

# Ski-At-School Guidebook for Instructors

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**Version dated May 7, 2015**



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## Introduction

Ski-at-School is a Nordiq Canada program, sponsored by AltaGas, which aims to bring cross-country skiing to schools across Canada. The Ski-at-School program will knit together communities of teachers, students, and local ski clubs, Nordiq Canada, AltaGas, coaches, equipment suppliers and volunteers to support this initiative and make it into a success.

The main driver behind the Ski-at-School program is to allow students to experience the sport of cross-country Skiing, because it is a *life sport*. Cross-country skiing can be enjoyed at many levels of skill and it involves all major muscle groups, balance, endurance and strength. Cross-country skiing builds self-esteem, confidence as well as health and well-being, and cross-country skiing can be done in a group or individually.

The main objectives of the Ski-at-School program are:

1. **Encourage** schools to include cross-country skiing as part of their physical education curriculum, thereby introducing larger numbers of children to the sport.
2. **Link** schools with local cross-country ski clubs to provide a continuum for the introduction and development of cross-country skiing and related skills.
3. **Include** all children in this program. Children with physical/intellectual impairments can also enjoy cross-country skiing with specialized equipment and support.
4. **Promote** the active-for-life principle, and fuel interest in cross-country skiing as a life sport.
5. Focus on **FUN!** This is what kids will remember; it is enjoyable to learn a new skill, especially with classmates and friends.
6. Provide children with the **skills, equipment and coaching** needed to learn and participate in the sport.
7. Provide **guidelines** for instructional standardization of the Ski-at-School program by means of the Nordiq Canada Ski-at-School Guidebook, which will serve as a key program resource with sample plans and expected learner outcomes.

Some of the participants of the Ski-at-School program may never have stood on skis before. As such, consider preparing children by including an overview of the equipment itself, the clothing (layering), as well as hydration/snacks to ensure that the skiers are prepared for their first on-snow session.

The Ski-at-School program guidebook has included lesson plans as a resource for delivering this program. The suggested lesson plans are scheduled with a 1-1 ½ hr time allotment. This includes getting equipped. Feel free to modify these lesson plans to suit your needs in your school. For more information about the Jackrabbit program information on the Nordiq Canada website.

## 1. Learner Outcomes: Equipment

**A) Correct Pole Grip:** The poles of the participants should have adjustable straps so that the pole will not slide off the hand. The correct way to grip the pole is to slide the hand up into the strap from below, go through the strap completely, and then grip the pole handle from the top down.

**TIP:** Classic poles should fit under the arm, when the skier is standing on the floor, and a skating pole should be the same height as the chin. If poles are an incorrect height the skier can have difficulty with skiing techniques.

**B) Clipping in/ out of skis with ski boots on:** The ski boots and the binding of the skis should be of the same brand or compatible system. In most cases the binding and boots release and clip in approximately the same the way. The toe of the boot points down, then applies pressure into the front of the binding. There will be a “button” or release tab at the front of the binding to un-clip the boot.

**TIP:** The toes should be able to wriggle in the boot, otherwise the sock is too thick, or the boots are too tight.

**C) Dressing to keep warm:** Dressing in layers is very important, preferably no cotton, but thermals. Wearing mitts instead of gloves, socks, a warm hat or toque, and a neck warmer to keep the face protected.

**TIP:** Make sure all the clothes, especially socks and mitts, are dry when you start your ski.

**D) Snacks and water:** Cross country skiing is a very aerobic sport. You will be working hard! So it is important to keep your energy up with a nutritious snack and some water to keep you hydrated.

**TIP:** If available, it is very handy to have a drink belt for cross country skiing. It can store a snack, the water you need and some wax if you are going for a longer ski. A backpack will also work.

**E) Wax:** there are two types of waxes for skis, grip wax and glide wax. The grip wax is used for the classic ski, and it is generally applied on the section of the ski which is under the foot. The exact pocket of wax is determined by the skier’s weight. There are many types of grip waxes available, which correspond to the various snow conditions. The wax is corked into the wax pocket in a few thin layers. When conditions are especially icy, a Klister wax is used, it is very gummy, and it is applied in dabs to the wax pocket and then rubbed into the base.

The glide wax is applied with an iron to the front and back sections of the ski base on a classic ski and then scraped off and buffed. On a skate ski the glide wax is applied front to back under the whole ski.

**Tip:** it is a good idea to scrape the grip wax off the ski after each outing, unless you expect the same snow conditions. Be particularly careful with the Klister wax (if using) because it is extremely sticky!

## 2. Learner Outcomes: Trail Etiquette

For your safety, and that of other skiers, it is important to practice proper trail etiquette and follow the rules listed below.

**A) Ski on the right hand side of the trail:** The rules of the road also apply here. If there are two sets of tracks then please keep to the one on your right. If no one is coming in the opposite direction then you can also occupy the left track, but you need to jump out of that track quickly for any on-coming skiers.

**B) Let faster skiers pass – step aside:** To ensure that everyone will enjoy their ski, it is good manners to allow a faster skier to pass. The safe way to do this is to step out of the track and wait until the faster skier has gone by. If there are two sets of tracks and there is no on-coming skier, then the faster skier can step into the left track and pass in that manner, but the pass needs to be done quickly.

**C) If you fall on the trail:** If you should fall on the tracks, please try and get off the trail as quickly as possible, so that others may pass you. This is especially true if you are in the left set of tracks or on a hill. You can collect yourself on the side of the tracks and then resume skiing when you are ready.

**D) Never litter:** As a cross country skier, you are enjoying nature and it is your responsibility to leave nature natural. No litter or garbage please.

**E) Ski in control:** Perhaps one of the most important safety practices that you can perform is to ski in control at all times. You will keep yourself and others safe when you do. It is important to learn how to control your speed and how to fall if you find that you cannot control your speed and you need to stop.

## 3. Learner Outcome: Standing up and falling down

**A) Proper ski stance:** It is important to understand what a proper ski stance is because it helps with stability and control; it is the “ready position”. Generally, a proper ski stance is with knees and ankles slightly bent and a slight forward lean with the body. The arms should be relaxed and at the sides with a slight bend at the elbows. Skis are parallel to each other.

**B) Falling down and getting up:** Practicing falling down and getting up should be done on flat terrain. Perhaps start without poles and then allow poles to be used. Let the skiers fall to the side and back in a sitting motion. Bring the skis together, side by side and under the body. Move onto hands and knees. Stand up with your body weight over your feet in a crouching position. Come to a standing position.

**C) Basic Balance:** This should first be practiced on flat terrain and when the skiers are more comfortable you can find more varied terrain to practice these skills. The skiers should have both skis on and the practice is best done with poles.

- Weight shift forward and backwards:
  - a) Alternating with leaning forward and lifting up the back tails by leaning on the poles and then lifting the front tips by leaning backwards.
- Weight shift side to side:
  - a) Using poles for balance sway sideways. Alternate putting most of your weight on one ski to the other ski. This is done without lifting the skis.
- Wedging skis together:
  - a) Standing in ready position, wedge the tips of the skis together to form a “pizza pie” and then slide them to parallel again. Try the reverse and spread the tips far apart while the tails of the skis are together, talk about what feels more stable.
- Edging the side of the ski; inside, outside and leaning:
  - a) Standing in ready position, with weight equally balanced on both skis, find the edge of the ski by leaning to the side and finding the edge of the skis, alternate to the other side. Then switch to pointing inside knees together and finding the inside edge and then separating the knees to find the outside edges.
- Balance on one ski and then the other:
  - a) Starting in ready position, lift one ski and then place it to the ground and lift the other. Try to do this with and without poles.

## 4. Learner Outcome: Basic movement on skis

**A) Diagonal stride:** This technique is best practiced on flat terrain with set tracks. The skier slides his/her skis down the tracks. The skier “walks” down the track on the balls of the feet with some ankle and knee bend. There is some glide onto the forward ski as the skier pushes off. There is a “jogging-like” action on the balls of the feet, with glide onto the forward ski. After the skier’s weight is shifted to the gliding ski, the pushing ski momentarily comes off the snow at the end of the push. Arms swing comfortably somewhat in opposite time to the leg’s stride.

**B) Free Glide:** This technique should be practiced on a gentle slope. The skier starts at the top of the hill in the ready position, hands are kept forward, skis are parallel and skiers are able to glide down the slope while maintaining ready position.

**C) Correct pole plant:** An effective pole plant helps with the skiers balance and body positioning. The arm should have a 45 degree angle when the pole strikes the snow, with the base of the pole closer to the foot on the same side. When the weight is transferred to the other foot, the planted pole stays in the snow and the arm stretches back somewhat and extends straight behind. Then the pole is lifted out of the snow and placed in front again. Repeat and repeat...

#### **D) Turning in both directions:**

**Star Turn:** This technique should be practiced on flat terrain.

- The skier stands in ready position, with skis parallel to each other.
- The skier places their weight on their left ski.
- The skier then lifts up the right knee and places the right ski back down with the tips about 20-30cms apart, keeping the tails together. The skis form a “pizza pie”.
- The left ski is then moved parallel to the right ski.
- This is repeated until a full circle is completed. Repeat in the opposite direction.

**Step Turn:** This technique should be practiced on a gentle hill.

- The skier stands evenly with weight balanced on both skis.
- As the skier descends the hill; arms are in front of the skier in a loose bend at the elbow.
- Skier looks ahead and points the handles of their poles in the direction of the turn, where they wish to go.
- As the turn is approached the skier shifts their weight from one ski to the other and takes small quick steps to work their way around the turn.

**Leaning:** This technique should be practiced on a gentle hill.

- The skier stands with weight balanced equally on each ski.
- As the skier descends down the hill, weight is placed more on the ski which is closest to the inside of the turn, the upper body remains relaxed and the shoulders also lean slightly towards the inside of the turn.

#### **E) Climbing Hills:**

**Herringbone technique:** This technique should be practiced on a gentle slope that is packed but not too hard or icy.

- The skier steps up a gentle slope, alternating arms and legs.
- The skier keeps the tips of the skis wide apart in a “V” shape.
- Arms swing comfortably at the side of the body.
- There is a slight forward lean into the slope with the body.
- The inside edge of the ski “bites” into the slope for traction.

**Side stepping technique:** this technique should be practiced on a gentle slope. Poles could be used for balance.

- The skier stands on the flats at the start of a gentle slope, with skis perpendicular to the “fall line”.
- Arms and hands are forward and to the side for balance.

- The skier places their weight on the downhill ski and then lifts the uphill ski, placing it 10-20 cms uphill from the original position.
- The downhill ski is then placed beside the uphill ski.
- Skis are kept parallel to each other.
- Repeat with another step until the top of the slope is reached.

#### **F) Managing Downhills:**

**Snowplow stops:** After the skier can demonstrate a stable ready position moving down a gentle slope, they can advance to snowplow braking on the gentle slope.

- The skier forms a wedge shape with their skis by spreading the tails of the skis apart (the tips come together).
- Skier controls their speed by adjusting to size of the wedge and edging their skis.
- The pressure (braking) on each ski is fairly equal with minimal turning to one side.
- The skier maintains the upper body in the ready position.

### **5. Learner outcome: Environmental Appreciation**

As you enjoy your outing on cross-country trails or in the woods, look around. There are many creatures big and small that call nature home, and they rely on you to help keep the trails and the nature around you in a natural state. Take time to learn about the forest and the wildlife that lives there.

### **6. Learner outcome: Social Development**

Skiing with your friends, classmates, teachers, coaches and volunteers is fun. It is a great way to get to know each other in a different way than in the classroom. Take time to encourage each other and share the experience. Cooperate in organizing the equipment both before and after the outing. It is fun to be active in the outdoors, feel good about it!

## 7. Sample lesson plans for Season One: program is once a week for 5 weeks

### Ski-at-School lesson reminders for coaches and volunteers:

- Focus on **FUN!** This is what the kids will remember; it is enjoyable to learn a new skill especially with your classmates and friends.
- Ensure that **all kids** are participating, and no one is left out, or struggling beyond the fun threshold. Also include children with physical and/or cognitive challenges. Take note of the “adaptation” section of each week’s lesson plan to make the lesson easier and more fun for everyone.
- Develop a sense of **exploration** within the group. Allow the children time to “goof around” on the ski equipment. Have only loose rules, and let them explore what skis can do. If you have a playground nearby, allow kids time there to see what they can do there. For a fun video on Ski Playgrounds please click here: [http://www.youtube.com/watch?v=0EDew\\_65Lgw](http://www.youtube.com/watch?v=0EDew_65Lgw)

### Season 1 Lesson Plan #1: Intro into skiing: basic movement on skis (balance and gliding)

This is the first session that the children will spend outside on skis. It is best to have this first session on terrain which is only slightly undulating or flat. You may need to separate the group out into advanced skiers and beginners. If at all possible, please have everyone on skis; the teachers/coaches/parent helpers as well as the children. The idea is to learn together and play together.

#### Week #1: Suggested Program

Skill	Description	Where	Time	Adaptation
<b>Organize: fit boots etc</b>		Gym	15min	
1. Organize skis ( <i>no poles</i> )  2. Break into 2 groups based on general ability (has skied before/never-ever)	teacher / helper to make list of groups for each class	Outside the school	10 – 15 min	

<b>XC-ski basics</b> 1. put on / take off skis 2. Falling and rising 3. Warm-up	<ul style="list-style-type: none"> <li>• sky reaches (raise heels)</li> <li>• ski swings, arm swings</li> <li>• lunges, jumping on the spot</li> <li>• tippy toes (rock back and forth)</li> </ul>	Field area	5 – 10 min	Assistance with putting and taking off their skis; getting up if they fall. Sit skiers may need assistance transferring from their wheelchair to the sit ski. The beginner sit skier requires flat terrain.
<b>Basic Movement on skis (no poles)</b>  1. Star turn / sidestep         2. ABC's (Agility, Balance, Co-ordination) on skis   3. running step	<b>Options for games/activities:</b>  <ul style="list-style-type: none"> <li>• Simon Says game (incl. fall &amp; rise).</li> <li>• Falling Tag. Coach is "it" and when tagged, the children fall down.</li> </ul> Balance activities – flea leaps, stork stands (one leg) "snow pizza" – pointing tips in and out (this is star turn sequence)  <ul style="list-style-type: none"> <li>• Red Light – Green Light where kids ski from one end to another when instructor yells colors.</li> <li>• "Giants-Elves-Wizards" (which is modeled after rock paper and scissors)</li> </ul>	Field area	15-20 min.	Use supports or hold skier if he/she does not have good balance. Slow it down, or use one ski/ pole to start.  If a skier has difficulty getting back up, have them stand in place. Depending on their mobility have them crouch down as best as possible instead of falling down if they have difficulty getting back up or have an assistant with them to

	<p>Form two teams - each team convenes to decide on a character. Teams then line up facing each other (use a rope on the ground to separate teams). Have ~ 4 feet between teams</p> <p><b>Giant</b> - Tip-toes, raise hands above head, curl fingers, growling sounds <b>Wizard</b> - Crouch slightly, wave and point a magic wand, shouting "kazaam!" <b>Elf</b> - On haunches, hands cupped for big ears, shrill screeching noises</p> <p>→ Giant wins by 'squishing' an Elf → Elf wins by 'outwitting' a Wizard → Wizard wins by 'zapping' a Giant → Identical characters are a draw</p>			<p>support them in the activity to fall and get back up.</p> <p>Include the student in a team. A "Buddy system" with the teams might be a good support system for the student.</p>
Games	<p>1. Snake slalom – each child holds onto a long rope and skis behind the leader who will ski and turn and “wiggle” his/her direction.</p> <p>2. Tag (can have more than one child as “it”)</p>	Field area	15-20 min.	<p>1. If the student is not able to hold onto the rope use velcro straps or create loops from the rope that the student can hold onto easier.</p>
Wrap up	Back to school – skis / boots to gym or other place		10-15 min.	

## Season 1 Lesson Plan #2: Movement on skis to gliding step and turning

### Week #2: Suggested Program

Skill	Description	Where	Time	Adaptation
Organize equipment	Perhaps lists of sizes (tape on gear with names) group lists	Gym	15 min.	Outfit sit skis or adapt ski equipment as needed.
<b>Warm up:</b>  Movement on Skis Warm-up with <b>Agility, Balance</b> <b>Coordination</b> exercises	<ul style="list-style-type: none"> <li>Marching soldiers (knees high)</li> <li>Tail lifts (extend the ski backwards)</li> <li>Flea leaps (jump up and land with bended knees)</li> <li>One-leg pops (Jump from one leg to the other)</li> </ul>	Field	10-15 min.	Support the athlete with their level of mobility. Explain the feeling of the movements so that they can try the best they can with their limited movement.
Running Step ( <b>no poles</b> )  Gliding Step ( <b>no poles</b> )	<b>Options for games/activities:</b> <ol style="list-style-type: none"> <li>Simon Says game</li> <li>Ideas: Scooters and 1-ski soccer (switch feet half way)</li> </ol>	Field	15-20 min.	Sit skiers can push the ball with their hands instead of their feet.
<b>Game options:</b> <b>chose only one or two</b>	<ol style="list-style-type: none"> <li>snake tag (the person who is "it" tags another skier who then holds onto the tagger, the line of skiers grows as the game goes on)</li> <li>capture the flag</li> <li>British Bulldog (group stands on one side of the field and then one skier stands in the middle to tag them, if tagged they then join the skier in the middle)</li> <li>Hill games on small hill (if avail). → Race some kids two by two or in a group to push off).</li> </ol>	Field / tracks area	20-30 min.	Make modifications according to the student's mobility.  Some hills could be challenging for sit-skiers. If going on hills; be aware of the control of direction and speed going downhill. Be aware if the sit skier needs support behind

	→ Make two teams and give each team one colour of beanbags in a bucket/pile at their end of a field. The two teams need to steal the beanbags from each other and put them in their own bucket.			the sit ski to stop them from going backwards down the hill.
Wrap-up	Ski Playground fun		10-20 min.	

### Season 1 Lesson Plan #3: Diagonal stride (no poles)

#### Week #3: Suggested Program:

Skill	Description	Where	Time	Adaptation
Organize equipment		Gym	15 min.	Outfit sit skis or adapt ski equipment as needed.
Warm up	<ul style="list-style-type: none"> <li>Play a game of tag (no poles)</li> <li>Have skiers in two teams, in tracks side by side. Each team sends one child down the track to race in pairs. Do this without poles.</li> </ul>	Field	10-15 min.	Support the athlete with their level of mobility. Explain the feeling of the movements. Practice warm-ups by double polling, moving forward, backwards, turning and getting in and out of tracks.

<b>Diagonal Stride</b>	<ol style="list-style-type: none"> <li>1. “Horse and carriage” – Pair up the skiers according to size. One is the horse the other the carriage. The “Horse” gets a rope around the waist with a fixed loop and pulls the “carriage” forward. This is to teach herringbone technique. The “carriage” just holds onto the rope. Then switch. <b><i>This is to teach a forward position or lean.</i></b></li> <li>2. Go for a ski and focus on leaning and rhythm. Try different terrain; on uphill talk about faster cadence, on downhill focus on tucks.</li> </ol>	Field: Skier-tracked area – set up ring prior	15-20 min.	A Theraband may provide support with a little more flexibility for movement.
		Undulating terrain.	20 min.	
<b>Game activity options</b>	<ol style="list-style-type: none"> <li>1. Obstacle Relays – break into 2 groups and have an obstacle course ready. Step over a rope, hopping on one leg, then another, go under hoops, around pylons/poles, throw a bean bag into a hoop etc</li> <li>2. Cops and Robbers: All skiers take one ski off and no poles. Instructor is the Cop and tries to tag the robbers.</li> </ol>	Field	20 min.	If there is a sit skier instead of jumping over the rope you can get everyone to get in and out of the ski tracks or circle around the rope. The sit skier can practice falling and getting back up if they have the strength.
<b>Wrap-up</b>	<ul style="list-style-type: none"> <li>• Free time on ski playground</li> </ul>		10 - 20 min.	

## Season 1 Lesson Plan #4: Hills and turning techniques (intro to poles)

### Week #4: Suggested program

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>		Gym	15 min	Outfit sit skis or adapt ski equipment as needed.
<b>Warm Up</b>	Pendulum swings with the legs, flea jumps etc all while wearing ski equipment.	Field	5-10 min	Support the athlete with their level of mobility. Explain the feeling of the movements.
<b>Diagonal Stride in tracks (warm up)</b>	<ul style="list-style-type: none"> <li>Best in a location which is track-set; otherwise a skier-set trail will work as long as there are clear tracks. Practice correct pole placement.</li> <li>Practice lifting one ski in the tracks then the other (place beanbags or tennis balls which are cut in half in the track at intervals)</li> </ul>	Try to find undulating terrain	15-20min	Sit skiers also need to practice getting in and out of ski tracks. They can also practice skiing with one ski in the track and one out of the track.
<b>Introduce the Kick Turn, snow plow stop and snowplow turn</b>  <b>Options for games/activities</b>	<p>Need a hill in the terrain: Practice the kick turn, side stepping and herringbone technique.</p> <p>1. Game: Downhill Catch (no poles) Skiers try to touch the snow as they glide downhill. If that is easy then have them throw a ball in the air (or a mitt) and catch it, if that becomes easy then have another skier or a coach throw them an object as they glide down. <i>This allows the body to find</i></p>	Field	20-30 min	<p>If possible find a hill that sit skiers can gradually work towards going uphill and downhill with enough room for safety.</p> <p>Sit skiers can practice control by moving around poles. Tilting and pole</p>

	<p><i>balance while focusing on catching a ball.</i></p> <p>2. Fast and slow poles: On a hill place ski poles at intervals in gate formation, straight down. Have skiers ski through the “gates” and use the snowplow technique to moderate their speed.</p> <p>3. Snowplow snake game: On the top of a hill have the first person in snowplow position then the next person moves behind this leader and holds onto their waist while also in snowplow position, and so on. Have the “snake” traverse the slope in a slither movement and go over a few bumps too.</p>			<p>plants are key to turning.</p> <p>You can have the sit skier ski out first and traverse the slope then others can follow.</p>
<b>Ski in the woods – if available or ski playground</b>	Kids can build jumps and bumps or just find fun terrain to explore on their skis.	Woods or ski playground	20-30 min	Depending on the sit-skier they can also do jumps and bumps. Please talk to the student and decide.

## Season 1 Lesson Plan #5: Fun in the final session of season 1

### Week#5: Suggested program

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>			15 min	Outfit sit skis or adapt ski equipment as needed.

<b>Fun time! Scavenger hunt!</b>	Scavenger hunt: divide up the skiers in teams and give them a list of items that they must find. Have the teams start in different quadrants of a field and give each group a parent to help/supervise.	Field	40 min	Have a buddy system to pair up students and feel included.
<b>Ski Playground and /or obstacle course</b>	<ol style="list-style-type: none"> <li>1. Go to the playground at the school and see if there are features that lend themselves to a terrain park.</li> <li>2. Or build jumps and set up an obstacle course with hoops and pylons.</li> <li>3. Or play a one ski-soccer game.</li> </ol>	Ski Playground Or field	20-30 min	<p>2.Consider taller hoops if students are to ski under them and do not have the mobility. Consider more space in between pylons for sit skiers or students with reduced mobility to have more turning radius.</p> <p>3.Allow sit skiers to hit the soccer ball with their hands. A safety concern to be aware is the level of the sit skiers body/head in relation to the other students and the soccer ball. You may decide to use a softer ball that is also lighter.</p>
<b>Wrap up</b>	Treats for all skiers, funny awards for best trick, fall, technique etc	Field/school	10 min	

**Sample list of Scavenger Hunt items:** (give all children a bag to carry the items)

- Leaf
- Snow
- Stone
- Litter
- Stick/wood
- Lost item
- Broken item
- Edible item
- Paper
- Something in the colour of the rainbow
- The middle name of your parent helper/teacher
- Something that is in your pocket that is not edible
- Show your parent helper that you can make a human pyramid (take skis off)
- Show your parent helper that you can all star turn AND kick turn without falling over
- Finish the line “Now that I know how to Cross Country ski I will.....” This needs to be positive and **bonus points** for a funny ending.

## 8. Sample lesson plans for season two: program is once a week for 5 weeks

### Season 2 Lesson Plan #1: Review of classic ski techniques (no poles)

This is the first session that the children will spend outside on skis. It is best to have this first session on terrain which is flat to slightly undulating. You may need to separate the group into more experienced skiers and novices. If at all possible, please have everyone on skis; the teachers/coaches/parent helpers as well as the children. The idea is to learn together and play together.

#### Week #1: Suggested Program

Skill	Description	Where	Time	Adaptation
<b>Organize: fit boots etc</b>		Gym	10min	
<b>Warm up game: no poles</b>	Play a game of British Bulldog: one skier in the	Field area	10-15 min	Assistance with putting

	middle of a square playing area and the other skiers try to cross to the other side without getting tagged, if they do, then they join the tagger.			and taking off their skis; getting up if they fall. Sit skiers may need assistance transferring from their wheelchair to the sit ski. The beginner sit skier requires flat terrain.
<b>Diagonal stride review</b> (focus on ready position and forward lean)	<ul style="list-style-type: none"> <li>Go for a ski, and have the kids take turns leading, give children pointers as they pass, or as you ski alongside them; only one tip per child each time they pass by.</li> <li>If possible incorporate a hill in the ski outing, for variety.</li> </ul>	Field area	15-20 min	
<b>ABC's</b> (Agility, Balance, Co-ordination) on skis	<ul style="list-style-type: none"> <li>Have the kids in tracks and have them take off one ski. Ask them to glide as long as possible on one ski, a type of scootering movement. Then switch skis. (No poles) use arms for balance.</li> </ul>	Field area - with tracks, can be skier set, but better if track set by snowmobile	15-20 min.	Outfit sit skis or adapt ski equipment as needed.
<b>Game</b>	One-ski soccer game, with goalie and two teams. Switch kids in various positions. (No poles) you can use pinneys to identify each team.	Field area	20 min.	
<b>Wrap up</b>	Back to school – skis / boots to gym or other place		5-10 min.	

## Season 2 Lesson Plan #2: Hill techniques (herringbone, side stepping and leaning)

### Week #2: Suggested Program

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>	Perhaps lists of sizes (tape on gear w/ names)	Gym	10 min.	
<b>Warm up game</b> (no poles)	<p>Set up gates on a hill/incline and have the kids in two teams on the hill, one at the top of the hill and one at the bottom.</p> <p>Each team has a bucket with equal number of one single colour of beanbags. Their mission is to put <u>their</u> beanbags in the <u>other</u> teams bucket.</p> <p>Switch halfway so that each team can experience the difference between the higher and lower “home base”</p>	Undulating terrain/hill	15-20 min.	Support participant as needed.
Coach explains what the “fall line” is and then demonstrates the <b>herringbone</b> and <b>side stepping</b> technique on a steep hill.	<p>Kids line up at the bottom of a hill and have them go up using herringbone technique and then side stepping technique.</p> <p>Have the skiers complete a few laps this way until they look balanced and capable. NOTE: show how pole planting can really help.</p>	Steeper hill/incline	10-15 min.	Have sit-skier on the flats, since hills are very difficult to get up in a sit ski

<b>Activity: Gate snowplow</b>	<p>Set up gates with poles/pylons on the downhill portion of a hill and space the poles/pylons at different widths. This way the kids will need to <b>parallel ski</b> and sometimes <b>snowplow</b>.</p> <p>Space kids as they come down the hill. Have kids <b>herringbone</b> back up the hill.</p>	Steeper hill/incline	15-20 min.	
<b>Game: Uphill basketball</b>	<p>Make two teams on separate sections of the same hill. Teams have players on different parts of the hill but no “goalie”.</p> <p>Each team passes the beanbag/ball to teammates (they should ski to each other) until one team mate “shoots” the beanbag/ball into the other team’s bucket.</p> <p>Switch sides at the half time – so that each team experiences the challenges of uphill skiing.</p>	Hill/incline	20 min	Have participant at the bottom of the hill and choose a tacky ball that is easy to grip.
<b>Wrap-up</b>	Back to school – skis / boots to gym or other place		5-10 min.	

## Season 2 Lesson Plan #3: Hill techniques (snowplow and tuck position)

### Week #3: Suggested Program:

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>	Perhaps lists of sizes (tape on gear w/ names)	Gym	10 min.	

<p><b>Warm up game (no poles)</b> Start this game by reminding the kids what a star turn is.</p> <p>Each skier gets a sock with a ball in it (tennis ball). Tie a knot in the open end of the sock so the ball stays put.</p>	<p><b>Play Fetch:</b> Make two teams and form into lines.</p> <p>Make start and end zones at opposite ends of a field.</p> <p>Have all skiers line up at the start line and the first team members throw the sock/ball as far down the field towards the finish line as they can.</p> <p>They ski to their sock/ball, execute a <b>star turn</b> and then throw the sock/ball again towards to finish line. (<i>They must make a Star turn each time they pick up their sock/ball.</i>) When they get to the finish with their sock ball the next team mate can do the same. The game is done when all team members are over the finish line.</p>	Field	20-25 min.	Have participant start further ahead on the field.
Coach talks about <b>body positioning</b> on hills.	Practice leaning into the hill to go up either with herringbone or parallel technique and then snowplow down the hill. Show how the stability improves when the body is angled into the hill on the uphill and how the balance shifts on the downhill. Focus on stability “ready position” for downhill and arms forward.	Hill	15 min.	Practice on a very gentle hill with assistance.
<b>Tucking downhill</b>	Practice the tuck position from the top of a hill and see how far each of the kids can get <i>without using their poles</i> . They are only allowed to give one push at the start of the downhill to gain momentum. Make it a fun competition and	Hill	15-20 min.	

	see how many laps the kids can do.			
<b>Wrap-up</b>	Free time on ski playground		20 min.	

## Season 2 Lesson Plan #4: Turning on skis; snowplow, step turn, kick turn and star turn.

### Week #4: Suggested program

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>	Perhaps lists of sizes (tape on gear w/ names)	Gym	10 min.	
<b>Warm up game: Balance and Agility (no poles)</b>	Skiers form a large circle so that they cannot touch each other with outstretched arms. The coach calls out slide/jump/hop “forwards, backwards, left, right” if the skier falls or doesn’t follow instructions then they are out of the game.	Field	10 min	
<b>Demonstrate the Kick turn</b>	Form two teams:  Have skiers line up along a line. Have them race each other to the other side where they will <b>kick turn</b> (after they <b>snowplow/parallel</b> stop) and race back to the start line and tag their team mate to go and do the same. Continue until all skiers have had a turn.	Field	15-20 min	Have participants further ahead on the field.
<b>Demonstrate the Step turn</b>	Ski to a hill and talk about arm position and body position before the skiers go down the hill. Looking ahead is also important. Then have each skier try this step turn technique one by one. When they are at the bottom of the	Hill with a turn in it.	20 min	Practice with an assistant.

	hill they will climb back up for another try.			
<b>Fun time!</b>	Take the skiers to a wooded or more natural area for some off-track fun. Let them build some jumps and explore.	Woods or ski playground	25 min	
<b>Wrap up</b>	Ski back to school		10 min	

## Season 2 Lesson Plan #5: Last lesson – games and ski playground and/or ski in the woods

### Week#5: Suggested program

Skill	Description	Where	Time	Adaptation
<b>Organize equipment</b>	Perhaps lists of sizes (tape on gear w/ names)	Gym	10 min.	
<b>Team game options:</b>  <b>Handball</b> (no poles) use a large ball that is slightly tacky (easier to hold)  <b>One Ski Soccer</b> (no poles)	Create two teams – use pinneys (shirts) of the same colour if available. Each team has a goalie, rotate positions throughout the game.	Field	35-40 min	Use a tacky ball that is easy to grip.
<b>Tag:</b> If the area is large then have several taggers.	If available have the area of play include hills and a variety of terrain.	Field/wooded area	15 min	
<b>Ski Playground fun</b>	Have kids explore the terrain with their skis on in free play.	At the school playground	30 min	
<b>Wrap up</b>	Treats for all skiers, funny awards for best trick, fall, technique etc	On the field or at the school	10 -15 min	

## 9. Sample lesson plans for a three day consecutive program in one season

Note: These lessons are aimed at a *one-hour time slot*.

### Session 1: Intro to Cross-country skiing – basic movement on skis

Skill	Description	Where	Time	Adaptation
Fit boots on students	Teachers may have a list with sizes	In classroom or designated area *Make sure to have benches for fitting	10-15 Mins	
Put skis on	Line up by height in front of skis, introduce how to put on skis	By the trailer, close to the field * Have the kids line up by height inside.	5-10 Mins	
XC basics 1. Introductions 2. How to fall and rise 3. Ready position (Gorilla stance vs. Giraffe)	1. In a circle 2. Dead bug 3. Sports stance	In field	5-10 mins	Assistance with putting and taking off their skis; getting up if they fall. Sit skiers may need assistance transferring from their wheelchair to the sit ski. The beginner sit skier requires flat terrain.
Basic Movement 1. Ninja moves 2. Star turns 3. Ask for suggestions on different ways to turn around.	1. Kick and jump 2. Tips out first	In field	5-10 mins	
Tag Games 1. Flamingo Tag 2. Moose & Wolf (Nordic British Bulldog)	1. Freeze tag-tagged stand on one foot, to be freed, ski under arm. 2. Switch "its"	In field with pylons, small area	5-10 mins	

Giants, Wizards, and Elves	<p>Form two teams - each team convenes to decide on a character. Teams then line up facing each other (use a rope on the ground to separate teams). Have ~ 4 feet between teams</p> <p><b>Giant</b> - Tip-toes, raise hands above head, curl fingers, growling sounds  <b>Wizard</b> - Crouch slightly, wave and point a magic wand, shouting "kazaam!"  <b>Elf</b> - On haunches, hands cupped for big ears, shrill screeching noises</p> <p>→ Giant wins by 'squishing' an Elf  → Elf wins by 'outwitting' a Wizard  → Wizard wins by 'zapping' a Giant  → Identical characters are a draw  -</p>	In field with pylons	5-10 mins	
Go for a ski	- Around the field	In field	5 mins	

## Session 2: Continuation of movement on skis and introduction of hills or balance exercises

Skill	Description	Where	Time	Adaptation
Skis and boots	- a faster process by day 2	In classroom and outside	5-10 mins	

Review 1. Falling and rising 2. Movement (star turns, etc)	In a circle	In field	5 mins	
Movement 1. Body position	1. "Going to Zoo" 2. Frog, horse, penguin, gorilla, giraffe	In field in a circle	5 mins	
Capture the Flag	1. Make sure everyone knows the rules	In field with pylons and pinnies	10-15 mins	Participant placed further up the field.
Hills 1. Herringbone and side step on flats 2. Review ready position	1. Ankle angle 2. Move to hill	In field (hill)	10 mins	Practice with assistance.
Free time on hills 1. Work with struggling students	1. Put pylons on hill to guide students	In field (hill)	10 mins	
Hill Alternatives 1. How Many Ways?	1. Child suggestion exercises that will encourage exploration of movement on skis	In field, two pylons dictating where lines should go.	5 mins	
Hill Alternatives 2. Race Car Gliding	2. Exercises that develop balance and gliding	In field, two pylons dictating where lines should go.	5-10 mins	
Go for a ski			5-15 mins	

### Session 3: Continuation of hills and introduction of poles

Skill	Description	Where	Time	Adaptation
Skis and boots		In classroom and outside	5-10 mins	

Game 1. Freeze tag 2. Wide game	1. Warm up game	In field	10 mins	
Hills 1. Free time 2. Snowplow	1. Practice on hill	In field	10-15 mins	Assistant to aid skier.
Hill Alternatives 1. High/Low stance 2. Skills	2. Exercises that develop balance and gliding	In field, two pylons dictating where lines should go.	10-15 mins	
Poles 1. How to put them on 2. How to plant them	1. Instructor demo 2. Go for a ski	In field	10-15 mins	

### Alternative for older children (2<sup>nd</sup> or 3<sup>rd</sup> session)

Item	Activity	Where	Time
Strength & Skill Development 1. Push Your Partner 2. Sled Dogs	1. Teams of 2 push each other around field.	Field, set up pylons as a loop for kids to ski around	5-10 mins per activity

## 10. Glossary of terms:

**Fall line:** the natural downhill course (as for skiing) between two points on a slope, on the steepest angle down the natural contours of a slope.

**Herringbone:** The uphill climbing technique where skis are placed with tips wide apart, alternating, and where the inside edge of the ski presses into the slope. This makes a pattern in the snow of a “herringbone”.

**Groomed Tracks:** These are the classic tracks that are parallel from each other and made by a snowmobile with special grooming device.

**Camber:** The “hollow” or upward curve in the middle of the ski which is correlated to the skier’s height and weight for optimal performance.

**Flex:** The amount of stiffness in a ski.

**Ski base:** The bottom of the ski, where wax is applied.

**Pole Basket:** The “cup” shaped end of the ski pole. Recreational poles have a larger basket – to reduce the amount the pole can sink into fresh snow, and a racing pole has a small basket.

**Kick and glide:** This is the movement of cross-country skiing where there are alternate movement of pushing off and gliding with the speed that the push created.