

The Adventures of the

JACKRABBITS



JACKRABBIT NAME:

FUNdamentals

JACKRABBIT PROGRAM

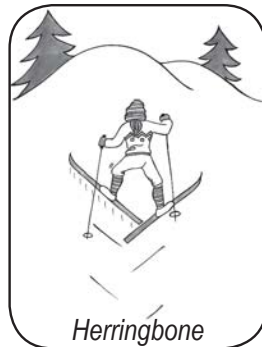


MY TRAIL ETIQUETTE PROMISE

If I practise good trail etiquette it will make skiing more fun for everyone!

- I will call out “track” or move to the left and go around slower skiers when I overtake them.
- I will move to the right and let faster skiers pass when they come up behind me.
- I will pass to the right if I meet another skier head on.
- I will move to the side and wait until the other skier passes if a trail is too narrow for two skiers.
- I will remember that skiers coming down a hill have the right of way.
- If I need to stop, or if I fall, I will move off the trail to allow clear passage for other skiers.
- I will move off the trail if I want to visit with my ski-friends.
- I will not take my pets on the ski trails unless the trail has been designated for use by pets (i.e. K-9 trail).
- I will not litter and I will pack out what I packed in.
- I will respect the custom and say a friendly ‘hello’ when passing other skiers.
- I will obey the trail signs and ski in designated areas only.

LEVEL 1



WHAT I WILL LEARN AT MY PRACTICE SESSIONS:

(Put a check in the appropriate box when you have completed an item.)

- The outdoors is a wonderful place to be in winter!
- I can play on skis with my new ski-friends!
- I will be warmer if I wear mitts (rather than gloves) and keep my toque on!
- I must never block the ski trail! If I fall, I should get off the track as quickly as possible to clear the way. If I stop on a hill, I must step to the side.
- I must be careful not to ski over gravel or anything else that could damage the bottom of my skis!
- How to carry my equipment when I have to carry it myself.
- I should put my skis and poles where they won't be stepped on when they are not in use!
- How to store my skis after I have been skiing.
- I should take a snack in a waist pack when I go skiing – a multi-grain bar, dry fruit and nut mix (gorp), or a couple of cookies. And of course, I must carry out all garbage.
- How to compare types of snow: crystals and grains. I learned that the points on snow crystals interlock. I learned that a snowflake is frozen water in the air!
- I need to practise my ski technique more than once a week in order to become a good skier!

TECHNIQUE AWARD #1

In general, poles should not be used when these skills are introduced.

Ready Position

The skier stands on flat terrain with arms slightly forward and to the side for balance. Skis are kept parallel. The body is upright, but relaxed. Knees and ankles are relaxed and slightly bent. The skier remains in this position for several seconds.

Falling and Rising

The skier glides down the hill without poles, and falls to the side and back in a sitting motion. Skis and legs are kept together. Skis are brought together, side by side and under the body, on the downhill side of the body and perpendicular to the fall line (the path a ball would take if it rolled down the hill). The skier moves on to his/her hands and knees, edges the skis and stands up with minimal or no assistance.

Side Stepping

The skier stands on the flat at the start of a packed, gentle slope with skis perpendicular to the fall line. Arms and hands are forward and to the side for balance. The skier places his/her weight on the downhill ski and then lifts the uphill ski placing it 10 to 20 cm uphill from the original position. The downhill ski is then placed beside the uphill ski. Skis are kept parallel. Repeat for five repetitions. The skier must be able to travel up the slope using five side steps.

Star Turn

This technique should be practised

and assessed on packed, flat terrain. The skier stands relaxed in the Ready Position, with skis parallel and arms away from the body for balance.

The skier places his/her weight on the left ski. The skier then lifts up the right knee and places the right ski back down with the tips about 20-30 cm apart, keeping the tails together. The skis form a "pizza slice." The left ski is then moved parallel to the right ski. This is repeated until a full circle is completed. Repeat in the opposite direction. On flat terrain and packed snow, the skier can repeat the above points, but keeping the tips together and positioning the tails 20-30 cm apart.

Diagonal Stride – Running Step

In the progression of the Diagonal Stride, this step is called the "running step." It is practised and assessed on flat terrain with set tracks. The skier slides his/her skis down the track, "walking" down the track on the balls of the feet with some ankle and knee bend. There is some glide onto the forward ski as the skier pushes off. There is a "jogging-like" action on the balls of the feet, with glide onto the forward ski. After the skier's weight is shifted to the gliding ski, the pushing ski momentarily comes off the snow at the end of the push. Arms swing comfortably.

Herringbone

This technique should be practised and assessed on a gentle slope that is packed, but not too hard or icy. The skier steps up a gentle slope, alternating arms and legs.

Tips are kept quite wide apart (in a "V" shape). Arms swing comfortably. The skier completes five steps with each leg.

Free Glide

This technique should be practised and assessed on a gentle downhill slope that is packed but not too hard or icy. The skier starts at the top of the hill in the Ready Position; the body is generally upright, knees and ankles are relaxed and slightly bent. Hands are kept forward. Skis are kept parallel. The skier is able to glide three metres down the slope maintaining the Ready Position.

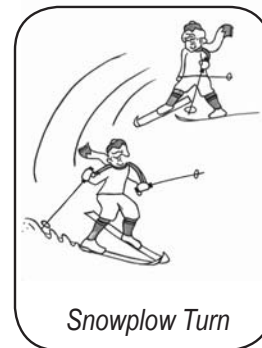
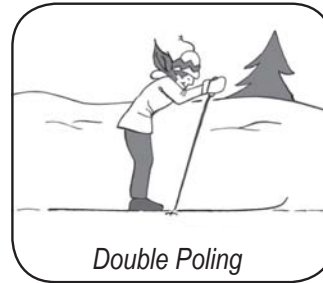
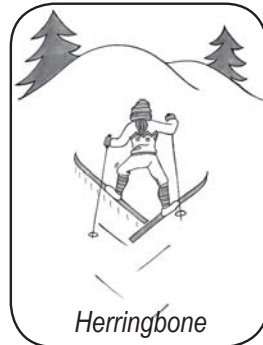
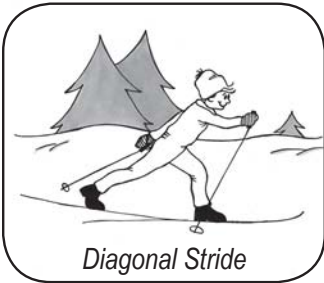
Snowplow Braking

If the skier can demonstrate a stable Ready Position moving down a gentle slope, he/she is ready to be introduced to Snowplow Braking on a similar slope. The skier makes a wedge by spreading the tails of the skis apart (the tips come together). The skier controls speed by adjusting the size of the wedge and edging the skis. The pressure (braking) on each ski is fairly equal with minimal turning to one side. The skier maintains the upper body in the Ready Position.

*A year-end **Report Card** will evaluate your progress and indicate whether you have earned your first Technique Award. The Report Card will be provided by either your Coach or Programmer.*



LEVEL 2



WHAT I WILL LEARN AT MY PRACTICE SESSIONS:

(Put a check in the appropriate box when you have completed an item.)

- My ski group, or “team”, has a lot of fun when we ski together.
- How to put my skis on and slip into my pole straps correctly. I must be careful of pole tips at all times.
- The different purposes of glide wax and grip wax.
- I should yield and give the right of way to faster skiers coming down a hill by promptly moving to the side of the trail. I can ask “TRACK” if I overtake another skier when I am skiing up a hill.
- I need a full breakfast before I go skiing. Cereals, muesli, oatmeal, pancakes, waffles, muffins, whole-wheat bread, peanut butter, eggs, fruits and yogurt are some good choices.
- I should take my water bottle when I go skiing because it is important to drink lots, especially during exercise.
- Good technique will help me to ski fast.
- Relays, sprints and similar speed “games” are a lot of fun!
- It is important to get my muscles “warmed up” before skiing fast, playing games or practising skills that require quick movements.
- Play time on snow, including frequent use of a terrain park/ski playground, will help me become a better skier.

TECHNIQUE AWARD #2

Poles will be used when learning/practising some of the following skills.

Diagonal Stride – Gliding Step

In the progression of the Diagonal Stride this step is called the “gliding step.” Some glide occurs with each stride. The skier lifts the skis off the snow when kicking; there is a weight transfer about 50% of the time, and the recovery foot lands beside or in front of glide foot. The skier can perform five successful strides in a row, but balance may be insecure and unnecessary movements may occur. Poles are not yet used for propulsion, but arms move in an alternating pendulum arm action. The body is mainly upright in the Ready Position.

Herringbone

The skier steps up a moderate slope, alternating arms and legs. Tips are kept quite wide apart (in a “V” shape). The inside edge of each ski is angled into the snow to eliminate slipping. Arms swing comfortably. The pole tips are planted behind and to the side of the feet, and the hands are just below shoulder height. There is good weight transfer from ski to ski. The skier completes five steps with each leg.

Double Poling

The skier pushes down the track for five meters using only the upper body. The skier reaches his/her hands forward to plant the poles. The pole tips do not come ahead of the pole handles when they are being planted. The upper body flexes at the waist just after the poles are planted to provide additional propulsion. The upper body movement is completed by extending

the arms to the rear. The legs remain fairly straight, but not rigid, through all phases of the movement.

Free Glide

Follow the steps outlined in Level 1, but this time the pole handles should be down in front of the body with the tips angled behind, so that the pole shaft is generally angled down and backward without dragging on the snow. The skier is able to glide five metres down the slope maintaining the Ready Position.

Kick Turn

Start in the Ready Position. The skier reaches back with the right arm outstretched and plants the right pole on the outside of the left ski near the tail. Both poles are now planted on the same side of the left ski. The skier stands to the right. The skier now lifts the right ski, bending at the knee and hip so the tail of the ski drags on the snow and the ski is perpendicular to the ground. Next the right leg is moved so the skis are parallel, but the tip of the one ski is beside the tail of the other. The left leg and pole are now brought around so the ski tips are together and the skier resumes the Ready Position, having completed a 180 degree turn. The skier performs the technique in both directions. At this level the skier may require some assistance.

Snowplow Stop

The skier begins by demonstrating Snowplow Braking. The skier returns to the top of the slope, then moves down the hill showing a good wedge and keeping the ski tips together. By

applying equal pressure on the inside edges of the skis (rolling inward with the ankles) the skier is able to safely reduce speed to a full stop. At this level the skier may require some assistance.

Half-Snowplow Braking. The skier Free Glides down an easy to moderate hill. Part way down the skier lifts the right ski out of the track and places it in a wedge position with the tip close to the tracks and the tail farther away. Pressure is applied to the inside edge of the right ski by shifting much of the skier’s weight to the ski and rolling inward on the ankle. The pressure is applied until the skier is able to significantly reduce speed. Both skis are then placed parallel in the tracks. Repeat with the left ski.

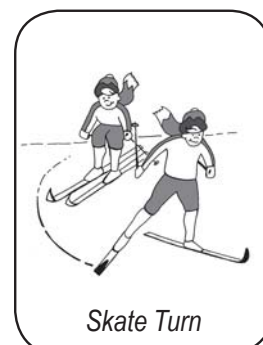
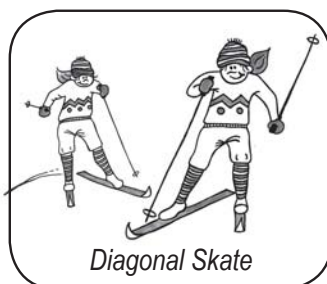
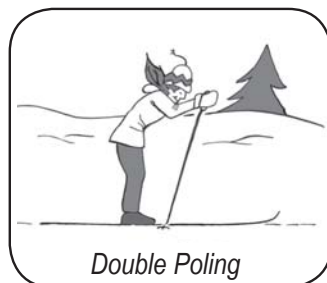
Snowplow Turn

The skier starts down the hill in a proper Snowplow position. Weight is applied unequally to the skis, so most of the body weight is placed on the right ski and the ankle is rolled inwards. This will cause the right ski to start to move perpendicular to the fall-line. The skier continues to face down the hill. After the skis turn to the left, the skier unweights the right ski and transfers the weight mainly to the left ski, while rolling the left ankle inward. The skier should be able to complete two successful turns.

*A year-end **Report Card** will evaluate your progress and indicate whether you have earned your second Technique Award. The Report Card will be provided by either your Coach or Programmer.*



LEVEL 3



WHAT I WILL LEARN AT MY PRACTICE SESSIONS:

(Put a check in the appropriate box when you have completed an item.)

- How to adjust my pole straps.
- How to clean the base of my skis under the supervision of my parents or coach.
- How to apply and cork a grip wax - crayoning wax onto the grip zone, and smoothing it with a cork.
- Why dressing in layers will keep me warmer. Which clothing to avoid and which types of fibres to use.
- I should be developing general fitness through participation in a variety of sports/activities on a regular basis, year round.
- A good level of physical fitness will make skiing more fun and help me with my technique.
- If I really want to progress as a skier I should be attending 30-40 sessions annually – **pre-ski season activities as well as ski sessions on snow.**
- My ski club is the centre of the cross-country ski community where I live.
- How to be part of a team when I participate in a Ski Tournament or similar activity with other skiers from my club.

TECHNIQUE AWARD #3

In general, poles should be used when learning/practising the following skills.

Diagonal Stride – Long Step

In the progression of the Diagonal Stride, this step is called the “long step”. The skier shows a clear weight transfer from ski to ski resulting in a longer gliding action. The ski lifts off the snow when the skier kicks. The recovery foot usually lands beside or in front of (not behind) the gliding foot when viewed from the side. The hands are close to shoulder height and elbows are slightly bent at pole plant. The skier demonstrates some ankle and knee bend, and maintains a slightly forward body lean. The poles are angled backwards and help provide propulsion; the skier is clearly pushing off of them. Each pole is planted beside the opposite side ski boot.

Double Poling

The skier reaches the hands forward to plant the poles. When the poles are planted, the skier is leaning forward slightly, hands are forward at shoulder level, elbows are slightly bent. Poles are held at a small angle to the snow, pointing backwards. Pole tips are behind the pole handles when they are planted. The upper body flexes at the waist just after poles are planted to provide additional propulsion. As the upper body bends to a horizontal position, the arms start to extend, and follow through with a strong extension to the back. Immediately following the pole plant, the skier is obviously pushing on the poles with his/her upper body weight. The upper body movement is completed by extending the arms to the rear. The progression is upper body, then shoulders, then elbows. The elbows should not collapse in the initial phase of the pole motion. Legs remain relatively straight, but not rigid, through all phases of the movement. After completing the push, the arms and

upper body are recovered forward at the same time to initiate another poling action. The skier is able to execute fairly effective poling action and push down the track using the Double Poling technique.

One-step Double Poling

The skier stands in the Ready Position with body weight on the left ski. The skier pushes off the left ski, and transfers all of the weight to the right ski, while reaching forward with the arms to Double Pole. The skier then initiates Double Poling action while recovering the push foot forward. The skier glides on both skis, and then begins the cycle again, alternating the pushing leg (this time using the right ski). The skier is able to ski 50 m using this technique. For evaluation purposes the skier needs to demonstrate some weight transfer between the pushing and gliding skis.

Free Skate

The skier is in the Ready Position demonstrating an obvious “V” shape with the skis. The skier bends the left knee and ankle, pushing off with the left leg and transferring the weight onto the right ski. The right hip and shoulder are aligned over the right ski. As the glide ski slows, the skier bends the right knee and ankle and pushes off the right ski so the weight is transferred to the left ski. The left shoulder and hip then align over the left ski. The glide on the left and right skis is consistent. During each glide, the feet come close to each other. The skier swings the arms in front of the body (rotation movement). Poles are held with the tips pointing backwards, not touching the snow.

Downhill Tuck

In a low tuck the upper body is bent to a horizontal position, and knees and ankles are bent so the thighs are parallel to snow. In a “high” tuck the knees and ankles are only slightly bent.

Poles are held under the arms and tightly against the body. The skier can safely descend a medium hill in a low or high tuck.

Diagonal Skate

This technique should be practised on a moderate uphill slope. The action is similar to that used in a Herringbone, but in this case the skier glides on each ski. Alternating pushes with the arms and legs, the skier glides up the hill shifting the weight from ski to ski. A pole and the opposite ski touch the snow at the same time. The gliding skis should be kept fairly flat on the snow, and not edged until the actual push off. The arm action is similar to that used in the Diagonal Stride. Arms are kept close to the body during the initial phase of the arm push.

Kick Turn

Follow the steps outlined in Level 2, but this time no assistance should be provided to the skier.

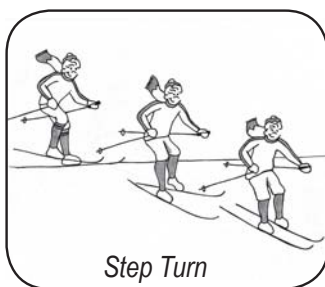
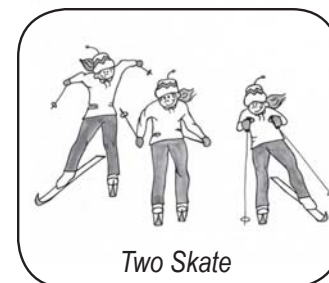
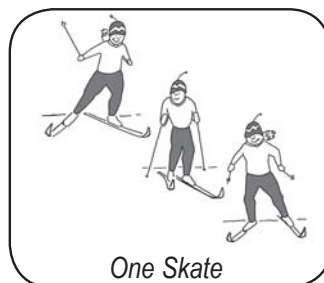
Skate Turn

The skier performs Double Poling just in front of the place he/she wishes to turn. As the skier recovers the arms and upper body forward, the inside ski (the ski that is on the side to which the skier is turning) is unweighted, lifted and pointed in the new direction. The skier edges and pushes off the outside ski transferring the body weight to the inside ski. The skier then glides with the skis parallel and equally weighted in the new direction. Another Double Poling action completes the turn.

*A year-end **Report Card** will evaluate your progress and indicate whether you have earned your third Technique Award. The Report Card will be provided by either your Coach or Programmer.*



LEVEL 4



WHAT I WILL LEARN AT MY PRACTICE SESSIONS:

(Put a check in the appropriate box when you have completed an item.)

- The properties of snow, the snow transformation process (crystals, grains, dry, wet) and their effect on wax selection.
- What waxes and tools I need in my wax kit. How to select wax for the day.
- I can help my ski club in a variety of ways such as stuffing club bulletins in envelopes, preparing food for a club gathering, cleaning up litter at the ski area, playing ski games with the youngest skiers, etc.
- What I should be eating for lunch to keep my energy level up. Choices might include: sandwiches with protein such as cheese, meat or peanut butter, macaroni or rice salad, vegetables and dip, apple sauce, fruit juice.....
- I need to ski frequently at a terrain park/ski playground in order to improve my ski technique.
- At this level I should participate in at least four short, “fun” competitions during the ski season – sprints, relays or similar kinds of activities.
- As I progress through the cross-country skill development programs there will be many adventure-based cross-country skiing opportunities I can take part in if I am physically fit, have developed my outdoor skills, and have good technique.

TECHNIQUE AWARD #4

One-step Double Poling

The skier should be able to demonstrate this technique as described in Level 3, and show a consistent fluid action with good balance at both the pole plant and the end of the pole push phase.

Free Skate

Follow the steps outlined in Level 3. There should be an obvious and complete weight transfer from ski to ski (the skier glides on one ski and then the other).

One Skate

The One Skate technique requires a poling action (arm push) with each leg push. The skier begins as if Double Poling. The weight is placed mainly on the right ski, while the left ski is lifted and angled a bit to the side. Ski tips should be kept 50 cm apart. The right hip and shoulder are over the gliding ski until the leg push is initiated. The skier plants the poles with the tips slightly ahead of the binding. The skier pushes down with the upper body and arms, beginning to transfer the weight onto the left ski. Knees and ankles bend before pushing off. The leg pushes to the side, not back, and as the ski is pushed off it remains parallel to the snow. The weight transfer is accomplished by edging and pushing off the right ski, and pushing with the arms. The completion of the poling extension is synchronized with completing the weight transfer to the left ski. As the skier shifts onto the new ski, the arms are recovered along with the right ski and the sequence is repeated using the opposite arms and legs. The glide on the left and right skis is consistent. During each glide, the feet come close to each other.

Two Skate

The Two Skate technique is similar to the One Skate except the poling action only occurs with every second leg push.

The skier begins as if Double Poling, gliding with the weight on the right ski and the right shoulder and hip aligned over it. The left ski is lifted and angled a bit to the side. Ski tips should be approximately 50 cm apart. The skier plants the poles with the tips slightly ahead of the binding, and completes a Double Poling push action. As the skier pushes down with the upper body and arms, he/she begins to transfer the weight onto the left ski by pushing off with the right leg. The skier glides on the left ski, with left hip and shoulder aligned on the glide (left) ski, and begins to recover the arms forward. The skier then skates off the new glide ski (left) using only a leg push. The arms are recovered forward over the right ski in preparation for another Double Poling action after the skier has transferred the weight back to the right ski.

Step Turn

The skier starts in a “high” tuck position and glides down the hill. The skier completes several Step Turns in one direction, using small, quick steps, and consistently maintaining the tuck position. Weight is kept on the heels. During this exercise there is a complete weight transfer from one ski to the other. Skis are edged when weight shifting. The skier should be able to Step Turn both to the left and right.

Parallel Side Slipping

The skier maintains the Ready Position throughout. By moving the knees and rolling the ankles in and out, the skier shifts weight alternately on the uphill and downhill edges. Skis remain parallel while slipping down the hill sideways. The skier demonstrates control by stopping mid-slope. The skier should be able to sideslip at least one metre down the hill, and demonstrate this skill facing both directions.

Offset

This technique requires a poling action after every second leg push. The skier begins as if going to use the Two Skate technique, but the ski tips are generally a bit wider. The skier balances on the left ski and pushes with the left leg in order to step up the hill onto the right ski, planting both poles at approximately the same time (three point landing). The right shoulder and hip should be aligned over the right ski. The poles are planted in an “offset” position. The right pole is planted with a slight slant to the rear, with the tip beside the right binding. The left pole is angled more sharply back and to the side, with the tip at the left binding. The skier continues with an action similar to the Double Poling motion but with less bend at the waist. During the Double Poling action, the skating (pushing and weighted) right ski is edged and the skier pushes off with the right leg and arms to begin the weight transfer to the left ski. The skier balances briefly with the left hip and shoulder aligned over the left ski. The ski is then edged and the skier pushes off the left leg and steps and shifts the weight onto the right ski, to start the cycle again. The skier’s weight shifts quickly and does not linger over the ski as it does with One Skate and Two Skate techniques. The skier must be able to offset on both sides – i.e. with right hand leading and with left hand leading.

*A year-end **Report Card** will evaluate your progress and indicate whether you have earned your fourth Technique Award. The Report Card will be provided by either your Coach or Programmer.*



PROGRAM AWARD: SNOW GOALS

The objective of this award is to encourage play-time on snow (including frequent use of a ski playground or terrain park) in addition to practice sessions for the purpose of improving a skier's balance, agility, fitness and rhythm - the key elements of good ski technique.

Award Rules: Skiers can earn one sticker per year, with the exception of the final year, in which case a bonus sticker can be earned. In order to achieve the sticker that says SNOW GOAL 1, skiers must ski at least five times (a minimum of one hour each) a season *in addition* to their Jackrabbit lessons. If they ski 10 times, they earn the sticker that says SNOW GOAL 2; 15 times, SNOW GOAL 3; and 20 times, SNOW GOAL 4. In order to earn the bonus sticker (SNOW GOAL 5), skiers must double the number of times they would ski to earn a SNOW GOAL 4 sticker during their fourth year in the program – for a grand total of 40 times in snow in addition to their Jackrabbit lessons. The highest achievement would be to earn four “SNOW GOAL 4” stickers, one for each year the skier is enrolled in the program, plus the bonus sticker (SNOW GOAL 5) at the end of the fourth year. The centre of each circle records the skier's score.



Richard Weber

Born in Cantley, Quebec, Richard Weber comes from a family of cross-country skiers. It was therefore no surprise when he became a member of the National Ski Team. He competed for Canada at the 1977, 1979, 1982 and 1985 World Championships. He then dedicated his skills and talents to polar exploration, reaching the North Pole on skis in 1986. In 1988, he was the leader of the Canadian team that was part of the joint “Polar Bridge” expedition comprised of Russians and Canadians who skied from Siberia to Canada via the North Pole. In 1995, Richard and Mikhail Malakhov became the only explorers in history to ski from Canada to the North Pole and back entirely unsupported.

PROGRAM AWARD: SPRINTS

The purpose of this award is to develop speed. Recommended sprint distances for skiers seven years of age are 50 to 75 metres; eight and nine years of age is 75 to 100 metres.

Award Formula: If the distance is 100 metres, the actual time of the skier is used. If the distance is 50 metres, multiply the time of the skier by two, and so on.

- Green – 2 minutes to 1 minute per 100 metres.
- Blue – 59 seconds to 50 seconds per 100 metres.
- Purple – 49 seconds to 40 seconds per 100 metres.
- Red – 39 seconds to 30 seconds per 100 metres.
- Gold – 29 seconds or less per 100 metres.



Beckie Scott

Beckie Scott, from Vermilion, Alberta, started skiing in the Jackrabbit Ski League at the age of six, and at seven she entered her first ski race. Through a rare combination of talent, hard work and determination, she later established herself as one of the world's best cross-country ski competitors. Beckie earned multiple World Cup medals in sprint, individual and relay events, and in 2002 at the Olympic Winter Games in Salt Lake City she became the first Canadian to win an Olympic gold medal in cross-country skiing.

PROGRAM AWARD: HAT TRICKS

The objective of this award is to recognize the exceptional accomplishment of achieving a high standard for technique, speed and commitment.

Award Formula: Combine a Technique Award with a Sprint and Snow Goal Award to collect an all-round achievement award – the Pierre Harvey Hat Trick Award!

Hat Trick #1: Technique Award – Level 2	Sprint Award (blue)	Snow Goal 2
Hat Trick #2: Technique Award – Level 2	Sprint Award (purple)	Snow Goal 3
Hat Trick #3: Technique Award – Level 3	Sprint Award (purple)	Snow Goal 4
Hat Trick #4: Technique Award – Level 4	Sprint Award (red)	Snow Goal 4
Hat Trick #5: Technique Award – Level 4	Sprint Award (gold)	Snow Goal 5



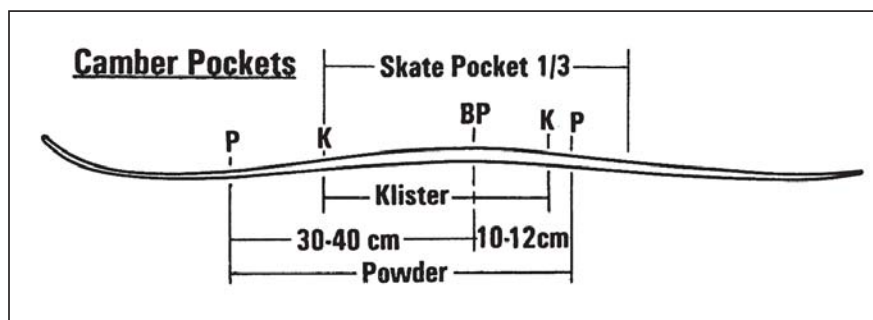
Pierre Harvey

A native of Rimouski, Quebec, Pierre Harvey was the first Canadian cross-country skier to win a World Cup competition. During his career, he won a total of three World Cups and two World Loppets. He is also one of the top-ranked Canadian Championships medalists ever with a total of 35, including 22 gold! A multi-talented athlete, Pierre finished 24th in road cycling at the 1976 Olympic Summer Games, and in 1984, he accomplished the feat of competing in both the Winter Olympic Games (in Sarajevo) and Summer Games (in Los Angeles).

YOUR SKI EQUIPMENT

KNOW THE TERMS

- ❑ **Classic Ski:** This is a double or single camber ski that is designed to support your weight until you kick. When you “kick” your ski will flatten, allowing the grip wax to hold the snow.
- ❑ **Skate Ski:** This ski can also be a single or double camber. However, the ski should be stiff enough that when you skate (kick) you cannot flatten it.
- ❑ **Camber:** The camber is the arc that is built into the ski. This arc can be of varying degrees of stiffness. The stiffness is what carries your weight.



- ❑ **Poles:** Ski poles are usually made of aluminum or different types of fiberglass. A rule of thumb for determining pole length would be chin height for skating poles and a tight fit under your arm.
- ❑ **Glide Wax:** Glide wax is applied to the glide zones of classic skis and the full ski length of skate skis to enhance the free glide abilities of your ski. These waxes are designed for the whole spectrum of snow conditions.
- ❑ **Grip Wax:** (Kick wax). Grip wax is used for classic skiing only and is designed to permit the ski to “grip” the snow when you put your weight on it. It is applied in layers to the middle portion of the classic ski. Grip wax comes in different levels of hardness so that the wax can be matched to the snow conditions. Since the snow crystal must penetrate the grip wax for the wax to hold, the grip wax must match the hardness of the snow crystal.
- ❑ **Klister:** Klister is a type of grip wax. It is applied in a single layer in the middle section of your classic ski and it is used to provide grip when the snow is melting or has melted and re-frozen. The klister must always be allowed to cool before you ski on it.
- ❑ **Base Binder:** Base binder is used to help the grip wax (either hard wax or klister) stay on your ski when the ski track is abrasive. Base binder is not designed to provide kick.
- ❑ **Plastic Scraping:** Scraping describes the process of removing the excess glide wax from your skis.

SELECT YOUR EQUIPMENT

Following are some general guidelines to assist you in determining which kinds of equipment you need.

LEVELS 1 & 2. For learning the skills required at these levels, it is preferable to have waxable skis, even if they are your first pair. Your skis can be dual purpose (classic skis that can also be used for skating), but your poles must remain “classic” length.

LEVELS 3 & 4. At this point you will be introduced to the skating technique. You can learn skating technique skills while using classic, dual-purpose skis, but you will now require both skating length poles and classic length poles. For skating technique sessions, if you are using classic, dual-purpose skis, you must remove the grip wax from the kick zone and have the entire length of the ski prepared with glide wax. For classic technique sessions, the kick zone must be in place again, and grip wax must be applied. It is also important that you are using bindings that do not rub the track when your ski is on edge or when you are using the skating technique.

By the time you have completed the Jackrabbit Program, you may wish to have two sets of equipment (both skating and classic), especially if you plan to continue on to the next stage in CCC’s skill development progression, the Track Attack Program.

SKIS

- Classic skis should reach just below your wrist when your arm is stretched out, and the camber should be suitable for classic skiing. A basic test can be performed to see if the camber is appropriate for you. When standing on one ski the ski base should fully contact the flat floor under the foot; when standing on both skis at the same time, a piece of paper should be able to slide between the ski and a flat floor for about 15-20 cm. This movement indicates that the ski’s “camber” is appropriate.

- Your skating skis should be 3-4 cm above your head, and the camber should be suitable for that technique. When you are standing on one ski on a flat floor, a piece of paper should be able to be pulled out from under the foot with a gentle tug.
- If you choose dual-purpose skis they should be a length mid-way between the length of a classic ski and a skating ski, but the camber must be determined by what is suitable for classic skiing.
- If your skis are not the correct length and camber you will have difficulty mastering the technical skills necessary to become competent in the sport.

POLES

- Your poles must have adjustable straps.
- Classic poles should fit snugly under your arm when you are standing on the floor.
- Skating poles should be the same height as your chin.
- If your poles are too long or too short, you will have difficulty mastering the technical skills necessary to become competent in the sport.

BOOTS/BINDINGS

- Your boots should be comfortable. If the boots are too large, they will be awkward to ski in and if they are too tight, your feet will not stay warm.
- Select bindings that will not rub in the track when the ski is on edge or when skating technique is used.
- Salomon and NNN are two commonly used, suitable boot/binding systems. Both are good and equally functional.

LEARN TO PREPARE YOUR OWN SKIS

The following instructions are for cleaning and preparing the full length of your ski. Note that base preparation and wax application should always be done under the supervision of your parents or coach.

- Place the ski firmly in the form.
- Clean the ski top, sides and bottom with wax remover.
- Dry thoroughly.
- Using a plastic scraper, make a couple of passes from tip to tail in a continuous motion.
- Take some fiberlene or paper towel and wipe your ski.
- Your coach or parent should check the ski to see if it needs work, and make any repairs that are necessary.
- Your ski is now ready to wax.

The first step is for your coach or parent to apply a glide wax. Once this process is complete, you can begin applying the kick wax.

- Take some sandpaper (80 grit) and rough up the grip zone of your ski. Note, however that

you should be cautious about how you apply this step if you plan to use your classic skis for both classic and skating techniques.

- Make sure the grip wax is cold. This is especially important with the softer waxes or base binder. “Freeze” the wax by leaving it outside while you get ready to begin. This allows it to be rubbed on in thin layers and avoids big lumps that are difficult to spread out with the cork.
- Rub a thin layer of the grip wax onto the grip zone of your ski and smooth out each layer with a cork.
- Start with 3-4 thin layers of grip wax. If the ski is not too stiff and the wax is right, that will be enough.
- If you do not have adequate grip you can add one or two more layers, or a slightly softer wax.
- The next step is to lengthen the layers.
- Finally, if the grip is still inadequate, you should scrape it all off with a plastic scraper and repeat the process with a softer wax.

MAKE UP YOUR OWN WAX KIT

- Cork and plastic scraper.
- Paper towel or fiberlene.
- Grip wax: one package of a recognized brand that covers the full temperature range (approximately six grip waxes).
- Klister: universal klister.

- Glide wax: one warm range and one cold range non-fluoro paraffin glide waxes.

Your “kit” can be a small plastic box with a lid, a little cloth bag, a fanny pack, etc. This kit helps to reduce the chance of items being lost in the wax area during the ski session or workshop.

WINTER SAFETY

- Never ski alone.
- Dress appropriately for ski sessions. Stay dry and warm. Be prepared for bad weather or changing conditions.
- Know which trails you are allowed to ski on, and never ski outside the designated area.
- Learn what to do if you become lost.
- Find out what causes frostbite. Learn to recognize it and what to do about it.
- Re-evaluate your plans if you or other members of your group start to fatigue.
- Do not ski out of control.
- Do not ski terrain and distances beyond the scope of your skill and fitness level.
- Be aware of the dangers of crossing bodies of water in winter. Proceed one person at a time and check the thickness of the ice with your poles.
- Do not ski in avalanche areas without proper training and equipment.

“Jackrabbit” Johannsen

Herman Smith Johannsen, who was born in a small Norwegian village in 1875, contributed significantly to the development of cross-country skiing in Canada. In the late 1920s he settled in the Laurentians in Quebec. For many years, he designed cross-country ski trails in Canada, and particularly in that region. As a consultant, he was part of the development of ski centres in Lac Beauport, Mont-Orford, Mont-Gabriel, Mont-Tremblant and Collingwood (this last one in Ontario). The Cree Indians he met along those trips admired his ability to move between trees and his capacity to travel by ski for long distances. Subsequently they named him “Wapoos,” a Cree word for Jackrabbit. He registered in his last ski race at the age of 75! When he passed away in 1987 he was 112 years old. When the Jackrabbit Ski League was created in the early 1980s he supported the program by giving it his nickname.

