

# Cross Country Skiing

## Special Olympics Coaching Guide

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## **CROSS-COUNTRY SKIING COACHING GUIDE**



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## Acknowledgements

The Special Olympics movement is profoundly grateful for the support of the Annenberg Foundation, which has underwritten the production of this guide and resource, supporting our global goals for coaches' excellence.



Advancing the public well-being through improved communication

Special Olympics would also like to thank the professionals, volunteers, coaches and athletes who helped in the production of the *Cross-Country Skiing Coaching Guide*. They have helped fulfill the mission of the Special Olympics: to provide year-round sports training and athletic competition in a variety of Olympic-type sports for people eight years of age and older with intellectual disabilities, giving them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in the sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

Special Olympics welcomes your ideas and comments for future revisions of this guide. We apologize, if for any reason, an acknowledgement has been inadvertently omitted.

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## Special thanks to the following for all of your help and support:

City of Brandon Parks and Recreation Department, Brandon, Manitoba, Canada

Video Clips Starring Athletes from Special Olympics Canada

Wayne Bauche

Shannon Bauche

Special Olympics Colorado

Denver Parks and Recreation Department

National Sports Center for the Disabled Jim O'Connor, Nordic Program Director

New England Nordic Ski Association

US Nordic and Biathlon Paralympics

Paul Whichard, Special Olympics, Inc.

Paola Quijano, Special Olympics, Inc.



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## **CROSS-COUNTRY SKIING COACHING GUIDE**

Planning a Cross-Country Skiing  
Training and Competition Season



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### Part 1

#### Benefits of Cross-Country Skiing

Cross-country skiing is a great way to be active and to enjoy the outdoors in the winter. As a lifelong sport, skiing is also a challenging way to build fitness, strength and confidence. If learned at the right pace and done consistently, then the benefits of aerobic endurance and strength can be long lasting. Learning different cross-country ski techniques requires physical and psychological balance, coordination and focus.

There are two primary cross-country techniques, classic and skate, which differ in movement and in equipment. Beginner skiers are most likely to start with the classic technique because the forward diagonal movement is a great way to learn how to balance and maneuver on skis. Gaining confidence in classic skiing will set the base for future ski skills. And, most importantly skiing is fun!

#### Basic Ski Lesson

The purpose of this Guide is to assist coaches and volunteers in teaching Special Olympics athletes fundamental abilities on snow and specific skills on skis:

##### Abilities

- ♦ Balance and maneuver on skis
- ♦ Glide on skis
- ♦ Move from ski to ski with weight transfer
- ♦ Basic propulsion
- ♦ Refined poling and timing of movements
- ♦ Changing direction with skis<sup>1</sup>

##### Skills

- ♦ Classic diagonal striding
- ♦ Double pole
- ♦ Herringbone
- ♦ Wedge
- ♦ Side Step
- ♦ Star Turns
- ♦ Step Turns
- ♦ Skate – V1, V2, V2 alternate

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<sup>1</sup> New England Nordic Ski Association (NENSA)  
[www.nensa.net](http://www.nensa.net)



### Preparation for an Effective Ski Lesson

Below is a checklist for important points to keep in mind for an effective lesson. Preparation is key, especially to be able to adapt and adjust accordingly for a safe training environment, properly functioning equipment and maintaining an understanding of athletes' abilities.

#### Before the Lesson

- ♦ Be prepared: know your venue and trail system well.
- ♦ Be prepared: know your athletes' abilities and goals.
- ♦ Have a solid, but flexible lesson relative to the athletes' abilities and goals.
- ♦ If using kick wax, determine the optimal wax for the day's conditions.
- ♦ Clearly communicate to volunteers and support staff their roles and responsibilities in accordance to your training plan.
- ♦ When possible, have all equipment and stations prepared before the athletes arrive.
- ♦ Introduce and acknowledge coaches, support staff and athletes.
- ♦ Review intended program with everyone. Keep athletes informed of changes in schedule or activities.
- ♦ Alter the plan according to weather, the facility in order to accommodate the needs of the athletes.
- ♦ Check that athlete equipment and attire are complete and appropriate for the day's training technique and weather.

#### During the Lesson

- ♦ When speaking to the athletes, arrange them in a semi-circle in front of you and make eye contact.
- ♦ Speak simply and clearly. Be concise with your skill explanation. Do not give long demonstrations and explanations.
- ♦ Encourage the athletes to imitate the technique of the coach.
- ♦ Keep drills and activities appropriate to the level of your athletes.
- ♦ Keep everyone moving.
- ♦ Ask the athletes questions to make sure that everyone knows what is expected of them.
- ♦ Keep the "fun" in fundamentals.
- ♦ Change activities before the athletes become bored and lose interest.
- ♦ Devote the end of the practice to a fun, group activity that can incorporate challenge and fun always giving them something to look forward to at the end of practice.
- ♦ Take necessary rest and water breaks.
- ♦ Watch for fatigue and listen to athletes who say they are cold.
- ♦ Watch for warning signs of frostbite (change in skin tone of the cheeks, nose and ear tips).

#### After the Lesson

- ♦ Summarize the session and announce arrangements for next session.
- ♦ Acknowledge progress made and challenges that the athletes faced.
- ♦ Compile a progress report or evaluation of each athlete to inform the next lesson plan.

The aforementioned and following guidelines are recommendations for how to instruct a cross-country ski lesson. However, it is up to the coach to adapt the guidelines to fit their coaching style, the learning style of the participants, and the individual needs and abilities of the group.<sup>2</sup> Every nordic center is different, and requires specific adaptations and staff awareness in order for ski lessons for individuals with intellectual and developmental disabilities to be run effectively, smoothly and safely.

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<sup>2</sup> NENSA



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

#### Special Olympics Coaching Principles

<b>Keep all athletes active</b>	Athlete needs to be active listeners
<b>Create clear, concise goals</b>	Learning improves when athletes know what is expected of them
<b>Give clear, concise instructions</b>	Demonstrate – increase accuracy of instruction
<b>Record progress</b>	You and your athletes chart progress together
<b>Give positive feedback</b>	Emphasize and reward things the athlete is doing well
<b>Provide variety</b>	Vary exercises – prevent boredom
<b>Encourage enjoyment</b>	Training and competition is fun, help keep it this way for you and your athletes
<b>Create progressions</b>	Learning is increased when information progresses from: Known to unknown – discovering new things successfully Simple to complex – seeing that “I” can do it General to specific – this is why I am working so hard
<b>Plan maximum use of resources</b>	Use what you have and improvise for equipment that you do not have – think creatively
<b>Allow for individual differences</b>	Different athletes, different learning rates, different capacities.



### Conducting a Safe Ski Lesson

The safety and well being of athletes is the coach's primary concern. Cross-country skiing involves a variety of conditions in which accidents may occur. It is the coach's responsibility to minimize the occurrence of injuries by providing safe conditions.

### Preparing for Safety

Choose a safe location for ski practices and be knowledgeable of the ski venue. Training should only take place on trails that are properly prepared and maintained. Consider low-traffic areas to conduct the ski lesson to avoid distraction and disruption.

- ♦ Ensure that the athletes' equipment is safe.
- ♦ Familiarize yourself with individual athlete needs and precautions, like medications.
- ♦ Ensure that the athletes are dressed appropriately for the weather conditions.
- ♦ Check your first-aid kit and restock supplies as necessary.
- ♦ Provide emergency procedures. Train all athletes and coaches in these procedures.
- ♦ Identify the nearest phone accessible during practice; carry a cell phone with pertinent emergency contact information.

### Training and Competing Safely

Establish clear rules for behavior at your first practice and enforce them.

- ♦ Make sure that your athletes are listening to you.
- ♦ Keep ski pole tips pointed down.
- ♦ Do not let athletes ski by themselves.
- ♦ Encourage athletes to wear appropriate clothing and eyewear.
- ♦ Be aware of the weather and how it may change.
- ♦ Provide proper stretching exercises after warming up at the beginning of each practice.
- ♦ Provide activities that will improve general fitness levels. Fit athletes are less likely to get injured. Make practices active; keep your athletes moving.
- ♦ Provide one-on-one instruction if possible, especially with lower ability athletes.
- ♦ Stay on groomed trails and avoid icy, difficult terrain, especially for beginners.

### Care of Minor Cross-Country Skiing Injuries

It is the coach's job to maintain a safe environment. It is strongly recommended that coaches have certification in cardiopulmonary resuscitation (CPR) and first aid. If not, make yourself aware of a ski center's ski patrol and emergency procedures. Athlete medical forms should be reviewed before the start of practice and be on hand at all training and competition. There should be a plan for emergencies. Using the Coach's Safety Checklist will help to prevent injury by assuring adequate supervision, equipment, facility, warm-up and stretching.

When an injury does occur, stay calm and administer only basic first aid. When in doubt or when more care is needed, consult the athlete's family and/or a physician. Notify local Special Olympics program if/when an incident occurs and fill out appropriate incident report.

### Treating Strains, Contusions, Minor Bumps and Bruises

- R - Rest, stop any pain-causing activity
- I - Ice for 24-36 hours after the injury
- C - Compress with elastic bandage if needed
- E - Elevate to avoid edema and subsequent swelling



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#### Blisters

- ♦ Keep pressure off new blisters using a felt “doughnut”.
- ♦ Where the skin is torn use extreme care.
- ♦ Keep area clean and cut skin halfway around the perimeter without removing the skin.
- ♦ Apply the dressing.
- ♦ When underlying tissue toughens, cut away the remaining flap of skin.

#### Frostbite

Be aware of the cold factors that may lead to frostbite. Signs to watch for are white spots on cheeks, nose, fingers or toes. If signs appear, bring the athlete indoors immediately. Gently thaw frozen area by restoring circulation—do not rub it. If you use warm water to thaw the frozen part, it should be 98–100 degrees body temperature. Counsel the athlete and family about taking extra care with proper attire for the next session because the athlete will now be more prone to frostbite.

#### Nutrition

Ensure athletes are properly hydrated and fueled. Cross-country expends a lot of energy, especially in the cold. It is important for the athlete to be properly hydrated before a training session so that their body is prepared for athletic exertion in cold weather. If possible, staying hydrated during a ski can help the athlete maintain energy and focus. Unlike warm weather activities, it is not easy to notice water loss.

Encourage your athletes to bring healthy snacks and water for after ski practice, because it is likely that the athlete has a long drive home after a long day of skiing. Eating a nutritious snack after training will help the athlete recover.

Teach these tips by example. Staying properly fueled will also enable the coach to maintain energy and focus throughout a day of lessons. When a coach can participate, it also makes it easier to designate water breaks during a lesson.



#### **Individual Sport, Team Environment**

Cross-country skiing is an individual sport, but is enjoyed with others. The coach can use this as a guide when addressing the individual needs of an athlete, preparing for a competition and playing ski games together.

Introduce a skill to the whole group, but pay attention to where individual attention is needed. Let a athlete have the time and space to process the new information and try the new skill. Conversely, utilize group drill sessions for athletes to begin to learn from each other. It is here that athletes can pay attention to how others are skiing and how the coach is demonstrating the new skill. When playing ski games or going on a group ski the focus can be placed on the group and a team environment can be fostered, which in turn creates a positive environment that makes skiing fun for all.

Lastly, draw on the athletes' past sport experiences. Use benefits from both individual and team sport environments to make your ski group more effective.



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## Equipment and Attire

### Cross-Country Skiing Equipment

If an athlete is new to skiing, then renting a basic set up from the ski center is the best place to start. If an athlete would like to consider purchasing their own equipment, here are some guidelines for choosing between classic, skate or combination gear. The ski length, pole length, type of boots and bindings differ between each set-up.

### Classic Skis, Bindings, Boots and Poles

Classic skis can be waxable, requiring wax for the kick zone, or waxless, with fish scales along the kick zone. The kick zone, waxless or with kick wax, grips the snow and enables the skier to “kick” off the snow and glide. Waxless skis provide a low-maintenance introduction to skiing. As a skier’s skills develop, waxable skis will be a fun option, and will provide better kick and glide while classic skiing. A classic ski can be waxed to enhance glide and to create kick. The length of the ski should reach the wrist of the athlete’s upward extended arm; however, shorter skis are easier for beginners, so it is okay if the skis seem too short on a novice athlete. Refer to a qualified ski technician or coach for accurate ski length based on height, weight and ability.



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Classic boots have a short ankle cuff and allow for significant flex in the ball of the foot. Fitting boots is important and requires assistance from a ski technician or coach. They should be comfortable and fit similar to a pair of sneakers. The boot is too big if the foot can slip and the heel can lift. The boot is too small if the toes are scrunched. Combi boots can also be used for beginner classic skiers because the higher ankle cuff will provide more support and stability.



Classic poles should reach from the floor to between the armpit and shoulder. When beginning, it is also okay to start with slightly shorter poles, so that the athlete can develop upper body strength in order to pole effectively. Pole grips and straps are universal. When fitting, the athlete should make sure they know how to insert their hand and adjust accordingly for a snug fit and firm grip.



#### Skate Skis, Bindings, Boots and Poles

Skate skis do not have a kick zone like classic skis and are waxed only for glide. The length of the ski should be relative to the height of the athlete, however ski length can differ depending on height, weight and ability. Skate skis are shorter than classic skis and should be fitted by a ski technician or coach. An athlete can skate ski on waxless or combi skis, but with skate skis the athlete will benefit from increased glide and may experience greater enjoyment of the technique.





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Skate boots have a higher ankle cuff than classic boots. These boots are more supportive of the ankle and enable the skate technique. Fitting boots is important and requires assistance from a ski technician or coach. They should be comfortable and fit similar to a pair of sneakers. The boot is too big if the foot can slip inside the boot and the heel can lift. The boot is too small if the toes are scrunched. Combi boots can also be used for beginner skate skiers and the athlete can transition as skill and interest progress.

Skate poles are longer than classic poles because skating is a more upright technique and benefits from longer poles. Skate poles should reach from the floor to between the chin and the mouth. Pole grips and straps are universal. When fitting, the athlete should make sure they know how to insert their hand and adjust accordingly for a snug fit and firm grip.



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### Combi skis, bindings and boots

Combi boots and skis are good for a new skier or one who is in transition from classic to skate technique. Combi boots are both flexible and stiff, so to be comfortable in both skate and classic techniques. Combi skis are typically sized in between skate and classic lengths.

As for bindings, certain brands of boots fit with certain types of bindings. There are only two types, NNN and SNS, so this makes finding the right equipment rather easy. A ski shop or coach will assist you in matching boots and bindings that work together and rental shops are typically outfitted with one system or the other. To ensure proper fit, safety and importantly optimal enjoyment, all equipment should be fit by a knowledgeable ski technician or coach. Small boots lead to cold feet; too long of skis inhibit glide and balance.

Ski boots, poles and skis are offered for a beginner, intermediate and advanced skiers. The price and materials differ between each set up; high performance equipment is more expensive than introductory equipment.

Note: When beginning, consider using standard or biathlon straps, without Velcro. This may simplify the equipment process and make it easier to put on and take off poles.

### Cross-Country Ski Wax

If renting from a ski shop, an athlete will not need to worry about waxing. However, if an athlete decides to own their own equipment, basic waxing knowledge will help the athlete and family take care of the equipment and prepare for different snow conditions. Either way, the coach should periodically check the bases of the skis to make sure they are properly waxed. General waxing maintenance will ensure that the skis glide well. Slow, sticky skis will not be enjoyable for the athletes to ski on.

Refer to the following websites for nordic waxing information, products and advice:

New England Nordic Ski Association (NENSA) website under *Training Resources* [www.nensa.net](http://www.nensa.net)

Toko Wax [www.tokousa.com](http://www.tokousa.com)

Swix Wax [www.swix.com](http://www.swix.com)



### Cross-Country Ski Attire

Athletic ski clothing and accessories need to be combined to provide warmth and protection from moisture, wind and sun. Several layers of clothing are recommended because layers can be easily taken off or added on, depending on temperature and exertion. This concept of venting is particularly important in cross-country skiing. By removing an article of clothing or opening, unzipping a jacket, you can vent or regulate the body's temperature and perspiration rate. Remember, proper fit means clothing that does not restrict motion or circulation. The main goal with ski clothing is to stay warm and to stay dry.





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#### Three-Layer System

The three-layer system is simple and works well. The inside layer is the wicking layer. Long underwear made of polypropylene will remove perspiration from the body into the outer layers. A wicking layer should cover both the upper and lower body.

The middle layer, for the upper body, needs to be an insulating layer. This could include a cotton shirt, turtleneck or fleece. This layer provides warmth by trapping a layer of air around the body. Except in extremely cold conditions, the legs do not need this layer.

The weatherproof outer layer blocks wind and snow. For the legs, heavyweight lycra tights are preferred however wind pants are acceptable. For the upper body, a lined windbreaker or warm-up jacket is preferred. Parkas are usually too warm for cross-country skiing, however in extreme conditions may be necessary for certain athletes.



#### Socks

It is recommended that an athlete wear one pair of medium weight, polypropylene blend socks, however in extreme cold an athlete is advised to wear a properly fitted heavier outer sock. More than two pairs will adversely affect the boot's fit. Cotton socks provide little warmth, especially when wet and should be avoided.

#### Vests

Vests can provide warmth for the torso without restricting movement of the arms.

#### Gloves and Mittens

The hands are the first part of the body to get cold. Gloves or mittens specifically designed for cross-country skiing are preferred. Mittens are warmer, but gloves are more versatile. Be sure the fingers have room to move. Bring an extra pair to replace those that may become wet.

#### Hat

Most body heat is lost from the head therefore a skier should never be without a hat. Styles and weights vary and an appropriate hat should be selected based on the weather. Lightweight ear cover, underneath your hat, is recommended in extremely cold weather.

#### Sunglasses

Visibility is of great importance. Sunglasses block the wind and glare of the snow from the eyes. Be sure the lenses protect against ultraviolet radiation and fit snugly enough so that they will not slip down or fall off.

#### Sunscreen

Sunscreen should be used on the face to prevent sunburn or windburn.

#### Additional points

A water belt or water carrying pack is useful for staying hydrated during a ski.



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Hand-warmers can be useful to keep hands warm during a ski lesson. The athlete can also keep a pair in their jacket pocket to offer a quick warm-up during a ski. These heat packets can be found at a ski shop.

Bring a dry pair of clothes to change into immediately after the ski lesson. Changing out of wet clothes will enable the athlete to recover better from the training session and to warm up more quickly. This requires extra gear, but it is worth the extra bag.

#### Drills

- ♦ Practice putting on and taking off of ski attire at home.
- ♦ Practice getting in and out of ski boots.
- ♦ Practice getting into and out of the ski bindings.
- ♦ Practice putting on, adjusting and taking off ski pole straps.
- ♦ Use a wall chart with all of the different articles of clothing and pieces of equipment in the order that they are put on.





## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

## Part 2

### Basic Lesson Plan

A cross-country ski lesson is a combination of warming up and cooling down, skill instruction, games and fitness challenges. The diversity of a lesson helps athletes to learn skills in a variety of different ways, inspired by the maxim—learning by doing. Athletes benefit from developing abilities and learning new skills through a variety of modes like exercises and games in addition to skiing. A dynamic plan also keeps the athletes active, engaged and curious about what happens next. Be flexible and creative, but consider the following set up as your basic guideline:

<b>Warm-up</b>	10-15 min
<b>Skill instruction or review</b>	15-20 min
<b>Time to practice skill</b>	10-15 min
<b>Water/restroom break</b>	
<b>Ski Games/fitness component</b>	10-15min
<b>Cool down</b>	10 min

A typical lesson should last between 45 and 90 minutes depending on the ability, fitness and enthusiasm level of your group.

### Typical On-Snow Practices – Three Sample Lessons

Sample 1	Sample 2	Sample 3
Teach athletes warm-up and stretching routines.	Warm-up, stretch and practice plan overview.	Warm-up, stretch and practice plan overview.
Introduce new on-snow activities.	Review previously taught techniques.	Review previously taught techniques.
Practice and drill technique.	Introduce new skiing technique.	Introduce new skiing technique.
Play an active game.	Ski a longer loop incorporating the new technique when appropriate.	Practice the new technique and perform technique drills.
Ski a short loop.	Cool-down/Review practice/Remarks.	Have relay races or play a game.
Cool-down/Review practice/Remarks.		Ski a short loop.
		Cool-down/Review practice/Remarks.



### Cross-Country Skiing Skills Assessment

A Skills Assessment chart can be used to evaluate an athlete's abilities. The following list is a recommendation, but can be expanded to include cognitive, social and emotional abilities as they pertain to a cross-country skiing environment. This assessment can be done throughout a training season and can be a useful tool to track athlete development, strengths and weaknesses. Combine with daily progress records to develop a holistic view of an athlete as a skier and their particular needs.

### Cross-Country Skiing Skills Assessment

**Athlete** \_\_\_\_\_ **Start Date** \_\_\_\_\_  
**Coach** \_\_\_\_\_

### Instructions

1. Use as a tool at the beginning of the training/competition season to establish a basis of the athlete's starting skill level.
2. Have the athlete perform the skill several times.
3. If the athlete performs the skill correctly three out of five times, check the box next to the skill to indicate that the skill has been accomplished.
4. Schedule several Assessment Sessions into your program.
5. Athletes may accomplish skills in any order. Athletes have accomplished this list when all possible items have been achieved.

### Equipment Adaptation

- ☐ Put on and take off ski boots
- ☐ Wears the correct skiing attire
- ☐ Get into and out of ski poles

### Warm-Up and Stretching

- ☐ Knows the different stretches in the routine
- ☐ Performs stretching exercises properly

### Classic Skiing

- ☐ "Gorilla Stance"
- ☐ Weight Shift
- ☐ Arm Swing
- ☐ Walking on skis
- ☐ Striding without poles
- ☐ Striding with poles



#### Star Turns

- ☐ Keeps tips together
- ☐ Keeps tails together
- ☐ Can turn 1 full circle

#### Falling and Getting Up

- ☐ Falls properly to the side
- ☐ Can get up with some assistance
- ☐ Can get up without assistance
- ☐ Can get up with all ski equipment on

#### Uphills

- ☐ Herringbone
- ☐ Uphill Step Up

#### Downhills

- ☐ Put skis in "V" position
- ☐ Keeps hands high and in front
- ☐ Keeps knees bent
- ☐ Wedge to control speed
- ☐ Wedge to stop

#### Downhill Turning

- ☐ Step turns to the left
- ☐ Step turns to the right

#### Drills

- ☐ List specific drills from Guide

#### Games

- ☐ List specific games from Guide



### Long-Distance Skiing

- ☐ 10 Meter Ski Race - Classical Technique
- ☐ 25 Meter Ski Race - Classical Technique
- ☐ 50 Meter Cross-Country Skiing Race - Classical Technique
- ☐ 100 Meter Cross-Country Skiing Race - Classical Technique
- ☐ 500 Meter Cross-Country Skiing Race
- ☐ 1 Kilometer Cross-Country Skiing Race
- ☐ 2.5 Kilometer Cross-Country Skiing Race
- ☐ 5 Kilometer Cross-Country Skiing Race
- ☐ 7.5 Kilometer Cross-Country Skiing Race
- ☐ 10 Kilometer Cross-Country Skiing Race
- ☐ 4x1 Kilometer Cross-Country Skiing Relay
- ☐ 4x1 Kilometer Unified Cross-Country Skiing Relay

### Goal Setting

- ☐ Able to form individual performance goals

### Other

- ☐ List skill or goal



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

#### Daily Performance Record

A keystone quality of the role of a cross-country coach is to understand the abilities of participants under their care. This coach/athlete relationship is crucial to developing skills and ensuring enjoyment. Utilize a progress chart for individual athletes to assess the ski abilities and skills for a given lesson and over the duration of a season. Use this chart to also track and learn about the social, cognitive and physical accomplishments and challenges during a lesson. Collectively, this information will help inform the design of a ski lesson and enhance the level of attention and understanding given to the participants.

#### Daily Performance Record

Athlete: \_\_\_\_\_ Date: \_\_\_\_\_

Coach: \_\_\_\_\_ Venue: \_\_\_\_\_

Skill Analysis	Conditions & Criteria	Dates & Instruction Methods	Date Mastered



### Goal Setting

Goal setting is an important skill for all ability levels. Cross-country skiing is a technique-specific sport and requires a progression of skill accomplishments. It is also a mentally challenging sport and requires building confidence and trust on skis. Goal setting can guide both the coach and athlete towards accomplishing certain skills to make skiing a more enjoyable and challenging experience. Goals can be set to enhance fitness, improve attendance, increase intensity, promote sportsmanship, develop team spirit, find more free time, or establish consistency. Be sure to adjust goal setting to fit the level of the athlete. For beginners keep a focus on motivation, having fun and being active. For intermediate and advanced athletes include more sport specific goals to help further their skills progression.

### Benefits of Goal Setting

- ♦ Enables an athlete see skill progress.
- ♦ Teaches self-discipline.
- ♦ Provides a focus for an effective training session.
- ♦ Teaches the athlete both sport and life skills.
- ♦ Provides the athlete with a means for self-expression and social interaction.

### Coaching Tips

#### Performance Goals versus Outcome Goals

Effective goals focus on performance, not outcome. Performance is what the athlete controls. An athlete may have an outstanding performance and not win a contest because other athletes have performed even better. Performance goals ultimately give the athlete more control over his/her performance. Example of a Performance goal: *"Improve balance by doing more balance drills."* Example of an Outcome goal: *"To win the 2km classic race."*

#### Measurable and Specific

Effective goals are very specific and measurable. Goals stated in the form of "I want to be the best that I can be!" or "I want to improve my performance!" are vague and difficult to measure. It is positive sounding but difficult, if not impossible, to assess whether they have been reached. Measurable goals must establish a baseline of performance over the short term and the long term. Example: *"I want to successfully double pole for 100 meters."*

#### Difficult, but Realistic

Effective goals are perceived as challenging, not threatening. A challenging goal is one perceived as difficult but attainable within a reasonable amount of time and with a reasonable amount of effort or ability. A threatening goal is one perceived as being beyond one's current capacity. Realistic implies that judgment is involved. Goals based upon a baseline of performance recorded during the past one or two weeks are likely to be realistic. Example: *"To classic ski 1km without stopping."*

#### Long- versus Short-Term Goals

Both long and short-term goals provide direction, but short-term goals appear to have the greatest motivational effects. Short-term goals are more readily attainable and are stepping-stones to more distant long-term goals. It is okay to have long-term goals for a season, but utilize short-term goals for training in order to achieve the end-of-the-season goals. Example: *"I want to learn how to do the V1 skate technique over the next two weeks."* Which relates to: *"I want to do a skate race at the end of the training season."*



## Special Olympics Cross-Country Skiing Coaching Guide

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#### **Positive versus Negative Terms**

Positive terminology directs what to do. Negative terminology directs an athlete to the errors he or she wishes to avoid or eliminate. Use positive affirmations and encouraging dialogue in goal setting. When a coach points out when an athlete is doing something right they can use it as starting point to introduce a new and challenging skill or goal. Build off of the athlete's confidence.

#### **Set Priorities**

Effective goals are limited in number and meaningful to the athlete. Setting a limited number of goals requires that athletes and coaches decide what is important and fundamental for continued development. Establishing a few, carefully selected goals also allow athletes and coaches to keep accurate records without becoming overwhelmed with record keeping.

#### **Mutual Goal Setting**

Goal setting becomes an effective motivational device when athletes are committed to achieving those goals. When goals are imposed or established without significant input from the athletes, motivation is unlikely to be enhanced. Positive goals also require coaches and athletes to decide how they will reach those specific goals. Once the goal is decided, the athlete and coach must determine specific strategies and techniques that allow that goal to be successfully attained.

#### **Set Specific Time Lines**

Target dates provide urgency to an athlete's efforts. Specific target dates tend to eliminate wishful thinking and clarify what goals are realistic and which are not. Timelines are especially valuable in high-risk sports where fear often promotes procrastination in learning new skills.



### Goal Setting: Motivation and Self-Confidence

#### Developing Self-Confidence through Goal Setting

Sport confidence in athletes helps make participation fun and is critical to the athlete's motivation. Cross-country skiing helps develop self-confidence as the athlete's skills progress. Personal feedback, such as improved balance, fitness and coordination, will let an athlete know that they are capable of accomplishing difficult tasks. External feedback from coaches will let an athlete know when they are doing something right and when the need to try again and improve. Collectively, trust and determination in a ski lesson will dispel uncertainty and doubt.

A competition is a common setting to set goals; however, it can also be a stressful setting. Incorporate competition type goals, skiing 100 meters without stopping, into daily sessions to familiarize athletes with competition stress so that they can be better prepared for a competition setting.

#### Finding Motivation through Goal Setting

Goal setting has proven to be one of the most simple and effective motivational devices developed for sport. Motivation is all about having needs and striving to have those needs met. Identify an athlete's internal motivation to learn and excel at a sport like cross-country skiing. Understand the athlete's intrinsic motivation to learn to ski and use their key words and phrases to motivate them to accomplish their goals. Likewise, understand the external motivating factors of skiing, like the social aspect of the group, that affect the athletes. Specifically, identify how the coach can provide external motivation to increase the athlete's internal motivation in a training or competition setting.

Here are some ways the coach can enhance an athlete's motivation:

- ♦ Provide time and attention to an athlete when he/she is having difficulty learning a skill.
- ♦ Use their motivational cue words.
- ♦ Reward small gains of achievement in skill level.
- ♦ Develop measures of achievement outside of winning.
- ♦ Show your athletes that they are important to you.
- ♦ Show your athletes that you are proud of them and excited about what they are doing.
- ♦ Fill your athletes with self-worth.

Goals give direction. They tell us what needs to be accomplished. They increase effort, persistence and the quality of performance. Establishing goals also requires that the athlete and coach determine techniques for how to achieve those goals.

If athletes are inclined to develop their own goal setting, use the following checklist:

- ♦ Write a goal statement.
- ♦ Does the goal sufficiently meet the athlete's needs?
- ♦ Is the goal positively stated? If not, rewrite it.
- ♦ Is the goal under the athlete's control?
- ♦ Is the goal important to the athlete?
- ♦ How will this goal make the athlete's life different?
- ♦ What barriers might the athlete encounter in working toward this goal?
- ♦ What does the athlete need to learn?
- ♦ What risks does the athlete need to take
- ♦ What commitments does the athlete need to make?



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

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#### **Cross-Country Nine-Week Beginner's Season Training Plan**

The following Cross-Country skiing plan is for the eight training weeks that lead up to a final competition week. This plan is designed for at least one, one- to two- hour on-snow training session per week including at home training.

#### **Pre-Season**

Athletes can participate in sports during the spring, summer and fall to build general fitness. Aerobic sports like running or swimming can help to build endurance and strength, while sports like tennis or gymnastics can improve coordination and balance. Refer to the recommended home training program for additional strength, endurance and balance exercises to prepare for ski season.



### Nine-Week Training and Competition Plan

Week	Objective	Skill Focus
1	<p>Introduce venue and staff.</p> <p>Introduce lesson plan – warm-up, skill lesson, activity and cool-down.</p> <p>Introduce attire and equipment.</p> <p>Evaluate ability level of individual athletes and group.</p>	<p>Practice getting in and out of skis and pole straps.</p> <p>Cross-Country Skills Assessment.</p> <p>Focus on warm-up stretching and proper body position with and without equipment.</p> <p>Focus on walking on skis on flat terrain and star turns to maneuver.</p> <p>Play a game or do a drill.</p>
2	<p>Review equipment and lesson plan.</p> <p>Basic ski skills: taking equipment on and off, striding progression, star turns.</p> <p>Introduce Falling and Getting Up.</p>	<p>Practice falling properly with a drill or game.</p> <p>Practice getting up and down.</p>
3	<p>Introduce downhill and uphill technique: wedge, herringbone and step-ups.</p> <p>Offer home training ideas.</p>	<p>Wedge drills.</p> <p>Herringbone drills.</p> <p>Step drills.</p> <p>Practice home training exercises.</p>
4	<p>Reevaluate skills assessment; adapt as necessary.</p> <p>Review learned skills.</p> <p>Introduce Double Pole and fitness component on flat terrain.</p> <p>Introduce sportsmanship component in group ski.</p>	<p>Double pole for certain distance.</p> <p>Ski non-stop for designated time.</p> <p>Group ski tour – explore a new trail.</p>
5	<p>Downhill step turns.</p> <p>Offer home training ideas.</p>	<p>Work on turning progression on flats and downhills.</p> <p>Downhill drills.</p> <p>Practice home training exercises.</p>
6	<p>Prepare for upcoming competition.</p> <p>Introduce competition rules.</p> <p>Review learned skills.</p> <p>Offer home training ideas and goal setting.</p>	<p>Ski part of competition distance.</p> <p>Play a game using a start and finish line, with a countdown.</p>



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

Week	Objective	Skill Focus
7	Review competition rules. Introduce goal setting for competition.	Ski competition distance. Play a game using a start and finish line, with a countdown. Write out goals for the competition.
8	Have Fun – enjoy the last practice. Review any last minute questions about the competition.	Ski tour. Fun game or activity.
9	Regional Competition.	Competition goals and race schedule.



### Home Training Program

Cross-country skiing is much easier and more enjoyable to learn if the athlete is aerobically fit, strong and can use proper technique. All three of these aspects can be greatly improved during the summer and fall, before the skiers get on the snow. The objective of the home fitness program is to teach each athlete a series of strength and conditioning exercises and supervise the sessions until they can do them on their own. Begin with shorter and easier practices and increase the amount of time and challenge as the athletes become comfortable with the exercises. Do the same sequence each session and have the athletes repeat it three times per week. Technique practice can be incorporated into the strength and conditioning program, but to ensure the skiers are learning correctly, these sessions should always be supervised.

### Coaching Tips

- ♦ If athletes only train once a week with their coaches and do no training on their own, progress will be very limited. A minimum of three training sessions is needed in order for the training to have an effect. The Home Training Program for cross-country is designed to help facilitate basic sport skills and fitness activities between athletes and families or friends. The program can also be used as a basis for a partner's club program. The Home Training Program can be used in homes, schools, group homes, and parks and recreation program.
- ♦ Nothing improves the athlete's sport ability like playing! Parents/guardians can challenge the athlete to family competitions for additional practice or just social outings.
- ♦ To be effective, coaches should run a home training orientation for family members and/or training partners. This needs to be an active session where partners get hands-on experience with the different activities.
- ♦ As a motivational tool, a coach may want to award a certificate of achievement to athletes and training partners who complete a set number of home training sessions during the season.
- ♦ The Home Training Program can also be used during the ski season as additional training.

Since cross-country skiing is an endurance activity, it is important to adapt the body to the demands placed upon it. Specific and consistent exercises can help to build endurance, increase strength and develop balance and coordination. The following recommendations can be done in addition to cross-training sports to create an even more effective strength and conditioning routine.

### Weekly Home Training Program

Each athlete needs to recruit a partner, who will train with him or her at home. This can be a sibling, parent, or friend. A coach is appropriate only if that person also is training. The athlete and partner must push each other to make it effective. Begin slowly; choose a comfortable pace, one where the athletes can continue non-stop for at least 15 minutes. Games, which keep the athletes physically active, can also be an excellent way of increasing fitness. Refer to *Ski Games*, in the *Teaching Cross-Country Skiing Skills* section of the guide. Gradually increase the duration of the sessions. Becoming aerobically fit will help prevent injuries and will make learning to ski easier and more fun.

In addition to the off-ski drills and warm-up stretches incorporated in the technique section, below is a beginning list of strength exercises that pertain to cross-country skiing. Tailor this list to create a fun and challenging program where the athlete can start to see gains in strength, balance and coordination.



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

#### Strength Exercises

##### Leg Lifts

- ♦ Lie on back with hands under hips.
- ♦ Place palms flat on floor.
- ♦ Keep the legs straight.
- ♦ Slowly raise both legs up until perpendicular to the floor.
- ♦ Lower to 6-10 centimeters off the floor, not all the way down.
- ♦ Repeat.



##### Squats

- ♦ Stand with feet shoulder width apart.
- ♦ Lower body so the thighs become parallel to the floor (do not go lower than parallel).
- ♦ Return to standing.
- ♦ Repeat.





#### Sit-Ups: Partial Sit-Up

- ♦ Lie on ground with knees bent.
- ♦ Hands can be on chest, shoulders or on side with fingers touching ears.
- ♦ Elbows are out to the side.
- ♦ Keep back straight; slowly lift shoulders, reaching sitting position.
- ♦ Slowly return to start position.



WATCH  
VIDEO



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

#### V-Up with or without Medicine Ball

Reps: 2x5

- ♦ Lie on ground with arms and legs outstretched.
- ♦ Hold medicine ball between hands.
- ♦ Slowly lift ball and legs off ground at 45 degrees.
- ♦ Slowly return to start position.



#### Push-Ups: Regular

Reps: 1x10; gradually increase to 3x10 or more

- ♦ Kneel down.
- ♦ Place hands on ground in front of body, shoulder-width apart with a straight back.
- ♦ Move feet back behind until you are on toes.
- ♦ Weight is on both hands and feet.
- ♦ Slowly bend arms until parallel to ground, dropping chest 4-5 inches from ground.
- ♦ Push up to starting position.





#### Push-Ups: Bent Knee

If the athletes can efficiently complete push-ups with the knees down, have them raise the knees off the ground, keeping the back straight. Refer to *Push Ups Regular*.

- ♦ Start on hands and knees, with hands shoulder-width apart.
- ♦ Lower body straight down until chest barely touches ground.
- ♦ Push the body up to the starting position.
- ♦ Repeat.



#### Plank Hold

Hold for a count of 10, 20 or 30 seconds. Remind athletes to keep their back and core engaged, do not slump down in the middle of the body.

- ♦ Assume high push up position and hold.

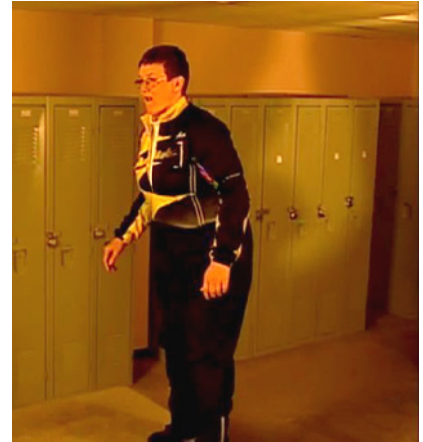


## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

#### Step-Ups

- ♦ Stand facing a chair or bench.
- ♦ Step up with the left foot.
- ♦ Bring up the right foot, staying in a relaxed stance.
- ♦ Step down with the left foot.
- ♦ Bring down the right foot.
- ♦ Alternate which leg takes the first step.
- ♦ Repeat the exercise, stepping sideways.



WATCH  
VIDEO

#### Jump-Ups

- ♦ Stand with feet hip-width apart.
- ♦ Bend knees, lowering body toward the ground. Keep back upright and straight and Look Up.
- ♦ Jump straight up in the air.
- ♦ Land on flexed knees and ankles.
- ♦ Repeat.

# Special Olympics Cross-Country Skiing Coaching Guide

## Planning a Training and Competition Season



### Sample Home Training Program

Include the following components when designing an individual program:

- ♦ Warm-up
- ♦ Stretching
- ♦ Strength
- ♦ Aerobic exercise
- ♦ Ski technique drill
- ♦ Cool-down

Begin Date \_\_\_\_\_ Athlete Name \_\_\_\_\_ Partner Name \_\_\_\_\_

Warm Up Exercises	Instructions
<b>Arm Circles</b>	Hold arms out to sides at shoulder height; make 15 small circles rotating arms forward. Rest, repeat arm circles by rotating arms backward 15 times.
<b>Walking/Jogging</b>	Walk around the room for two minutes and then jog in place for five minutes.
<b>Calf Stretch</b>	Stand facing a wall or fence with one leg in front of the other. Bend your forward leg slightly. Bend at the ankle of your back leg. Remember, you do not want to feel pain, only slight tension of the muscle stretching. Repeat with other leg.
<b>Hamstring Stretch</b>	Stand with legs slightly apart and knees slightly bent. Do not lock your knees. Bend at your hips, reaching your hands toward ankles or toes. As your flexibility increases, reach for feet or behind you toward your heels. Hold for 15 seconds. Repeat five times. Remember to not stretch so that it hurts.
<b>Quad Stretch</b>	Stand facing wall. Bend left leg. Hold ankle and slowly push from the thigh, stretching the top of thigh. It is extremely important to not pull from the knee. The inside of the knees will touch. Hold for 30 seconds. Repeat with other leg.
<b>Groin Stretch</b>	Squat down, keeping your head up and back straight. Place elbows on the inside of the knees and gently push out. Hold for 30 seconds. Relax. Repeat five times.
<b>Jumping Jacks</b>	Stand with arms to side and feet together. Jump, placing legs shoulder width, while bringing arms straight up overhead. Bring hands together. Jump back to starting position. Repeat continuously 15-20 times.
<b>Diagonal Stride</b>	Use four pieces of cardboard or four old towels. Athlete and partner stand with one foot per cardboard or towel. Practice shuffling first and then sliding on a smooth surface.
<b>Sit-ups</b>	Have partner hold the athlete's feet to stabilize the body. Both athlete and partner can count the number of repetitions together. Set a goal for a certain number of sit-ups in a row.
<b>Squats</b>	For support, start with holding on to the back of a chair or use ski poles. Gradually work up to squatting to a 90° angle, unassisted.
<b>Cool-down Walk</b>	Walk for 10 minutes to cool-down and relax the body after the training session.



## Special Olympics Cross-Country Skiing Coaching Guide

### Planning a Training and Competition Season

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#### **Bonus Activities**

##### Using Your Ski Equipment

- ◆ Practice putting on and taking off your ski equipment.
- ◆ Are your poles on properly?
- ◆ Do your feet feel comfortable in your boots?

##### Using Your Ski Equipment

- ◆ With your equipment on, practice changing direction without crossing either your ski tips to tails.
- ◆ You can practice sidestepping, and most important, getting from a fall.

### **Cross-Training for Cross-Country Skiing**

Within Special Olympics, there are other sports that use some of the same skills and muscle groups as cross-country skiing. These activities are excellent for cross training during the dry land season. The purpose of cross training is to take part in activities that place similar demands on the body as cross-country skiing. These sports are different, challenging, and fun. The advantage of cross training activities is enhancing general fitness, not improving specific ski skills.

Cycling, swimming, running and hiking with ski poles will develop both muscle strength and endurance. Roller-skating and speed skating develop balance as well as strength and endurance. Team sports which involve running are excellent cross training activities. Soccer and team handball are two examples. You can play without a goalie so athletes do not get stuck standing around.



### Additional Resources

#### Cross-Country Ski Coaching Instruction and Waxing Information

National Sports Center for the Disabled (NSCD)  
P.O. Box 1290  
Winter Park, CO 80482  
<http://www.nscd.org/>

New England Nordic Ski Association (NENSA) coaching tutorials, materials and  
Bill Koch Youth Ski League Coaching Manual  
49 Pineland Dr., Suite 101 A  
New Gloucester, ME 04260  
<https://www.nensa.net/>

Swix, wax and ski equipment company, look specifically at the Swix School for waxing tutorials, tips  
and products.  
<http://www.swixsport.com>

Professional Ski Instructors of America (PSIA)  
P.O. Box 775143  
Steamboat Springs, CO 80477  
<http://www.psia-rm.org/>

US Ski and Snowboard Association (USSA) coaching tutorials and materials  
1 Victory Lane  
Box 100  
Park City, UT 84060  
<http://ussa.org/>

US Paralympic Adaptive Nordic and Biathlon Manual available through NENSA  
Developed December 2011



***Special  
Olympics***

## **CROSS-COUNTRY SKIING COACHING GUIDE**

Teaching Cross-Country Skiing Skills



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### Warm-up and Stretching

A warm-up period should be the first part of every training session. The warm-up can also be a time to help athletes transition from being inside or a long bus ride to being outdoors and on the snow. Athletes will be excited to just get out and ski, but be vigilant and help them properly prepare.

### Coaching Tips

- ♦ The total warm-up period should take between 10-20 minutes.
- ♦ Begin with an easy stretch to the point of tension and hold this position for 15-30 seconds until the pull lessens. When the tension eases, slowly move further into the stretch until tension is again felt. Hold this position for an additional 15 seconds. Each stretch should be repeated four to five times on each side of the body.
- ♦ It is also important to continue to breathe while stretching. As you lean into the stretch, exhale. Once the stretching point is reached, keep inhaling and exhaling while holding the stretch.

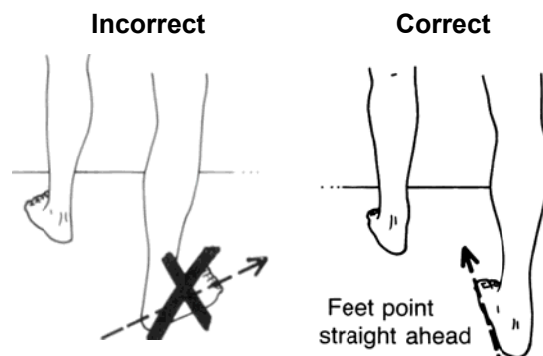
Regular, daily stretching has been demonstrated to have the following effects:

- ♦ Increases the length of the muscle-tendon unit.
- ♦ Increases joint range of motion.
- ♦ Reduces muscle tension.
- ♦ Develops body awareness.
- ♦ Promotes increased circulation.

Some athletes, like those with Down syndrome, may have low muscle tone that makes them appear more flexible. Be careful to not allow athletes to stretch beyond a normal, safe range. Several stretches are dangerous for all athletes to perform and should never be part of a safe stretching program. These unsafe stretches include the following:

- ♦ Neck backward bending
- ♦ Trunk backward bending
- ♦ Spinal roll

Stretching is effective only if the stretch is performed accurately. Athletes need to focus on correct body positioning and alignment. Take the calf stretch for example. Many athletes do not keep the feet forward, in the direction that they are running.





Another common fault in stretching is bending the back in an attempt to get a better stretch from the hips. A good example is a simple seated forward bend.

**Incorrect**



**Correct**



There are a host of stretches and stretch variations that can be done during the warm-up. However, we will focus on some basic stretches highlighting major muscle groups. To begin the warm-up stretch session, start at the top of the body and work down to the legs and feet.

The warm-up period should begin with an easy ski, jog or walk. Include the following basic sequence and components:

### Lower Body

**Calf Stretch**



**Calf Stretch with Bent Knee**



- ♦ Stand facing forward, with or without snowshoes on, toes pointed forward.
- ♦ Place one leg out in front.
- ♦ Bend forward leg slightly.
- ♦ Bend ankle of back leg.
- ♦ Same as Calf Stretch but bend both knees to ease strain.





#### Standing Hamstring Stretch



- ♦ Place one leg out in front (heel on the ground, toe pointing up), bending knee of opposite leg with heel flat on ground.
- ♦ Legs are not locked.
- ♦ Sit back on your heels.
- ♦ As your athletes' flexibility increases, have them reach toward their feet.



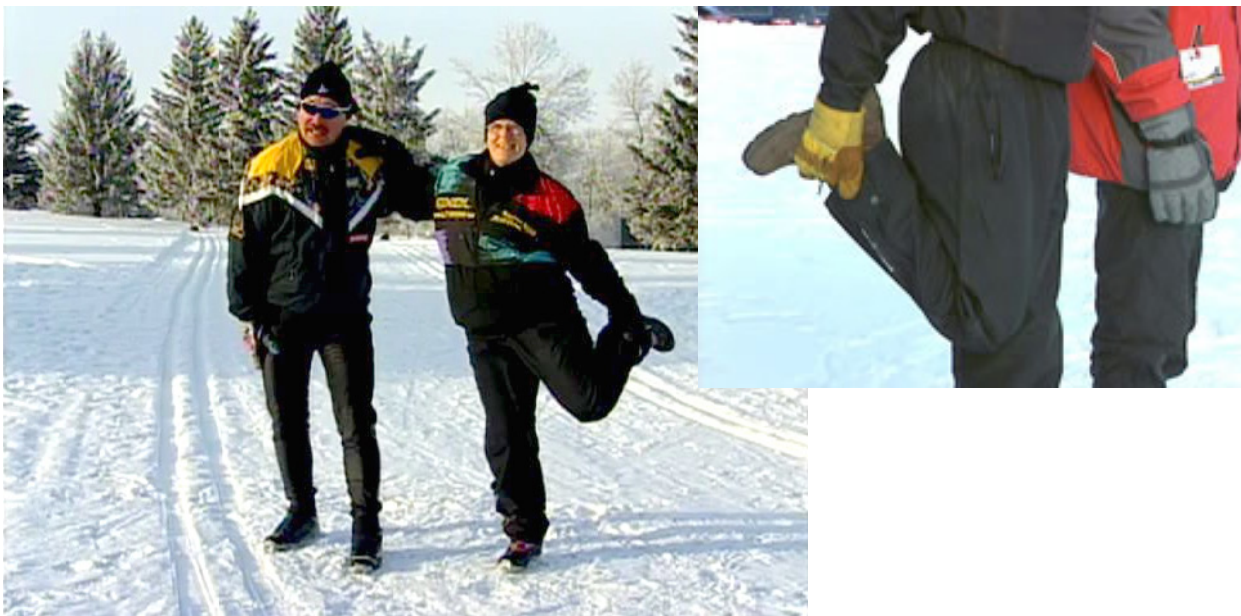
#### Standing Straddle Stretch



- ♦ Spread feet shoulder width apart, with or without snowshoes on.
- ♦ Bend forward at hips.
- ♦ Keeping your back straight, lean into the stretch.



#### Standing Quad Stretch



- ♦ Stand with one foot flat on ground.
- ♦ Bend knee of other leg, reaching foot toward buttock while grasping ankle with hand.
- ♦ Pull foot directly toward buttock.
- ♦ Do not twist knee.
- ♦ Stretch can be done standing alone or balancing with partner or fence/wall.
- ♦ If pain occurs in knees during stretch and foot is pointing out to the side, point foot back to relieve stress.





## Special Olympics Cross-Country Skiing Coaching Guide Teaching Skills

### Forward Bend



- ♦ Stand, arms outstretched overhead.
- ♦ Slowly bend at waist.
- ♦ Bring hands to ankle level without strain.



### Low Back & Glutes

#### Side Groin Stretch



- ♦ Stand with feet flat on the ground, with or without snowshoes on.
- ♦ Lean body to one side, bending knee slightly.
- ♦ Keep opposite leg straight.
- ♦ Repeat with other leg.



#### Hip Stretch



- ♦ Stand, with or without snowshoes on, and place hands on low back.
- ♦ Push hips forward.
- ♦ Gently tilt head back.





#### Upper Body

##### Chest Opener



- ♦ With partner, place one hand/arm on your partner.
- ♦ Turn chest, facing outward, away from your partner.
- ♦ Feel stretch in chest.
- ♦ Repeat with other arm.



## Special Olympics Cross-Country Skiing Coaching Guide Teaching Skills

### Side Stretch



- ♦ Bend to one side with or without hand over head.
- ♦ Feel stretch in side.
- ♦ Repeat on other side.

WATCH  
VIDEO 1

### Shoulder Stretch



- ♦ Take elbow into hand.
- ♦ Pull to opposite shoulder.
- ♦ Arm may be straight or bent.
- ♦ Repeat with other arm.

WATCH  
VIDEO 2

### Shoulder Shrugs



- ♦ Raise top of shoulder to ear.
- ♦ Relax shoulders downward.

WATCH  
VIDEO 3





### Arm Circles



- ♦ Swing arms forward in large circles.
- ♦ Repeat going forward and backward.



### Neck Stretch



- ♦ Roll the neck from shoulder to shoulder with chin touching body at all times.
- ♦ Do not perform full circles as they may hyperextend the neck.
- ♦ Tell athlete to roll neck to right, center and left. Never have the athlete roll the neck backward.



## Cool Down

Cool down is as important as the warm-up, however is often ignored. Depending on the intensity of the activity, abruptly stopping an activity may cause pooling of the blood and slow the removal of waste products in the body that may cause cramps, soreness and other problems for Special Olympics athletes. The cool down gradually reduces the body temperature and heart rate and speeds the recovery process before the next lesson. The cool down is also a good time for the coach and athlete to review the session or competition.

### On-Snow Cool-Down

- ♦ Slow aerobic ski to relax the muscles after an intense game or strenuous drill.
- ♦ Arm circles are the same as in warm-up.
- ♦ Leg swings help to loosen any tight muscles around the hips and lower back, and relax frustrated emotion. Be sure to use poles or an assistant for additional support.
- ♦ Stretching exercises are the same as in the warm-up. These can be done inside, depending on the weather.

Be consistent with your warm-up and cool-down exercises so that you can create a routine for your athletes to follow. A routine will help define your time schedule with your athletes, and they will understand what begins and ends their ski lesson.



### Teaching Technique Skills and Progressions

The following 12 techniques and additional skills include description of the technique, coaching tips and specific drills.

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These fundamental ski skills are the components of basic ski lessons. They can be taught at an introductory, recreational and advanced level depending on the skill set of your athletes. By learning these basic skills, athletes will both acquire and develop on snow abilities and a sense of balance, stamina, and coordination. Learning these skills will also enable an athlete to ski the varying types of terrain found at a nordic center, from flat sections to uphill and downhill.



### Classic Skiing

Classic skiing includes diagonal striding, double poling and kick double pole. The techniques are taught by developing abilities on snow through a progression of movements. For example, in order to diagonal stride an athlete needs to learn the basics of balance, gliding on snow and weight transfer. Consider the following technique progressions and combine with ski games to create a fun, motivating and challenging lesson.

#### 1. Diagonal Striding

Striding can be broken down into its different components to create a progression of abilities: Athletic Stance, Arm Swing and Weight Shift

The primary starting position for cross-country skiing is the athletic stance, also referred to as a comfortable stance or the ready position. The athletic stance carries over to a variety of sports and ensures a stable and engaged start to a movement, as compared to starting standing straight up.

#### Skier's Athletic Stance

- ♦ Feet are shoulder width apart, with equal weight on both feet.
- ♦ Hands are held in front.
- ♦ There is a slight bend in the knees and ankles.
- ♦ Round the shoulders and lean forward to put pressure on the ball of the feet.

This position is also called the "Gorilla Stance". By rounding the shoulders and upper back you allow the arms to swing freely. Another visual description could be the letter "C". The upper curve of the "C" is created by the rounded shoulders and the lower curve of the "C" by the flexion in the lower body.

#### Drills

- ♦ Review indoors before adding equipment or have it be part of the warm-up.
- ♦ Use a life-size picture on the wall, like a Flat Stanley, to help the athlete see what the position looks like.
- ♦ Squat while standing still, moving in and out of the athletic stance.
- ♦ Put red tape across the ball of the foot on the ski boot to create a visual reference for where they need to put pressure on their feet. Do the same with the coaches boots.



#### Arm Swing

Next comes the diagonal striding arm swing. Even if an athlete does not use poles, this upper body movement is still important. The arm swing will help to keep the upper body engaged and will help the athlete remain balanced while in the tracks, gliding downhill or doing herringbone.

- ♦ Start with the athletic stance with arms hanging relaxed in front of the body.
- ♦ Swing one arm forward to shoulder height, while swinging the other backward, not quite to shoulder height.
- ♦ Repeat, alternating arms to create a rhythm.



#### Coaching Tips

- ♦ The arms swing like a pendulum, elbows slightly bent and shoulders remain relaxed.
- ♦ Start slowly to ensure proper technique and coordination.
- ♦ An athlete might have a tendency to not swing the arms in a parallel motion. If this is the case, slow down the motion and assist in correct movement.

#### Drills

- ♦ Mimic an athlete or have them practice in front of a mirror, for additional visual feedback.
- ♦ Have the athlete think of holding a cup of water in their hand. As they swing the arm forward they are “pouring” out the water.
- ♦ Face the athlete and have them hold the grip ends of a their poles. The coach holds the opposite ends of the poles and initiates the diagonal arm swing movement. This helps the athlete “feel” the nature of the arm swing and timing. This can also be done standing behind the athlete, but if in front, it gives them a mirror image to emulate.

#### Faults & Fixes Diagonal Arm Swing Chart

Error	Correction	Drill
Incomplete arm swing.	Rear arm must pass thigh, front arm must come up to eye level.	Mirror the coach. Use ski poles between athlete and coach to mimic proper swing.
Asymmetrical arm swing.	Coach physically assists athlete into correct arm position. Repeat full range of motion slowly.	Same as above.



### Weight shift

The third skill to add to the athletic stance and the arm swing is weight shift. This movement is key to both classic and skate techniques. Shifting body weight from one foot to the other while staying balanced in an athletic stance is important because it creates movement and momentum on skis. The following progression is like a deliberate walking motion with emphasis on the transfer of weight from one foot to the next.

- ♦ Start with the athletic stance.
- ♦ Step forward with the right foot as if to walk.
- ♦ Lift the left heel off of the ground and shift more weight to the front right leg.
- ♦ Reach forward with the left arm and back with the right arm.
- ♦ Balance in this position.
- ♦ Shift weight by stepping forward with the left foot.
- ♦ Lift right heel off of the ground.
- ♦ Reach forward with the right arm and back with the left arm.
- ♦ Balance in this position.
- ♦ Alternate sides and create a rhythm.

### Coaching Tips

- ♦ This combination skill will take coordination and focus. Challenge your athletes to see who can move the slowest.
- ♦ Use an assistant if an athlete is having trouble balancing.
- ♦ Start with small, slow movements.
- ♦ In the profile of the athlete in this position the nose, knees and toes will line up. Toe-Knees-Nose can be a good body position reminder.

### Drills

- ♦ Develop balance—stand on one leg at a time.
- ♦ Develop balance—stand on one ski at a time.
- ♦ Connect this movement with a dance move.
- ♦ Step Drill (advanced)—see video 2



### Faults & Fixes Weight Shift Chart

Error	Correction	Drill
Athlete is unable to hold position.	Instruct the athlete to keep head up, eyes focused forward on specific target. Assist athlete in holding position. Perform drill close to a wall, which may be used for balance.	Review athletic stance and use poles.
Athlete unable to use arms in opposition to legs.	Assist athlete in using opposite hand.	Assisted poling movement.
Inability for complete weight shift.	Reinforce weight shift motion with sufficient forward knee and lead ankle flexion. Alignment of toe-knee-nose.	Hopscotch on the snow. Stand on one leg at a time.



### Weight Shift and Arm Swing on Skis

When the athlete is ready and can demonstrate the athletic stance, arm-swing and weight shift, give it a try in combination and on skis.

- ♦ Start with skis on, in the classic track, and in the athletic stance.
- ♦ Walk on skis with a corresponding arm swing.
- ♦ Make necessary adjustments so that the opposite arm and leg move forward at the same time.



### Coaching Tips

- ♦ To make the transition from walking to gliding, have the athletes “shuffle” to get the feel of the movement of their skis in the track.
- ♦ Nose-Knees-Toes—reinforce proper body position. If the athlete is too upright or too far back, they will not be able to depend on their full balance capability.
- ♦ Keeping the knees bent will give them the most control and create the most stable position.
- ♦ Synchronized movements—reinforce coordinated arm swing and leg movement



### Faults & Fixes Diagonal Stride with Poles

Error	Correction	Drill
Position is too upright.	Lean forward, nose over your toes.	Nose-Knees-Toes—line them up.
Toe touches ground before the heel.	Emphasize heel strike.	Return to athletic stance and forward pressure on the ball of the foot.
Arms are not synchronized with legs.	Slow progression down so that the athlete can maintain correct position.	Pick one of the striding drills and do it in slow motion.



### Diagonal Stride With Poles

Once an athlete feels comfortable moving in the tracks re-introduce their poles. Emphasize that at first it is easy to use the poles for additional side support. However, with a forward athletic stance and proper poling motion they will be able to use the poles to make them go forward. Encourage a beginner to strive to move forward the best they can.

- ♦ Start in an athletic stance in the track.
- ♦ Hold the poles halfway down the pole and repeat diagonal arm swing.
- ♦ When an athlete is able to do this, put on the poles and double check that the straps are snug and properly strapped.
- ♦ Start with the basic walking motion and then slowly add in the arm swing, and finally the pole plant.
- ♦ Now they will be ski walking in the track.

For those athletes who were ready to try to kick and glide, have them attempt the same movement with poles. The same fundamental body position and movements apply when using and not using poles.

- ♦ Keep the arms relaxed and slightly bent, swinging opposite to the leg movement alongside the body.
- ♦ Pole next to the ski and just beyond the tip of the boot, not behind.

The diagonal stride is a fundamental starting point for all nordic techniques. It can be used on flat and gradual and steep uphill. Striding requires coordination, but if an athlete can sufficiently demonstrate this technique they will be able to apply the same sense of balance and coordination to other techniques. Working on this basic technique will challenge their physical motor skills and teach them the body control and awareness needed to maneuver safely on skis. Also, to be able to glide freely on the snow will be a lot more fun!



**WATCH  
VIDEO**



### Kick and Glide

“Kicking” off one ski and on to the other is what propels the athlete forward in diagonal striding. When the athlete “kicks” they are compressing the ski to the ground for the wax or fish scales to make contact and stick to the snow. This gives them a platform to kick forward from. Try the method of kicking and gliding if your athletes are willing and ready to learn diagonal striding.

### Coaching Tips

- ♦ With skis off, have the athletes skip with the same opposite arm, opposite leg coordination. The power that they need to “skip” is the same power they’ll need to “kick” phase of striding.
- ♦ Back on the skis and in the track, have your athletes start in the athletic position. By leaning the body forward, they should be balancing on the ball of their foot to prepare for the kick. Shift their weight onto the right ski and “kick” down and jump forward onto the left ski.
- ♦ Repeat.

### Striding Drills

#### Beginner

- ♦ Inside—standing on paper plates, shuffle along the floor in a striding motion to experience the feel of sliding or gliding.
- ♦ Walk, run, glide. Repeat this progression to reinforce how to get glide.

#### Intermediate

- ♦ Alternate between short strides and long strides on flat terrain. This drill helps the athlete to lengthen their stride and increase glide.
- ♦ Without poles, stride with arms high in the air. This drill helps to reinforce high hips and the pressure put on the ski to create kick.

#### Advanced

- ♦ Continue to develop balance. Walk, run, then hold a glide balancing on one ski.
- ♦ Stride without poles on flat, gradual uphill and then steep uphill terrain. Challenge the athlete to set their kick, keep their weight shift and strive for glide.

#### Weight Shift to Glide Progression



#### Walk to Glide with Poles



#### Strength Training, Upper Body: Diagonal Stride with Poles, No Kick



#### Uphill Diagonal Stride





### Faults and Fixes Diagonal Stride with Poles

Error	Correction	Drill
Incomplete range of motion with poling action.	Grip poles at midpoint to emphasize poling action, forward to backward.	
Incorrect body position.	Emphasize forward lean, keeping weight on the ball of the foot, eyes focused forward. Alignment of toe-knee-nose.	Refer to red tape on ball of foot to reinforce pressure point.
Inability for complete weight shift.	Reinforce weight shift motion with sufficient forward knee and lead ankle flexion. Alignment of toe-knee-nose.	Start with a walk, then a shuffle, then a run on skis to define weight transfer from one side to the other.
Improper pole plant (pole plant too far forward).	Maintain a slightly bent arm position, planting pole tip even with weighted foot. Pendulum motion, maintain forward hand at eye level.	Single-sticking: keep the body still while diagonal poling. This will reinforce that it is easier to pole closer to the foot.
Improper pole plant (pole plant off to the side of body for balance).	Keep the hands closer to the midline of the body. Focus on linear forward/ backward movement with arms.	Do standing squats and maximize athletic position and ability to balance without poles.
Improper pole plant (pole plant off to the side of body).	Maintain a slightly bent arm position, planting pole tip even with weighted foot, reaching forward. Pendulum motion, keeping hand and pole close to the body.	Watch shadow on a sunny day – keep poles vertical.
Incomplete extension during push phase.	Ensure pole push is past the hip. Hold pole with relaxed grip using thumb and forefinger.	Stand in athletic stance and work on arm swing. Keep the upper body relaxed for a full arm swing.
Lack of hip flexion, while maintaining balance on weighted lead ski.	Increase forward hip flexion while keeping eye focus forward.	



## 2. Double Pole

Skiing can be thought of as one movement done over and over again. When an athlete is learning encourage them to make four coordinated strides and pole plants, then five, six and so on. When skiing long distances they will be able to do that motion hundreds of times once they learn it. However, most ski trails will have undulating terrain and turns. Classic technique can change accordingly to continue to move through those obstacles. The change in technique will also use different muscles. The switch from striding to double pole is one such example.

The double pole technique is used primarily on flat terrain and slight downhills where the gliding is easy, and the skier can take advantage of gravity. When learning the technique the athlete will develop specific strength in the upper body and core. Start in the athletic stance in the track with equal balance on both skis.

- ♦ Raise both arms to shoulder height and plant both poles alongside the skis. Pole plant should be just beyond the skier's binding.
- ♦ Lean forward onto the poles, using your core muscles and upper body push down and through with the poles.
- ♦ Arms extend just beyond the body to complete the push.
- ♦ Raise the body back to the athletic stance.
- ♦ Raise the arms back to shoulder height and repeat the poling motion.

Have the athletes think about a train moving along the train tracks. Their double pole motion is like the rising and falling of the pistons. Once they get this movement, they are creating human powered locomotion. Knowing how to double pole is also helpful when learning to do the basic skate technique, V1.





### Drills

#### Beginner

- ♦ Plant poles just in front on the ski boots and lean forward. Explain how their body weight creates power and moves them forward.
- ♦ Frog hops (two-footed forward hop) without skis on. Start small, then go as far as possible. Make it a game or a skill that they can improve upon with each ski lesson. This helps teach forward body movement in double pole.

#### Intermediate

- ♦ Double pole distance—set cones along a track to determine the distance that the athlete has to try to double pole without stopping. How far can they go?
- ♦ Double pole with speed—set similar distance markers and have the athlete double pole with a higher tempo. Time the difference between fast and slow.

#### Advanced

- ♦ Double pole over the crest of a hill before going down. This helps work on transitions in a long ski or competition, and helps the athlete maintain speed.
- ♦ Pole with one arm—try to do the double pole motion with only one arm/pole at a time. This is a strength drill and helps emphasize the use of the back and shoulders in the poling motion.
- ♦ Double pole starts. Practice double poling with speed and power to use at the start of a competition.

#### Double Pole



#### Double Pole Arm Swing



#### Double Pole Up a Hill



### Faults & Fixes Double Pole

Error	Correction	Drill Reference
Bent legs.	Double pole phase begins with straight leg.	Return to athletic stance. Keep only slight bend in knees.
Pushing with arms too early.	Keep shoulders locked in pole plant position until hip flexion occurs.	Remind athletes to bring their hands up high before they initiate the poling motion.
Inadequate hip flexion.	Bend upper body farther at the waist.	Return to athletic stance to maintain forward upper body.
Glide phase too short.	Arms extend fully past hips.	Challenge: how far can they glide with one push?
Pole plant ahead of feet.	Plant poles even with heels.	Stationary, start with poles in correct poling point. Raise arms and poles and try to get back to that same spot.



### 3. Kick Double Pole

Used when the skier's speed is too great for an effective diagonal stride and too slow for ordinary double poling.

- ♦ Extend both arms forward in preparation for double pole plant while pushing off the snow with one foot. Extend the other leg naturally behind, lifting the ski slightly off the snow.
- ♦ Plant poles and begin double pole power phase and bring both feet together.
- ♦ Hips are over toes and weight is transferred to poles as upper body flexes toward the snow.
- ♦ When hands are even with the knees, push back with the arms.
- ♦ Once the arms are fully extended back, the skier returns to an upright position and prepares for the next double pole plant phase.
- ♦ Repeat the maneuver alternating leg kick.



### Faults & Fixes Kick Double Pole

Error	Correction	Drill Reference
Insufficient weight transfer.	Step and lean forward transferring all the body weight to the opposite foot.	
Inadequate extension of both arm and leg phase.	Exaggerate full extension of both arms and kick leg.	Full body extension is "open" downward poling motion is "closed" repeat these words to encourage movement.

#### Kick Double Pole



#### Diagonal Stride – Kick Double Pole – Double Pole



#### Stationary Kick Double Pole





### Uphill Technique

The ultimate goal for an athlete will be able to diagonal stride up most gradual hills. In the learning process there are two other techniques a skier can use to scale an uphill of any grade: herringbone and sidestepping.

#### 4. Herringbone

This technique is used when the hill becomes too steep to keep the skis parallel in a track. When this is the case, plan ahead and change techniques before the steep pitch begins. Have the skier step out of the track and into a “V” position, with the tips of the skis far apart and the ends of the skis nearly touching. Instruct the athlete to put pressure on the insides of the skis by pushing down into the hill with their knees. This will give them the necessary traction they need to scale the incline.

- ♦ Start in an athletic stance, but with the feet and skis in a “V” position. Take note that more pressure needs to be put on the inside of the feet and inside edge of the skis to hold the skier in place.
- ♦ Plant the poles to the sides of the body just outside of the ski “V”, down slope.
- ♦ Step forward and up the hill with the right ski, while pushing off the left hand pole for support.
- ♦ Once stable, shift weight and step up the hill with the left ski and push off the right hand pole for support.

#### Coaching Tips

- ♦ As the hill gets steeper, the athlete needs to widen the “V”.
- ♦ When the skier has scaled the hill, have them look back and notice the “herringbone” pattern they have created in the snow.
- ♦ If necessary, help to set the athlete’s skis, bend their knees and plant their poles to the side. When first learning to go uphill, stand behind for support and to prevent any downhill movement.





#### Drills

##### Beginner

- ♦ Pretend they are walking like a duck, waddling up the hill. This will emphasize weight shift and uphill movement,
- ♦ Try without poles and hold their hands behind their back. This will require proper body position and balance.

##### Intermediate

- ♦ Challenge them to scale the hill in fewer steps than before.
- ♦ Challenge them to “run” up the hill in the same formation to see if they can quicken their tempo.

#### Faults Fixes & Herringbone

Error	Correction	Drill Reference
Athlete slips backwards.	Move the knees toward each other to get more “edge bite”. Make sure athlete is in the athletic position: hands up, knees bent forward. Use a wider “V”. Stand behind the athlete give support.	Try without poles to challenge the skis to go on edge. Push in the knees to get adequate bend.
The tails of the athlete's skis are clicking.	Have the athlete take larger steps up the hill.	Start in the athletic stance with skis in a “V” before uphill movement is started.
Inability to coordinate opposing arm and leg motion.	Emphasize the herringbone movement with correct arm and leg movements on level terrain.	Do the movement in slow motion – make a slow motion game out of it.
Falling forward.	Keep weight centered over feet.	Start in the athletic stance with skis in a “V” before uphill movement is started.



#### 5. Side-Step

An alternative way, although not necessarily an easier way, to scale an uphill is to side-step up. Herringbone requires inner leg strength and coordination to move alternating arms and legs. Sidestepping is more straightforward. It also functions as a way to move laterally across flat terrain.

- ♦ Determine the athlete's dominate side (which hand do they write with?).
- ♦ Before the hill begins, have your athlete step out of the classic tracks to stand horizontal against the hill with their dominant side on the uphill.
- ♦ Keep a shoulder width stance and poles firmly planted at the athlete's feet.
- ♦ Slightly shift weight onto the downhill leg and pole and step up the hill with the leading uphill leg and pole.
- ♦ Slightly shift weight onto the uphill leg and pole and step up the hill with the downhill leg and pole.
- ♦ Look up the hill to make sure they are headed in the right direction along the trail AND to make sure other skiers are not coming down the hill.

#### Coaching Tips

- ♦ Move in small increments to maintain balance. Compare to an inchworm—moving one inch at a time.
- ♦ Have athletes keep their knees bent to maintain balance both in the static position and when step up the hill.
- ♦ Have athlete's imagine they are stepping sideways up a staircase—only one step at a time.



#### Drills

##### Beginner

- ♦ Use a visual floor map that directs the placement and movement of their skis. Think about a floor map for dance steps.
- ♦ Practice on a staircase at home or in the ski lodge. Mimic the same body movements to ascend the stairs. Keep the hands up and forward and remain in the athletic stance.

##### Intermediate

- ♦ Pick two points, first on the flats then on an uphill, for your athletes to side step between.
- ♦ Alternate between sidestepping with and without poles to work on lateral balance and stability.

##### Advanced

- ♦ On a hill, transition from a side-stepping position to herringbone.
- ♦ On a hill, transition from a side-stepping position to a downhill position.



#### Faults & Fixes Side-Stepping Up a Hill

Error	Correction	Drill Reference
Athlete's skis are sliding sideways down the hill.	Roll their knees into the hill, causing the skis to edge. Assist the athlete in walking on the uphill side of feet to get an edge.	Practice on flat terrain first.
Skier is slipping backward.	Move the tails of the skis up the hill.	Make sure the athlete is perpendicular to the fall line. Practice on stairs.
Skier is sliding forward.	Move the tips of the skis farther up the hill.	Make sure the athlete is perpendicular to the fall line. Practice on stairs.



### Downhill Technique

Going downhill on cross-country skis is thrilling, but also intimidating. By teaching your athletes a proficient wedge or snowplow they will always know that they have a way to control their speed. For a beginning skier, the wedge is the primary way of controlling speed on a downhill. The athlete's skis form a "V" shaped wedge with the tips together and the tails apart. The angled position of the athlete's skis function as a brake, slowing their descent. Start without poles until the athlete is comfortable and proficient. As the lower body position changes depending on the purpose for the wedge, the upper body remains the same. Instruct your athletes to keep their hands up and forward, like they are steering the wheel on a bus. This reminder is important because most often where the hands go the body will follow.

### 6. Wedge

#### Wedge Glide to Control Speed

- ♦ Have the skier step out of the classic tracks and face downhill.
- ♦ Push the heels away from each other and bring the tip of the skis together to form a wedge.
- ♦ Look ahead, bend the knees, and keep hands up and forward. (If using poles, keep them pointed behind).
- ♦ Roll the knees and ankles slightly in to apply pressure on the inside edges of the skis.
- ♦ Slowly slide in a snowplow downhill.

#### Coaching Tips

- ♦ Practice changing from a large "V" to a small "V" to change their speed.
- ♦ Depending on the athlete's ability, encourage them to change from parallel skis to a wedge. Descriptive words like "pizza slice" and "noodles" may help the athlete visualize the difference between gliding on two flat skis verses snowplowing in a wedge.





#### Faults & Fixes Gliding Wedge

Error	Correction	Drill Reference
Tips of skis cross.	Emphasize keeping the knees and ankles flexed and pushing the skis apart into a wedge using equal outward pressure.	Practice “Pizza” and “Noodles” to train for better control of the tips of the skis.
Cannot slow down.	Have the athlete relax the body, bending at the knees and ankles. This lowers the body, which will widen the wedge and produce greater edging.	Sit down if need to. Practice standing squats in wedge position.
Knock-kneed.	Keep knees apart.	Review athletic stance.
Straight legs.	Keep center of gravity lower by bending knees.	Review athletic stance.
Unable to maintain a straight line.	Keep even pressure on both skis.	Draw a line in the snow for athlete to follow.

#### Wedge Stop

- ♦ Using a wedge or snowplow to come to a complete stop is a safe way of braking on a downhill. Demonstrate and practice on flat ground first.
- ♦ Do the same as instructed in the Wedge Glide.
- ♦ Apply more pressure to the insides of the skis to slow their glide to a stop.



#### Coaching Tips

- ♦ Encourage athletes to keep their hands up, body slightly forward, and knees bent inward to control this technique.

#### Wedge Turn

The wedge is also a way for an athlete to change direction on a downhill slope or with a change in terrain of the trail. A turn is made when the downhill ski is weighted, which steers the athlete across the fall line (the direction a ball would roll down the hill). For example, by bending the right knee and applying pressure to the right ski, the athlete’s body will respond by turning to the left.

Remind the athlete to keep an upright and forward upper body with their hands out in front. Descriptive language, like “steering wheel”, helps describe their hand position and “steering a bus”, helps describe the movement around a turn, like “turning a bus”. Leading with the hands will greatly help the athlete control their direction. If an athlete’s inside ski is falling behind it is because of a rotation in the hips. Return focus to maintaining a square upper body position, facing downhill.

As with all cross-country techniques, it is about learning one movement and repeating it over and over. When an athlete feels comfortable with turning in both directions, encourage them to link their turns together. Start by turning against the fall line and just before the athlete slows down, weight the other ski to make a turn to the other side against the fall line.



### Drills

#### Beginner

- ♦ Make a piece of “pie” with their skis on flat terrain.
- ♦ Have your athletes practice with their hands on their knees to help with forward pressure, verses falling back.
- ♦ When working on a hill teach this skill at the same time as herringbone and side-stepping.
- ♦ Ski down the enter length of the hill keeping their skis in a “V” position.
- ♦ See how many times they open and close the “V” on the way down the hill.
- ♦ Start with skis straight—“noodles”—and change to the wedge—“pizza”.

#### Intermediate

- ♦ Ski in a wedge with poles held horizontally in front imagining that they need to keep a tray of milk and cookies steady the whole way down the hill. This emphasizes maintaining a forward and stable upper body position.
- ♦ Create a turn guide with cones or poles for the athlete to follow when learning to turn with a wedge.

#### Advanced

- ♦ “Brake Check”—stand half way down the hill and have athletes come to a complete stop using the wedge.
- ♦ Set a wide-open slalom course down a hill with cones to challenge your athletes to link turns down a hill.

### Faults & Fixes Wedge Turn Chart

Error	Correction	Drill Reference
Skier remains in a wedge but does not turn. Athlete is not transferring body weight to the downhill (outside) ski.	Have the athlete step from ski to ski to get the feel of weight transfer.	Have them yell downhill when they need to put more pressure on the downhill knee and ski.
Overturning.	Evenly weight the skis once turn is complete.	Keep the body square and facing downhill. Have the athlete hold their poles horizontal in front to create a second visual of their upper body position.



## Special Olympics Cross-Country Skiing Coaching Guide

### Teaching Skills

#### Faults & Fixes Downhill

Error	Correction	Drill
Too much weight on heels causes athlete to fall backwards.	Have the athlete bend at the ankles to shift weight forward without lifting up at the heels.	Use steering the bus analogy to keep hands forward and knees bent.
Difficulty maintaining balance.	Keep center of gravity lower by bending knees. Widen stance. Keep head up and focus further down the trail.	Do standing leg squats standing in a "V" formation. How low can they go?
Poles are planted in front of body.	Keep poles pointed back, inline with skis.	Keep hands on "the steering wheel".



## 7. Step Turns

When an athlete becomes comfortable with going downhill on cross-country skis and is ready to advance from snowplowing, encourage them to step in order to turn instead of sliding through the turn.

- ♦ Practice stepping through a right hand turn and a left hand turn on flat ground first.
- ♦ Next, try on a gradual downhill turn. Approach the turn slowly in a snowplow or with more speed with skis straight.
- ♦ Keep knees bent and move in small steps around the turn until the trail straightens out.
- ♦ Keep the hands up and forward to “steer the bus” around the turn.

Step turns will take more confidence and ski control to perform. Be patient and continue to encourage the athlete to step lightly and quickly to keep their body moving around the turn. Remind them to keep their hands forward. This simple body position reminder is key to keeping their upper body turned in the direction of travel. It also helps them to look forward. Where their hands and eyes go, so will their body. Practice on gradual terrain and one turn at a time. Consider setting up cones on a wide-open trail for your athletes to ski around.





### Faults & Fixes Step Turns

Error	Correction	Drill Reference
Incomplete turn.	Reduce speed. Increase number of steps. Flex the legs at the ankles and knees with arms square to the turn. Increase edge pressure.	For all faults refer to “steering the bus” and practice without skis first.
Initiating turn with outside ski.	Always initiate turn with inside ski.	
Not squaring off of upper body.	Initiate turn with shoulder squared off to new direction.	



### Additional Skills

#### 8. Star Turns

Star turns enable an athlete to change direction on skis. This circular way of turning helps an athlete become accustomed to shifting body weight from ski to ski. This movement is also a good practice tool for maneuvering the tips and tails of the skis. The objective of a star turn is to rotate by stepping in one direction while keeping the ski tails or ski tips together. The following progression is to change direction to the right, pivoting from the ski tails.

- ♦ Stand in a relaxed, balanced position, without poles.
- ♦ Lift the tip of the right ski and leave the tail of the ski on the snow.
- ♦ Place the ski down farther to the right, creating a “V” shape with the skis.
- ♦ Keeping tails in place, lift the tip of the left ski and place it parallel to the right.
- ♦ Continue taking small steps until desired direction, or for a full circle.

Afterwards, point out the “star” pattern the athlete’s ski made in the snow. Encourage the athlete to try this movement in the opposite directions and while pivoting from the ski tips. When adding poles make sure that the poling motion follows the leg motion so that the athlete can also work on coordinating equipment with movement.

Let your athletes know that this is a very useful skill and they will get to use it during games, drills and general skiing out on the trail to efficiently change direction.

#### Star Turn



#### Kick Turn





## Special Olympics Cross-Country Skiing Coaching Guide

### Teaching Skills

#### Drills

- ♦ Start by asking your athletes to rotate around in a circle. Then challenge them to keep either their tips or their tails together.
- ♦ Goal is to do a 360-degree star turn. Ask athletes to see how many degrees they can rotate?
- ♦ Draw a circle in the snow and challenge your athletes to turn within the circle.



#### Faults & Fixes Star Turns/Step Turns

Error	Correction	Drill
Can't keep tips or tails together.	Coach can hold tips or tails of skis together.	For all faults, create a visual map to stand on and follow the pattern
Stepping on your ski.	Always step from inside to outside of turn.	Of the star turn.
Step is too big.	Shorten up step.	



### 9. Falling Down and Getting Up

Falling in skiing is natural and happens to everyone; it's all a part of the learning process. Therefore, it is important to prepare your athletes to be able to fall and get up effectively. If an athlete is weary of falling, have them practice falling down and getting back. Be aware that ski poles can break if caught under body weight.

#### Falling Down

- ♦ Lower the body and fall to the side, not backwards or forwards onto the poles.
- ♦ Keep skis parallel.
- ♦ Keep arms close to the body.
- ♦ Stay relaxed.

#### Coaching Tips

- ♦ To reposition, have the athlete roll on to their back in order to start with skis parallel to the fall line.
- ♦ Falling is also a way to stop when they feel they are out of control. When an athlete feels like they are accelerating on a downhill and they can't stop themselves in a wedge, sitting down is an effective way to stop.
- ♦ If the athlete's legs are too straight and their weight is too far back, encourage keeping their knees bent and hands up and forward to keep their weight forward and body in more control. Hopefully, with more experience this will prevent falling.

#### Drills

- ♦ Make a game out of falling to be able to de-stigmatize the event. Liken it to a "fire drill"—stop, drop and roll—knowing how to fall is a safety precaution.
- ♦ Have the athlete start lying down on the snow. At your start command, see who can get back up first.
- ♦ If an athlete is having trouble, try without skis, and then add one ski before trying with two.





#### Faults & Fixes Falling Down

Error	Correction
Falling with outstretched arms.	Keep hands and arms close to body, falling to the side or back.
Falling backwards instead of falling to the side.	Lower the body while reaching toward the boots.

#### Getting Back Up

Often getting back up after a fall can be frustrating: skis, poles and limbs can be entangled. Teach the same routine when a fall happens to help your athletes learn the order of movements to get back up.

- ♦ Roll on to the back with legs and skis up in the air—like an overturned turtle.
- ♦ Drop onto one side with skis in a parallel position. If on a hill, drop on the downhill side across the fall line.
- ♦ Bring legs and skis close to the body.
- ♦ Crawl towards the tips of the skis.
- ♦ Kneel over the front of the skis with hands on the ground.
- ♦ Rise to one knee first, and then stand.
- ♦ Use arms and poles to assist in pushing up to standing position.

The following are a few scenarios that can complicate this situation:

If the athlete falls backward, then:

- ♦ Direct them to roll onto their back to free their lower body and skis—like an upside down turtle.
- ♦ Roll to one side and keeping skis parallel.
- ♦ Now the athlete can lean onto their hands and knees to stand back up.

If the limbs and equipment are entangled, then:

- ♦ Try to release their boots from the bindings and take off their poles.

If the athlete falls on an incline, then:

- ♦ Keep the skis parallel, perpendicular to the fall line and on the downhill side in order to get back up.

Be patient and help your athlete to remain relaxed and focused on return to their hands and knees to get back up. Encourage them to be independent and try their best before receiving help. It is tempting to help hoist them up, but give your athletes time to figure out their bodies and how to properly move them.

**WATCH  
VIDEO**

#### Faults & Fixes Getting Up

Error	Correction
Skis are sliding forward or backward.	Place the skis perpendicular to the fall line.
Body position too far back on skis.	Reach forward and kneel down over skis.



## 10. Skating Technique

### V1

V1 is the basic skate technique and a good place to start when learning how to skate. To learn this new technique, break it down into the upper body and lower body motions. Begin without poles and skis to demonstrate optimal body position in a walking motion, then transition to skis to learn how to push and glide. Your athletes will be familiar with starting a technique without poles and skis after they've learned the basic classic ski progression. Taking away the equipment helps the athlete to focus solely on the movement they need to learn.

Once back on the skis, the "V" formation is used as a verbal cue in skate technique ski position. Be sure to differentiate between a wedge "V", which is upside-down, and a skate "V" which is right side up.

### Lower Body Movements

This back and forth movement will be what your athletes want to try to replicate on skis.

- ♦ Start without skis or poles in the athletic stance with knees bent and arms out in front.
- ♦ Plant feet shoulder width apart with the toes slightly in and the heels slightly out, to simulate a "V" position of the skis.
- ♦ Rock back and forth from right leg to left leg to feel the weight shift.
- ♦ Next, rock to the right and take a small diagonal step forward with the left foot.
- ♦ Rock to the left and take a small diagonal step forward with the right foot.

### Coaching Tips

- ♦ Unlike classic skiing in the tracks, skate skiing uses edging to push off from one ski to the other.
- ♦ Practice rolling the ski onto an edge and pushing against the ski.
- ♦ Emphasize the importance of bent knees in applying pressure and control to roll and push the ski.
- ♦ Similar to classic skiing, proper alignment on the dominant poling side is Nose-Knee-Toes.

### Upper Body Movements

V1 is a combination of the lower body skating movement and an offset double pole poling motion on one side. The movement is asymmetrical because the technique is lead by a dominant poling side. On the right side, for example, the poling and the transfer to the right ski happen at the same time. When pushing to the left side, the athlete only glides on the left ski.

Coordinating upper body with lower body movements is key to coordinating in skating. When combining the two, start learning without poles, then one pole in the poling side hand, and finish using two poles.

- ♦ Start in the athletic stance with knees bent, skis in a "V" and poles out in front.
- ♦ At the same time, step diagonally forward to the right with the right foot and plant the right pole to the right of the right foot.
- ♦ Step over to the left side and glide.
- ♦ Step back to the right and plant the poles to push on the right side.
- ♦ Repeat the same right to left poling motion.

When the athlete is proficient with this V1 movement, return to skis and repeat.

### Coaching Tips

Remind your athletes to keep their knees bent to maintain their balance while transferring weight from side to side.





### Drills

#### Beginner

- ♦ Practice lateral weight shift without skis first.
- ♦ Practice lateral weight shift with skis with the goal of gliding on each ski.
- ♦ See Marathon Skate below.
- ♦ While practicing weight shift, hold hands behind the back to develop balance.
- ♦ Ski with bellies far forward to emphasize high and forward hips.

#### Intermediate

- ♦ Add one ski and let the athlete feel the glide on the snow when they step onto the ski.
- ♦ See Marathon Skate below.
- ♦ Set up a hopscotch game on the snow. Set the squares in a pattern to mimic a skating movement. Athletes can walk or hop through the hopscotch.
- ♦ Play a game on skate skis without poles, like soccer.

#### Advanced

- ♦ Add one pole, then two.
- ♦ Transition your coaching cues from stepping to pushing and gliding.

Marathon skate is an alternative way to teach your athletes the feel of pushing off one ski and gliding on the other.

- ♦ Set the left ski on the right-hand track, with left knee bent and ready to glide.
- ♦ Place the right ski at an angle away from the track.
- ♦ Plant the poles just beyond the boots and outside of the skis.
- ♦ At the same time, double pole and roll the right ski to its edge and push.
- ♦ Repeat to gain enough speed to practice pushing and gliding.



### Faults & Fixes V1

Error	Correction	Drill Reference
Athlete is not able to laterally shift their weight from ski to ski.	Return to walking through the movements without skis and poles.	Hop-scotch drill. Balance drills to improve their confidence in trusting the lateral movement.
Athlete's hips are too far back and they are prone to falling backwards.	Go over proper athletic stance and that the athlete should not feel like they are "sitting in a chair."	Standing squats to improve strength.
Athlete is unable to roll the ski on to an edge.	Show the athlete how the hips, knee and ankle move in order to roll the ski on to an edge.	Physically roll the foot, ankle and knee inwards in order to roll the edge.
Athlete's ski slides instead of edges when they push.	Go over rolling the ski on to an edge and emphasize the pressure put on the ski by bending the knee and engaging the quad muscles.	Skate without poles to put emphasis on this motion. Practice Squatting from the knee and focusing on the ankle bend.
Athlete struggles to pole and push at the same time.	Separate lower and upper body movements, then return to the whole movement.	Do the whole movement in slow motion.

### V2 and V2 Alternate

If an athlete is proficient at classic skiing and is able to learn the V1 skate technique, consider encourage them to learn V2 and V2 alternate. These new skate techniques will improve their overall ski technique and will keep the sport fun and challenging. For detailed coaching instructions seek out local cross-country ski clubs and coaches, as well as coaching manuals provided by the New England Nordic Ski Association (NENSA). Visit [www.nensa.net](http://www.nensa.net) for further information.

### V1, Transition to Open Field, Transition to V2





### Ski Games

Ski games serve multiple purposes when learning how to ski and improve technique.

#### Ski games:

- ♦ Teach fundamental ski skills.
- ♦ Teach cooperation within a group.
- ♦ Help improve fitness.
- ♦ Are creative and imaginative.
- ♦ Can be modified to incorporate all ski abilities.
- ♦ Involve all members of the group.
- ♦ Teach sportsmanship.
- ♦ And most importantly, they are fun!

Games complement ski technique lessons and provide a different environment for an athlete to learn fundamental skills. Games are often played without poles, which encourage athletes to work on balance and comfort on snow. Games also require varying speeds on snow, stimulating the athlete to move at a different pace than in a technique lesson. Game objectives like tossing a ball or following leader can help develop body coordination and motivate an athlete to learn how to maneuver on skis. Start on flat, unobstructed terrain. When your athletes are ready to advance their skills incorporate an uphill or down hill, or more speed on the flats.

Ski technique is often taught on an individual basis and the focus is on self-improvement. Ski games balance out a ski lesson, and they bring everyone back together. Of course, make modifications based on the ability level of your group. You can split the larger group into smaller groups in order to match like skills, and to maximize fun and play. Ski games are also a chance to actively incorporate assistants, parents and even skiers who are weary of playing. They can be given scoring or cheering positions that help support the games being played.

### Coaching Tips

- ♦ Play games for short periods of time to keep interest, energy and enthusiasm high. Know when to move on to a new game or back to the ski lesson. Know when to take a water or rest break.
- ♦ Depending on ability level, use non-contact games like Red Light, Green Light instead of Tag, until your athletes are more proficient on skis.
- ♦ Incorporate ski games into a ski lesson with purpose and match it with the skill of the day.
- ♦ Play without poles. However, if you do use poles remind the athletes to keep the pole tips down.
- ♦ “Everyone Wins”—encourage sportsmanship amongst the group so that all involved can share the success.
- ♦ Prepare for games before the lesson so that the games can be seamlessly integrated into the lesson without extra waiting and fiddling. Have all extra props or the game area prepared beforehand.
- ♦ Communicate with your group when you will be playing games and use as a reward. As your group becomes more familiar with skiing later in the winter, give them the option of which games they would like to play so that they can be involved in the creating a positive ski lesson.
- ♦ Use a bell, whistle, music or fun sound to begin and end a game.
- ♦ When separating into groups or teams pick fun names, movie characters, favorite foods, favorite colors, for example.
- ♦ Games can be done in one area or can be used to help the group progress along the trail or to reach a certain destination.



The following 10 games are adapted from the Bill Koch Ski League Manual and the NENSA Level I Manual.<sup>3</sup> Following are the descriptions of the games, skills to be learned and coaching tips.

### Sharks and Minnows

Line the skiers “minnows” up on the “beach” and choose one skier to be the “shark”. The objective is for the “minnows” to ski across to safety on the other side. The “shark” tags as many as possible to create more “sharks.” Invite the “shark” to give a starting call or phrase to entice the “minnows” to try to cross. Proceed until only one “minnow” remains.

### Skills

Thinking while moving on skis, overall balance, upper and lower body coordination, ski speed, and step turning.

### Coaching Tips

- ♦ Use a designated area and denote the safety zones with brightly colored cones, markers or rope.
- ♦ Play along with your athletes encouraging them to enjoy the chase and challenging or moving from one end to the other.
- ♦ Monitor your athletes and make sure they are enjoying the challenging of speed and tagging. Switch to another game if some are getting frustrated with the speed and contact.

### Red Light, Green Light

Arrange skiers in a line. Pick one skier to be the “stop light” and have them stand 10 paces in front of the group (or choose an easy distance for skiers to ski). When the “stop light” skier says “go”, he/she raise their arms above their head and the group of skiers skis towards the “stop light”. When the “stop light” skier says “stop”, he/she stands with their arms stretched out to the side and the group of skiers must freeze in position. The “stop light” skier randomly alternates between stop and go, varying the time for each. The first skier to pass the “stop light” skier wins. Or, the skier who skis the farthest at the end of the game wins.

### Skills

Skiers work on listening skills, learn to listen to each other and the coach, and ability to ski for a certain length of time.

### Coaching Tips

- ♦ An athlete who is unwilling to play can be the “Stop Light” and stand stationary during this game. Make sure his or her voice is loud enough for everyone to hear. Have them wave colored flags to enhance the visual signal.
- ♦ Make a clear starting and stopping point and noise.
- ♦ Have athletes mimic a road with stoplights that they are on often and see how far they can go.

### Treasure Hunt

Scatter bright objects, toys or “treasures” in a designated area. Use the treasures as a reward, a snack break for example, or a message to do a certain trick or say a rhyme. Arrange the skiers in a start line, give them a “Go” signal, and let them try to find all of the hidden treasures

### Skills

On snow body coordination, the “hunt” for hidden things is mentally stimulating as can be the treasures.

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<sup>3</sup> NENSA [www.nensa.net](http://www.nensa.net)



#### Coaching Tips

- ♦ Designate a specific area so that skiers do not wander too far away.
- ♦ Use the treasures as rewards or as teaching tools.
- ♦ Have the athletes contribute ideas for treasures for other groups.
- ♦ Blown up balloons as “treasures” can work on a non-windy day.



### **“Circle” Relay**

Skiers ski to a pole, ski around it once and then return to their group. Skiing in a circle is just one skill example. Relays can be altered to emphasize any skill you would like. A relay format changes the learning environment and is another stimulus to learning a new skill. Relay challenges also demonstrate to the athlete the purpose, like being able to turn in a circle, of a skill in everyday skiing.

#### **Skills**

All ski skills, ski speed, sportsmanship.

#### **Coaching Tips**

- ♦ Be creative and use this activity as a teaching tool, or acknowledge when your athletes just want to have fun and let them choose the relay task.

### **Obstacle Course**

Create an obstacle course depending on certain skills the skiers are working on. The length and complexity of the course must be relative to the ski ability of the group for it to remain fun, challenging and at the end rewarding for all. Use different markers, like poles, cones, benches, trail signs or hula-hoops, for skiers to tag, ski around, and ski through or under. Start on flat, unobstructed terrain.

#### **Skills**

All techniques and sportsmanship.

#### **Coaching Tips**

- ♦ Use a designated area.
- ♦ Keep the course simple and the direction understandable.
- ♦ Use to practice skills like stopping, turning, tucking, and sidestepping.
- ♦ Make a human course. Line the skiers up like poles in a slalom course with enough room to ski in between them. The first skier in line can ski around the “poles” and stop at the end to form another “pole”. Then the second skier goes, so on and so forth.
- ♦ Encourage the group to cheer on their teammates, when they are successful and when they need support to make it through a difficult maneuver.
- ♦ Incorporate different terrain if the group’s ability warrants the challenge, to practice herringbone, sidestepping and snowplow.

### **“What’s Around the Corner?”**

Set up two or three stations along the trail, field or designated ski area. Each station represents a surprise task that the athlete must complete before moving on to the next. Tasks can be range from simple to challenging depending on the energy level, enthusiasm and skill of the group. Tasks can reflect ski skills—such as “do one star turn”—or they can reinforce other experiences—such as “name one animal you might see in the wintertime”.

#### **Skills**

All ski techniques necessary to travel from one point to another, comprehension skills, step turns, stopping, feel for ski trail.



#### Coaching Tips

- ♦ Use this game to stay in one area, or to help progress along a new trail.
- ♦ You can help control the distance/time that the athlete skis between each station. This might inspire them to keep moving until they get to the next station, as well as encourage taking a break before they move on.
- ♦ Set this up beforehand, especially if it requires skiing a distance away from the starting point.
- ♦ If you are taking a new trail or skiing a new area, clearly communicate when this game is over so that your athletes know when to return to the starting point and have a sense of the length of the activity.
- ♦ Combine verbal, visual and kinesthetic tasks so that this game can appeal to different learning styles.

#### Follow the Leader

As your group becomes more cohesive and trusting, offer a “Follow the Leader” section in your lesson. Let your athletes lead, choosing which direction, which technique or task to accomplish. This can either be done moving and on skis, or without skis and in a circle like “Simon Says”.

#### Skills

All ski techniques, especially the ones that your athletes like and know they can lead, communication skills within the group.

#### Coaching Tips

- ♦ Have your assistants ready to help with communication of skills.
- ♦ Set a time limit or distance goal so that all involved have a sense of control the duration of this activity.
- ♦ Give encouragement when all of the athletes are able to follow along.
- ♦ Switch leaders to give different athletes a feel for the different roles.
- ♦ This might be a proactive way to lead a warm-up or cool-down session once the group is knowledgeable of the stretches and routine.

#### Biathlon Bean Bag Relay

Set up three buckets with three beanbags or tennis balls a comfortable tossing distance from the bucket. Divide the group in half or thirds. The objective is for the first skiers to ski up to beanbags or tennis balls and get as many in the bucket as possible (or at least one, change rule as needed) and ski back to their teams for the second skier to go.

#### Skills

Hand and eye coordination, combination skills skiing and tossing, and finite focusing on getting the beanbag into the bucket.

#### Coaching Tips

- ♦ Assistants can help re-set all of the beanbags or tennis balls at the throwing point, or “firing line” to use biathlon terminology.
- ♦ Describe the Biathlon to your athletes. Biathlon nordic skiing and shooting, is another form of nordic skiing. Skiers ski with rifles on their back and shoot .22 long rifles at five black targets in a designated shooting range. The biathlete who hits the most targets and skis the fastest from start to finish wins.
- ♦ Wide mouth buckets or overturned pylons work well.



#### **Duck, Duck, Goose**

Skiers form a circle, face the center and stand arms width apart. One skier is chosen to be “it” steps outside the circle. The skier skis around the circle tapping or pointing to each skier saying, “Duck, duck, duck...” until they call someone “Goose”. The “Goose” is now it and chases the other skier around the circle. The other skier is safe if they make it back to the open spot in the circle. If the “Goose” catches the skier, then they are “it” again.

#### **Skills**

Balance, coordination, listening skills and step turning on skis.

#### **Coaching Tips**

- ♦ Use a wide-open space without any obstructions.
- ♦ Combine a group of athletes have similar ski abilities and interests.

#### **Hares and Hounds**

Split the group into Hares and Hounds (Bunnies and Foxes, Mice and Magpies or pick two animals they might see along the trail). The Hounds will be chasing the Hares. The Hares will be wearing brightly colored scarves or ribbons; half is tucked into their jacket or pant pocket, the other half is dangling free. The Hounds “catch” the Hares when they grab their scarf. The Hound with the most scarves at the end of the game wins. Switch Hares and Hounds and play again.

#### **Skills**

Upper and lower body coordination, use skis as a way to get to a certain point, and work on balance and changing direction.

#### **Coaching Tips**

- ♦ Designate a specific play area.
- ♦ Brightly colored scarves, fabric strips, or fluorescent surveyors tape make great props for games.



### **Fun Race – Winter Games Preparation**

Whether Special Olympics athletes participate in cross-country skiing for the love of skiing or for the love of competition, cross-country races are a fun way to improve and to enjoy this outdoor winter sport. Competitions brew camaraderie and inspire good sportsmanship amongst athletes. As an individual sport, competitions are also a venue to set and achieve individual goals. Aim to work on acquiring basic skills in the beginning of the winter and as the competition at the end of the season nears, start to integrate race preparation.

Cross-country ski racing can be an excellent and fun challenge, a chance for the athletes to test what they have learned and practiced. The race will be enjoyable if the level of challenge matches the ability of the skiers. A course that is too easy or short may be boring while large hills and long distances could discourage the skiers. Encourage the skiers to have fun and to ski as well as they know how and the natural joy of being active and out in the snow will take over.

### **Athlete Readiness**

- ♦ Athlete can execute all the skiing skills necessary to successfully complete the course.
- ♦ Athlete is familiar with the course and race procedure.
- ♦ Athlete has attained a level of fitness appropriate to the demands of the race.

### **Race Formats**

The following formats offered at the Special Olympics Winter Regional Games are an example of a potential Special Olympics Cross-country event:

50 m

100 m

500 m

1 km

2.5 km

5 km

4x1 km relay

4x1 km Unified relay

Events can be either classic or skate classic. Classic events will require one or more classic tracks to be set throughout the course.

### **Preparation in Training**

In preparation for upcoming events, incorporate racecourses, race distances and a competition environment into your ski lesson.

### **Start Line and Finish Line**

Introduce a start line by beginning an activity or a game with a five-second countdown at a designated starting point. A start line can be a cue phrase or visual to focus and to get ready. Similarly, introduce the concept of a finish line. End a ski session by crossing an imaginary finish line and celebrate with congratulations and acknowledgement of accomplishments.

### **Practice Tracking**

In a race, when the trail and track are shared with other competitors with different ski speeds, it is helpful to be able to signal to and yield to other competitors without interfering. This is referred to as "tracking." When an athlete is about to take over a slower skier, say or yell "track." The slower skier who is about to



be overtaken should move out of the tracks and to the right of the trail to allow the other skier to pass. Within the group, practice giving this command while moving in and out of the classic tracks. The same protocol is used for skating.

### Sportsmanship

Even though cross-country skiing is an individual sport, good sportsmanship amongst competitors is important. Teach your athletes to cheer their teammates and competitors before and during a competition. After a competition encourage your athletes to congratulate their competitors. And above all, remind your athletes that skiing is fun!

### Coaching Tips

- ♦ Practice the different formats, so that as the coach you know which distances your athletes are capable of completing, and so that the athletes can get a feel for a point-to-point endeavor.
- ♦ Learn to know when to use different techniques on different terrain presented in a course.
- ♦ Discuss with your athletes an appropriate pace to ski in order to complete the racecourse—not too slow, not too fast. Encourage them to find the fastest pace possible without exhausting themselves before the finish line.
- ♦ Set individual process goals for upcoming events. For example, skiing a whole race without stopping or gaining enough strength to double pole during a competition.

### Preparation Before a Competition

The day of the competition should not be viewed as different from a regular ski lesson day. An athlete should approach a competition day with the same preparation, commitment, focus and enthusiasm as they would for training. Of course, some extra excitement is a good idea, but reinforce to your athletes that they do not need to do anything different. Stick to their normal routine of warm-up and goal setting and be prepared for the upcoming challenge just as they would a new lesson.

However, the day of competition does present different variables that the coaches and athletes need to be prepared for. If the athlete will be using a different ski center or trail, be sure to preview the course with your athletes during warm-up, so that they are well aware of the new territory and race markers.

### Coaching Tips

Remind your athletes to:

- ♦ Be properly hydrated and eat well the night before and the morning of the competition.
- ♦ Prepare and practice their competition process goal.
- ♦ Complete a proper warm-up before the competition so that they are 100 percent ready.
- ♦ Complete a proper cool-down after the competition so that they relax and help their body recovery after a hard effort.

Create a competition routine for your athletes and rehearse during training. Consider the following teaching points:

1. Warm-up as normal and preview the racecourse.
2. Identify the start line and athlete's start time.
3. Line up on the start line and wait for the starting command "go" (or count down).
4. Start at the starter's command.
5. Follow the trail the length of the course.
6. Call "track" when overtaking a slower skier.
7. Yield the track when overtaken by a faster skier.
8. Cross the finish line and stop.
9. Clear the finish area after the race.



### **Modifications and Adaptations**

In competition, it is important that the rules not be changed to suit athletes' special needs. However, coaches can modify the training exercises, communication and sport equipment to assist athletes in achieving success. Different athletes require different communications systems. For example, some athletes learn and respond better to demonstrated exercises, whereas others require greater verbal communications. Some athletes may need a combination—to see, hear and even read a description of the exercise or skill.

### **Mental Preparation and Training**

Mental training is important for the athlete, whether striving to do his or her personal best or competing against others. When appropriate athletes should practice mental imagery. The mind cannot tell the difference between what is real and what is imagined. Practice is practice, regardless of whether it is mental or physical. Ask the athlete to sit in a relaxed position in a quiet place with few distractions. Tell the athlete to close his/her eyes and picture performing a particular skill. Each athlete is seeing himself or herself on a large movie screen. Walk them through skills step by step. Use as much detail as possible, using words to elicit the senses of sight, hearing, touch and smell. Ask the athlete to repeat the image and picture rehearsing the skill successfully.

Some athletes need help to start the process. Others will learn to practice this way on their own. The link between performing skills in the mind and performing while cross-country skiing may be hard to explain. However, the athlete who repeatedly imagines him or herself correctly completing a skill and believing it to be true is more likely to make it happen.



***Special  
Olympics***

## **CROSS-COUNTRY SKIING COACHING GUIDE**

Rules, Protocol and Etiquette



# Special Olympics Cross-Country Skiing Coaching Guide Rules, Rules, Protocol and Etiquette

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### Teaching Cross-Country Skiing Rules

There are many things you can do to help novice racers succeed during their first few competitions. The best time to teach the rules of cross-country skiing is during practice. As coach, it is your responsibility to know and understand the rules of the sport. It is equally important to teach your athletes the rules that enable them to compete in cross-country skiing. A coach must maintain current copies of the official Special Olympics Sports Rules at [www.specialolympics.org](http://www.specialolympics.org) and the International Ski Federation Rules (FIS), which can be found at [www.fisssi.com](http://www.fisssi.com). The following is an overview of some of the basic rules:

#### Proper Safety

1. Wear non-breakable eyewear or sunglasses.
2. Select trails that are appropriate for ability level of your athletes.
3. Learn, recognize and obey trail markers.
4. Ski cautiously in areas where there are blind spots.
5. Warm-up before skiing to loosen muscles.
6. Cooperate with the ski center employees.
7. Be physically fit.
8. Check equipment often.
9. Ensure proper clothing is worn.
10. Always ski with a partner.
11. Be careful not to hit others with skis or poles when carrying equipment.

#### Rules of the Trails

1. Do not walk on groomed trails.
2. Ski in control.
3. When passing, let skiers in front know which side (left or right).
4. Slower skiers must give up the track to faster skiers.
5. Yield the right of way when entering from a side trail.
6. Always stay on marked trails.

#### Courtesy While Cross-Country Skiing

1. Try not to ski too close to other skiers.
2. Be careful not to step on or ski over other people's skis.
3. Get out of the way as quickly as possible if you fall.
4. Do not cross in front of other moving skiers.

#### Courtesy When Stopping

1. Do not stop abruptly.
2. Do not stop in a narrow place on the trails.
3. Do not block the trail when stopped.
4. Look before starting again; don't pull out in front of others.

#### Coaching Tips

- ♦ Discuss the importance of courtesy on the trails.
- ♦ Always commend the athlete after demonstrating courtesy while participating in skiing.



## Cross-Country Ski Signs and Trail Markers

Trails may be marked with numbers, symbols, letters and color-coded signs. Know and understand your local trail markings. Trails are categorized as:

Easier: green circle

More Difficult: blue square

Most Difficult: black diamond

## Caution or Warning Signs

Warning signs should be posted on the trail board, at the trailhead and as required, on the trail. These signs have both permanent and temporary use. Examples of this could be steep downhill, sharp turns, or low-snow coverage on the trail up ahead.

## Sportsmanship

Good sportsmanship is both the coaches' and athletes' commitment to fair play, ethical behavior and integrity. In perception and practice, sportsmanship is defined as those qualities, which are characterized by generosity and genuine concern for others. Below we highlight a few focus points and ideas on how to teach and coach sportsmanship to your athletes.

### Fair Play at All Times

- ♦ Always comply with the rules.
- ♦ Demonstrate sportsmanship and fair play at all times.
- ♦ Respect the decision of the officials at all times.

### Expectations of Coaches

- ♦ Always set a good example for others to follow.
- ♦ Instruct participants in proper sportsmanship.
- ♦ Respect judgment of officials.
- ♦ Treat everyone with respect.
- ♦ Develop and enforce sportsmanship standards.
- ♦ Commend the athletes when they demonstrate good sportsmanship.

### Expectations of Athletes

- ♦ Treat everyone with respect.
- ♦ Put forth maximum effort during each race.
- ♦ Practice the skills with the same intensity, as you would perform them in competition.
- ♦ Do your best to finish each race.
- ♦ Always encourage teammates.
- ♦ Do not retaliate (verbally or physically) at any time.



### Official Special Olympics Winter Sports Rules for Cross-Country Skiing

The most updated version of the Official Special Olympics Cross-Country Skiing Competition Rules book can be found on the Special Olympics website.

Look specifically at Cross-Country Skiing under the Sports & Games section on <http://www.specialolympics.org/sports.aspx>

### Divisioning

It is important that the rules and procedures of divisioning is clearly understood by all coaches and athletes before attending competitions. Understanding the divisioning process will have a direct impact on your athlete's performance. The fundamental difference between Special Olympics competitions and those of other sports organizations is that athletes of all ability levels are encouraged to participate, and every athlete is recognized for his/her performance. Competitions are structured so that athletes compete with other athletes of similar ability in equitable divisions. Historically, Special Olympics has suggested that all divisions be created so that the variance between the fastest and slowest times within that division does not differ by more than 10 percent. This 10 percent statement is not a rule but should be used as a guideline for establishing equitable divisions when the number of athletes competing is appropriate.

### How Divisioning is Implemented

An athlete's ability is the primary factor in divisioning Special Olympics competitions. For cross-country skiing, divisioning works best when coaches submit accurate preliminary ski times for a specified distance. This ensures athletes are placed into the proper division.

Determining appropriate divisions:

- ♦ Gender
- ♦ Age
- ♦ Ability

### Protest Procedures

Protest procedures are governed by the rules of competition and may change from competition to competition. Only rules violations can be protested. Judgment calls made by officials or divisioning decisions cannot be protested. The protest must be written, cite a specific violation from the rules and state why the coach feels the rule was not followed.

Check with the competition management team or jury prior to a competition to learn the protest procedures for that competition. The protest period is time sensitive. Coaches should be aware of the impact on their athletes and competition time schedule.

The role of the competition management team or jury is to enforce the rules. As a coach, your duty to your athletes and team is to protest any action or events while your athletes are competing that you think violated the official Cross-Country Skiing Rules. It is extremely important that you do not make protests only because you and your athlete did not get your desired outcome of an event. Filing a protest is a serious matter that may impact a competition.



## Special Olympics Cross-Country Skiing Coaching Guide Rules, Rules, Protocol and Etiquette

### Cross-Country Skiing Glossary

Term	Definition
Athletic Stance	A dynamic position with knees bent, arms out that prepares the body for athletic movement.
Classical Technique	Traditional cross-country skiing technique, also called diagonal striding.
Cool-down	Time period at the end of a training session or competition that includes easy skiing or joggin, and stretching.
Diagonal Stride	Cross-country skiing technique in which opposite arm and leg move together as in walking. This is also called classical skiing.
Double Pole	Planting of both poles together, slightly ahead of the feet and initiating forward gliding by applying downward force on both poles simultaneously. The upper body follows the arms by bending at the waist. One variation is the Kick Double Pole.
Downhill Ski	The ski closest to the bottom of the slope while standing across the fall line.
Edging	Rotating the ski onto its edge causing it to dig into the snow.
Fall Line	An imaginary line down the slope of a hill. The route a ball would follow if allowed to roll freely down a slope.
Glide	The result of ski technique and effort to move the ski across the snow.
Herringbone	A technique for stepping uphill; skis remain in a "V" position.
Inside Ski	The ski closest to the inside of a turn.
Inward Star Turn	Step turn pivoting on the tips of the skis.
Kick	The movement necessary to set the wax on the base of the ski in order to push forward onto the other ski to glide.
Kick Double Pole	A maneuver in the tracks, which combines a double pole with a push off from one leg.
Marathon Skate	A maneuver, which combines a double pole with a push from one diverging ski.
Outward Star Turn	Step turn pivoting on the tails of the skis.
Side Step	A method of climbing the slope by keeping the skis parallel across the fall line and using the edges.
Skating	Skiing technique in which the skis form a V-shape and the skier glides on one ski at a time. This is also called freestyle.

## Special Olympics Cross-Country Skiing Coaching Guide

### Rules, Protocol and Etiquette



Term	Definition
Track	The ability of the ski to go straight.
Tracking	When a faster skier comes upon a slower skier and must get out of the classic tracks in order to pass the fellow skier.
Tracks	Grooves in the snow that skis are placed in while skiing.
Uphill Ski	The ski closest to the top of the slope while standing across the fall line.
V1	A skating technique, which combines double pole and skating. The skier double poles once for every two skating steps. The timing of the arm and leg motion is synchronized.
V2	A skating technique, which combines double pole and skating. The skier double poles with each skating step. The timing between the arms and leg movements is staggered.
V2 Alternate	A skating technique similar to V1. The double pole occurs once every two steps but the poling is not synchronized with the skating motions.
Wedge	A downhill maneuver to control speed, turn or stop. Skis are angled inward (tips together) and edged into the snow. Also referred to as a snowplow.
Weight Transfer	Shifting the body weight from one ski to the other.