

Cross-Country Skiing



Cross-country skiing is a highly technical sport. There are two skiing styles, classic and skating (free). All generic athletes compete in both styles and have waxed skis adapted to current snow conditions. Each style requires different equipment and racing surfaces. Most SO athletes compete in classic style on wax-less skis (skis that don't require waxing but are much slower than waxed skis). This style is characterized by diagonal strides where skis follow tracks made in the snow.

Learning classic ski technique is natural for SO athletes as it is similar to walking, however using poles to coordinate with each push is more difficult. As a result, many SO cross-country skiers are walking on the snow with little use of poles. Walking on the snow is achieved after just a few hours on snow (if staying on a flat course) and does not require much knowledge of basic skills from coaches.

SO Regional, Provincial and National Games have both classic and free (skate skiing) races in their programs. Usually racing courses that are not flat and require uphill and downhill skills; skills that can be quite challenging if cross-country skiers are used to "walking" on flat surfaces. Most SO skiers will take a long time to cover short distances compared to generic athletes, as they are not pushing with their legs and poles efficiently and are using slower wax-less skis. Unless a focused approach to basic classic skills is considered, most SO athletes will remain at this level for their entire career.

Cross-country skiing is a demanding aerobic sport when done properly and requires training to be able to complete at SO competitions. SO events have distances ranging from 500m to 7.5km and discussions are under way to have qualifying time standards for Regional, Provincial and National Games as many athletes walk the course with little training sometimes finishing events way after all other competitors are finished. Training aerobic capacity for these distances requires a minimum of 3 trainings per week, preferably on snow.

Free style does not come naturally for SO skiers and will not be as easy to start with as "walking" on snow. As a result, it takes much longer to move forward because poles and pushes coordination are necessary for skate ski. Free skiing is however much faster than classic technique when done properly. It is

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recommended for SO to start with classic style and when basic skills are acquired, move to skate skiing (intermediate skill). This is how the following cross-country section is presented.

After learning to “walk on snow”, athletes are ready to learn basic cross-country classic technique. Skills required for classic technique are listed in the cross-country basic skill (next page). These sheets can be used as a guide, and when all skills are marked “yes”, cross-country skiers have basic classic technique and are ready for skate skills.

Skills are simplified to encourage home training (ski rollers and on snow) and require many hours of practice for each one of them.

Guidelines for using the skill sheets for cross-country skiing

1. Athletes start with learning to push and glide (kick). The basic sheet requires this skill with and without poles.
2. When this is achieved (this could take 20 hours or more), it is then time to start on diagonal strides coordinated with arms.
3. When an athlete can diagonal ski correctly, general skills such as skiing in and out of tracks are trained.
4. Follow each step of the skill sheet (next page) until all basic skills are acquired. Progress will be mostly dependent on how many focused training sessions an athlete does. Using roller skiing is a great way to accelerate learning.

Cross-country Skiing Basic Skills
Review of video is best if possible
On snow or classic rollers

Basic Skills: Push and Glide	YES	NO	Comments
Sub Skills			
Push off 200m no poles	<input type="checkbox"/>	<input type="checkbox"/>	
Glide 1m after pushes no poles 10 strides	<input type="checkbox"/>	<input type="checkbox"/>	
Diagonal strides 200m with poles (Kicking up)	<input type="checkbox"/>	<input type="checkbox"/>	
Track (in and out 3 times slow non-stop)	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Skills: Poling and Double Poling	YES	NO	Comments
Sub Skills			
Pole placement (70°-80°)	<input type="checkbox"/>	<input type="checkbox"/>	
Arm position (Elbow bent)	<input type="checkbox"/>	<input type="checkbox"/>	
Using pole propulsion alone (200m – double poling)	<input type="checkbox"/>	<input type="checkbox"/>	
Using pole propulsion (100m – diagonal strides)	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Skill: Downhill	YES	NO	Comments
Sub Skills			
Turn steps	<input type="checkbox"/>	<input type="checkbox"/>	
Parallel skis (in tracks and out)	<input type="checkbox"/>	<input type="checkbox"/>	
Basic Skill: Uphill	YES	NO	Comments
Sub Skills			
Up 20m without poles	<input type="checkbox"/>	<input type="checkbox"/>	
V steps 20m uphill with poles	<input type="checkbox"/>	<input type="checkbox"/>	

**When athletes achieve all “YES”, they have acquired basic skills.
Expectations are critical to skill acquisition.**



Classic Skiing

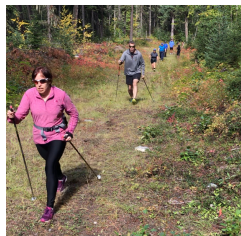
20-hour acquisition

Skill Breakdown: Examples of priority elements to focus on during practice

Spend time on each one until acquired

1. Diagonal Strides: Leg push off – Glide – Weight transfer
2. Poling-Double Poling: Pole placement – Arm and Body action – recovery
3. Downhill: Turn steps – Body position – Weight distribution– Ski control
4. Uphill: Pressure (with and without poles) – Ski direction

Each of these skills can be learned in one to 20 hours



Home skill practice:

Diagonal Strides: Can be learned on a ski machine - off snow training – roller skis

Poling-Double Poling: Using In-line skates or Roller skis

Uphill: Run uphill with poles for coordination and training

Practice three times per week (if possible) for 1h until each skill (focus on only one at a time) is acquired.

Cross-country Classic Example: Focused Basic Skills Session on snow (2 hours)

Focus on one skill at a time: Example Push and glide technique
(15' = 15 minutes)

15' Warm up and stretching in the lodge

30' Free skiing ability-based groups

- Push and Glide
- Poling

60' On similar racing course as SO competitions (**Use video and examples, slow down the demonstration when introducing a new skill, and use hands to guide movements when necessary**).

- Push and Glide
 - Shuffle strides forward (poles are used for balance)
 - Quick push (kick back) and long glide (no poles)
 - Quick kick on cone markers and glide to next marker (no pole)
 - Kick and glide with arm swing (no pole)
 - Kick and glide with arm swing (high kick back)
- General aerobic session (2-5 km skiing)

15' Cool down on snow on their own

Don't worry about perfect classic technique yet just do as many "kick and glide" exercises as you can for the first 20 hours of practice.

SUMMER

Cross-country Classic Example: Focused Basic Skills Session Summer (1.5 hour)

Focus on one skill at a time: i.e. Hill training with poles

20' Warm up, stretching and core exercises

30' 10' Walking up and down with poles
 10' Hopping up and down with poles
 10' Bouncing up hill (push and pole)

20' Hike on mountains with poles (intervals 30 seconds up rest 1'30" repeat 15 times)

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- Use pole with opposite leg



- Pole on every stride
- 10' Cool down

Poles are planted close to the feet, don't worry about the quality of pole plants, make sure hands are kept high and poles are used with every stride.

Conclusion:

Because classic cross-country skiing is so similar to walking, SO athletes can ski on a flat surface without much difficulty in just a few hours. However learning to use poles, having proper leg pushes (kicks), and going up and downhill will require focused training for up to 20 hours for each skill. Using the skill sheet is an excellent way to learn basic classic skills and encourage athletes to practice often. Cross-country skiing can be acquired all year around (with roller skis), off snow training will be necessary in many regions because of the lack of snow and the season being too short to train and learn basic skills.

Lesson Plan
Basic Skill Acquisition Program
(weekly or monthly)

Sport _____ Athlete Name: _____

Program Expectations

1- Weekly Practice (attend all practices)

Day (S) _____ Time _____

Location _____

“What the group is working on”:

2- Club Fit 100% attendance (Including Functional Testing exercises)

Day _____ Time _____

Location _____

“What you need to concentrate on”:

3- Basic Skill Development Homework (4 times per week - 1 hour per day)

Skill _____

“Individual Home Practice Objectives”