Snowshoeing

Physical Education Curriculum

Letter to Educators

DEAR EDUCATORS,

Thank you for learning how to snowshoe with your students so you can be active all winter long!

Equipping students with the skills and awareness to snowshoe safely not only enhances their personal safety, but it supports their physical health, growing independence, and stewardship of natural areas.

With guidance from Physical Education teachers throughout the East Central Wisconsin region, the East Central Wisconsin Regional Planning Commission team is proud to offer you the Safe Routes to School Snowshoeing Curriculum. **This curriculum teaches students how to use snowshoes safely to get active outdoors during winter and equips teachers with resources to bring these lessons into their classrooms.**

The learning outcomes students gain from the Snowshoeing Curriculum will expand opportunities for them to be active outside during winter and explore the natural beauty of Wisconsin. Snowshoeing offers a good challenge for students and provides an opportunity to foster a sense of adventure.

Thank you for being part of this effort to make our communities safer and healthier!

Sincerely,

Your Safe Routes to School Team

East Central Wisconsin Regional Planning Commission

FREE Snowshoe Share Program

The Regional SRTS program offers **free snowshoes** for schools to check out for 1-2 weeks when teaching this curriculum.

Learn more at:

eastcentralsrts.org/regional-srts-programs/reservations

Table of Contents

LESSON PLAN OVERVIEW

Lesson Plan	Duration	Materials Needed
Prep-Work • Snowshoe share coordination • Student take-home announcement letter	5 minutes	• Snowshoe Curriculum Take-Home Letter (pg. 31)
Lesson 1: Introduction to Snowshoes & Snowshoeing (indoor/outdoor) • Introduction & history of snowshoes • Purpose and parts of snowshoes • Fitting & putting on snowshoes • Snowshoe strides and turns • Taking a lap & removing snowshoes	30 minutes	• Snowshoes • Extra boots, gloves, hats, jackets, and pants for students who may not have these items • Ski poles – for students with mobility needs
Lesson 2: Basic Maneuvers & Personal Safety (indoor/outdoor) • Winter layers • Winter outing and the Ten Essentials • Proper care & putting on recap • Walking • Turning • Falling & recovery • Removal & recap	30 minutes	• Ten Essentials List (pg. 32) • Leave No Trace Snowshoes • Extra boots, gloves, hats, jackets, and pants for students who may not have these items • Ski poles – for students with mobility needs
Lesson 3: Building Skills (outdoor, all physical activity) • Leave No Trace • Layers & putting on snowshoes recap *Obstacle course with piles of snow or natural hills* • Climbing • Descending hills • Traversing hills • Game • Removal & care, recap	30 minutes	• Station volunteers/staff if desired • Leave No Trace links (pg. 34) • Snowshoes • Extra boots, gloves, hats, jackets, and pants for students who may not have these items • Ski poles – for students with mobility needs
Ready-to-Go Resources		

Curriculum Goals & State Standards

CURRICULUM GOAL

Teach students how to walk safely in winter conditions and use snowshoes as outlets to enjoy being active during the winter.

WISCONSIN PHYSICAL EDUCATION STANDARDS

Wisconsin PE Standards		Applicable Lesson Plan		
		1	2	3
Standard 1	The student will demonstrate competency in a variety of motor skills and movement patterns	X	X	X
Standard 2	The student will apply knowledge of concepts, principles, strategies and tactics related to movement and performance			X *optional*
Standard 3	The student will demonstrate the knowledge and skills to achieve a health-enhancing level of physical activity and fitness	X		X
Standard 4	The student will exhibit responsible personal and social behavior that respects self and others	X	X	X
Standard 5	The student will recognize the value of physical activity for health, enjoyment, challenge, self-expression, and social interaction			X

Prep-Work

Each lesson plan in this curriculum provides basic and intermediate skill building activities, with additional activities to engage students with more advanced skills.

1. Coordinate with the Regional SRTS program to reserve the fleet of 40 snowshoes for your classes. Schools may check out the snowshoes for free for 1-2 weeks when teaching this curriculum. Various sizes available.
2. Send the Snowshoe Curriculum Take-Home Letter (pg. 31) with students so they come prepared to be outside and snowshoe.

Lesson 1:
Introduction to Snowshoes & Snowshoeing

LEARNING OBJECTIVES

- Learn the Indigenous roots of snowshoeing
- Understand the different types of snowshoes (Standard 3)
- Demonstrate knowledge of the parts of a snowshoe (Standard 4)
- Demonstrate proper fit, safe donning & doffing procedures of snowshoes (Standard 4)
- Understand the concept of weight dispersal (Standard 1)
- Demonstrate how to walk and turn in snowshoes (Standard 1)

LOGISTICS

Time: 30 minutes

Location: Begin inside for 1.1 and 1.2, then move outside for 1.3 – 1.5 to a field with packed or powdered snow for the movements with snowshoes. Avoid snow that is hard-packed into ice. The transition from inside to outside also helps students prepare to be outside in the cold prior to snowshoe movements.

Materials:

- Snowshoes – 1 set per student
- Extra boots, gloves, hats, jackets, and pants for students who may not have these items
- Snowshoe/trekking poles for students with balance support needs
- *Image of types of snowshoes – optional*

PREP WORK:

- Lay out snowshoes in groups by shoe sizes
- Lay out extra clothing items for students to easily take and a bin for students to put back after use, following hygiene protocols

VOCABULARY TERMS:

- Snowshoes
- Indigenous Peoples
- Crampons
- Decking
- Bindings
- Frame
- Pivot point

1.1 HISTORY & TYPES OF SNOWSHOES (5 MINUTES)

1. *Purpose & History (3 minutes)*

Q. *What is the purpose of a snowshoe?*
A. *The purpose of the snowshoe is to allow a person to walk more easily in the snow. Snowshoes are especially useful for walking over deep snow without sinking.*

Q. *When do you think snowshoes were first used?*
A. *Snowshoes have been used to travel more easily across snow for at least 6,000 years (4,000 B.C.E.). They were first used by Indigenous Peoples in present day central Asia, some of whom later migrated to North America and brought snowshoes with them.*

The North American Indigenous Peoples were the first to use snowshoes in North America, including in the area we now live in—Wisconsin!

Indigenous Peoples *refers to the many distinct cultural and ethnic groups that were the first to live in a place. North American Indigenous Peoples refers to the first people, and their descendants, to live in North America.*

Indigenous Peoples were inspired to create snowshoes by the feet of animals such as lynx and rabbit, who could travel easily over the snow. The Algonquin Indigenous peoples – many who lived in the region we live in today within specific tribes such as the Ojibwe and Chippewa – perfected the snowshoe. The Algonquin people's snowshoe style is what the style we use today came from.[1]

2. *Types of Snowshoes (2 minutes)*

Indigenous Peoples developed different styles of snowshoes depending on the different snow conditions, terrain, and different types of materials that were available to make them. The same is true for the different types of Western snowshoes we will be using today! Some snowshoes are long and narrow (good for deep snow), some have points at the ends (good for breaking through hard snow), and some are more rounded (good for hills and thick brush)

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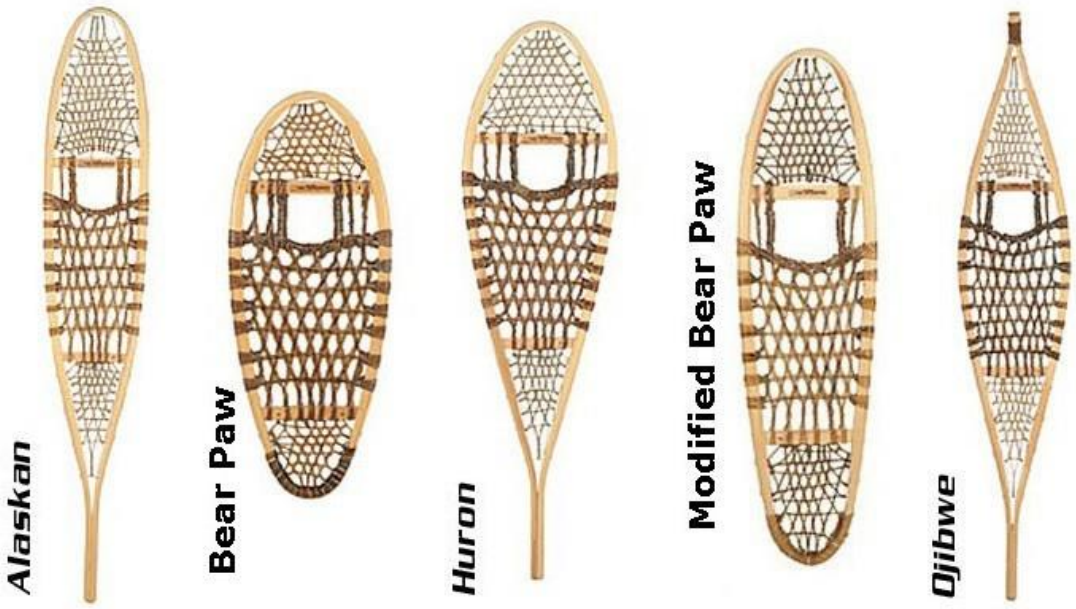
[1] United States Department of Agriculture. Forest Service. *The History of Snowshoes.* https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5109544.pdf

Courtesy of: https://www.epbrparkscouncil.org/snowshoes/



Alaskan snowshoes = good for flat terrain with soft and deep snow

Bear Paw snowshoes = good for dense forest and for turning

Huron snowshoes = good for deep snow and in open forests and fields

Modified Bear Paw = good for dense forest and for turning and offers versality in open areas

Ojibwe snowshoes = good for open forests and fields and gliding downhill on hard snow

1.2 PARTS & FITTING OF SNOWSHOES (6 MINUTES)

1. ***Right Sizing (1 minute)***

   Getting the right size snowshoe will depend upon your shoe size and your weight. Snowshoe sizes can fit a wide range of shoe sizes because the bindings are adjustable.

   If you wear between a size 6.5 and 12 in women's shoes or less than 7 for men's shoes, then you will most likely need a size small.

   If you wear between a 7 and a 13 men's size shoe then you could wear a size medium.

Videos for Snowshoe Parts and Fitting

REI How to Size Snowshoes Video: https://www.youtube.com/watch?v=_bdDf0afy9A

TSL Outdoor 305/325 RIDE Video: https://www.youtube.com/watch?v=JT_84eKrKzo

Activity Modification

Since snowshoe size is based on foot size, some people may exceed the snowshoe's weight limit, which may cause them to post-hole or not stay on top of the snow as easily.

However, as long as students are not going in very deep snow, we recommend prioritizing fitting students for the right shoe size.

2. ***Quick Safety Tip (1 minute)***

   Before you find the right sized snowshoes for you, listen up.

   *Snowshoes have **crampons**, or metal spikes on the bottom that provide traction and stabilization on snow and ice. These are sharp. **Please be careful** picking up snowshoes, carrying them, and setting them down.*

   *When you set them down, do so carefully, **with the crampons UP** so you do not scratch the gym floor. However, that also means you need to be careful when walking around so you don't trip and fall onto upward facing crampons.*

3. ***Parts of the Snowshoe (4 minutes)***

   Each student will go and grab a pair of snowshoes and return to a seated position. Make sure that students do NOT put the snowshoes on yet. Using a snowshoe, point out and define the following key parts that students need to learn for safe fitting and snowshoeing.

- **Decking:** The material that makes up the center of the snowshoe and keeps you afloat.
- **Crampons:** The spiky teeth (usually metal) on the bottom of the snowshoe—often near the toe or heel—that provides traction in the snow and prevents you from slipping in icy conditions.
- **Bindings:** The straps that comfortably and snugly hold your boot in place. Bindings are important for making sure your snowshoes properly fit.
- **Frame:** The outer edges of the snowshoe that give the snowshoe its structure and shape.
- **Pivot Point:** Where the binding attaches to the frame of the snowshoe, usually near the ball of the foot.

Courtesy of: https://www.skirack.com/blog/how-to-select-snowshoes/

1.3 PUTTING ON SNOWSHOES (5 MINUTES)

1. Putting on Snowshoes (5 minutes)

Students move outside at this point and onto the snow. Make sure the students carry the snowshoes holding under the toe frame with the crampons facing each other. If the students are already outside, they need to move to the snow.

1. *Lay both snowshoes on the snow. Stand behind the snowshoes, with both shoes flat on the ground and the bindings facing up. To check that the left snowshoe is on the left and the right snowshoe is on the right, the straps of your bindings should be on the outside of the shoe.*
2. *Adjust the overall binding to make it fit for your shoe size by lifting up the binding and pushing in towards the toe or pulling out towards the heel.*
3. *Place your toe into the "cup" of the binding; the top strap will need to be over your foot. You may need to loosen the top binding strap and/or the heel strap.*
4. *With your toe and the front of your foot securely placed to the front of the snowshoe, adjust the top binding strap so that the toe-part of your shoe does not wiggle around, but fits snugly against the heel of your boot. Depending on what snowshoe you're wearing, adjusting the strap can be done differently. Some require un-tucking the black strap from under the top lip (for TSL snowshoes) and pulling straight up on the strap.*
5. *Pull the back-most strap over the heel of the boot, kneeling down if you need to be more stable.*
6. *Make sure the strap sits less than an inch from the sole of the boot. If the strap is too high above the ankle, it will be uncomfortable.*
7. *Tighten the heel strap as needed so that your foot is comfortable and secure by pushing in the ratchet system.*

Activity Modifications

Assist students, especially smaller students and those with limited mobility, with pulling the strap over the heel of the boot.

1.4 SNOWSHOE STRIDES & TURNS (4 MINUTES)

1. ***Snowshoe Strides (2 minutes)***

Guide the students through the following steps, having them try each of the movements after you explain them.

- *Walk with a slightly longer stride—or bigger steps—than your normal walk. A longer stride helps prevent having to walk with your legs spread unnaturally wide, and helps to prevent stepping on one snowshoe with the other.*
- *Try to lead with the knee, and point the knee where you would like to go.*
- *Plant your foot (the snowshoe) into the ground (soft snow) heel first.*
- *When going over obstacles, avoid putting weight on the front or back (tips and tails) of your foot (snowshoe) with no support under the foot. This helps you keep your balance.*

Activity Modifications

Provide assistance as needed to students who have limited mobility. For students who are able to walk upright, but need additional balance support, offer them trekking poles, if available. Instruct them to plant the pole on one side and step their foot on the opposite side forward, if applicable for their gait. If conducting the Strides & Turns activity indoors, place rubber stoppers on the ends of the poles for extra surface area and to prevent scratching the gym floor.

2. ***Turns (2 minutes)***

Guide the students through the following steps, having them try each of the movements after you explain them.

STEP TURN
A step turn is a simple, broad turn. Move your right foot (snowshoe) to the right slightly, then move your left foot (snowshoe) to the right slightly. Repeat these short movements until you are pointed where you want to go.

180° KICK TURN
Lift the right leg up and turn it 180° to the rear (all the way in the opposite direction); try leaving the tail (the back of the snowshoe) down, then match with the left leg.

Activity Modifications

For students with limited mobility or flexibility, have them continue to practice *step turns*, or emphasize 90° or even 45° turns for *kick turns*.

1.5 TAKE A LAP & REMOVING SNOWSHOES (10 MINUTES)

1. *Take a Lap (7 minutes)*

With snowshoes on, have the students walk in a large circle in the snow, reminding students of the movements for walking in snowshoes. If it is not feasible to make a large circle, then narrow the lap and have students use the *step turn* to turn around. Adjust the size of the lap that students take depending on the amount of space you have and the time you have available.

Activity Modifications

Provide assistance as needed to students who have limited mobility. For students who are able to walk upright, but need additional balance support, offer them trekking poles. Instruct them to plant the pole on one side and step their foot on the opposite side forward, if applicable for their gate.

2. *Removing Snowshoes (3 minutes)*

1. *Stand with your feet/snowshoes shoulder width apart.*
2. *Loosen the binding straps, starting with your heel and then your toes. Remove one foot at a time. Kneel down if you need better grip and balance.*
3. *After you remove your snowshoes, make sure to use your hands, with your gloves on, and remove any remaining snow that has stuck onto the snowshoe.*
4. *Hold them together with the crampons facing inwards to carry them. Letting your snowshoes dry out helps to prevent rust and keep them working properly for longer!*

Lesson 2: Basic Maneuvers & Personal Safety

LEARNING OBJECTIVES

- Recognize clothing that is safe and comfortable for snowshoeing (Standard 4)
- Demonstrate knowledge of the Ten Essentials (Standard 4)
- Understand the importance of Leave No Trace (Standard 4)
- Demonstrate the safe way to fall and recover in snowshoes (Standard 1, 4)

LOGISTICS

Time: 30 minutes

Location: Begin indoors for 2.1 and 2.2, outdoors for 2.3 – 2.7 with access to a nearby large, open snow-covered field.

Materials:

- Ten Essentials List (pg. 32)
- Snowshoes – 1 set per student
- Extra boots, gloves, hats, jackets, and pants for students who may not have these items

PREP WORK:

- Lay out snowshoes in groups by shoe sizes
  Lay out extra clothing items for students to easily take and a bin for students to put back after use
- Ten Essentials List, Leave No Trace Principles and basics handouts

VOCABULARY TERMS:

- The Ten Essentials
- Base layer
- Middle layer
- Outer layer

2.1 WINTER LAYERS (4 MINUTES)

1. Winter Layers Checklist (4 minutes)

Have some examples of each of layers mentioned below.

When going outside in cold winter weather, it is important to wear the proper layers to keep yourself comfortable and warm. Layers are also really important for when you get warm and begin to sweat.

There are three layers to wear in winter in addition to your hands, feet, and head:

1. ***Base Layer:*** *the layer closest to your body, the base layer should be "wicking" to keep your skin dry. If you sweat, for example, while snowshoeing, the base layer will move the sweat off of your skin and keep you dry. Materials could be polyester, nylon, merino wool, or silk. In cold weather your base layer could be long underwear. Cotton is not a good material for being active during the winter. Instead of wicking away heat and sweat, cotton absorbs sweat. When your clothes become moist with sweat and you remove a layer, that wet cotton becomes very cold. Those wet, cold layers can be dangerous in really cold temperatures.*
2. ***Middle Layer:*** *the middle layer provides insulation, meaning it traps heat that your body releases, keeping you warm. Your body may heat up when snowshoeing, but when you take a break, the middle layer is what keeps you warm. For activities where you might sweat, like snowshoeing, water-resistant middle layers are the best. Examples include a polyester fleece or a water-resistant down jacket.*
3. ***Outer Layer:*** *the outer layer protects you from the elements such as wind, rain, and snow. While the base layer and middle layer can help keep you dry from the heat and sweat that your body may produce, the outer layer keeps you dry and protected from the weather outside! This layer should be water-proof or water-resistant.*
4. ***Hands, Feet, and Head:*** *Your hands, feet, and face are often the most sensitive to winter weather! Make sure you wear wool socks, a wool or fleece hat, gloves, and a scarf! Keeping your head, fingers, and toes covered will help keep you more comfortable.*

These layers will protect you from most weather conditions in the winter. If you and the temperature outside heats up, you can always remove layers that you bring, but you can't add layers that you didn't bring!

2.2 WINTER OUTING SAFETY & THE TEN ESSENTIALS (4 MINUTES)

1. ***Winter Outing (1 minute)***

   Explain to students that going outside in nature, and in winter, requires not only the right clothing, but also the right items to pack and an awareness of your surroundings. Safety comes first. They must be prepared for many different possibilities.

2. ***The Ten Essentials (3 minutes)***

   > *Nature—including animals, plants, and weather—can be unpredictable. To be safe it's best to be prepared for any situation. The Ten Essentials are the ten items you need to bring with you whenever you go snowshoeing, hiking, camping or other outdoor activities in nature. While you may not use many of these items for every outdoor trip you take, it's best to be prepared for when you DO need them.*

   Provide visual and ask students to provide examples of the Ten Essentials as you work your way through each type.

   > *The Ten Essentials include:*
   >
   > 1. ***Navigation:*** *Know where you're going and where you've been. This could include a map, compass, and/or GPS system.*
   > 2. ***Sun Protection:*** *Protect yourself from the sun! This could include sunscreen, sunglasses, and a hat.*
   > 3. ***Insulation:*** *Stay warm and prepare for changing weather, the three layers.*
   > 4. ***Illumination:*** *Make sure you can see in the dark. This could include a flashlight, lanterns, and/or a headlamp.*
   > 5. ***First-Aid Supplies:*** *Be prepared if someone gets hurt or sick. This could include a standard first-aid kit.*
   > 6. ***Fire:*** *Stay warm, send a smoke signal to others, and be able to cook food if needed. This could include matches, a lighter, and/or fire starter.*
   > 7. ***Repair Kit and Tools:*** *Be able to repair your gear. This could include duct tape, a knife, screwdriver, and/or scissors.*
   > 8. ***Nutrition:*** *Keep your energy and never go hungry. Bring a little extra food than you may need for a day trip.*
   > 9. ***Hydration:*** *Stay hydrated to stay healthy and alive. This includes water and supplies to treat/filter water you don't bring but may need later.*
   > 10. ***Shelter:*** *Protect yourself from the weather if you need to stay the night. This could include a tent, space blanket, tarp, and/or bivy (a small, collapsible bag made of weatherproof fabric made for one person to use as temporary shelter).*

Discuss the benefits of always going with a friend or family member, as snowshoeing can be a fun social activity. If going without a snowshoeing partner, remind students to always tell a trusted adult where exactly they are going and when they expect to be back.

2.3 PROPER CARE & PUTTING ON SNOWSHOES RECAP (4 MINUTES)

1. ***Proper Care Recap (30 seconds)***

Remind students that snowshoes, like all of the equipment they use in the class, should be treated with respect and care so that they can all enjoy them for longer.

Remind students to be careful when carrying the snowshoes and to carry the snowshoes holding under the toe frame with the crampons facing each other.

2. ***Putting on Snowshoes (3.5 minutes)***

If students are not yet outside, they need to bring their snowshoes outside and onto the snow. If the students are already outside, they need to move to the snowy area where they will practice.

1. *Stand behind the snowshoes, with both shoes flat on the ground and the bindings facing up. In order to make sure the left snowshoe is on the left and the right snowshoe is on the right, the straps of your bindings should be on the outside of the shoe.*
2. *Adjust the overall binding to make it fit for your shoe size by lifting up the binding and pushing in towards the toe or pulling out towards the heel.*
3. *Place your toe into the "cup" of the binding; the top strap will need to be over your foot. You may need to loosen the top binding strap and/or the heel strap.*
4. *With your toe and the front of your foot securely placed to the front of the snowshoe, adjust the top binding strap so that the toe-part of your shoe does not wiggle around, but fits snugly against the heel of your boot. Depending on what snowshoe you're wearing, adjusting the strap can be done differently. Some require un-tucking the black strap from under the TSL top lip and pulling straight up on the strap.*
5. *Pull the back-most strap over the heel of the boot, kneeling down if you need to be more stable.*
6. *Make sure the strap sits less than an inch from the sole of the boot. If the strap is too high above the ankle, it will be uncomfortable.*
7. *Tighten the heel strap as needed so that your foot is comfortable and secure by pushing in the ratchet system.*

Activity Modifications

Assist students, especially smaller students and those with limited mobility, with pulling the strap over the heel of the boot.

2.4 WALKING RECAP (4 MINUTES)

1. Take a Lap (3 minutes)

Review the tips for striding in snowshoes and have students take a lap.

- *Walk with a slightly longer stride—or bigger steps—than your normal walk. A longer stride helps prevent having to walk with your legs spread unnaturally wide, and helps to prevent stepping on one snowshoe with the other.*
- *Try to lead with the knee, and point the knee where you would like to go.*
- *Plant your foot (the snowshoe) into the ground (soft snow) heel first.*
- *When going over obstacles avoid putting weight on the front or back (tips and tails) of your foot (snowshoe) with no support under the foot. This helps you keep your balance.*

Activity Modifications

Provide assistance as needed to students who have limited mobility. For students who are able to walk upright, but need additional balance support, offer them trekking poles. Instruct them to plant the pole on one side and step their foot on the opposite side forward, if applicable for their gate.

2.5 TURNING (4 MINUTES)

1. Turns (4 minutes)

In the previous lesson, students practiced turning. Guide the students through the following steps in their snowshoes, having them try each of the movements in a zig-zagging pattern towards the next station. Consider using cones or jump ropes to create a path.

> ***STEP TURN***
> *A step turn is a simple, broad turn. Move your right foot (snowshoe) to the right slightly, then move your left foot (snowshoe) to the right slightly. Repeat these short movements until you are pointed where you want to go.*
>
> ***180° KICK TURN***
> *Lift the right leg up and turn it 180° to the rear (all the way in the opposite direction); try leaving the tail (the back of the snowshoe) down, then match with the left leg.*

Activity Modifications

For students with limited mobility or flexibility, have them continue to practice *step turns*, or emphasize 90° or even 45° turns for *kick turns*.

2.6 FALLING & RECOVERY (4 MINUTES)

1. Falling & Recovery (4 minutes)

Explain the following steps and demonstrate the tips and movements with them.

When snowshoeing, you may fall and that's okay! It's best to be prepared if you lose your balance. Here are a few tips and ways to get back up:

- *If you feel yourself falling try to sit down & lean back slightly.*
- *To get back up, get the snowshoes right under you. Get one knee under you and one foot under you and bring yourself up.*
- *If you have trouble getting your snowshoes under you, you can always take the snowshoes off and get up from there.*
- *If you have fallen on a hill, place the snowshoes in position horizontally across the hill and NOT facing straight up or down the hill.*

Instruct students to practice falling backwards, on their right, and on their left.

Activity Modifications

Provide assistance as needed to students who have limited mobility and may not be able to safely fall. Guide them down to the snow and help them get their snowshoes and feet under them to stand up. Provide ski or trekking poles to assist them.

2.7 REMOVAL & RECAP (2 MINUTES)

1. ***Snowshoe Removal Recap (1 minute)***

Review how to take off the snowshoes. If time allows, then you can review and ask the students to name some things they learned from this lesson.

As a reminder from the previous lesson, here are the steps for removing your snowshoes:

1. *Stand with your feet/snowshoes shoulder width apart.*
2. *Loosen the binding straps, starting with your heel and then your toes. Remove one foot at a time. Kneel down if you need better grip and balance.*
3. *After you remove your snowshoes, make sure to use your hands, with your gloves on, and remove any remaining snow that has stuck onto the snowshoe.*
4. *Hold them together with the crampons facing in wards to carry them. Letting your snowshoes dry out helps to prevent rust and keep them working properly for longer!*

Lesson 3: Building Skills

LEARNING OBJECTIVES

- Demonstrate how to ascend and descend hills in snowshoes, focusing on endurance (Standard 1, 3)
- Discuss the physical, social, and mental health benefits of snowshoeing (Standard 5)
- *Optional activity:* Practice faster pace snowshoeing techniques using an evasion game (Standard 2)

LOGISTICS

Time: 30 minutes

Location: A large, open snow-covered field with small mounds or snow piles that mimic hills.

Consider asking permission to use a nearby regional park that has some hilly features.

Materials:

- Leave No Trace (pg. 34)
- Obstacle Course volunteers / staff if available and desired
- Snowshoes – 1 set per student
- Extra boots, gloves, hats, jackets, and pants for students who may not have these items

PREP WORK:

- Identify a location will small mounds or snow piles that mimic hills:
  - Avoid snow that is hard-packed into ice.
  - Hills can be natural or made using piles of snow, such as snow drifts near buildings.
  - If shoveling snow to create hills, pack the snow to avoid air gaps that can cause students to post-hole into the hill.
  - Check with your school's administration and/or recruit volunteers to set up the hills if needed.
- Prepare obstacle course based on the hills and space available using cones and jump ropes to create paths to follow.

VOCABULARY TERMS:

- Leave No Trace
- Edging
- Traversing
- Herring bone

3.1 LEAVE NO TRACE (4 MINUTES)

1. Leave No Trace (4 minutes)

To protect our natural outdoor spaces, it's important to Leave No Trace.

***Q:** Can anyone tell me what they think it means to Leave No Trace when you are outside in nature?*

There are 7 principles to Leave No Trace:

1. *Plan ahead and prepare: Remember the 10 essentials! (Station 2)*
2. *Travel and camp on durable surfaces: Stay on the trail. (Don't cut trails)*
3. *Dispose of waste properly: Never litter, make sure to pick up pet's waste, and always take your trash with you. If you need to go to the bathroom, but there aren't bathrooms nearby:*
    - *Walk at least 70 feet from a trail*
    - *Dig a "cat hole" – about 6"-8" inches deep*
    - *Go to the bathroom in the "cat hole"*
    - *Cover up your waste*
    - *Pack out your TP in a sealed bag!*
4. *Leave what you find: Leave plants, rocks, and other natural or historical items as you find them.*
5. *Minimize campfire impacts: If you're camping and have a fire, be careful and keep it minimal.*
    - *Always make sure your fire is completely out before walking away or going to sleep.*
    - *How? Smother the fire with sand, water, and/or dirt. Make sure no coals are still burning.*
    - *The number one cause of forest fires is humans!*
6. *Respect wildlife: Observe animals from a distance and never feed or approach them.*
7. *Be considerate of other visitors: Treat others the way you would like to be treated*

3.2 LAYERS & PUTTING ON SNOWSHOES RECAP (6 MINUTES)

1. ***Winter Layers Checklist Recap (3 minutes)***

   Ask students to list each of the three types of layers, plus accessories needed for safe winter outdoor activity.

   Ask students to explain why each layer is important. Refer back to Lesson 2.1 (pg. 15) for details. Emphasize that cotton is not good for outdoor activities in the winter and explain the risks of hypothermia of when wearing cotton in winter.

2. ***Putting on Snowshoes Recap (3 minutes)***

   If students are not yet outside, they need to bring their snowshoes outside at this point and onto the snow. If the students are already outside, they need to move to the snow.

   Refer to Lesson Plan 1.3 (pg. 11) for the steps to put on snowshoes.

   While students are putting on their snowshoes, ask students to consider the physical, mental, and social health benefits of snowshoeing. What benefits do they see if they were to snowshoe outside of school?

   Activity Modifications

   Assist students, especially smaller students and those with limited mobility, with pulling the strap over the heel of the boot.

Obstacle Course

Either using the same outdoor space from the prior lessons or moving to a nearby open area with more natural hills, the students will begin to build their snowshoeing movements to practice climbing, descending, and traversing hills.

Break the students into small groups spread out across the hill(s). For each skill, spend 1 minute teaching/demonstrating the technique. After that, have the students practice the movement going uphill and/or downhill for the remainder of the designated time.

3.3 CLIMBING & DESCENDING (24 MINUTES)

There are different methods to climbing and descending hills depending on the hill's slope. It's important to remember to always shift your weight towards the hill when climbing or descending.

You can use the same techniques to go downhill depending on your level of comfort and the hill's slope. The major difference, however, is to always shift your weight toward the hill and lead with your heel first when stepping forwards.

1. ***Edging (3 minutes)***

When travelling across, up, or down a hill, a useful technique is called edging. One at a time, plant the edge of your snowshoes into the side of the hill and shift your weight to the outside edge of each snowshoe—towards the hill—to create a ledge or a step in the snow. Edging will be the foundational skill for most of the other climbing and descending techniques.

2. ***Side Stepping (5 minutes)***

Climbing

Side stepping can be used to go up or down hill. Facing sideways across the hill, use the edging technique to create a ledge or step. Step up with the top leg first and then bring your lower shoe up to the top one. Try to actually bear all your weight on each snowshoe one at a time.

Descending

Similar to side stepping going uphill, you will face sideways across the hill and use the edging technique to create a ledge or step. Step down with the bottom leg first and then bring your upper shoe down to the bottom one. Try to actually bear all your weight on each snowshoe one at a time. Always lean your weight toward the hill, and keep your weight on the upper or uphill snowshoe to avoid falling.

3. ***Traversing - Edging (5 minutes)***

Climbing

Traversing means to go up or down a hill at an angle, zig-zagging your way up. The angle you decide to climb will depend on the hill's slope. To traverse you will use the edging technique as you step to move diagonally up the hill.

Descending

To traverse downhill you will use the edging technique as you step to move diagonally down the hill. Lead with your heels as you step. As a reminder, always lean your weight toward the hill, and keep your weight on the upper or uphill snowshoe to avoid falling.

4. ***Stepping Up & Down (5 minutes)***

Climbing

Stepping Up can be used for smaller hills. While facing directly uphill, step into the snow with your weight on your toes while planting your front crampons (spikes) into the hill. Walk straight up the hill.

Descending

Stepping Down can be used for smaller hills. While facing directly downhill, step into the snow with your weight on your heels first. Walk straight down the hill with your weight always backwards.

5. ***Herring Bone (3 minutes)***

Climbing

The Herring Bone technique uses edging, but while facing uphill. Facing uphill, place your snowshoes facing outwards at approximately a 45° angle to one another. As you begin to step forward up the hill, you will use the edging technique by placing your weight to the outside of each snowshoe. This will allow you to dig into the snow and give you greater traction as you climb.

6. ***Butt Slide (3 minutes)***

Descending

As a last option, you can always slide downhill slowly on your butt.

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Optional Game!

If time allows, have the students play a game to incorporate and practice the snowshoeing skills they have learned.

Winter Predator / Prey Game:

- Use pylons or other items to mark boundaries. Divide the group into foxes, rabbits and leaves. Give each sub-group an identifying characteristic.
- The game begins with the leaves spread around the playing area and the rabbits in their safe area “the burrow” and foxes around the boundary.
- The object is for the rabbits to leave their burrow and tag a leaf, and for the foxes to try and tag a rabbit.
- If a rabbit is tagged by a fox, then the rabbit automatically becomes a fox. If a leaf is tagged by a rabbit, then the leaf becomes a rabbit.
  After a short period of play, the leader shouts “freeze” & sees how many players are now in which roles at the end of a “season” ... however, anyone who is a fox or rabbit at the time and has not eaten anyone “dies” and becomes a leaf for the next “season”. Run through multiple seasons as time allows and record how many foxes and rabbits are alive each time. You should be able to notice the cycles of life as the three populations interact.

3.4 REMOVAL & RECAP (2 MINUTES)

1. ***Snowshoe Removal Recap (2 minutes)***

   Review proper removal and carrying of snowshoes.

   While students are removing and properly storing their equipment, remind students that snowshoeing:

   - Provides them with an opportunity to get active, explore the natural beauty around them, 1381and adventure in woods with friends and family.
   - Snowshoeing is a great way to not only get physical activity, but reap the mental health benefits humans get when exposed to nature.

   Offer some nearby snowshoeing trail suggestions at local or regional parks to inspire students to try it out.

   For more information regarding snowshoeing trails, visit https://wisconsintrailguide.com/skiing-snowboarding/skiing-snowboarding-areas.html

   For more information about Wisconsin's State Park System, visit https://dnr.wisconsin.gov/topic/Parks

Ready-to-Go Resources

The following resources are included in this curriculum:

- ☐ **Snowshoe Curriculum Take-Home Letter – page 31**
- ☐ **Ten Essentials List – page 32**
- ☐ **Leave No Trace Basics (English & Spanish) – page 34**
- ☐ **Winter Workbook (Middle School) –**
  - **Interactive: https://eastcentralsrts.org/wp-content/uploads/2021/07/ECW_WinterWorkbook_Final-Interactive.pdf**
  - **Printable: https://eastcentralsrts.org/wp-content/uploads/2021/07/ECW_WinterWorkbook_Final-Print.pdf**
- ☐ **Winter Storybook (Elementary School)**
  https://eastcentralsrts.org/wp-content/uploads/2021/07/ECW_WinterStorybook_Final.pdf

Interested in encouraging Winter activities at your school?

Join in the Winter Walk to School month fun and receive student incentives such as hats, gloves, and gift cards. More information, including downloadable challenges, tips, and posters at: eastcentralsrts.org/events/winter-walk-to-school-day

Snowshoe Curriculum Take-Home Letter

DEAR PARENT AND GUARDIAN,

As a part of **[SCHOOL NAME]** Physical Education, your student has the opportunity to participate in the Snowshoe Curriculum to learn safe snowshoeing practices.

Students will learn how to:

- Properly fit snowshoes and take them on and off safely
- Walk, turn around, and climb and descend hills in snowshoes
- Recover from falling while snowshoeing
- Dress for winter physical activity, including layering
- Identify the ten essentials for outdoor adventure

Please help your student come prepared to snowshoe outdoors on [DATES]. The East Central Regional Planning Commission team has loaned snowshoes to the Physical Education instructors for free while conducting this curriculum. However, we request your help preparing your students for outdoor class.

Remind your student to wear or pack:

- Waterproof hiking boots or winter boots
- Hiking or ski socks – *wool or synthetic materials are ideal, rather than cotton*
- Base layers that wick-away moisture – *wool or synthetic materials are ideal, rather than cotton*
- Winter coat or insulated jacket – *waterproof, breathable fabric is ideal*
- Snow pants or bibs – *waterproof is ideal*
- Snow mittens or gloves – *waterproof is ideal*
- Hat
- Neck gaiter or balaclava – *optional, but nice to have*

We will hold snowshoeing classes during scheduled Physical Education (PE) class on campus, but outdoors. **[UPDATE WITH OFF-CAMPUS DETAILS IF APPLICABLE AND PERMISSION SLIP NEEDS AS DETERMINED BY YOUR SCHOOL DISTRICT]**

Thank you,

TEACHER's NAME,

Physical Education Teacher

Ten Essentials List

The following list is taken from guidance from the National Park Service:

1. **NAVIGATION – Map, compass, and GPS system**
   Navigation systems are used when planning your route before your trip, and when you need help orienting yourself in your surroundings during your activity. Know how to use a topographical or relief map as well as your compass or GPS unit before going out.
2. **SUN PROTECTION – Sunglasses, sunscreen, and hat**
   Sun protection is necessary to protect your skin and eyes against harsh UV rays that are responsible for sunburns and skin cancer. Use sunglasses, sunscreen, and hats. Sun-protection clothing such as pants and long sleeve shirts can also help minimize your exposure to the sun.
3. **INSULATION – Jacket, hat, gloves, rain shell, and thermal underwear**
   Nature is unpredictable. Be prepared for sudden changes in weather conditions. Pack an extra layer of clothing that reflects the most extreme conditions you could encounter.
4. **ILLUMINATION – Flashlight, lanterns, or headlamp**
   Lighting is indispensable in the outdoors where no conventional light sources can be found. Items include flashlights, lanterns, and headlamps. Headlamps are the preferred light source because they are hands-free. Be sure to pack extra batteries.
5. **FIRST-AID SUPPLIES – First Aid Kit**
   Be prepared for emergencies by packing first-aid supplies with you. Start with a pre-made kit and modify it to fit your trip and your medical needs. Check the expiration date on all items and replace them as needed. Consider including an emergency guide in case you are faced with an unfamiliar medical emergency.
6. **FIRE – Matches, lighter, and fire starters**
   Fire can be an emergency signal and a heat source for cooking and staying warm. Pack matches (preferably waterproof) and fire starters - items that catch fire quickly and sustain a flame (e.g. lighter). Familiarize yourself with the fire use regulations of your park before heading out.
7. **REPAIR KIT AND TOOLS – Duct tape, knife, screwdriver, and scissors**
   Carry a basic repair kit with you to help repair equipment. The kit should include items such as duct tape, a knife, and scissors. Consider packing a multi-tool, a compact version of many tools that can include a knife, screwdriver, can opener, etc. Be sure to bring any tools specific to your trip and your activity.

8. **NUTRITION - Food**
   You should always be prepared for the possibility of changes to your trip plans. Pack an extra day's supply of food, preferably no-cook items that have good nutritional value in order to keep your energy high. Salty and easy to digest snacks (e.g., trail mix, nuts, and granola bars) work well for outdoor activities.
9. **HYDRATION – Water and water treatment supplies**
   Staying hydrated on your trip is of utmost importance! Physical activity increases your risk of dehydration (loss of water and salts from the body), which can lead to negative health consequences. **If you're active outdoors, especially in hot weather, you should drink water often and before you feel thirsty.** Prepare your water before you need it and do not allow yourself to become dehydrated. Before heading out on your trip, be sure to identify if there are any bodies of water at your destination that you could collect water from and treat using your water treatment supplies.
10. **EMERGENCY SHELTER – Tent, space blanket, tarp, or bivy**
    Shelter is one of the most important elements during an emergency survival situation. It can protect you from severe weather conditions and exposure to the elements. A tent, tarp, bivy sack, or emergency space blanket are all light weight options for emergency shelter.

Learn more about The Ten Essentials at https://www.nps.gov/articles/10essentials.htm.

Leave No Trace Basics

See the next two PDFs from The Center for Outdoor Ethics or learn more about these basics here:

https://lnt.org/research-resources/leave-no-trace-basics/

For all seven Leave No Trace Principles, visit: https://lnt.org/why/7-principles/