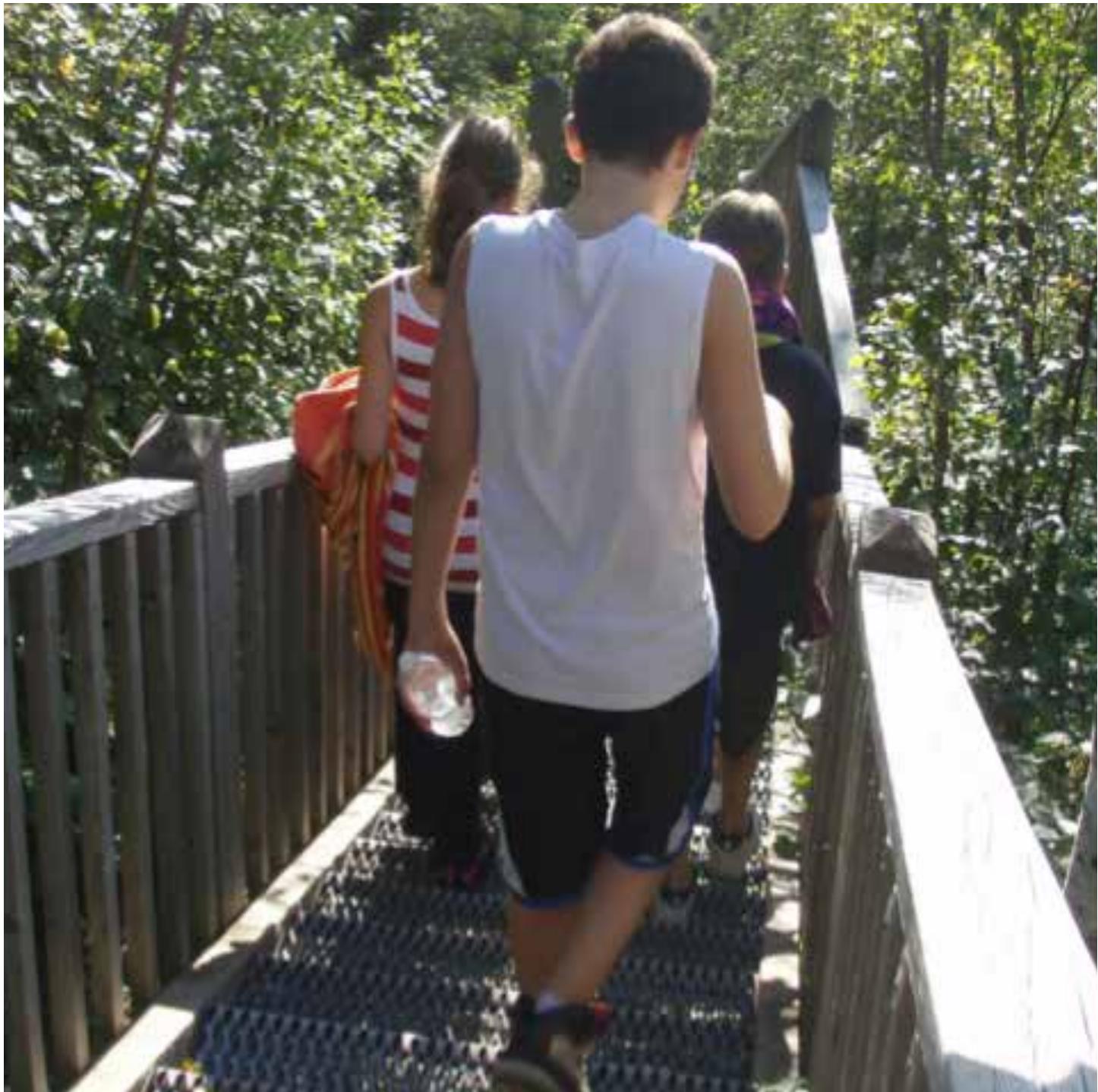


# LIGHT HIKE

## LESSON PLAN



**WOLF RIDGE<sup>SM</sup>**  
ENVIRONMENTAL LEARNING CENTER

# LIGHT HIKE



## CLASS DESCRIPTION: A Personal Growth and Team Skills Class (offered April through August)

Students will hike a designated route, stopping at various points to do activities. These activities will lead to a better understanding of the use of senses in awareness of our surroundings and animal communications. Students will have the opportunity to be alone and experience their surroundings.

**Total time:** 1 1/2 hours (flexible length)

**Audience:** 6-20 students, any age

**Activity level:** strenuous

**Travel:** 1 1/4 mile

**Total uphill travel:** 320 feet

## PURPOSE

To explore and hone our observation skills, use our senses to appreciate our surroundings, and gain insight into animal communications.

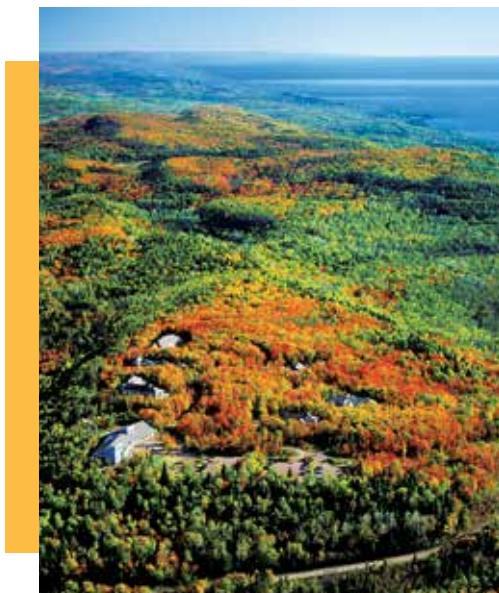
## CONCEPTS

1. All living things acquire physical and behavioral adaptations to be successful in their environment.
2. People can overcome their fear or discomfort of the woods through knowledge and familiarity.
3. Humans learn about their world through their senses, investigation, and experimentation.

## OUTCOMES

Upon completion of Light Hike class students will be able to:

- Share how the I Spy activity increased their observation skills.
- Describe something about the experience that was new and surprising.
- Discuss how their awareness about the forest has changed following the hike and activities.



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**Our mission** is to develop a citizenry that has the knowledge, skills, motivation and commitment to act together for a quality environment.

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## Equipment

### Light Hike:

- 6 different scent jars
- 3 blindfolds
- sound CD
- CD player
- 2 Sigurd Olson quote cards
- I Spy cards
- Sensory Solo cards
- Light Hike Ridge Notes

## Appendices

- Resources
- Possible Routes

## Set-up (15 min.)

- Classroom/class prep description
- Safety Management

## I. Introduction to Light Hike (10 min.)

- A. Greeting
- B. Class Overview
- C. Assess Learner Level

## II. Listen to Animal Sounds (5 min.)

## III. Light Hike (65 min.)

- A. Exploring through Observations - I Spy (stop 1)
- B. Smell - Scent Jars (stop 2)
- C. Hearing - Bat & Moth game (stop 3)
- D. Communication - Animal Calling (stop 4)
- E. Sensory Solo - (stop 5)

## IV. Conclusion (10 min.)

- A. Discuss Sensory Card Solo
- B. Review
- C. Read Quote

## Clean-up (1 min.)

### Set-up (10 min.)

#### Classroom/class prep description

From the kit room pick up a Light Hike equipment kit bag which includes all the materials needed for the hike. Get a CD player from the kit room to play the sound CD.



#### Safety Management

Adhere to and be familiar with all general safety practices designated by Wolf Ridge. Be aware of any student's special needs (medical, etc.) and adjust the activities as needed to maintain safety.

- First aid kits are located in all the buildings and at the canoe landings.

### I. Introduction (10 min.)

#### Grabber

Greet the students as they enter and make sure all the students are appropriately clothed.

#### Assess Learner Level

*During the introduction ask them about what their senses are telling them about their immediate environment.*

Sigurd Olson, a well known naturalist and author from the North Country, wrote about many of his observations from this area and beyond. He employed all of his senses into an experience that many people live through in the pages of his writing. Read students the passage to begin thinking about listening, looking, and being in touch with all of their senses while observing the areas around them:

*"Wilderness sounds would be here, bird songs in the mornings and at dusk. The aspen leaves would whisper and the pines as well, and in the sound of water and wind I would hear all that is worth listening for. I would come in all seasons, when the first buds of spring were painting the hillsides, when the sounds of summer made it seem as though the woods were pulsating with life. I would be here in the autumns watching the pageantry of color, in the winter when the lake was frozen and still and the pines deep with snow. I would come to listen and feel and to recapture for a little while the old joys I had known."*

*Listening Point - Sigurd F. Olson*

## Overview of the Class and Outcomes

Often times we can travel by the same place multiple times a day, perhaps a place that you travel by at home comes to mind, these places can seem the same to us but in fact they are always changing. During this hike you will explore a new or perhaps a familiar place at Wolf Ridge. You and your class will get to pick a route based on the things that you most want to see and explore.

Along the way everyone will make observations looking for a new 'discoveries.' These observations will let you explore using sight, smell, sound, and feel. These observations can encompass a wide variety of things including trees, lichens, birds, sunsets, and more. The hike will take approximately 1.5 hours.

## II. Listen to Sound Tape (5 min.)

Before starting on the hike, listen to the CD with common forest sounds. The tape contains owl, wolf, woodcock, ruffed grouse, and frog songs. Play the CD once just listening. Then play the CD again stopping after each call to practice. You can expect to hear the bird and wolf calls year around. Listen for the others in the appropriate season. The chart shows peak seasons.

## III. Hike (65 min.)

Head away from the buildings following one of the designated light hike trails. Refer to map and suggested hikes at the end of the lesson plan.

### A. Exploring through Observation - I Spy (Stop 1)

Introduce this activity at this stop. It can be done throughout the hike or until the next stop. Give each student an I Spy card.

Have students shout "I spy" when they see the object on their card and then share their observation with the group. Depending on the season and luck sometimes not all the students will find the item on their card. The point is to get students LOOKING. This activity can be continued throughout the hike with students switching cards or you can end it after a couple of stops.

### B. Smell - Scent Jars (Stop 2)

Smell is another way to "observe" our surroundings. Humans can smell about 5 million different scents. Each scent has its own receptor cell in our noses. Canines have 220 million smell cells. One can sometimes estimate the importance of the sense of smell to a particular animal by comparing the size of its nose to its head.

To focus on our sense of smell, have students guess some scents that vary in difficulty to identify. Have the students close their eyes when smelling so they can concentrate on the scent and aren't cheating by looking into the container. Hold the film container under each student's nose for a few seconds. After all have had a chance to smell have them guess what it is.

Scent jar 1 - crayon  
 Scent jar 2 - pepper  
 Scent jar 3 - cedar  
 Scent jar 4 - wintergreen  
 Scent jar 5 - orange/citrus  
 Scent jar 6 - money (expert scent)

### INSTRUCTOR NOTE: Peak Sounds by Month

#### **Boreal Owl**

Feb. & March

#### **Saw-whet Owl**

Feb. & March

#### **Great-horned Owl**

Feb.

#### **Barred Owl**

All winter

#### **Woodcock**

May & June

#### **Ruffed Grouse**

Early spring through fall

#### **Spring Peeper**

End of April through June

#### **Wood Frog**

May

#### **American Toad**

May

#### **Western Chorus Frog**

End of April through May

**INSTRUCTOR NOTE:**  
The Bat & Moth Game requires an open area of about 20 to 30 feet in diameter for playing.

## C. Hearing - Bat & Moth Game (Stop 3)

Hearing is a third way to get to know our environment. The importance of hearing to a particular animal can also be estimated by comparing the size of the ear to the size of the head. The outer flap of the ear works as a receiver for sound. Canines and other animals have much larger "receivers" than we do. They also have the ability to move them independently of each other which allows them to pinpoint a sound with ease. Owls, which do not have outer ear flaps, have an acute sense of hearing, because their ears are located asymmetrically on their heads. This allows them to triangulate quickly on a sound. Bats use echolocation to help them navigate and find prey. They send out high frequency sound waves (which are too high pitched for people to hear) and these sound waves are bounced back to them off their prey. Try the following game to get a sense of how echolocation works.

**Moth and Bat** - Have the kids stand in a circle. Pick about four or five kids to be moths. Choose one or two kids to be bats. Blindfold the bats. Place the bats and moths in the circle of the remaining kids. The object is for the bats to catch the moths by tagging them using echolocation. When the bats say "bat" the the moths must respond by saying "moth". When all the moths are eaten (tagged), exchange players so all the students get a chance to be a bat or moth.

### Assessment

**Concept 1** - All living things acquire physical and behavioral adaptations to be successful in their environment.

## D. Communication - Animal Calling (Stop 4)

Many animals use sound to communicate. They may be marking their territory, having a pep rally for an upcoming hunt, looking for a mate, or alerting others of dangers. Try hooting for owls. Four common owls in the Wolf Ridge area are the Great Horned, barred, Saw-whet, and Boreal owls.

Barred Owl - "Who cooks for you? Who cooks for you all?"

Great Horned Owl - Deep, soft, resonant six-noted hoot.

"Whoo! Whoo-whoo-whoo! Whoo! Whoo!"

Boreal Owl - Single melancholy note repeated at one or two minute intervals.

Saw-whet Owl - Sounds like the beeper of a truck backing up.

You can also try howling for wolves. Listen to the CD in the kit at the beginning of class to learn the wolf's howl. Start on a low note and go high.

Listen for the woodcock. This sandpiper type bird makes a twittering sound, using its wings and voice, during its courtship display.

You may also hear these four common frogs.

Spring peeper - a "peep!"

Chorus frog - sounds like finger running up a comb.

American toad - continuous single noted trill.

Wood frog - sounds like a chicken. "Buck"

Ruffed grouse make the "drumming" noise you may hear during their breeding season. By rapidly beating their wings in the air they produce a whirring noise that attracts mates and marks territory.

## E. Sensory Solo (Stop 5)

Make sure you have at least two adults to run the solo hike. One adult will go ahead, placing the sensory cards and the other will stay in the back to stagger students and send them along the trail. Tell students they are to not to go through intersections and they must remain on the trail.

Pick a trail section where you can walk along for about 5-10 minutes. One adult will walk ahead with the sensory cards and lay out 1 card every 10-20 paces. Each card has an action for students to stop and do when they reach the card. The second adult will send students out one at a time giving some time/space between each student. Have them to stop at each card, read it and try to engage in the activity written on the card. When they get to the end they will reach the other adult and gather as the group again. The second adult will go after all the students have been sent and pick up the cards.

## V. Conclusion (10 min.)

### A. Discuss Sensory Card Solo Hike

Ask the students how they felt being alone in woods. Why did they feel they way they did? Ask them how they would have felt if they had done the solo experience at the beginning of class instead of at the end of class. How would the experience have changed if they did the sensory cards as a group instead of as individuals? Ask them what card/activity on the solo was their favorite.

### B. Review

- Share how the I Spy activity increased their observation skills.
- Describe something about the experience that was new and surprising.
- Discuss how their awareness about the forest has changed following the hike and activities.

Exploring and making observations of places helps us to gain appreciation for and understanding of places that we visit. Read the Sigurd Olson quote to conclude the class:

### C. Read Quote

*"Only when one comes to listen, only when one is aware and still can things be seen and heard. Everyone has a listening-point somewhere. It does not have to be in the north or close to the wilderness, but some place of quiet where the universe can be contemplated with awe."*

*Listening Point - Sigurd F. Olson*

#### Assessment

**Concept 2** - People can overcome their fear or discomfort of the woods through knowledge and familiarity.

**Concept 3** - Humans learn about their world through their senses, investigation and experimentation.

# LIGHT HIKE

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## Clean-up

Return kit and CD player to kit room Night/Light Hike kit tub.

## Resources

*The Sixth Sense of Animals*, Maurice Burton, Taplinger Co. NY 1972.

*The Audubon Society Encyclopedia of North American Birds*, John K. Terres, Alfred A. Knopf, Inc., NY 1980.

*Peterson First Guide to Astronomy*, Jay M. Pasachoff, Houghton Mifflin Co., Boston MA 1988.

*Nature's Living Lights: Fireflies and Other Bioluminescent Creatures*, Alvin and Virginia Silverstein, Brown Little Publications 1988.

*Sharing Nature with Children*, Joseph Bharat Cornell, Ananda Publications 1979.

## I Spy Cards

- crustose lichen
- foliose lichen
- fruticose lichen
- fungus
- tree with horizontal lines
- tree with peely bark
- animal track
- hole in tree made by a bird
- holes in trees made by insects
- needle like leaf
- moss
- tree with 2 trunks
- rotting tree
- evidence of an animal
- man-made object
- black-capped chickadee
- something orange
- scat
- insect
- trash (pick this up)
- something out of place
- animal with 4 legs
- seed
- raccoon poop fungus
- insect home
- bird nest
- flying bird
- something fuzzy
- something that starts with the letter 'S'
- bud
- red stone
- sawed stump or branch
- tree with lizard like bark
- dead leaf
- something you could use as emergency toilet paper
- place to shelter from rain, snow, or wind
- something that might tell you what direction you are facing
- animal insulation

## Sensory Solo Cards

- Welcome to this Sensory Solo. Take your time.
- What do you smell?
- Look up at the sky through the trees.
- Take three deep breaths.
- Look around you. How many shades of green do you see?
- Crush these and smell them. What does the smell remind you of?
- Put your face close to this tree. What do you see?
- Lie down on the ground and look at the world from the perspective of a mouse.
- Listen. What do you hear?
- Walk as quietly as you can to the next card.
- How many different colors do you see on this?
- Water give us life. Listen, look, and smell for signs of water.
- Stand still and feel the air on your face. Can you hear it rustling the trees?
- Hug this tree.
- Can you see sunlight? Do a dance to celebrate the life that the sun brings.
- Feel this.
- Listen to sound of your footsteps on the path as you walk to the next card.
- Do you see any signs of animals?
- Listen again. How many bird sounds do you hear?
- Make a wish and whisper it to the forest.
- Think of 5 words to describe the forest you just walked through.

## Possible Routes (See attached map)

Make up your own route (please stay off the roads and ski trails) or use one of ours!

**Purple Route:** This longer hike brings students down to Sawmill Creek. It begins down the North Stairs and continues down the hill and across Sawmill Creek Bridge. You can stop at the bridge or continue to Forest Ecology Building before returning to the ridge.

**Orange Route:** The orange route also begins down the North Stairs, but hangs a left at the giant rock and benches. At "Raspberry Site," go down the hill to Sawmill Creek. As you wind your way back upstream, look for beavers, birds, or other wildlife along the way. (Don't forget to take a right at Sawmill Creek Bridge to get back to Wolf Ridge!)

**Yellow Route:** Once again, this route begins down the North Stairs. This time, take a right at the bottom of the stairs. Stay to the right until you come to "Big Trees" site. Check out the huge yellow birch trees, then turn left. At Wolf Hill, take a right. Another right up the hill will lead you past the old 1909 homestead before you come to the next intersection. A right turn will lead you to the bottom of the stairs, or a left will lead you back to Wolf Ridge.

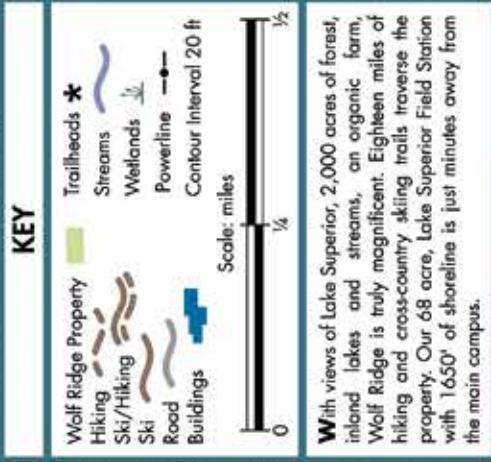
**Pink Route:** If you want to surprise your students with the North Stairs at the end of your hike, take the pink route. Take the trail that leads you behind Summit Lodge. This trail will continue past both ropes courses and the Birch Ojibwe Site. At the bottom of the "double bump hill," take a left. Another left at the benches will lead you past "Gully Wash" and "Big Trees Site" and to the bottom of the North Stairs. This is a relatively short hike.

**Green Route:** If you feel like wandering to Raven Lake take the green route. From the Education building, head out across the volleyball court and down the hill. Follow the signs to the lakes to listen for frogs or other wildlife. The night sky from the shores of the lake is beautiful. Note that Marshall Mountain is an unsafe trail in the dark. Don't hike it without lights.

**Blue Route:** The blue route takes you to Wolf Lake. If you wander past the canoe dock, you will come to the Wolf Ridge beach, where you can watch for loons and ducks in the summer or listen to the ice crack in the winter. Note that Marshall Mountain is an unsafe trail in the dark. Don't hike it without lights.

# NIGHT HIKE ROUTE MAP

**PLEASE DO NOT LEAD GROUPS  
OF STUDENTS ALONG THE WOLF  
RIDGE DRIVEWAY. THANK YOU**



With views of Lake Superior, 2,000 acres of forest, inland lakes and streams, an organic farm, Wolf Ridge is truly magnificent. Eighteen miles of hiking and cross-country skiing trails traverse the property. Our 68 acre, Lake Superior Field Station with 1650' of shoreline is just minutes away from the main campus.

