# Snowshoeing

▼ Sean Dwyer ▼

Who says I can't hike my favorite trail in winter? Winter adventures are the best! Winter snow is no reason to stay out of the woods; rather a real good reason to wear some funky shoes that will allow me to explore year round.

Dave Hubley, physical education specialist



Snowshoeing is a great way to experience the outdoors in winter. The amount of snow and varying snow conditions determine the nature of the experience. Deep snow makes progress challenging, and icy conditions can be treacherous depending on the type of snowshoes worn.

Snowshoeing is an intimate affair, providing the ability to admire and fully absorb the beauty of the natural surroundings. Sightings in nature are more common and more vivid when snowshoeing. This perspective is unique to snowshoeing for reasons that are best left to each person to discover.

The physical health benefits of snowshoeing include cardiorespiratory conditioning and the development of lower-body musculoskeletal tissue, namely the hip flexors. Some hill-climbing techniques and the optional use of ski poles improve muscular strength and endurance of the upper body.

Originally, snowshoes were made of wood and laced with natural rawhide. The bindings consisted of leather straps and a buckling system (figure 11.1).

Today, traditional snowshoes made with heavy wire frames and laced with nylon lacing offer a different experience but more versatility over the wooden predecessor (figure 11.2). Technology has advanced the snowshoe to a specialized piece of outdoor equipment.

Modern technology has introduced snowshoes that are manufactured from aluminum tubing and decking made of synthetic materials. Harnesses have evolved greatly and now provide much more control and dependability than rawhide, rubber, or string bindings. Another feature of modern snowshoes is their crampon-like sole that makes travel over ice much more secure.

The cost of modern snowshoes is much more than that of traditional snowshoes. Expect to pay CDN\$150 to CDN\$400 for an advanced pair. Some areas may have local craftspeople who make snowshoes at reasonable prices.

## **Equipment**

## **Group Equipment**

- 1 pair of snowshoes for each participant
- 1 pair of ski poles for each participant (optional)
- Small first aid kit
- Small repair kit, including extra webbing, buckles, and duct tape



**Figure 11.1** Traditional wooden snowshoes.



Figure 11.2 Modern aluminum snowshoes.

#### Personal Equipment

- Waterproof, breathable clothing suitable for weather conditions (easily layered because snowshoeing is a high-output activity)
- Gaiters (optional)
- Sunglasses (optional)
- Sunscreen (optional)
- Lip balm (optional)

## **Equipment Care and Maintenance**

- Snowshoes should not be worn across roadways or rocky outcrops because lacings and decks can become scuffed and worn.
- When walking across obstacles, take care not to stress the frame of the snowshoe and cause damage.

## **Site Selection**

- Snowshoeing is most exciting and enjoyable in a wooded setting.
- Walking among snow-laden trees is a tranquil experience.
- Terrain variations also add to the excitement when participants experience uphill and downhill areas.
- Avalanche-prone slopes or sites should be avoided.

## **Social Skills and Etiquette**

- Participants should gain an appreciation of the environment and refrain from harmful activities such as cracking off tree branches while walking.
- Small trees and shrubs should not be stepped on.
- Participants should take care of each other by not going ahead or falling behind and by being available to lend assistance if someone gets caught up in an obstacle or takes a fall.

## **Risk Management**

- Safety is a requirement when selecting a site for snowshoeing.
- Waterways should be avoided because banks tend to be sloped and icy and snowshoes may slip and cause participants to fall into the water. A snowshoe attached to the foot would make getting free from the ice and current difficult.

- Walking near the treetops of small evergreen trees is dangerous because tree branches collect snow and form air pockets. Participants on snowshoes can easily sink among the branches and twist a knee or scrape a leg with a sharp stick or small stump.
- Avoid avalanche-prone slopes and chutes such as valleys, gorges, or gulches that naturally funnel avalanche debris.

## **Unit Organization**

This unit includes core snowshoeing skills and safety skills while emphasizing the value of snowshoeing as a fitness activity and a lifelong pursuit.

#### Lesson Plans

Lesson 1: Equipment Selection and Walking Technique. This lesson addresses commonly unknown aspects of snowshoeing. Many people assume that snowshoeing is simple, but technology has increased the need for adequate instruction before setting out on an adventure. Proper walking technique requires a slight adjustment to regular walking posture and stepping.

Lesson 2: Recognizing Hazards, Managing Hazards, and Finding Routes. Proper walking technique can greatly assist participants with navigating hazards on the trail. Obstacles such as air pockets formed by snow-covered trees and fallen trees require good judgment, balance, and agility. Participants will also gain experience navigating through varying terrains to make good route-planning decisions.

Lesson 3: Hill Ascending and Descending Techniques. In this lesson, participants will gain experience and enjoy the adventure associated with ascending and descending hills on snowshoes. The terrain largely determines the techniques to be used, and therefore various options to practice and employ these skills are presented.

Lesson 4: Running in Snowshoes. The thrill of snowshoeing can be enhanced when participants sense the freedom of running on snowshoes. This freedom, however, can be interrupted if participants do not pay full attention to lifting their snowshoes out of the snow. Setting up a relay race or obstacle course enables participants to use their skills while cooperating in a competitive but lighthearted event with their peers.

Lesson 5: Snowshoe Walk Through a Nature Area. The liveliness and beauty of winter woodlands, river valleys, and barrens are the focus of this lesson as participants experience nature while on snowshoes. Snowshoeing can be a quiet and calming activity that affords the opportunity to look around while moving about. Exploration is exciting on snowshoes because nearly all areas can be navigated using the skills learned in this unit. Participants may be lucky enough to see wildlife and scenery that most people never get a chance to experience.

## Terminology

- avalanche—Occurs when the snow on a hillside becomes unstable and suddenly slides downward.
- **bindings**—A system of straps that keep the foot in place on top of the snowshoe.
- **chute**—A narrow channel on a hillside that might indicate a small waterway.
- **cornice**—An overhang of snow over a hillside or ledge that can break off and possibly lead to an avalanche.
- **crampons**—Metal projections that provide grip on the underside of a snowshoe.
- **decking**—The flat platform of a snowshoe that provides flotation on top of the snow.
- **drift lines**—The edge of a snow drift that may overhang and break off or give way if stepped upon with snowshoes.
- edging—Method of hill climbing where a series of sideways steps are taken up a hill

- leading with the top snowshoe. This method does not work well on icy slopes.
- gait—Style of walking or stepping.
- groping—Method of hill climbing where there
  is bending at the waist, the hands are used to
  claw up the hill, and the toes of the snowshoes
  are pointed outward.
- **gulch**—A small, narrow valley usually formed by the eroding action of water.
- herringbone step—Hill-climbing method that involves walking up a hill with the toes of the snowshoes turned outward.
- **kick-turn**—Method of turning that involves rotating the right snowshoe clockwise to end up facing the opposite direction of the left, followed by swinging the left hip clockwise so that both snowshoes are parallel.
- natural rawhide—Natural leather product that is laced together to form the decking for traditional snowshoes.
- snow reading—The ability to read and recognize snow conditions to be able to decide the easiest and safest routes.
- **step-turn**—Series of small steps with the tips of the snowshoes keeping the tails together, allowing the person to turn in a circle.
- **toeing out**—Method of hill climbing where the toe is pushed forward through the bottom of a traditional snowshoe and plunged into the hillside to act as a cleat for grip.
- **traverse**—Method of hill climbing that involves walking upward and across a hill-side. This method does not work well on icy slopes without using crampons.

## **Equipment Selection and Walking Technique**

## **Overview**

At first glance, it may seem that little skill is needed to snowshoe: You simply strap the device onto your boot and walk. However, not all snowshoe equipment is equal in design and use. Although the beauty in snowshoeing is its simplicity, certain considerations need to be followed to make this pursuit successful.

## **Learning Objectives**

- To know what it means to be prepared with the proper clothing and footwear
- · To know how to put on snowshoes and make any necessary adjustments
- To ensure proper stance and progression when learning to walk in snowshoes
- To walk in deep snow and break trails with snowshoes
- To perform a step-turn and a kick-turn on snowshoes to change direction
- To use ski poles to assist with walking and turning

## **Risk Management**

- Some light walking and stretching of the hip flexors should be done because the lifting motion can be demanding, especially in deep snow.
- Steps should be small at first; it is easy to lose balance if a snowshoe gets caught in heavy snow or crust.

## **Activity 1: Fitting the Snowshoes**

A quick glance would not reveal that there is a left and a right snowshoe. The buckling system will determine this alignment; buckles on the wrong side of the foot will cause frustration because they have a tendency to catch onto leg material, tripping participants.

#### Skill Cues

- Be sure shoes are placed on the correct feet so that the buckles are on the outside of the feet.
- If using traditional snowshoes, the toes of the boots should not go too far forward; otherwise they might hook under the crossbar of the snowshoe.

## Teaching Cues

- Most winter boots provide a good fit in snowshoe bindings.
- Modern snowshoes have bindings with toe stops that prevent the toe from going ahead too far, especially on hill descents.

## **Activity 2: Walking on Snowshoes**

Walking in snowshoes involves walking as naturally as possible with just enough compensation in stance to prevent one snowshoe from impeding the other.



**Figure 11.3** A slight side-to-side sway makes walking in snowshoes easier.

#### Skill Cues

- Widen the stance just enough to avoid stepping on the other snowshoe.
- When stepping, the heel of the shoe should touch the snow first; the heel of the snowshoe should drag slightly when the knee is lifted (figure 11.3).
- If in deep snow, a slight press and pause at the end of each step allows the snow to compact under the snowshoe, providing more stability.
- Traditional snowshoes tend to be wider and require a sideto-side motion while walking in order to have one snowshoe clear the other; modern snowshoes are narrower and require less side-to-side motion.

## **Teaching Cues**

- When breaking a trail, keep steps a little shorter and keep the tips from being loaded with snow.
- Slightly sway the body from side to side with each step if necessary to help relieve hip stress.
- If the heel of the snowshoe lifts high or flicks up with each step, the back of the pants will be covered with snow, which may lead to wetness and discomfort.
- Modern snowshoes are sleek and narrow, which allows for greater stability in balance for women, people with short walking strides, and children.
- Not only does the lightweight material make the activity more accessible to many age groups, but the design also allows their shoeing stride to be more natural.

## **Activity 3: Turning on Snowshoes**

Once participants have grasped the shuffling gait for snowshoeing, the next skill set is turning and keeping balanced on the snow. There are two turns for this activity: the step-turn and kick-turn.

#### Skill Cues

#### Step-Turn

The step-turn involves stepping to the side one foot at a time to either change direction while walking or completely turn around.

- If turning right, the right shoe is used first.
- Take short steps until the turn is achieved.
- The tail of the shoe covers little distance and the toes move the most.

#### Kick-Turn

The kick-turn involves turning 180 degrees.

• If turning right, lift the right snowshoe and turn it clockwise so that the tip is next to the tail of the left snowshoe.

• Picking up the left shoe, pivot the hips right so the left shoe is once again facing the same direction as the right snowshoe.

#### Teaching Cues

Step-Turn

Once balance is achieved, sharp turns can be mastered.

#### Kick-Turn

- Ski poles can help with balance while executing the kickturn (figure 11.4).
- The kick-turn is used when a quick turn and change of direction is required.

## **Lesson Closure**

- Review the techniques of walking and turning covered in this lesson.
- Emphasize the natural motion necessary for ease of walking while on snowshoes, as well as how snow conditions might affect walking.



**Figure 11.4** Using ski poles for balance while turning.

LESSON 2

# Recognizing Hazards, Managing Hazards, and Finding Routes

## **Overview**

In this lesson, you will guide participants through a natural area and point out hazards that are present. Buried treetops, fallen trees, and snow conditions are all safety concerns. Participants need to be able to recognize hazards and know how to avoid or deal with them. Route finding is integral to recognizing and dealing with hazards in the wilderness.

## **Learning Objectives**

- To understand the importance of staying together as a group in the wilderness
- To observe hazards pointed out by the outdoor leader
- To learn to recognize hazards such as buried trees, fallen trees, and varying snow conditions
- To gain experience in finding routes and dealing with hazards

## **Risk Management**

With obstacles in the snow such as fallen trees, stumps, and small, snow-covered bushes and trees, participants must proceed with caution while walking.

## **Activity 1: Guided Walk in Wooded Area**

The skill of snowshoeing allows participants to access natural areas otherwise not accessible during the winter months. Accumulated snow makes a wooded hike



**Figure 11.5** Be aware of potential dangers under the surface of the snow.

extremely challenging due to participants sinking up to their knees or deeper in snow. The shoes allow them to enter into the woods off main trails and plowed roads and appreciate the winter landscape.

#### Skill Cues

- Step slowly and with caution.
- When crossing a fallen tree, do not step on it with the tip or tail of the snowshoes; this will stress the snowshoe and probably cause it to break.
- If a fallen tree must be negotiated, it is best to step on the tree with the section of snowshoe that is under the boot so that the foot steps on the tree.

## **Teaching Cues**

- Inform participants of the types of obstacles they might face while walking through the woods (figure 11.5).
- Lead participants through a wooded area and point out obstacles.

## **Activity 2: Snow Reading on a Guided Walk**

The ability to read the snow and understand snow terrain is essential when deciding on the best routes to hike. This activity is yet another form of natural literacy—snow reading.

#### Skill Cues

- Recognize drift lines and cornices, and avoid steeply drifted slopes and cornices.
- In mountainous areas, measure approximate slopes. Avoid 30- to 45-degree slopes, gulches, and chutes because of the probability of avalanche.
- Identify where water runs under snow. Avoid such areas, and if they must be traversed, rope off (establish a roped boundary that must not be crossed) for traversing.
- Participants use ski poles to probe and identify snow-covered hazards such as treetops that prop up a thin layer of snow.

## **Teaching Cues**

 Inform participants of the features, hazards, and hazard management strategies they might face while snowshoeing.  Lead participants through various terrain and point out features, hazards, and hazard management strategies.

## **Activity 3: Route Finding**

Snowshoes allow participants to carve out their own path through the woods. There is no need for groomed snow trails or open walking trails, so participants need a sense of snow reading, energy to explore, and navigational awareness.

#### Skill Cues

- Steps should be short and planted firmly into the snow to ensure solid footing before committing body weight and stepping forward.
- If carrying ski poles, use them to probe the snow of the intended path.

## Teaching Cues

- Lead participants to an area where they can explore by making their own tracks.
- The site must allow you to easily direct participants toward a common meeting spot such as a trail or an open field.
- Participants are not allowed to wander on their own during this activity but must stay close and move with the group toward a common area.
- You should be familiar with any hazards in the area and participant activity proximal to such hazards.
- Have the group follow the leader, allowing participants to guide the group through the woods.
- Switch roles often to allow each participant to have a turn as the leader.

## **Lesson Closure**

- When participants are back together in the meeting area, discuss the obstacles they faced.
- Inform participants that in the next lesson they will experience ascending and descending hills.
- Ask if any participants encountered hills in this activity and inquire as to how they negotiated them.

## Hill Ascending and Descending **Techniques**

## **Overview**

Metal claws on the underside of the snowshoe beneath the binding assist greatly in hill climbing. The claws are especially effective in packed or crusty snow. Descending hills with claws can help prevent the slipping that can occur with traditional snowshoes, which happen to be more effective when gliding down a hillside (figure 11.6).

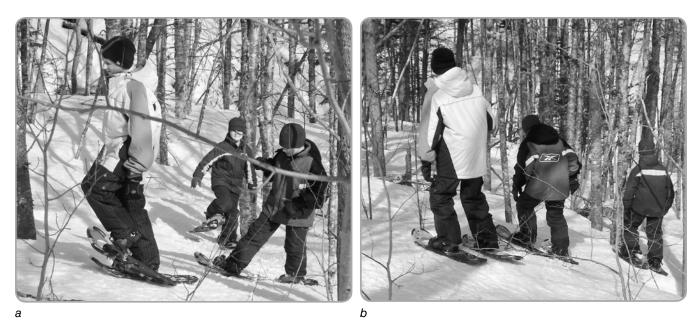


Figure 11.6 Ascending and descending hills on snowshoes is challenging and exhilarating.

## **Learning Objectives**

- To learn several techniques for safely ascending and descending hills
- To understand how to use traditional and modern snowshoes for ascending and descending hills
- To learn safety considerations when venturing around steep slopes on snowshoes

## **Risk Management**

- Steep hills require caution, especially when descending.
- Any steep hills used for practice should be short hills and not mountainous slopes. Hills should be short enough to ensure there is no risk of avalanche.
- Participants need to keep their body weight leaning slightly back. If they lose their balance, they will fall harmlessly backward instead of falling forward, where they might face-plant or tumble uncontrollably.
- You should be familiar with the area of the hillside to know if any dangerous obstacles exist beneath the snow.

## **Activity 1: Hill Ascending**

Going up a hill in snowshoes is not as easy as it looks. The more modern shoes have serrated clamps around the toe position that help bite into the snow for traction. However, maintaining momentum and working against gravity to get up the slope still requires a few techniques.

#### Skill Cues

#### Gentle Slope

Until the ability to ascend is mastered, begin on smaller hills. Climb small slopes with shortened steps.

#### Moderate Slope

As participants become more accomplished, move to a steeper slope to challenge their skills.

- Herringbone step:
  - Widen the stance slightly and turn the toes outward to provide a wider base of support.
  - Walk regularly while keeping the snowshoes in this position and with a slight forward lean.
- Edging:
  - Step with the lead foot (the uphill foot) and press into the snow to achieve a base for support; bring the second foot up just below the lead foot and also press it into the snow.
  - When the lead leg gets tired, switch by performing a kick-turn on the hillside.
- Zigzag: Walk back and forth up and across the hill using the skills of edging and turning.
- Turning: The kick-turn is employed with the uphill leg first to prevent sliding down the hill.

#### Steep Slope

For accomplished snowshoers and to give participants a fuller experience of ascending with snowshoes, move to steeper inclines.

- Groping (figure 11.7):
  - Bend at the knees and waist until the hands are on the ground between the snowshoes.
  - Turn the toes of the snowshoes out in a herringbone position.
  - Dig the hands into the snow to assist in getting up the hill.





Figure 11.7 Using the hands to assist in ascending a steep slope.

- Toeing out:
  - If using traditional snowshoes, loosen the bindings on the shoes so the toes can go out through the toe hole.
  - The snowshoes are walking straight up the hill with the toes poking through and sticking into the snowbank.
  - Use the hands in the same manner as groping if necessary.

- Snowshoe removal:
  - Snowshoes with tails can be used as poles.
  - The tail of the snowshoe must be firmly positioned in the snow before applying weight to the shoe.
  - Before lifting the snowshoe out of the snow to move ahead, be sure the body weight is directly over the top of the snowshoe.
  - Make small advances without overextending the reach.

#### **Teaching Cues**

#### Gentle Slope

The planted foot may slip backward and cause a fall if the stride is too long.

#### Moderate Slope

- The herringbone cannot be used for long because it is tiring on the hips.
- Poles can be an asset for the edging technique, which is best performed with a narrow snowshoe.



**Figure 11.8** Use short steps when walking upright up a hill to reduce fatigue and backward slipping.

• With the zigzag technique, the steepness of the climb is decreased while the distance to travel is increased.

#### Steep Slope

- Locate an area with a variety of slopes to practice these techniques.
- Toeing out is for traditional snowshoeing; modern snowshoes have claws that perform in this way.
- When using the snowshoe as a pole, overextending the reach will force the body to work too hard and may break the snowshoe.
- Deep, powdery snow will be difficult to climb and require a lot of energy but can be a lot of fun to descend; crusty or hard-packed snow will be easier to climb as long as the necessary traction can be attained (figure 11.8).
- A further discussion of safety and snow conditions is a good extension to this lesson.
- Visit various hills and question participants about safety considerations at each location.
- Snow conditions also affect the ability to navigate hillsides.

## **Activity 2: Hill Descending**

Depending on the slope of the hill, one of the following techniques may be used to safely descend. Use the same progression as in ascending.

#### Skill Cues

#### Gentle Slope

Lean backward slightly so the body weight falls toward the tail of the snowshoe (figure 11.9).

#### Moderate Slope

• In very deep snow, tie a piece of rope around the top of each snowshoe and grasp the cord with the corresponding hand.

• While moving down the hill, pull the shoe slightly by tugging on the cord.

#### Steep Slope

- Bend your knees to a full squat position and sit back to the tails of the snowshoes.
- Do not let the bum touch the snow or the snowshoes.
- Try to keep the feet at least shoulder width apart.
- Be careful not to let the snowshoes cross over one another.
- Place the arms out to the side with the hands touching the snow; the arms are used for balance and steering.
- If you fall forward, tuck the head quickly and go into a forward roll; do not slide.





a b

Figure 11.9 Lean back slightly to avoid falling forward while descending.

## Teaching Cues

#### Gentle Slope

- Short, quick steps are recommended to avoid tripping in deep snow.
- Short steps should be used to pack deep snow or push excess snow down the hillside.

#### Moderate Slope

Pulling on the cord prevents the toe of the snowshoe from going under the snow crust and causing a forward fall.

#### Steep Slope

- A slightly upturned shoe is a definite advantage.
- Traditional snowshoes with tails allow for great sliding action.
- Modern snowshoes with claws will not allow a sliding motion.

## **Lesson Closure**

- Review safety considerations for ascending and descending hills.
- Advise participants that hills should only be attempted if success is guaranteed, and overhangs should be avoided due to the risk of an avalanche.
- If they are unsure, participants should track around the hill.

## **LESSON 4**

## **Running in Snowshoes**

#### **Overview**

A fun way to challenge participants who have become accomplished in the skill sets from the first three lessons is to set up a small obstacle course and allow speed and technique efficiency to come to the forefront.

## **Learning Objectives**

- To learn how to run in snowshoes
- To experience varying depths of snow while running in snowshoes
- To participate in obstacle courses and relay races while running in snowshoes
- To practice teamwork during obstacle courses and relay races

## **Equipment**

6 to 8 pylons

## **Risk Management**

- The progression should be slow to avoid certain falls from striding too fast without the skill of recovering snowshoes from the snow.
- Snow with a layer of crust makes running particularly difficult because the tip of the snowshoe can hook and cause a stumble or fall.



**Figure 11.10** Arm swing greatly assists with running in snowshoes.

## **Activity 1: Running in Snowshoes**

Running in snowshoes is not just walking. Participants must exact efficient movements to refine their technique, allowing the speed of the stride to maximize the distance of the gait. An important lesson for participants to discover is how snow quality affects speed. How far participants sink is balanced with how high they can lift the shoe and how fast they can extend their running gait.

#### Skill Cues

- The action of the arms should be emphasized to encourage the legs to stride fully (figure 11.10).
- The height of the knee lift depends on the depth of the snow; deep snow requires a higher knee lift to clear the surface.
- To be efficient, the knee lift should be just high enough to clear the surface of the snow.
- The heel should strike first, as with regular running.

## **Teaching Cues**

- First attempts at running should be on well-packed surfaces to avoid hooking in deep snow.
- Striding should be as natural as running on dry land.
- Deep-snow running can be fun but strenuous.

## **Activity 2: Relay Races and Obstacle Courses**

A little competition can be beneficial as long as you prioritize teamwork, fair play, and a sporting attitude steeped in fun. This type of competition can allow participants to push themselves a bit further and dig a bit deeper to get their shoes out of the snow quicker.

#### Skill Cues

Participants will walk, jog, or run the course using the skills covered throughout the unit such as turning, hill work, and edging.

## **Teaching Cues**

- If available, use natural features such as fences, trees, and hills.
- The available terrain and obstacles will largely determine the challenge of the course.
- The skill and fitness levels of the participants need to be considered when developing the course.
- Create teams large enough to allow participants to rest between legs of the race but small enough to prevent waiting too long in line.
- Design an orienteering course around the area and provide pairs with a map to complete the course.
- Participants will easily see the tracks of each other and the course setter; to remedy this, the course setter should approach control marker sites through the least obvious routes and make lots of extra tracks to confuse participants.
- Assign each group a different order in which they have to complete the course and send them off all at once.
- The many sets of tracks will soon place all teams on an even playing field.

## **Lesson Closure**

- Lead a class discussion of the highlights experienced during the races.
- Participants will have stories to share about how they almost fell but didn't, or how fast they were able to scramble up a steep hill.
- Sharing is a valuable way to summarize many activities, especially where some adventure is involved.

## **LESSON 5**

# Snowshoe Walk Through a Nature Area

## **Overview**

The final lesson demonstrates the biggest benefit of snowshoeing: the winter landscape witnessed by few. Winter offers many natural wonders and beautiful experiences that go untapped because many of us have forgotten the value of the fourth season. Getting outside during the winter months can do wonders not only for physical health but for a more positive mental attitude toward winter. Snowshoeing allows us to get out there and enjoy what nature has to offer and to discover that the world is still active during the snowy months.

## **Learning Objectives**

- To experience the adventure and beauty of a winter walk on snowshoes
- To learn the importance of remaining together as a group for safety
- To demonstrate the importance of a route plan
- To understand the importance of a buddy system and keeping track of all participants
- To experience local wildlife and how animals might cope in the winter season
- To share experiences of the outing with other group members

## **Risk Management**

Ensuring that all group members stay together is crucial when touring an area. Participants who stray from the group could become injured and be far from assistance. Also ensure that every participant is properly dressed for the environmental conditions. The outdoor leader should pack extra gear (hats, gloves, fleece) just in case.

## **Activity: Nature Walk**

Nature can be found in more than established parks; a patch of woods in the winter will suffice. If parkland is accessible, that is a logical choice, but there are many winter treasures right in our own wooded backyards (figure 11.11).

#### Skill Cues

Using a combination of map, compass, GPS, stride length, direction, and distances, participants collect data on the trail and develop a route map.

## Teaching Cues

- You should be familiar with the area and plan a route before heading out on the trail.
- If traveling far, leave a route plan with a responsible person who knows the area.
- Assign one participant to be at the front and one at the end of the group to ensure that participants stay together during the walk.
- The leader can change regularly to share the burden of breaking the trail.



Figure 11.11 Venturing through a natural area highlights the beauty of snowshoeing.

- Establish a buddy system so that partners are responsible for helping each other with any troubles and to ensure that the group stays together.
- Perform a headcount before embarking on the walk so that you can make regular checks to ensure all are present.
- A roll-call system could be put in place to have participants call out assigned numbers or their names.
- Obtain a pamphlet or book of local wildlife and see if participants can spot any animals during the tour.
- Tracks in the snow can also be used as clues about the types of animals that inhabit the area during the winter.
- Other signs of wildlife could be noted, such as cones picked apart by squirrels, burrows used by rabbits, or droppings from deer, moose, weasels, or other animals.

## **Lesson Closure**

- Ensure that all participants are present and have safely returned from the outing.
- Discuss highlights after the walk is over and give each pair the opportunity to provide input.

#### References and Resources

Cook, C. 1997. Essential guide to cross-country skiing and snowshoeing in the United States. New York: H. Holt. Jensen, C.R. 1977. Winter touring: Cross-country skiing and snowshoeing. Minneapolis: Burgess. Savignano, P. 2000. Basic essentials: Snowshoeing. Guilford, CT: Falcon.