



## Chapter 5: Applying Skills

**What to Teach and How To Teach It:** In this section we will review the difference between aptitudes and skills/techniques, and outline activities where both can be developed.

**Skiing Aptitudes:** The aptitude areas involved in cross country skiing are balance, coordination, agility, imitation, strength, flexibility, and feel for the snow. They are primarily developed through games and self-directed play. Later on in this section, we will share games and activities that assist young children in aptitude development

**Skiing Technique/Skills:** Technique is the application of refined and directed aptitudes. A simple example is gliding which links balance with a feel for the snow. A more complex example is the diagonal stride which links gliding, pushing on poles at the right time, pushing on skis at the right time, and terrain adaptation. The diagonal stride involves a variety of movements which require the refining and directing multiple aptitudes. It makes sense that the application of a single aptitude such as balance (gliding) is generally learned more quickly than the application of a combination of aptitudes (diagonal stride). Consequently, a beginner's learning curve reflects the mastery of increasingly more challenging competencies. Listed below is a ladder of technical progressions arranged in order of increasing complexity. They are provided so leaders/coaches are aware of what they need to know to lead/teach effectively and so leaders/coaches can monitor and assess the overall development of each child.

We do not suggest a leader/coach go down the list and attempt to teach each skill application (technical competency) one-by-one. These technical competencies are best learned through a combination of exercises, games, and activities that are fun and challenging. Never lose sight of the cardinal rule in BKL instruction: **learning by doing is the primary way children learn.**

### Technique/Skills Progression

- Putting on equipment properly
- Falling down and getting up
- Assuming the basic athletic stance
- Star turning (tips and tails)
- Side stepping
- Uphill side-stepping
- Wedging (gliding and braking)
- Herringboning/duck walking
- Kick turning
- Double poling
- Diagonal striding
- Skating without poles
- Skating with poles
- Gliding turns
- Skating turn
- V1 skating
- V2 skating
- V2-alternate skating
- Wedging christie
- Gliding christie



The competencies listed above are addressed below in simple lesson plans. They are *not* meant to be followed as if they were instructions for assembling a mechanical device. They are *not* meant to be taught in order. They are meant to provide guidance to leaders/coaches who will then make adjustments according to their respective coaching style, the age and learning style of their group, the weather, and the terrain.

## **Instructional Videos:**

### **NENSA:**

- Building Comfort on Skis: <https://www.youtube.com/watch?v=jSTNm7E-X9Y&t=79s>
- Climbing Hills on Skis: <https://www.youtube.com/watch?v=V8a0zOf38ZM&t=3s>
- Things to Try on Downhills: <https://www.youtube.com/watch?v=Cj5u-IBKNpE&t=5s>

### **Nordic Ski Lab:**

- Beginner Cross Country Ski Lesson (including climbing and descending):  
<https://www.youtube.com/watch?v=VfwKAU4zaJM&list=PL8ONohrl6v8JXWGWcm4TSEeobbSzo3PBK&index=3>

### **Green Racing Project TV:**

- Double Poling:  
<https://www.youtube.com/watch?v=bbtNoT4j7I&list=PLZrpBGJYys86T1-dW-GLuqgxzCu40Ae8-&index=1>
- V1 Offset Uphill Skate Technique:  
<https://www.youtube.com/watch?v=zMTbTI1IAJ4&list=PLZrpBGJYys86T1-dW-GLuqgxzCu40Ae8-&index=12>

### **Skiku:**

- XC Skiing Basics: [https://www.youtube.com/watch?v=2ArPTdf\\_YoY&t=3s](https://www.youtube.com/watch?v=2ArPTdf_YoY&t=3s)
- Stride, Glide, and Climbs: <https://www.youtube.com/watch?v=Ies9Kj5Bk8o&t=1s>
- All about Poles: <https://www.youtube.com/watch?v=-bojAjw2C3w>
- Skills for the Hills: <https://www.youtube.com/watch?v=RehJTnqH2N4&t=267s>
- Adventure Time: <https://www.youtube.com/watch?v=iz6IGhIgv3A>
- Intro to Skate Skiing: <https://www.youtube.com/watch?v=FjyyddZN-P8>
- Skate Skiing with Poles: <https://www.youtube.com/watch?v=qtURmYkVuKQ>
- Advanced Skiing Skills: <https://www.youtube.com/watch?v=cwgEHANXy2o>



## **FALLING DOWN AND GETTING UP**

**Purpose:** To teach children how to fall safely and get up easily.

**Terrain:** Flat and gentle hills.

**Mechanics:** Children should fall back and to one side whenever possible, and their poles should point back during a fall. For safety's sake, children should avoid crossing their skis during a fall. When getting up, children should first roll onto their backs and untangle their legs, skis and poles (like a dead bug); next they should flop their skis down next to themselves across/perpendicular to the hill's fall line (the path a ball would follow when rolling down the hill), if on a hill. Then they should climb onto their hands and knees and finally they should stand up onto their feet.

**Teaching Methodology and Exercises:** Briefly explain the things to consider above in order to fall safely and then bring the children through the following exercises. Ask the children to lie down on one side with their skis and poles on. Then ask them to get up. Next have children lie flat on their backs and have them see how fast they can get up — ready, go! Finally, have the children start from a standing position, fall to one side, roll over (so that their skis flop over to the opposite side), and get up. Have the children start on your "Ready, set, go!" signal. Repeat this procedure on a hillside by having the children fall below their skis on the hill, flip their skis to the downhill side of their body and across the hill, and then get up.



## **ASSUMING THE BASIC ATHLETIC STANCE AND DOWNHILL TUCK POSITIONS**

**Purpose:** To teach children to glide downhill with stability and to change direction while gliding downhill. You can introduce this skill while the children practice the uphill side step.

**Terrain:** A moderate downhill with a flat, packed, open area at the bottom (this open area is called a runout).

### **Mechanics:**

- **Athletic Stance:** The children balance evenly on both skis; the weight is flat on the feet/skis. The ankles, knees, and hips are all slightly flexed, thus moving the center of gravity forward and down, and helping the child to better respond to changes in terrain. The upper body is bent slightly forward, the back and shoulders are relaxed, and the hands are in front of the child just below waist level and out to the sides as if they are holding the steering wheel of a big truck. The poles are directed back and the baskets are just off the snow.
- **The Tuck Position:** The children balance evenly on both skis. Once they have mastered balance and agility, the children can shift their weight back over the heels. The trunk bends forward until the back is about parallel to the ground. The head is slightly up and children should glide forward down the hill. The legs bend slightly— enough for comfort. The hands are pulled up to the chin, and the forearms rest gently on the knees or thighs. The children may open their arms for balance. The poles point back and are tucked up under the armpits and run down beside the hips.

**Teaching Methodology and Exercises:** You can teach these skills with or without poles. Starting at the bottom of the incline, demonstrate the athletic stance and tuck position. Have children climb approximately 15 meters up the hill and glide back down in either the athletic stance or the tuck position at their own speed. See Gliding Skills (page 64) for some other recommended exercises.



## **STAR TURNING, SIDE-STEPPING, UPHILL SIDE-STEPPING**

**Purpose:** To teach children how to maneuver on skis by turning in a circle and moving sideways on flat terrain.

**Terrain:** An open, flat, packed area.

### **Mechanics:**

- **Star Turning (tails):** The child lifts the front of their skis one ski at a time, keeping the tails in place. They open the skis by stepping out to the side with one ski tip and then close the skis by lifting the other foot/ski and bringing the feet together. They keep repeating this stepping process until they have made a full circle. Children should practice turning in both directions.
- **Star Turning (tips):** Children follow the procedure for tails except that they keep the tips in place and step around them by lifting and moving their tails. Children should practice this skill in both directions as well.
- **Side Stepping:** Keeping the skis parallel, children lift one foot and step straight to the side. Next, children pick up the other foot/ski and bring it to the side of the first ski bringing both feet/skis together. Children should use their poles for balance. The poles should be planted at a bent arm's length out to the side.
- **Uphill Side Stepping:** Keeping the ski parallel and perpendicular/across to the fall line, children move sideways and side step up the hill. They edge their skis into the snow on the uphill side to prevent them from sliding sideways down the hill. The steeper the hill, the more edge the ski will require. The children should plant the pole as they plant the uphill foot/ski in the snow. Children should not weight the ski until they are certain that the ski will hold body weight without slipping sideways.

### **Teaching Methodology:**

- **Star Turning:** Before demonstrating the skill, challenge your group. Ask the children to spread out so that no one's poles touch their neighbor and then ask who can turn a full circle to the right. Repeat the challenge with a full circle to the left. Then demonstrate the skill. Next, challenge the children to do a full circle without moving the tails of their skis. Finally, challenge the children to do a full circle without moving the tips of their skis.
- **Side Stepping:** See if the children can step sideways to where their nearest neighbor is standing and back to their original spot.
- **Uphill Side Stepping:** Children climb the hill by creating little stairs or steps in the snow with their skis and step up the side of the hill.



**Exercises:** Once children are comfortable with these skills, they can work on balance by doing these drills without poles. Children can create wagon wheels or star patterns in the snow with their skis. Children can do a short relay of side steps with a tip-and-tail star in the middle of each leg to reinforce the skill. On the hill, these skills can be paired with simple downhill maneuvers through uphill/downhill relays.



## WEDGING

**Purpose:** To teach children how to control speed on downhills and to progress to wedge turns. The herringbone/duckwalk should be taught in the same lesson.

**Terrain:** A smooth, packed hill of medium grade with a long, safe runout.

**Mechanics:** The wedge position is the ready position. The child's hands are forward, below the waist, and out to the sides as if holding the steering wheel of a big truck. The legs are bent slightly at the knees, and the ankles are flexed forward so the center of gravity is over the balls of the feet. The feet are fairly far apart, and the child steers as if pigeon-toed (the tips of the skis are fairly close together and the tails are farther apart). The children ski down the hill with the tips together in a V-like wedge. This position applies pressure to the inside edges of each ski. The children can increase this pressure by pushing their feet out and opening the wedge while lowering the body and by bending the knees more. The upper body and arms should NOT change position when changing the position of the legs and feet.

**Teaching Methodology:** First demonstrate the skill in front of the entire group. Have children progress directly from where they left off with gliding skills and the ready position in downhill skiing. Before letting children progress uphill, make sure that they are ALL comfortable with this skill.

**Exercises:** Challenge children to do the following:

- Make a piece of pie with their skis
- Ski to the bottom of the hill with their skis in a V
- Ski to the bottom of the hill starting with their skis straight and stopping at the bottom in a V
- Open and close their Vs while gliding downhill
- See what happens when they ski taller
- See what happens when they ski lower
- See what happens when they ski with their ski wider or narrower

Have the children glide as far as they can down the hill in a straight line in a wedge. Place widely-spaced ski poles where the changes should take place. Start in a ready position; halfway down the slope change smoothly to a wedge. Start in the wedge, change to straight and then back to a wedge again before the bottom of the hill. Repeat the exercise using as many changes as you can. The change in position from wedge to ready position should be as smooth as possible.



NOTE: If the arms and upper body are moving, the change from the ready position will cause a weight transfer and maybe a degree of direction change. Correct by carrying glasses of water on an imaginary tray without spilling it! Also, try skiing while holding the ski poles in front horizontally at waist level. This exercise will help keep the upper body still.



## **WEDGE BRAKING**

**Purpose:** To provide a safe means of braking on gentle to moderate terrain or to provide more speed control on steeper slopes and trails.

**Terrain:** A gentle slope with a smooth level runout.

**Mechanics:** The wedge is widened by pushing further out at the heels. Edge skis on the inside by applying inside pressure of the leg, hip, knee and ankle. The ankles will roll in a little and the knees will come closer together. Overall there will be an increase in the flexion of the leg. More edging and greater widening of the tails of the ski will decrease the speed of descent.

**Exercises:** Demonstrate the wider wedge while standing on flat ground and have the children describe the differences between the wider wedge and the wedge, and the wider wedge and braking. Have the children demonstrate the wide stance, the increased edging, and bringing the knees closer together (yes, we are a bunch of knock-kneed people!) Start down the hill in a wedge, and change to a braking wedge to reduce your speed by half. With practice, the children should become more aggressive with the braking wedge. The goal is to brake more and more until participants can come to a quick, straight-line stop.

**Game for Wedge Braking** (Motor Vehicle Inspection Station): Place two ski poles wide apart midway down the slope. Descend to this point in a gliding wedge and have the class yell "BRAKES!" Do the shortest braking distance you can. Red Light Green Light is also a good game to play for practicing wedge braking (see the Games chapter on page 80).



## WEDGE TURNING

**Purpose:** To change direction and control speed while descending.

**Terrain:** Smooth and gentle, the same as for wedge braking.

**Mechanics:** While descending in a wedge, a pivoting or turning effort is made with the legs and feet, maintaining the wedge throughout the turn. The upper body remains in the ready position. The downhill ski will be weighted as the skis are steered across the fall line while the child maintains a centered, upright stance. Proper stance/ ready position is skis in a wedge with tips slightly spaced and minimal edging. Tips remain opposite each other. The inside ski tip should not drop back. If this happens there is hip rotation.

### Exercises:

- Children descend the fall line in a wedge and turn gently until the change of direction brings about a full stop.
- Children repeat the above, but this time they start the turn from across the hill and then turn down and across the fall line. As a variation to help achieve the desired amount of turning effort, place a line of ski poles in an arc and have the children try to ski around the arc.
- Children carry their ski poles in a tray position to help produce a still upper body throughout the turn.
- *Variations:* Without poles, use your imagination and carry the tray. Or pull out an imaginary tube of glue, pretend to spread it around in the palm of your hand, and then glue your hands to your knees. Also, hold your hands out in front like they are on a steering wheel and steer in the direction you want to turn.

### Games for Wedge Turns:

- *Mogul Mice:* As you wedge through a turn, reach down (on the downhill side only) and point at the snow where you “see a mogul mouse.”
- *Snow Daisies:* Hold an invisible flower pot in your uphill hand and as you ski through the turn, reach down with the other hand and pick a pretty bouquet of snow daisies. Interesting how they only grow on the outside of turns!
- *Airplanes:* Extend your “wings” (arms) and bank your airplane to the outside throughout the turn.
- *Atomic poles:* Place a line of cones or ski poles in an arc. Pretend they are covered in sticky goo and it is necessary to lean away from them.



**Linking Turns:** Descend in a wedge and turn across the fall line. Before all speed is gone, turn back down and across the fall line again. Remember to stay upright; do not lean into the turns. Try not to let the inside ski tip drop back. Steer with your hands out in front of you like you are steering a car.

**Exercises for Linking Turns:** After trying two turns at random, place two cones or poles to produce an easy slalom course. Remember that corrective games will work just as well in a six-pole slalom as they will in a single turn.

- To increase the fun and improve balance and general mobility, prepare an obstacle slalom course. Begin by placing tunnels made from three ski poles or large half hoops stuck in cones in between the slalom poles. Ski the whole course in the wedge at first. Then, replace the tunnels with a pair of mini-cones or other markers. When children come around a slalom pole, their skis must quickly come to parallel, pass through the cones, and return to a wedge to steer around the next pole.
- To increase the fun and skill development, have children do a small jump when they are in between turns and are skiing parallel through the cones. Just make sure that the slalom course is sufficiently spaced so that the “little extras” can be fitted in.
- A good method for developing turning skills is to pair up the children using the hoops. Two children use one hoop held between them to allow a safe distance from each other for doing wedge turns. Make sure the slalom course is wide.
- Another method is to use a pair of poles, one held in each hand, with the child in front is the engine (holding the poles by the straps) and the child in back as the caboose (holding the poles by their baskets). Make lots of train noises and free ski, or do a slalom course.



## **HERRINGBONING/DUCK WALKING**

**Purpose:** To teach children how to climb up a moderate-to-steep hill with or without kick wax. The wedge stop and turn should be taught in the same lesson.

**Terrain:** For wedge skills, clearly outline which parts of the hill children should ski down and on which parts they should climb. Children can progress from moderate to steep inclines as their proficiency improves.

**Mechanics:** Children start at the bottom of the hill facing uphill, with their skis in a V-wedge. The tails of the skis are closer together than the tips. Children start walking up the hill by using the inside edges of each ski for traction by maintaining the V-wedge as they walk. As one foot steps forward up the hill, the opposite arm and pole reach forward and are planted outside the ski. The child's weight shifts completely from ski to ski with each stride, and the upper body bends forward into the hill. The hands extend forward on each pole plant, but they stay relatively low (about chest height). The children start by taking small strides up the hill. Once they are comfortable with these mechanics, they can progress to longer uphill strides. To emphasize weight transfer, have children waddle up the hill like a duck. The degree of V-wedge should match the degree of incline and children will learn to feel what angle they need. Have children bring their knees together if they are not getting enough of an edge.

**Teaching Methodology:** Start at the bottom of a moderate incline and have children note the similarities between the wedge's V-wedge and the herringbone/duck walk wedge. Initially, children should not use poles so they get a good feeling of ski angle, edging, and weight transfer.

**Exercises:** Challenge children to do the following:

- Walk like a duck up the hill
- Do the same thing, but hold their hands behind their backs
- Do the same thing, but in fewer steps than the last time
- Do the same thing, but on a steeper part of the hill
- Do the same thing, but use their poles to help push with each step
- Do the same thing, but run up the hill.

Once the students have learned the fundamentals, move to a rolling hill, and have children experiment with the various exercises.



## **KICK TURNING**

**Purpose:** To learn a stationary turn that is quicker and more efficient than the star turn.

**Terrain:** Flat and smooth terrain with well-packed snow but without set tracks.

**Mechanics:** Standing with skis parallel on flat ground and poles planted in front, the children turn the upper body around as though looking over their shoulder. The pole on the side that the children turn to swings around and is replanted so that the poles are placed on the same side of the skis. Children then kick up the leg on the side they are turning and let the ski turn 180 degrees and drop it down facing the opposite direction as the other ski. Finally, children swing the other ski around in the same direction so the skis are both facing the same direction. The pole on the same side is moved around at the same time, leaving children facing the opposite direction.

**Teaching Methodology:** Do a demonstration for this skill with a brief explanation. Then, once the group is spread out on a flat area, play step by step follow the leader. Be sure that all children try this maneuver on both sides until they are proficient. Children can also practice the skill on a hillside during one of the downhill lessons. While facing downhill, with poles planted on the uphill side of their skis, they practice using their edges to keep from slipping and ensure that the skis are directly across the fall line. Once comfortable with edging their skis, children can try a kick turn on the hill. Do not spend too much time trying to perfect this skill or children will become cold or bored with it. Try it a few times in two or three consecutive sessions instead.

**Kick Turning on a Slope:** From the ready position the children completely apply their weight to the outside ski (the ski opposite the direction of the turn), lift the inside ski, and redirect it in the desired direction of travel. The children step across onto the redirected ski and completely transfers their weight off the other ski. This action releases the ski so that the children can lift it and place it parallel to the new direction of travel. The children repeat this cycle until the desired direction of travel is achieved. The children can step from either the ready or the tuck position. However, the greater the speed, the quicker and narrower the steps should be. The children must also move the upper body in the new direction of travel during these steps.

**Teaching Methodology:** Teach this skill with an uphill skill on moderate downhill terrain. Choose terrain that allows children to turn either right or left at the bottom of the hill. Make sure that there is a safe runout in both directions and that children practicing the downhill part of the progression will not collide with those doing the uphill portion of the progression.



Children should start far enough up the hill to allow only a few seconds of gliding to the bottom. Allow children to progress up the hill only as they gain confidence and competence. Have the group ski down in the tracks and all turn in one direction. Ask children to feel balanced on the balls of their feet and to quickly lift one foot and then the other as they glide down the hill. This stomping of the feet will teach them to balance and transfer weight from foot to foot.

Once children are comfortable doing this kind of turning, they can redirect their skis as they lift them; the exercise thus becomes lifting a ski, changing its direction, and stepping down on it. Children should keep stepping until they have turned back up into the hill. Make sure that children practice in both directions. Have the group progress into working on an uphill technique without waiting at the bottom of the hill.



## DOUBLE POLING

**Purpose:** To use poles to propel people over flat and slightly downhill terrain.

**Terrain:** Flat or gentle downhill terrain with set tracks.

**Mechanics:** Double poling is a forward extension of the arms to shoulder height and width from an upright gliding position. The child plants the poles near or just ahead of their bindings and drives the arms and trunk forcefully down onto the poles by flexing the core and bending slightly at the knees and ankles. These movements occur simultaneously with a forward lean and slight bend of the trunk. The feet are side-by-side and the child's body weight moves from being over the toes at the start of the double pole to being over the heels at the end of the double pole. There is a slight bend in the knees. Once the push phase of the double poling cycle is complete, the child stands fairly upright and swings the arms forward for the next pole plant.

**Teaching Methodology:** Start by making sure that all children have their pole straps on properly or children will not be able to double pole correctly. Line children up at one end of a grid or a long, flat section of trail. Always line children up in the easiest direction to take advantage of even a slight descent. Then demonstrate the double pole in front of the group. Challenge children. Ask them who can get to Point X without using their legs and observe them as they ski to X once or twice. As they ski, offer encouragement in addition to making sure that they can see enough of your double poling to model it.

*Some additional challenges to add:*

- Try to get to X with stiff arms and just bend forward at the waist.
- Now use both arms and crunch your trunk/core. Which way feels better?
- For each challenge, have the children count the number of pushes they have to take to get to X. This way they will soon discover the most efficient method of double poling.

### **Exercises:**

Have children count to themselves:

- One—arms up front
- Two—push and crunch trunk/core and breathe out
- Three—follow through and stand up
- Four—relax and glide and breathe standing up



## **KICK DOUBLE POLE**

**Purpose:** To combine the diagonal stride and double pole on the flats

**Terrain:** A flat, consistent section of trail or a short loop that is track set (preferably double tracked)

**Mechanics:** Have children start with a full double pole. A review of simple double poling could be used to introduce this session. As the children complete their follow-through and recover from the double poling push, they shift their entire weight onto one ski. Then, with a quick, snappy extension of the trunk, children push forcefully off the weighted ski, compress at the trunk/core, and enter the standard double pole and glide phase on both skis. It may be helpful to see the motion as an extension of the trunk over one ski which leads into a compression of the trunk over two skis. Kick double poling is simply the continuous alternating rhythm between a double pole and a single-leg stride. Weight transfer is the most complex part of this skill. Getting a good strong push is dependent on being able to completely commit weight to the gliding ski.

**Teaching Methodology:** Review double poling in the form of fun relays together with a few technical reminders. Then, going in the easiest direction, practice pushing using the “scooter” exercise (successive pushes with one leg while gliding only with the opposite leg). Do this exercise on both sides. Once the children are comfortable with the “scooter”, combine the poling push between each “scooter” push and you have one ski double poling.



## THE DIAGONAL STRIDE

**Purpose:** To teach the fundamental skills enabling children to travel over flats and moderate uphill.

**Terrain:** A tracked, flat area and a gentle, tracked uphill of very moderate grade.

**Mechanics:** Children stride forward with their skis in the tracks. The skis move parallel and forward as in walking or running. Children stride by stepping from a stationary, weighted ski on to an unweighted ski, i.e. the one they have just strode forward on. Children must balance on this unweighted ski while it slides forward in the track until they are ready to step forward and onto the opposite foot again. The stride is simply the continued repetition of performing a leg push, transferring weight, balancing and gliding, and performing another leg push.

Each arm works in synchronization with the opposite leg. For example, children push down on the left pole while simultaneously pushing down with the right foot. The arms extend forward to about shoulder height (elbow bent around 90 degrees) to initiate the poling action. They are then driven down and back following a natural pendulum motion. The arms stay about shoulder width apart throughout the stride. The child's body weight should transfer from side to side over the gliding ski. The torso should face the direction of travel and should not twist or rotate from side to side. When the leg push is initiated, the ski stops moving in the track as the child pushes down to get traction on the wax, fish scales, or skins. The children must learn to keep all their weight on the pushing ski during this movement. This will ensure they get the best grip possible.

**Teaching Methodology:** Start by having the group diagonal stride for a few minutes in the tracks. If using kick wax, be sure skis are properly waxed to avoid frustration. Spend more time demonstrating than explaining. Only after children seem to be striding confidently and comfortably on flat terrain should they move to striding uphill. On hills we recommend starting with poles and emphasizing an aggressive weight shift from ski to ski to maximize kick. Remind children to look up the hill so they don't bend at the waist and get bogged down.

NOTE: Whenever you teach skills on hills, match an uphill skill with an appropriate downhill skill, and teach the pair simultaneously.



### Exercises:

- *Diagonal Stride Without Poles:* Have children ski along a track and emphasize pushing the foot down and driving the opposite knee forward to propel themselves. Children can swing their arms at their sides as if they are holding imaginary poles. Have children count how many strides they take to get to the end of the track and then have them try to hold their glide to keep the ski traveling as far as it can before they push off with the other leg. Have children do 3x3's: three aggressive, quick strides (step-step-step) followed by an extended glide where they will attempt to balance until they stop followed by another step-step-step and another extended, balanced glide. This exercise helps with weight transfer which is the movement of the child's body weight from one ski to the other. The longer a child holds their weight over their ski, the longer the glide.
- *Just Poling (Single Sticking):* Have children take five or six full strides to gather momentum and then simply use their poles in a diagonal stride rhythm to propel themselves along with no leg action. This exercise is also good for getting children to bend the trunk forward and really engage the core in the poling movements.
- *Relays:* Relays are a great way to practice different skills. With three-person teams, have each child do one shuttle of diagonal stride with no poles, diagonal "stride" with only poles (single sticking), and full diagonal stride. Keep the number of teams in the relay small, and run a lot of relays so everyone keeps moving there's no and there's no pressure to win.



## GLIDING SKILLS

**Purpose:** Many beginners have never tried gliding before. Since gliding skills, body position, balance, and agility are prerequisites of all other movements on skis, take special care to emphasize all of them. The purpose of this progression is to introduce children to, and familiarize them with, the feeling of gliding on skis. This progression requires that the child be able to get back uphill so you may also want to introduce the herringbone/duck walk or side step at this time.

**Terrain:** A smooth, well-packed, gentle downhill with a long runout.

**Mechanics:** The objective is to make children feel comfortable and balanced while gliding on one or both skis and at various speeds. The body is in the ready position. The legs should be shoulder width apart with slightly flexed knees and ankles. This flexion allows the legs to act as shock absorbers. The feet/skis are parallel to each other and should not be crossed. The arms are also shoulder width apart and are in front of the hips. The children should look as if they are carrying something or driving a truck.

**Teaching Methodology:** Be sure to teach children to glide without poles. Have children practice the ready position on the flats and explain how to improve balance by flexing their joints and lowering their center of gravity. Then have children do as follows:

- Jump on the spot
- Jump on one leg
- Slide their skis back and forth in the snow
- Lift one ski and balance on the other. Do this with both sides. Repeat with eyes closed
- Have children start near the bottom of the hill and see who can glide to a stop without falling. Gradually move up the hill as they improve.

### Exercises

Challenge children to do the following:

- Be as tall as they can while skiing downhill
- Be as short as they can while they ski downhill
- Hop up and down on their skis while skiing downhill
- Step from foot to foot while skiing downhill
- Ski downhill backward
- Ski downhill in a tuck like a downhill racer
- Make their skis look like a "V" as they ski downhill
- Change tracks while skiing downhill
- Pick up an object (like a hat or a mitten) while skiing downhill



## SKATING

**Purpose:** To teach the fundamental skills that enable children to travel over all types of terrain without using traditional kick waxes.

**Terrain:** A flat, level field or section of trail that is firmly packed and smooth.

**Mechanics:** Children skate forward and shift their weight from side to side as though ice skating. The legs push out to the side in a skating motion and returns directly under the child. The legs should push to the side with equal force. The position of the body when one foot/ski is in contact with the snow after the other has pushed off is the gliding phase of the motion. Children must shift their weight from one ski to the other while traveling forward. Children can find where their body weight should be by placing their skis in a V-shape and adjusting their weight forward and back and pushing on their skis until they start moving forward.

There are three technique variations in skating (V1, V2, and V2-alternate) that require three different arm motions. If we consider that there are 4 points of contact with the ground— two poles and two skis— we can break down the relationship of pole plant to ski step in the three styles. In the V1, both poles plant with one foot/ski step at approximately the same time: 3 points down (both poles and one foot/ski), then 1 (the other foot/ski). In the V2-alternate, both poles are planted followed by the one foot/ski and then the other: 2-1-1. In the V2, there is a double pole plant just before each foot/ski step: 2-1, 2-1

NOTE: These basic mechanics are not to be confused with the specific skills for the different types of skating.

### Teaching Methodology

- *Skating Without Poles:* Try a series of exercises like the following:
  - Without poles, skate around the field like a hockey player.
  - Put your hands behind your back and skate around like a speed skater.
  - Ski around like a speed skater and swing your arms.
  - See how long you can balance on each ski before you have to take the next push.
- *Skating With Poles:* Children must learn to assist the motion by using the upper body and arms in movements similar to those used in double poling. Try the following series of exercises:
  - Push on the poles every second step/push.
  - Try pushing on every step/push.



- Now see how far you can glide on each step/push when you skate and use your poles together.

### Exercises

- **Skating Without Poles:** Have children skate without poles (choose the easiest direction of travel if there's slope, wind, etc.).
  - Have children skate from A to B and count their strides.
  - Have children skate around a large figure eight.
  - Have children play any tag game, but the only technique they can use is skating.
- **Skating With Poles:** Refer to the exercises for skating without poles and add going up a moderate hill.

NOTE: In these exercises, don't worry about proper hand position, timing of arms and legs, body position, etc. If students can manage a skating leg push and rhythmically apply force by poling while skating, they are well on their way.



## SKATE TURNING

**Purpose:** The skate turn is used to turn sharp corners at low to moderate speeds.

**Terrain:** A moderate downhill with a flat, packed, open area at the bottom.

**Mechanics:** This technique is best described as a wide step turn with an explosive push off in the new direction. The skate turn begins with a double pole and while returning to the upright position, the child lifts their inside ski, directing the arms and body in the new direction.

The child digs in the inner edge of the outside ski in a skate push. The action is an explosive extension of the hip, knee and ankle pushing the body in the new direction. Then transfer the weight to the inside ski and the outside ski is brought parallel to the other ski. The movement is completed with a new double poling action.

**Teaching Methodology:** The teaching methodology is very similar to the step turn on a slope. Teach the skill with an uphill skill and make sure that there is a safe runout in both directions. Have the group start with a simple skate around a ski pole or other object. For a challenge, practice the turn on both right and left sides. You can also change the angle of the turn and increase the slope of the hill. Add the double pole with the skate turn once the children feel comfortable doing the motion without arms.

**Exercises:** Without poles, have the children hold hands and skate turn around the corners of a 15 meter square. A fun way of practicing this skill, in a drill or relay, is to use music. Upbeat music will encourage the participants to repeat the skill. Line up several poles in the snow so that children have enough room to double pole and have them skate turn through the slalom course



**V1 SKATING** (can be taught with the Gliding Christie on page 72)

**Purpose:** To climb moderate and steep hills.

**Terrain:** A hill progressing from a moderate to a steep grade climb. The hill should be wide, open, and packed with no tracks. It should be wide enough for two-way traffic (up and down).

**Mechanics:** Start where you left off with basic skating skills and reinforce the mechanics of a strong leg push working equally with both legs. When children are effectively gliding, shifting their weight, and pushing on both sides, introduce the upper body movements. The V1 movement involves a 3-1 rhythm of two poles and one ski/foot touching the ground at the same time. Children can pole on either side and can practice changing sides. Although the tempo of the 3-1 movement may change and become more rapid as the incline steepens, the timing remains the same. The trunk stays in a fairly upright position and does not bend much at the waist. The steeper the hill, the faster the tempo of the movement to account for the shortened glide phase. During each stride the hips should remain in a neutral position over the balls of the feet. Children must flex their ankles to achieve this position. If the children sit back too far while climbing their legs will tire.

**Teaching Methodology:** The first priority is to check that the basic skating skills are being well executed and that children are using both legs effectively. Skating skills can be reviewed with some games and relays at the start of the session. Don't use poles during these drills. To begin teaching the V1 technique, start the children on either flat terrain or a relatively short hill of moderate steepness. Have them start from a standing position. Have them rock back and forth while standing still transferring their weight from ski to ski. Then have them plant their poles in the V1 rhythm while rocking back and forth. Next, have them begin pushing off the *left* ski onto the right ski and coming down on the poles as they push onto the right foot and start moving forward while maintaining the 3-1 rhythm on their chosen side. Have them try to switch poling sides. Have children concentrate on fully shifting their weight and pushing off the inside edge of their gliding ski to keep the skis moving. Phrases like "quick and light" and "gallop" can help achieve the correct feeling. Keep the hill short and moderate for most of the practice or the children will tire before learning the skills. If children are not gliding for equal time on each side, have them go up the hill without poles.

### **Exercises**

- Practice the arm movements while stationary at first.
- Have children skate without poles and practice the arm movements.
- Have children air pole to the correct arm rhythm while skating but not actually plant their poles.



- Have children start air poling and then at a marked part of the hill begin planting their poles.
- Instead of picking up their poles at the end of the poling cycle to replant them, have them drag their pole tips along the snow to return to the next pole plant.



## V<sub>2</sub> SKATING

**Purpose:** To skate on flats and moderate uphill slopes by skating while double poling just before each ski/foot step.

**Terrain:** Use flat or slightly uphill terrain that is well packed and not tracked.

**Mechanics:** Children double pole just before each skate step. Both legs should work equally as with all skating motions. The glide phase is followed by a strong push phase and a complete weight transfer onto the other ski. Children must master the ability to balance completely on one ski to become efficient at this skill. Gliding should be done on a flat ski and the polling is initiated early in the glide phase. During poling the core crunches and the gliding leg bends slightly. This motion is followed by a leg extension where the ski shifts onto the inside edge as the child moves up and over onto the opposite ski pushing off that inside edge. The pole recovery is quick and simultaneous with the weight shift from one ski to the other. This action brings the arms up in front in time to initiate the next pole push as soon as the child balances over the other ski. This technique increases the use of the poles during each skate thereby increasing the contribution of the upper body to propulsion.

**Teaching Methodology:** Instructors should begin with basic skating skills re-emphasizing balance before introducing poling. To start poling, children should skate down a very gentle hill and try to push with the poles on each stride. Tell them to glide on the flat ski, and not do anything with the push until they have done a double pole. Keep the tempo slow until they achieve a sense of timing, and then pick up the speed bit by bit.

**Exercises:** Relays using this skill will work to reinforce the right feeling.

- Have children see how far they can go with each single push, or count the total number of pushes over a set distance and repeat to try and reduce that number.
- Start with small skate pushes (high tempo) with every double pole until longer, dynamic skate pushes can be achieved.
- Have children double pole twice (mini-pole pushes) on each glide to practice balance. This exercise is called the V<sub>4</sub>.
- Have children hop on their gliding ski on each side before pushing and transferring their weight to the other ski.



## **V2-ALTERNATE SKATING**

**Purpose:** To skate over flat and gently rolling terrain using a combination of skating pushes and double poling.

**Terrain:** Flat, smooth terrain with well-packed snow.

**Mechanics:** Poles are used together in a double pole fashion with a quick, strong compression of the upper trunk followed by a natural arm extension or follow-through. This follow-through shortens depending on the terrain and sometimes the hands do not move past the hips. The trunk starts in a fairly upright position and does not bend forward at the waist. Poles are loaded through a compression of the upper trunk. The arms work through the full range of motion but more power is applied at the start of the poling cycle. Poling is timed to occur every second leg push. The rhythm is 2-1-1 (2 poles, 1 ski, 1 ski), or pole-skate-skate, pole-skate-skate.

**Teaching Methodology:** To introduce poles in this technique, have children skate over a moderate downhill slope and ask them to pole once just before every second step using both poles at the same time. Once the timing is acceptable, emphasize the quick, aggressive upper trunk flexion. Poling should almost be complete when the actual leg extension (push) starts. Encourage this movement by instructing children to pole “early” and push “late”. Try having them say pole-skate-skate in time with their movements.

### **Exercises**

- Snow soccer without poles
- Tag games without poles
- Relays (first without poles then with the complete skill)



## GLIDING CHRISTIE

**Purpose:** To advance beyond the wedge with an introduction to the parallel progression and to introduce side slipping.

**Terrain:** A smooth, groomed slope slightly steeper than for the wedge.

**Mechanics:** The turn starts by crossing the fall line in a ready position. Ski across the hill (traverse) and open the skis into a wedge. Wedge two-thirds of the arc, or turn, as for a conventional wedge turn but after crossing the fall line, transfer weight onto the downhill ski. With your weight balanced on the downhill ski, slide the uphill ski until it is parallel to the downhill ski. Slide on your inside edges and continue to steer so that both skis continue turning. The final third of the turn is a skidded parallel. Skidded parallel can best be described as a side slip.

### Exercises:

- *Side Slip:* Before attempting the gliding christie turn, introduce the concept of side slipping. Begin by side stepping two to three steps uphill in between widely-spaced ski poles. Stand beside the uphill pole with skis parallel and shoulder width apart. Relax the knees away from the hill, towards the bottom of the hill, for a moment. This will cause the edges to release and a short side slip will result. Repeat until coming up against the downhill pole. Try the exercise without using the poles for balance. Instead, rely on natural balance by standing in the ready position between shoulder width skis. Try longer and longer side slips. Try facing both directions.
- *Gliding Christie:* Try an actual turn. The secret is the smooth weight shift to the downhill ski. This allows the uphill ski to easily slide in next to the downhill ski. If the uphill ski is getting caught on its inside edge, it will not be possible to place it parallel to the downhill ski. This will result in either a wedge that is too large (putting skis on too much of an edge)—or an uphill knee that is “knock kneed.” When the uphill ski is on too much of an edge, the solution is to move the knee slightly uphill until the ski flattens on the snow so that it slides easily alongside the downhill ski. Repeat for both right and left turns. Try to achieve a small amount of side slip at the very end of the turn. If the upper body is moving out of the ready position and interfering with balance over the downhill ski, try skiing with the poles held out front in the cookie tray position.
- *Linking Turns:* Before the skis have skidded to a complete stop, open into a new wedge and start a new turn in the other direction.
- *Variations:*
  - Hold arms out like wings and bank to the outside of the turn. This movement will add weight to the downhill ski.



- Mark the arc of the turn with ski poles and indicate where to change from wedging to skidding with your skis parallel.



## **ELEMENTARY CHRISTIE (PARALLEL TURNS)**

**Terrain:** A smooth, packed slope or wide trail. Can use the same slope as for gliding christie above.

**Mechanics:** The elementary christie progresses from the gliding christie in three ways:

- Unweighting is used to help with earlier weight transfer and easier steering
- The skis will close to a parallel position earlier in the turn
- The pole plant will be introduced as a timing aid to help with the above steps

Initiate the turn by opening into a wedge and steering towards the fall line. The knees are flexed a little more than in the ready position. Plant the pole that is on the inside of the turn and rise up. At the same time, start transferring weight to the outside ski and steering the inside ski to the parallel position. Younger children may have difficulty planting the pole and keeping the skis parallel until the fall line. Children more comfortable with the skill should be able to unweight quickly shifting to the outside ski following the pole plant and allowing the skis to close to the parallel position before the fall line. Once the skis are parallel, the steering force is maintained and the skis continue to skid in an arc. As children perfect the elements, edging can be introduced to reduce the amount of skidding. Edging is achieved by allowing the hip and knee to move more to the inside of the turn putting the outside, or downhill ski, more and more on edge by bending the knees into the hill to prevent side slipping.

### **Exercises:**

- To improve balance, the poles can be held in the cookie tray fashion. Once the weight transfer and balance over the outside ski is more natural, the pole plant can be introduced.
- To help with unweighting and weight transfer, transform the children into frogs! From an exaggerated crouch in the wedge position, the children shout “RIBBIT!”, jump up completely off the snow, land on the outside ski, and continue to turn. Any degree of success is wonderful! The goal is to reduce the jumping energy until the skis no longer leave the snow. However, the unweighting will still be a visible rising action that will make the skis lighter and easier to turn.
- Further skill development comes from using smaller and smaller wedges to initiate the turn. The game becomes one of “how small a wedge can you make to start your turn?!”



## BASIC TELEMARKING

**Purpose:** To introduce a turn used especially in powder snow while backcountry skiing or on alpine slopes in more demanding conditions.

**Terrain:** A smooth, gentle slope with a flat outrun.

### Mechanics:

- *Telemark Strait Running:* Children stride one ski ahead to a point where the rear ski tip is midway between the tip and boot toe of the lead ski. The body is in a relaxed ready position with hands held low and forward. The hands are well separated to aid balance. The rear thigh is never farther back than vertical (a common mistake that should not be allowed to develop into a habit). The lead foot is flat on the ski while the rear foot is flexed at the ball of the foot. The body weight is equally distributed between front and back.
- *Basic Telemark Turn:* Children rise and stride one ski forward while simultaneously steering it across the path of the rear ski. Once a large enough wedge has been created, the weight is distributed equally between the feet. The skis are pivoted the same as in the wedge turn. Hold the “tele-wedge” until stopped. Unlike the wedge, it is quite all right for the lead ski to touch the tip of the rear ski while in the telemark position.
- *Linked Telemark Turns:* Instead of finishing in a telemark position, let the rear ski come parallel to the lead ski at the end of the turn. Before momentum is lost, rise and stride into the new turn.

### Exercises:

- *Telemark Strait Running*
  - On a flat surface, assume the telemark position by striding ahead.
  - Rise and stride into a new telemark position, making all movements smooth and fluid.
  - Repeat several times and watch for signs of over striding (the rear thigh angled back past the vertical).
  - From a telemark position, kneel down and touch the snow. Notice that the body height, and thus the center of gravity, can be varied without a further separation of ski tips.
  - Glide down the slope from start to stop in the telemark position without poles (just the “large tray of cookies”). Then try again with poles held horizontally, hands as far apart as possible. Remember to try these exercises again with the opposite knee down.
  - Start in a low telemark and halfway down rise and stride into a new low telemark with the opposite knee down. Encourage smooth transitions, rising and settling



down at the start and finish of every change. Try with and without poles, and try with more than one telemark position change per run.

- *Basic Telemark Turn*
  - Start down the fall line in a telemark straight run. Rise and stride into a telemark turn, holding the new position until stopped. Repeat for both left and right turns, with or without poles.
  - Repeat and encourage large semi-circular turns.
- *Linked Telemark Turns*
  - After trying two linked turns, have two poles set up to create an easy slalom. Increase to a three- and four-pole course as skills develop.
  - Have children experiment with hands wide versus narrow to improve balance.

**Summary:** The above methodologies have been developed to show you how to teach children to combine basic motions to build proper technique. In each lesson, learning takes place without lecture. Children learn from watching and doing. A success chart can often help motivate and reward children as they learn new skills.



## **BKL Success Chart**

A success chart is a great motivational aid. It is also an excellent way to provide a self-paced, structured curriculum for BKL children. As you read through the directions below, please keep in mind that every club's success chart will be different. These suggestions are just meant to be a guide.

**How to Make a Success Chart:** You will need poster board, a yardstick, and markers

1. Determine what general categories you want to have on your checklists. In addition to the basic ski skills, you'll probably want to have some basic safety and equipment care competencies as well. There are many areas related to skiing that you can include: fitness (various strength exercises, dryland hikes, and/or ski games), races (watched, volunteered at, and/or entered), and trails (completed and/or kilometers covered). Make sure to include fun and even silly checklist items like skiing downhill backwards or skiing in a costume!
2. Leave a header on top for 4-6 categories and just below each write the checklist of associated skills and accomplishments.
3. Create a vertical column on the left (approximately 1" high x 4-5" wide) for each child's name. You may set it up so every child in your club tries for every skill, or make different charts for different age groups/levels/interests.
4. Fill in the grid on the chart with the yardstick.
5. Post your chart at a height convenient for children.
6. Use star stickers or check marks with colorful markers to show progress and accomplishments.

Below you will find suggested categories to head your success chart. Beneath each category are suggested skills. Choose from these to suit the needs and goals of the children in your club.

### **Suggested Categories and Skills for a BKL Success Chart**

#### *Smart and Healthy*

- Use sun block
- Wear a hat and mittens
- Ski with a water bottle
- Bring a snack to practice
- Bring dry clothes to change into



### *Equipment Care*

- Bring your skis, boots, and poles to practice
- Kick wax your own skis
- Glide wax your own skis
- Dry out boots and clothes after practice
- Put skis away after practice with ski straps

### *Adventure*

- Ski in all weather: rain, sun, snow, wind (with the exception of thunder/lightening)
- Build a jump at home
- Ski a 5K trail without stopping
- Go on a ski tour
- Ski all the easy/blue circle trails at local ski area
- Identify animal tracks, trees, and/or birds
- Backcountry ski off groomed trails
- Ski at night

### *Safety, Responsibility, and Sportsmanship*

- Use the "buddy system"
- Know what to do in case of an accident
- Know what to do in case of frostbite or hypothermia
- On time for practice and/or races
- Carry my own equipment
- Help the club coach carry things
- Support my teammates
- Be courteous to other people you see on the trails
- Give way to people passing you on the trails

### *Skills/Lessons*

- Falling down and getting up
- Assume basic athletic stance
- Star turning
- Side stepping
- Uphill side-stepping
- Wedging
- Wedge Braking
- Wedge Turning
- Herringboning/duck walking
- Kick turning
- Double poling
- Kicking double poling
- Striding without poles



- Diagonal striding
- Skating without poles
- Skating with poles
- Skate turns
- V1 skate planting with left leg
- V1 skate planting with right leg
- V2 skate
- V2-alternate skate
- Gliding christie
- Elementary christie
- Telemark turning

*Racing*

- Participated in a BKL race
- Helped out at a BKL race
- Learned the names of people on the US Cross Country Ski Team
- Watched a cross country ski race in person or online