands. The goal of LNT is to help visitors minimize their impact while enjoying the outdoors. The seven principles of LNT--based on an abiding respect for, and appreciation of, wildland communities and tempered by good judgment--enable people to enjoy and use wildlands like the BWCAW so that its stability, integrity, and beauty will be preserved for future generations.

LEAVE NO TRACE (LNT) PRINCIPLES

- Plan Ahead and Prepare
- Travel and Camp on Durable Surfaces
- Dispose of Waste Properly
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Other Visitors





UNIT FIVE: LEAVE NO TRACE

PREPARATION AND INTRODUCTION

PREPARING FOR UNIT FIVE:

1. Read through the unit and familiarize yourself with all of the materials before starting the activities.
2. Take items out of the BWCA Wilderness Kit marked "Unit Five: Leave No Trace."
3. Look through the Only You Can Choose Game to make sure that all of the appropriate pieces are present.
4. Make sure that you have enough room for the participants to divide into small groups around a table or with their desks pulled together and that they have an open space on their tabletop/desk for the Only You Can Choose Game boards, cards and game pieces.

INTRODUCTION: (5 minutes)

1. Ask the following questions to assess the participants' knowledge and get them ready to learn.
 - Have you gone camping or visited the BWCAW?
 - How long were you there?
2. Explain to the group that they will be going on a "trip" to the BWCAW. Participants must make decisions along the way, which will affect other people on the trip and the area in which they are traveling.

UNIT FIVE: LEAVE NO TRACE



ACTIVITY ONE: ONLY YOU CAN CHOOSE

OBJECTIVE:

1. Participants will learn that the choices they make can cause high, low or no impacts on rock, soil, vegetation/forest, water, cleanliness, wildlife and solitude.

INSTRUCTIONS:

1. Split the larger group into groups of four people. Groups can be smaller but should not be larger.

NOTE: If your entire group exceeds 32 people, make the groups larger and have people share game boards or make paper copies for the other individuals.

2. Give each person a board (a square board split into seven colored pie shapes). Each wedge in the circle represents an essential piece of an ecosystem: rock; soil; vegetation/forest; water; cleanliness; wildlife; and solitude.
3. Each group also receives a set of wedges, solid colored on one side and striped on the other side. Each participant should receive seven wedges, one of each color.
4. Pass out a few Bonus Chips to each group.
5. Give each group a set of Choice cards. There are eight complete sets with the kit. A complete set equals 9-10 cards for each category. Instruct them to arrange the cards in piles, by color, with the category label facing up and the question facing down.
6. Explain that the object of the game is to fill the game board with solid colored wedges and to get as many bonus chips as possible.
7. To begin play, decide who goes first. That person chooses a category; for example, "water."

TIME: 20 minutes

MATERIALS NEEDED:

1. Only You Can Choose Game Boards
(1 per participant)
2. Only You Can Choose Choice Cards (1 set per group of four)
3. Striped and Solid Colored Wedges
4. Bonus Chips



UNIT FIVE: LEAVE NO TRACE

ACTIVITY ONE: ONLY YOU CAN CHOOSE



FUN FACTS:

The time required for certain objects to decompose.

1. Paper: two to four weeks
2. Banana peel: three to five weeks
3. Wool cap: one year
4. Cigarette butt: two to five years
5. Disposable diaper: 10 to 20 years



8. The team member to his or her left then draws a “water” card and asks that person the question on the card. The person must choose from 2-3 answers.
 9. Based on his or her choice the reader will then read the complete answer and the action to take based on the answer. The player will follow that direction.
 - If the person answers the question correctly, then he or she places the appropriate solid colored wedge on the corresponding wedge of the board. For example, if asked a “water” question, then the person uses a blue wedge to cover the “water” (blue) wedge on the board.
 - If the person answers the question incorrectly, then he or she places a striped wedge on the corresponding wedge of the board. For example, if a “solitude” question is incorrectly answered, then a striped wedge is placed on the “solitude” (yellow) wedge of the board.
- NOTE: The striped wedge may be removed only by waiting until that person’s next turn and then correctly answering a question from the same category. For example, if a “water” question is answered incorrectly, the person must then answer a “water” question correctly during his or her next turn.
10. Some questions offer three choices. One choice improves the site, one choice has low/no impact, and one choice has a high impact. If a player chooses the “improve the site” option, he or she can either add a solid colored wedge PLUS a bonus chip, or remove a striped wedge and add a solid colored wedge.

UNIT FIVE: LEAVE NO TRACE



ACTIVITY ONE: ONLY YOU CAN CHOOSE

INSTRUCTOR'S NOTE:

Be sure to tell the group to read the entire answer on the cards, not simply the action for the player to take.

11. Midway through the game, stop play and take stock of how people are doing.

- How have your ecosystem components been affected?
- What choices did you make that resulted in a Striped or Solid colored wedge?
- What were tough choices?
- What were easy choices?

12. The game ends either when a person completely fills his or her game board with solid colored wedges or time expires. At that point, take a minute to look at people's boards.

- What was hard or easy about the game?
- What did the choices represent (high impact, low/no impact, improvement)?
- Review the decisions that seem to make big impacts.

FUN FACTS:

The time required for certain objects to decompose.

1. Hard plastic container:
20 to 30 years
2. Rubber boot sole:
50 to 80 years





UNIT FIVE: LEAVE NO TRACE

ACTIVITY TWO: THE BIG SEVEN

TIME: 15 minutes

MATERIALS NEEDED:

1. Chalk board or large sheets of paper and markers
2. Leave No Trace Principles Banner
3. Copy of BWCAW Permit

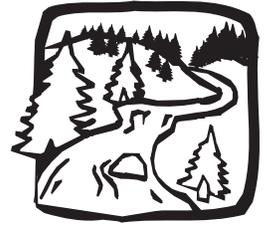
OBJECTIVES:

1. Participants will identify high impact and low impact behavior.
2. Participants will identify and explain the seven Leave No Trace principles.
3. Participants will compare Leave No Trace principles to BWCAW rules and regulations.

INSTRUCTIONS:

1. Gather the group.
2. Make a list on the board or on a large piece of paper with two columns: "High impact" and "Low/no impact."
3. Elicit responses from the group, citing examples from the Only You Can Choose game, to complete these columns.
 - What types of actions created a high impact (resulted in a striped wedge) or a low impact (resulted in a solid colored wedge) on their ecosystem?
4. Next to this list, hang the LNT Principles Banner so that all the participants can see it.
5. Explain the idea of the LNT principles.
6. Ask the participants for examples of each LNT principle based on the decisions they made in the game.
7. Compare the regulations listed on the back of the BWCAW permit with the LNT principles.
 - How are the regulations and principles different?
 - Does at least one of the principles summarize each regulation?

UNIT FIVE: LEAVE NO TRACE



UNIT CLOSING

1. Ask participants questions such as the following:

- How can humans have an effect on places like the Boundary Waters Canoe Area Wilderness?
- What choices can lead to negative impacts on the environment and other people?
- What choices can lead to positive impacts on the environment and other people?

2. Apply these ideas to your local area.

- What “traces” or impacts can people have on their neighborhood and neighbors? At the local park? On the school grounds?
- What can you as an individual do to have a positive impact?

3. Review the seven Leave No Trace principles.

TIME: 10 minutes

MATERIALS NEEDED:

1. Leave No Trace Principles Banner

FUN FACTS:

The time required for certain objects to decompose.

1. Tin can: 80 to 100 years
2. Aluminum can: 200 to 400 years
3. Plastic six-pack holder: 450 years
4. Glass bottles: thousands or millions of years





UNIT FIVE: LEAVE NO TRACE

WILDERNESS PASSPORT

MATERIALS NEEDED:

1. Unit Five Wilderness Passport (master in manual or on CD; make copies as needed)
2. Unit Five Wilderness Passport stamp and ink pad

OBJECTIVES:

1. Participants will list the LNT principles and examples of each.
2. Participants will explain the goal of LNT.

INSTRUCTIONS:

1. Give each participant a copy of the Unit Five Wilderness Passport (master in manual or on CD).
2. Ask participants to complete the Unit Five Wilderness Passport.
3. Stamp each participant's passport when the section is complete.



UNIT FIVE: LEAVE NO TRACE

EXTENSIONS

1. Arthur Carhart National Wilderness Training Center's "Wilderness and Land Ethic Curriculum." Additional information may be found at www.wilderness.net/carhart/.
2. Draw a poster representing the LNT principles, to hang in the school, clubhouse, or similar gathering place.
3. Create a survey to monitor visitor compliance with LNT principles. Participants could interview people using a local park or school grounds.
4. Predict humans' future impact on the BWCAW.
5. Find an area in your neighborhood where the group can implement the seven LNT principles.
6. Lead a discussion on how the LNT principles relate to a person's ethical framework--what he or she believes is right or wrong. The practice of LNT is not mandated or regulated but strongly suggested. How does this tie into ethics and values?
7. Research in more detail specific LNT actions as they apply to the Lakes Region (see enclosed pamphlet).

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MINNESOTA GRADUATION STANDARDS

MIDDLE:

Read, Listen, and View (Learning Area 1)

NON-FICTION:

1. Comprehend, interpret, and evaluate information from a variety of nonfiction formats in reading, listening, and viewing.

MIDDLE:

Write and Speak (Learning Area 2)

INTERPERSONAL COMMUNICATION:

Communicate effectively in a small group by:

1. solving a problem or settling a dispute, and giving a demonstration or presenting new information in a small group;
2. interacting and communicating appropriately with individuals of different gender, age, culture, and points of view; and
3. expressing tone, mood, and vocabulary appropriate for a given situation.

MIDDLE:

Scientific Concepts and Applications (Learning Area 6)

LIVING SYSTEMS:

Know the interactions and interdependence of living systems by understanding plants, animals, and microorganisms including diversity and adaptation of organisms, and populations and ecosystems; and the dynamic effect of humans interacting with the environment by:

1. describing how a premise is supported by scientific concepts, principles, theories, or laws.



UNIT FIVE: LEAVE NO TRACE

ADDITIONAL INFORMATION & RESOURCES

FOR MORE INFORMATION:

The BWCA Wilderness Kit was jointly produced by the Boundary Waters Wilderness Foundation and the United States Forest Service-Superior National Forest. Both are available to answer questions regarding content, instruction, and materials of the kit.

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- **www.superiornationalforest.org:** Superior National Forest website with trip planning information, history of BWCA, rules, and regulations.
- **www.LNT.org:** Leave No Trace website. Includes history of LNT, descriptions of the 7 principles, and teacher resources.
- **www.nols.edu:** National Outdoor Leadership School website. Information under “research” about the impact of humans on wilderness.