

**Grade Level:**5th**Time:**

60 minutes

Season:

Winter

Objectives:

Students will be able to...

- Identify the parts of a snowshoe
- Understand how snowshoes make traveling through the snow easier
- Properly put on and use snowshoes

Key Concepts:

- Terrain
- Traction
- Blazing a Trail
- Surface area

Materials:

- Snowshoes
- Snowpants
- Boots
- Coat
- Gloves
- Hat
- Parts of a Snowshoe Worksheet

Snowshoe Hike

Lesson 2 of 2

Summary

In this lesson students will learn about the parts of a snowshoe. They will then put on snowshoes and practice using them outside. Students will have time to explore outdoors and discover the wonders of the winter season.

Background

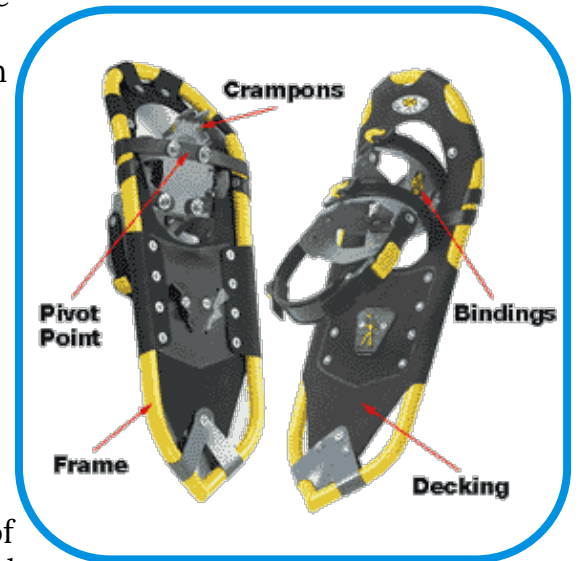
Snowshoes are essential when walking through deep snow. Snowshoes are designed to increase the surface area of your foot so that you can float on top of the snow. They must be big enough to support your individual weight, but small enough that you can still easily move with them.

Traditional snowshoes were made from wood and animal hide. Modern snowshoes are made of lightweight aluminum instead of wood and a plastic decking instead of webbing. Most have cleats or crampons on the underside for traction.

Modern snowshoes are mostly used for recreation. They are one of the cheapest and easiest ways to get outside in the winter. With snowshoes you will be able to experience different types of terrain using a variety of snowshoeing skills.

When traversing a hill in snowshoes you are not always able to go straight up the hill. Most people will use either a herringbone or sidestepping technique. The herringbone is when you plant the inside edge of each snowshoe into the snow and walk in a “V” shaped pattern.

When the students are outside it is important for them to have proper attire. Students will need gloves, coat, boots, and snowpants. It is best to always start off warmer so that you can take off layers, as necessary.





Procedure

1. Before the students head out, they need to understand the different parts of a snowshoe. Explain each part and how they work.
2. Explain that the snowshoes will increase the surface area of your foot so that you are able to walk on top.
3. Have the students fill out the *Parts of a Snowshoe Worksheet*.
4. Demonstrate how to secure the bindings leaving room through the toe hole for your boot to move freely.
5. Assign each student a pair of snowshoes based on their overall size and the size of their boot.
6. Each student needs to be dressed for the outdoors – coat, hats, gloves, snowpants, boots, etc. It is best to have more layers if you get warm you can take off layers as you go.
7. Once everyone has their snowshoes on, head out a short distance. This is a great time to check their bindings and re-tighten if necessary.
8. Give the students a chance to practice using the snowshoes. They will need to practice some basic maneuvers.
9. With the students facing the group leader have them spread out at least an arms-length from each other. Have each student practice:
 - Backing-up (must lift the back of the snowshoes by pointing your toes toward the ground.)
 - Turn (90 degree turns)
 - Sidestep (lift your foot up high to make sure the back of the shoe clears the snow)
 - Getting up. If you fall (roll onto your stomach, sit up on your knees, push up with your hands; students need gloves!)
10. Have the students take turns **Blazing the Trail**. Allow 3-5 students to walk in front of the instructor and blaze the trail.
11. When the instructor says “switch” the front students step to the side of the trail and allow the group to pass.
12. The instructor steps back into place behind the next 3-5 leaders and the students that were leading fall in line at the back.
13. While you are out look for signs of wildlife. Winter is a great time to look for animal tracks.
14. If you find signs of wildlife, can you make an educated guess as to what was happening.
15. Give your self enough time to head back to the classroom to remove snowshoes and outdoor clothing.



Vocabulary

- **Crampons:** a spike or anything sticking out of the snowshoe that will stick into the snow or ice for tracts. Also referred to as **Cleats**
- **Pivot Point:** the point under the ball of your foot where the binding attaches to the snowshoe.
- **Frame:** the wooden (used on historic/traditional snowshoes) or aluminum outer edge which the binding and decking are attached to.
- **Decking:** the flat part of the snowshoe that spreads your weight over a wider area providing the “flotation” on the snow.
- **Binding:** the harness or strap that holds the snowshoe onto your foot.
- **Toe Hole:** the opening ahead of the binding that allows the snowshoe to remain flat when you lift your foot.
- **Blaze a trail:** to be the first to establish a new trail.
- **Surface Area:** the total area that the surface of the object occupies.
- **Terrain:** physical features of an area or stretch of land.
- **Traction:** adhesive friction of a body on a surface that it moves.
- **Traverse:** travel across, through, or over.

Extensions

Snowshoe Math: <https://intersectingart.umn.edu/?lesson/14>

North Dakota Curriculum Standards

This lesson helps support the following state standards:

Social Studies

5.5.1 Explain the impact of climate, geography, and available resources on the daily lives of Native Americans.

Physical Education

S3.E2.5 Actively engages in all the activities of physical education

S4.E1.5 Engages in physical activity with responsible interpersonal behavior.

S4.E4.5 Accepts, recognizes, and actively involves others with both higher and lower skill abilities into physical activities and group projects.

Science

5-PS3-1 Use models to describe how energy from the sun is converted into food.

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Parts of a Snowshoe Worksheet

Name: _____

Label the parts of the snowshoe using the word bank.



Word Bank

Decking

Bindings

Frame

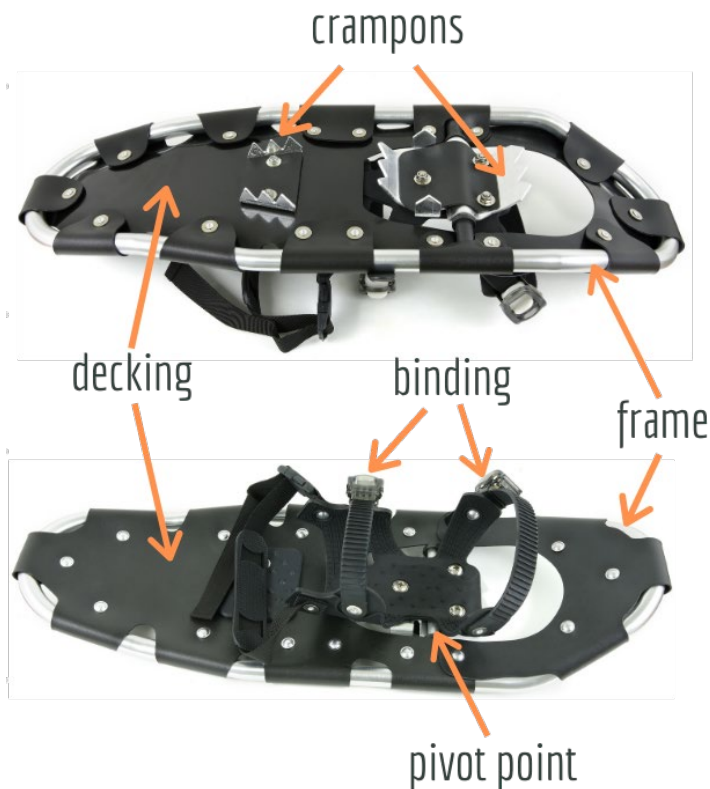
Pivot Point

Crampons or Cleats

Parts of a Snowshoe (Key)

Name: _____

Label the parts of the snowshoe using the word bank.



Word Bank

Decking
Bindings
Frame
Pivot Point
Crampons or Cleats

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Pivot Point: The point under the ball of your foot where the binding attaches to the snowshoe.

Frame: The wooden (older) or aluminum outer edge which the binding and decking are attached to.

Decking: The flat part of the snowshoe that spreads your weight over a wider area providing “flotation” on the snow.

Binding: The harness or strap that holds the snowshoe onto your foot.