



THE CANADIAN TEACHING APPROACH

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**The Canadian Ski
Instructors
Alliance
CSIA**





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The Canadian Teaching Approach

Introduction

The concepts outlined in this document, along with the Canadian Ski Technique document, define the Canadian Skiing and Teaching approach, the technical concepts define WHAT we teach, and the teaching concepts establish HOW we teach. While technical knowledge informs the content of a lesson, an instructor's ability to connect and engage with learners is paramount. The goal of every ski lesson should be to give each student a **safe and fun learning experience** on the snow.

Canadian Ski Technique

CSIA 'Technique' is based on the 'Movement and Motion' philosophy. Canadian ski technique is also centered on biomechanical principles and the use of modern equipment and outlines efficient and effective skiing. The Canadian approach can be used in all conditions for skiers of all levels and ages and is meant to be adapted to any desired outcome.

The Canadian skiing philosophy emphasizes 'Movement and Motion.' Central to this approach is the concept of the relationship between the Base of Support (BOS) and the Centre of Mass (COM). This foundational principle serves as the basis for evaluating and refining ski technique at all skill levels. With understanding of this concept, skiing can be distilled into its essential components, ensuring precise and accurate analysis from beginner to expert levels. Understanding fundamental movements in skiing enables instructors to assess their students effectively.

PURPOSE

The CSIA teaching concepts provide a practical framework which ski teachers can apply in the real world of ski teaching. These principles ensure the delivery of a consistent message across the country and around the world.

Understanding the learner's knowledge and skill level and their ability to identify areas for improvement, are key areas of focus for ski instructors. A common lesson structure, consistent assessment and development skills, and the ability to create a learning experience appropriate to the learner allows an instructor to provide an organized, valuable and memorable lesson.

Collaborative teaching (HOW we teach) provides the framework within which technical knowledge (WHAT we teach) can be shared with the learners, while recognizing that no two people and, therefore, no two lessons, are exactly the same.



Application/Communication

Knowledge of and adherence to these teaching concepts and use of the related vernacular facilitates consistent communication across the membership and between Course Conductors ski teaching ability can come through experience, trial and error but most importantly through reflection of one's own effectiveness and outcomes. Canadian Ski Teaching: A Collaborative Approach is designed with a common teaching cycle in mind and recognizes the following skills and values of effective teachers:

- o People Skills
- o Quality Guest Experience
- o Safe Teaching
- o Enjoyment and inspiration
- o Outcome based teaching
- o Skill Assessment and Development
- o Realistic teaching approach
- o Active and Reflective Learning



Canadian Ski Teaching: A Collaborative Approach

Explore the Possibilities

Repeat or vary the Task based on:

- ▶ Learner
- ▶ Environment
- ▶ Objective
- ▶ Skills

Create an Experience

Design a Task based on:

- ▶ Learner
- ▶ Environment
- ▶ Objective
- ▶ Skills



Assess the Experience

Assess or Debrief:

- ▶ Objective vs. Outcome
- ▶ Reflection vs. Observation
- ▶ Cause and Effect



Know Your Learner

Getting to know your Learner and building a rapport is a vital step in creating a successful and enjoyable lesson; the Learner is the 'hub'. This learner-centered approach guides all the decisions we make as ski instructors, from the terrain we choose and the movements we prescribe, to the communication style and manner of engagement we adopt.

As humans, we change as we learn. Checking in with the Learner throughout the course of a lesson helps an instructor actively customize the experience for their benefit. Assessing the Learner based on the points below should be a constant, ongoing process throughout any lesson. Observation and direct inquiry provide important information, but active listening skills and a true desire to help are imperative for a ski instructor to deliver a great, memorable experience.

STUDENT CONSIDERATIONS

Psychological

Learning is closely connected to emotions. A person who is confident and excited about learning something new will have a much easier time than an individual who is nervous or apprehensive of the unknown. Learning can be invigorating but also challenging and frustrating so understanding and noticing emotional "ups and downs" is extremely important. Age, past experiences, trust, and rapport can all affect the psychological aspect and should always be considered.

Physical

Learning about physical strengths, limitations, concerns or past injuries of a person is important to keep them safe as they try new things. For an average skier, skiing can be physically demanding and quite different from their everyday activities. Weather and temperature can also influence the students' movements, a person's ability to move in their equipment directly affects what their skis do on the snow.

Aspirational

Collaborating on goals and aspirations is a major part of building rapport and planning the direction for the lesson. Setting reasonable goals while considering safety and available time, along with the person's past experience and current ability, results in mutually understood targets for the learner and the instructor. Targets make development measurable and can be a strong motivator when learning new things. Like the learner themselves, goals can evolve as new learning takes place. It is important to recognize that the goals for a Snow School guest may not always include a technical approach; they may simply want the benefit of a guide, to meet new people, or to have faster access to lifts. These factors are part of the experience the instructor helps to create.

Performance/Skill

An awareness of the learner's current skill set and ability and the terrain they most enjoy or find challenging determines the start of the lesson. This vital information can be gained through conversations about past ski experiences – discussing favorite runs, for example – and, of course, through assessing their skiing. Understanding the technical concepts is essential to both recognize what is happening in a learner's skiing and to create experiences that enhance their ability, understanding and confidence.



Create an Experience

Understanding the many characteristics of a learner will help determine the experiences from which they will most benefit. Designing and implementing concrete tasks can help a learner understand both what they should try to do and the possible outcomes, making the tasks measurable for them and observable for the instructor.

Awareness of the possible outcomes can help a learner recognize if they are successful or not when attempting a particular task (reflecting IN action). For some learners, describing what they might “feel” as they make certain movements can add clarity and specificity. A well-built task provides parameters for both the task itself and for subsequent reflection.

The main considerations for a well-designed task are:

The Learner (WHO)

Tasks should account for the learner and their goals. Make learning easier by setting them up for success. Remember, they may be nervous, scared, or completely unsure of what to do. As an instructor, it is our job to tailor the approach for the learner. The points below should always be considered with the learner’s needs at the forefront.

Environment (WHERE)

Reducing the challenges presented by terrain, snow conditions, weather and traffic makes learning easier and faster. Making choices that create a safe learning environment keeps the primary focus on the learning task, resulting in earlier acquisition of new concepts.

Opportunities to take advantage of terrain are everywhere. For example, use a side hill to aid direction change or a berm to help coordinate edge changes or pole plants. With safety always at the forefront, experimenting with terrain can offer an additional element of fun, exploration and challenge for any skier.

Objective (WHY)

People take ski lessons with a goal in mind. Their goal could be to learn to ski, or to ski faster, or to manage difficult terrain such as a steep chute, a tough mogul run or a new feature in the park. The target is to determine an achievable, measurable, time-bound goal. Objectives serve as concrete steps toward the student's goal. Understanding objectives helps to provide direction and focus to a lesson, guiding decisions and actions toward desired outcomes. They are often broken down into smaller, actionable tasks and are essential for lesson planning, performance assessment, development and accountability.

THE SKIING OBJECTIVES:

- **Mobility** is the ability to move in the snow environment
- **Gliding** is the ability to "let go" and allow the skis to slide
- **Turning** is the ability to control direction
- **Speed** is the ability to increase, decrease or maintain speed



Mobility refers to the methods individuals navigate and move through terrain. This encompasses a variety of activities and techniques designed to address the unique challenges presented to a skier throughout their skiing lifetime. For a first-time skier, mobility can be as simple as becoming familiar with the equipment that will help them access the mountain, side-stepping uphill, and riding the lift for the first time.

As skiers develop and acquire new mountain accessibility, a new desire to access different types of terrain will demand new forms of mobility. From navigating increasingly difficult terrain to off-piste environments and adapting to different steepness, snow conditions and weather, all will affect how the skier will navigate the new situations.

Gliding refers to the smooth, continuous flow of momentum. In skiing, the slope of the hill plus the force of gravity allows us to glide from one turn to the next. This movement is facilitated by the ski design, which reduces friction and allows for a fluid motion across the snow, as well as by movements made by the skier. When turning, the skier flattens the skis on the snow to allow them to glide; if the skis stay on edge too long, they will not carry their momentum into the next turn and will lose their glide.

Gliding on snow can occur anywhere on the hill if the skier maintains momentum and flow. Gliding can also occur both in a straight line and on an arc, forward or backward.

Turning refers to the technique and action of changing direction. This change of direction is essential for managing speed, navigating slopes, and avoiding obstacles. In skiing, there are a variety of turn types that we can use, such as snowplow turns, parallel turns, steered turns, and carved turns. Turning can occur either forwards or backwards and is facilitated by how the skier applies body movements to their equipment, causing the equipment to interact with the snow and/or features in a particular way.

Speed refers to the techniques and strategies used to regulate the speed of the skier, ensuring safety and efficiency. The ability to slow down, stop, maintain speed, and increase speed is necessary to facilitate the desired outcomes and create an effortless, safe, enjoyable skiing experience.

As speed, turn shape, turn size, and ski performance increase, more advanced concepts must be used to develop your student's skiing. The next section will cover these concepts in detail.

HOW: The 5 skills

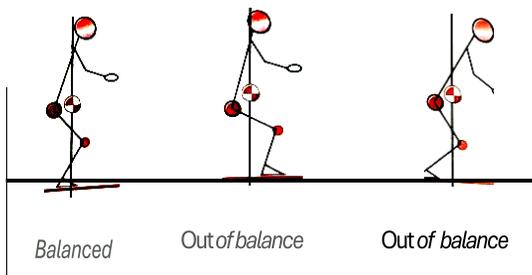
- **Balance**
- **Rotary**
- **Edging**
- **Pressure**
- **Coordinated**



BALANCE

Balance is the relationship between the base of support (BOS) and centre of mass (COM) and is a fundamental skill in skiing. This **dynamic** skill encompasses body position (e.g., stance) and continuous muscular activity to align with the forces when skiing. The desired result is maintaining a state of balance in a variety of situations. Teaching skiing often begins with helping students find a stable stance on their skis. A stable stance helps them stay in balance and control their equipment. Encouraging students to relax is also important. Being relaxed makes moving, reacting, and adjusting to terrain and snow conditions easier.

Stability comes from the feet supporting the body; the body segments are adjusted to maintain balance when skiing. For the greatest range of mobility, the skier should bend and extend the ankle, knee, hip and spine. Each joint should be utilized in direct relation to one another, considering each skier's unique body type. For example, a skier with longer legs and a shorter torso will move and ski differently than a skier with shorter legs and longer torso. A stance that produces balance is easily identified and can be taught in all stages of development. The body must be aligned for the other skills (rotary, edging, pressure, and coordination) to affect the interaction between the skis and the snow.

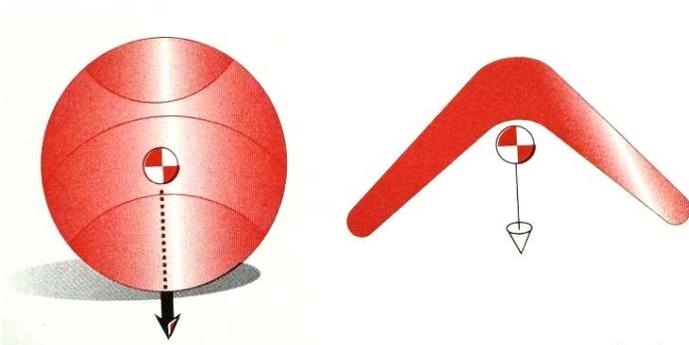


The act of balancing requires constant movement or adjustment. By maintaining an active state of continual movement (balancing), a skier can maintain the appropriate amount of stability for controlled, efficient skiing at any given moment. Stability is felt when forces acting on our COM pass through the center of our BOS. Dynamic balance is achieved when all forces on our COM are in a state of equilibrium. We need to move the BOS to balance the COM when in motion to achieve balance.

The concept of Movement and Motion emphasizes that motion is the result of gravity, with movements being the ability to move the body and joints freely.

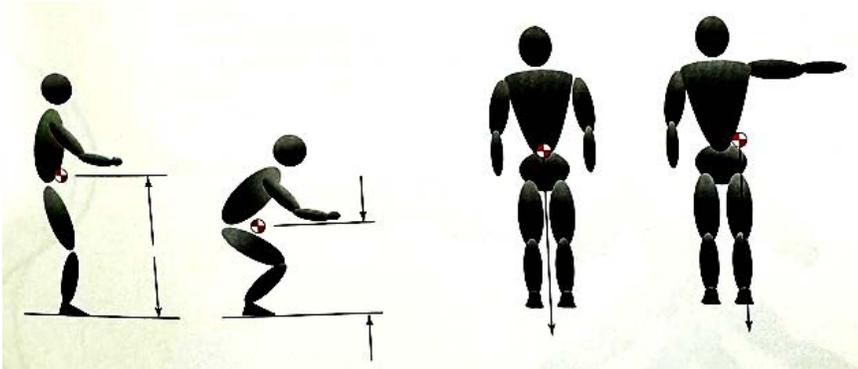
Base of Support (BOS)

The Base of Support (BOS) is anything in contact with the snow including the skis as well as the poles if they are touching the snow. For simplicity we will refer to BOS as the feet.





The COM is not an object itself. In a ball, the COM is in the space inside. In an irregularly shaped object, like a boomerang, it is just outside the object.



The COM is not a fixed point, it will move if the object changes shape.





ROTARY

The leg's Rotary movements are fundamental in skiing and can be seen in both carved and steered arcs. Turning is achieved through leg rotation, by twisting the upper leg in the hip socket and or by turning the feet, which both result in the lower body leading the turning effort and creating separation. Rotational movements can also relate to the body segments on the rotational axis, which is seen as upper and lower body separation.



Leg rotation is a turning force generated from the feet and legs that changes the direction of the skis. Internal and external rotation of the legs in the hip socket (femoral rotation) can be further segmented into upper and lower leg rotational actions. These movements are controlled by the rotator muscles of the hip, the leg muscles, the lower leg and the feet. When the leg is extended, the rotator muscles of the hip play a larger role. As the leg flexes, the upper muscles become more accessible and provide greater strength in the rotational axis.

Leg rotation can be achieved by twisting the upper leg in the hip socket and/or by turning the feet, which both result in the lower body leading the turning effort and creating separation. Separation between the upper and lower body segments in the hip joint is effective for many reasons. The degree of upper and lower body separation varies based on the desired outcome. Establishing a proper stance with separation in the hip joint allows us to balance against the outside ski (BOS supporting the COM). Leg rotation is commonly confused with pelvis rotation (see Figure 1).





Key Points:

- Turning the skis is led by the lower body, the feet, and the legs in the hip socket.
- A bent leg, when turned inward (rotating your femurs/knees toward the inside of the turn), can create lateral movement (this tips the skis onto the edge).
- A straighter leg, in a tall stance, when the leg is rotated inward, can turn the ski on the snow (aids in wedge turns and parallel steered arcs).
- Upper-body rotary movements can be used to create a spin.
- The Pelvis is considered part of the upper body.





EDGING

For every change of direction when creating an arc, external forces affect the skier (via edge angle). To balance against the forces on an arc, the COM will be inside the BOS. When the paths of the BOS and COM diverge, this relationship is called inclination. Inclination is present throughout the turn and is necessary to balance against forces.

Key points:

- Skiers use inclination to balance against the turning forces.
- Edging purely through inclination is only achievable with a limited number of factors (snow conditions, speed, slope).
- As speed and performance increase, the amount of inclination also increases.
 - There is a spectrum of edging, from a purely **carved** turn to a **steered** turn (blending rotary, edging, and pressure movements) to a **side slip** with very little edging and little to no direction change.
 - To change direction, the skier must decrease the edge angle by bending the outside leg to flatten the ski and decrease the amount of edge.

Note that the degree of inclination, depicted in the image below, is quite large due to the speed of the skier.



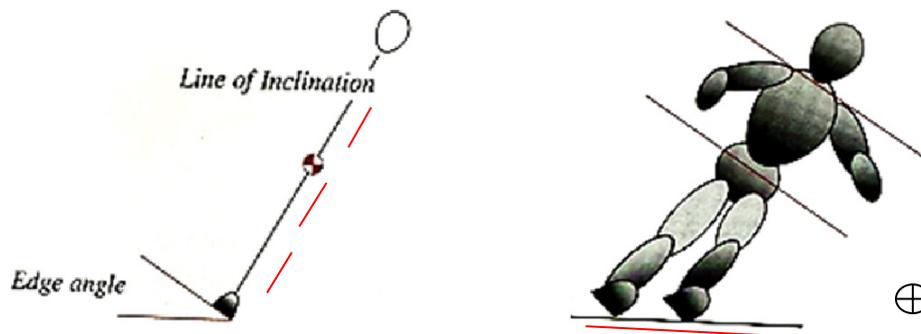
For each change of direction, inclination is needed to remain balanced against the turning forces and to resist the forces associated with angular motion. With inclination only, the edge angle is equal to the amount of inclining (leaning). This technique of turning with inclination only allows the skier to use the ski design to turn, but this approach may not be successful if snow conditions are not ideal and or as the skier's speed increases. When the skier blends both inclination and angulation, (see below) they will be better able to manage higher speeds (increased forces) and a variety of snow conditions.



Key points:

- Skiers use inclination to balance against the turning forces.
- Edging purely through inclination is only achievable with a limited number of factors (snow conditions, speed, slope).
- As speed and performance increase, the amount of inclination increases as well.
 - There is a spectrum of edging from a purely **carved** turn to a **steered** turn (blending rotary, edging, pressure movements) to a **side slip** with very little edging and little to no direction change.
 - To change direction the skier must decrease the edge angle by bending the outside leg to flatten the ski and decrease the amount of edge.

Note that the degree of inclination, depicted in the image below, is quite large due to the speed of the skier.



ANGLULATION

To manage edge angle effectively the ankle, knee, hip, and spine move inward. The angles these joints create along the line of inclination are what we call angulation. Angulation is an effective way to increase or decrease edge angle as needed and help us balance against forces effectively. Angulation is also a component that helps the skier glide from one turn into the next with flow.

Edging with angulation uses the ankle, knee, and hip joints to increase the edge angle while maintaining balance over a relatively small base of support (the edged skis). The COM stays closer to the center line of the skis (the BOS), increasing stability. Using inclination and angulation together, the skier can increase the edge angle beyond that obtained by inclination only.

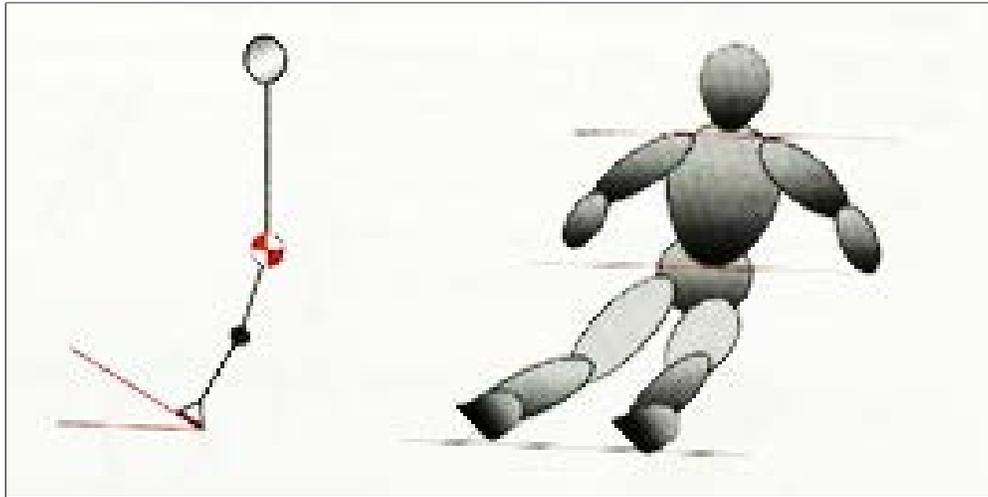
Effective use of inclination and angulation requires constant adjustment, considering the "cues" from the terrain - steepness, snow conditions, speed travelled, desired outcome, etcetera. Edging may be applied progressively through the turn, using refined movements with the feet, ankles, and knees.

Key points:

- Angulation allows the skier to increase the edge angle without increasing the distance of the COM from the BOS, which is essential for stability.
- Angulation combined with inclination will provide the best results when it comes to reliable edge grip.
- When skis are on edge, they create friction (grip). Friction (grip) creates force, and these forces need to be controlled through movement patterns (skills), lateral, vertical, fore, and aft, all the while maintaining the relationship of BOS supporting the COM.
- More edging is not necessarily better edging. The goal should be to edge the right amount for the situation. The edge should help the skier deal with the pressure they create Inclination with angulation.



INCLINATION WITH ANGULATION





PRESSURE

Pressure is a sensory skill in which the skier moderates the pressure on the skis. In skiing, these pressures are fore and aft, along the length of the skis, side to side (lateral), up and down (vertical).

- The skier can change the pressure by resisting the forces or by bending or extending the legs, changing the amount of edge angle, shifting from one ski to the other, or a combination of these movements
- Managing pressure is one of the most challenging skills to master and is required to demonstrate advanced levels of skiing and expert performance

We often intentionally slip the skis in a turn, decreasing the pressure on the skis. The ability to slip and grip the ski within a turn provides the versatility to control the amount of pressure. The skier can then control the turn sizes, turn shapes, speed, and performance outcomes. To do this, the skier must blend all the skills to achieve the desired pressure.



The ability to dynamically adjust the edge angle to intentionally side slip and feather the edge is of great utility. Edging ability involves controlling the ski grip, applying it more, or using it less as required. Training the movements that reduce ski grip develops the versatility and adaptability needed to control many situations and turn outcomes. This aspect of edging is often overlooked. Competency is developed over time by understanding how pressure affects the skis and deliberately practicing movements that increase pressure in the turn.

Pressure Movements

Key points:

- Once skiers are comfortable controlling pressures, they will begin to move more dynamically with the goal of creating pressure for the desired outcome
- Up, down, lateral and rotary movements can be employed to create pressure at various points in the arc or in the park
- Allowing for a total pressure release will put the skier into the air to avoid terrain obstacles or to jump/generate lift



COORDINATION

Moving the body segments in the correct order creates efficiency. Efficient movements help direct the COM from arc to arc with little interruption of momentum (motion). This is the flow we notice when we see a good skier, and the seamless blend of the skills can be seen with a smooth glide between turns.

Coordinated Movements refer to the skill of harmonizing movements so that the right things happen at the right time. In a sport such as skiing, where the very essence of the sport is balancing while moving over changing terrain, coordination is crucial to progressing beyond the beginner stage.

Initially, the student learns to do such things as edge the skis at the right time, extend or flex at the right time, and later, do several of these actions simultaneously (coordinate the movements). In expert skiing, coordination is a magical element that makes skiing appear effortless and fluid. More experienced skiers utilize sensory input by looking ahead to anticipate terrain changes and feeling variations in snow conditions, adjusting their technique well before the fall line or terrain feature.

Various combinations and proportional application of the skills give us incredible control over the performance outcome of our skiing. Timing and coordination are integral to achieving desired outcomes. Timing refers to when, for how long, and how intensely a movement is applied. Forces need to be managed smoothly to create effective skiing at all stages of learning.

Key points:

- Successful timing relies on using the appropriate movement for the appropriate duration, given the desired outcome.
- Starting and stopping a selected movement at the appropriate point in the turn or maneuver is also an important element of timing.
- Advanced coordination skills will make many complex movements appear as one single effort.
- Skiers can develop coordination skills by challenging themselves with the speed and combination/sequence of movements.

Providing the following directions to a learner, along with a clear and accurate demonstration, makes a task simple and understandable:

What skill to focus on (i.e., 5 skills)

What part of the body to move

Where in the turn to make the move (e.g., Apex, Fall-line)



Assess the Experience

By observing learners as they try an assigned task, you see both the results of their efforts and the effectiveness of your approach. Encouraging a learner to reflect on their experience (reflecting ON action) is proven to facilitate longer term learning. It is important to keep this process positive. Recognizing negative or unintended results is valuable but should not become the focus. Just like checking a map to ensure you are on the right road, ongoing learner/ instructor debriefs can help calibrate the direction of the lesson throughout. Through this process, the instructor can reflect on their decisions and the guidance they have provided and adjust the approach if required.

WATCHING SKIERS

A simple method of assessing skiers is to start with the 'skis on the snow' and work your way up the body; this usually starts with turn shape (e.g., is it turn round or 'Z' like), next look at what the skis are doing (e.g., are the tips off the snow, are the tails washing out behind the skier, is the outside ski gripping the snow and when).

Next, we can move up the body, looking at the ankle, knee and hip joints to see if each is working well; last, we can look at the Pelvis and upper body to see if either is starting the turn. Finally, the arms if they are relaxed or behind the body. This is one of many ways to assess skiers, but it provides a simple bottom-to-top assessment process that helps guide instructors' decisions.

DEVELOPING SKIERS

When providing our skiers with feedback, we should strive to give suggestions as soon as possible after their demonstration. One approach to keeping students focused is to give each student a part of the body, a part of the turn, and a skill that they can focus their attention towards.

Student feedback should be solution-oriented rather than problem-focused. By guiding students towards the correct actions, we can enhance their performance more effectively. For instance, instead of identifying a fault like excessive shoulder tipping at the start of the turn, we should instruct them to "turn your legs to start the turn." This approach directs the student's attention towards the desired movement, facilitating corrective action without them fixating on the error itself.

Comparing Objectives and Outcomes

Assess your learner as they try the task, picturing the objective and what you would expect to see. Is the outcome as expected? If not, what is "out of place"? Remember, the *objective* is what you told them would happen (priming), the *outcome* is what actually happened, good, bad or otherwise. Maintaining focus on the task at hand and the chosen objective is important for the continuity of the process.

Comparing Reflections and Observations

Connecting actions (movements) with outcomes can take time and learners may not recognize success or exactly what they have done to achieve it. For this reason, a primed learner and an observant instructor make a great team. A learner's account of their experience matching what the instructor observed indicates an understanding of the cause-and-effect relationship between the prescribed movement and the effect on the outcome. This important building block can set the stage for varying the task and exploring the possibilities of new skills.



Explore the Possibilities

Skiing is exciting and learning anything new can be thrilling at any level. A balance of skill development and practical application is important for a learner to understand what they have accomplished and how to apply it out on the slopes. The autonomy to explore the snow environment is invigorating and empowering.

Repetition of a successful task can help to consolidate the correct movements and provides an opportunity to practice the new skill.

Varying one aspect of a task at a time can help a learner deepen their understanding of a concept and learn how much and when to apply the movements in relation to their objectives. Task variations also allow the instructor to adjust the approach to be more effective, or in other words, they create a new experience that begins the “loop” again.

Again, consider the Learner first. Are they engaged? Distracted? Tired? Ready for more? Are they understanding what you hoped? Varying a single aspect of a task will help the learner understand how the outcome is affected. Adjusting multiple factors at once makes understanding the effect of each change more difficult.

Environment: Choose steeper or flatter terrain or different snow conditions; look for terrain-assisted development opportunities

Objective: Vary turn shape, speed, level of performance

It is important to note that the framework and “loop” may be repeated multiple times in a lesson. The time required for each portion may vary - a short interval or a season-long development program. Each learner in a group lesson will learn at a different pace, making for a rich and complex environment.

Active and Reflective Learning concepts are a key component of the collaborative approach described above. The prescriptive nature of the approach addresses the common ski school lesson challenge of utilizing a relatively short time frame to produce noticeable results. More experienced instructors may adopt a less structured approach or other learning strategies such as discovery-learning and team-based approach etc. based on the lesson situation.

WHERE: Precision in Time and Place

In skiing, every action, body movement, or adjustment should be executed at a specific time and place. To improve a student's skiing, it is essential to identify where these actions need to occur. Establishing a reference point helps us determine the exact moment and location for each movement.

Reference Points: Before, At, After

A reference point serves as a guide for the execution of a necessary action. Before the fall line, at the fall line and after the fall line helps identify where and when to adjust. References include the fall line and the transition between turns.

Terrain Features: Specific Reference Points

Using terrain features helps to distinguish when and where a student executes a defined movement. Features like jumps and rolls, cat-track edges and moguls provide clear examples of where specific skills should be executed. For instance, the edging can occur on a mogul's front side or the downside. In tree skiing, the reference might be the location relative to a tree, the snow condition, or changes in terrain incline.



Reference Areas: Breaking Down the Turn/execution of a desired outcome

To facilitate student development, instructors should break down skiing into manageable sections.

For the table found in Appendix B, the 'Fall line' is the line down a run or part of a run that is most directly down the hill. To see this in action, if we roll a ball down the hill we are skiing on, the 'Fall line' is the path the ball would roll down the slope when pulled from gravity alone. See Appendix A or the [Snowpro.com/resources](https://snowpro.com/resources) <https://csia-lesson-plan.com/> for sample lesson plans.

The decision-making tool is designed to be a flexible assessment tool enabling instructors to tailor their assessments and teaching methods to the unique needs of each skier, fostering autonomy and encouraging innovative problem-solving by answering the four questions within it.

Repeat the process or wrap up the lesson by skiing with a focus on the area they improved. Assessing ski technique starts with setting an objective for the skier to achieve. This can be determined through conversation between the student and instructor; the instructor should start by asking questions to understand the student's goals before setting their skiers' task(s). This will help guide the ski instructors' observations and satisfy students' needs.

Conclusion

The Canadian Ski Technique and teaching concepts outlined here serve as a comprehensive foundation for delivering consistent, high-quality ski instruction. By integrating the movement and motion philosophy and the technical principles of biomechanics instructors can provide effective, personalized lessons. This combination ensures that each student, regardless of skill level, receives a safe, engaging, and tailored learning experience. Ultimately, the collaboration between technical knowledge and the teaching process is key to fostering growth and enjoyment for skiers of all ages and abilities.



One of the biggest challenges a ski instructor faces is assessing skiers. Making decisions during a lesson using the system found in the Appendix A, will make this easier.

APPENDIX A

EXAMPLES

The following section includes examples of how instructors with different levels of skiers can use the decision-making tool.

Basic Use of the Assessment Tool

What: I want you to make a wider snowplow (Mobility, Speed).

How: I will get you to turn your legs inwards more to create a wider and more pronounced triangle shape with your skis.

Where: Try to do this constantly as you glide down to the bottom of the magic carpet.

Why: This will allow you to travel slower and give you more control over speed.

Intermediate Use of the Assessment Tool

What: I would like to improve your grip on the outside ski edge at the end of the turn (Turning, Speed).

How: Try to bend more at the hip and the knee to keep pressure on the outside ski.

Where: I would like you to do this as you move out of the fall line at the end of the turn.

Why: This is going to allow you to stay in balance against the outside ski throughout the turn, improving your ability to steer and control the ski and not lose your balance to the inside.

Advanced Use of the Assessment Tool

What: I would like to get more grip above the fall line on steep terrain.

How: I would like you to rotate both legs (femurs) underneath your body using an internal twisting motion from your upper leg (adductor muscles).

Where: You should be doing this as soon as you have made the decision to move into the next turn. Continue to do this into the fall line.

Why: This is going to allow you to control the turn shape and pressure at the top of the turn while remaining in balance instead of moving your feet away from you and finding that your balance is on the inside ski with little control at the end of the turn.

Expert Use of the Assessment Tool

What: I would like you to focus on maintaining contact with the snow as you go over the bump (Turning, Speed).

How: By turning your ski tips into the backside of the bump.

Where: As your ski tips pass over the top of a bump, bend your knees and open your ankle to drive your ski tips down as you complete the turn.

Why: So that you can maintain balance and control your speed and turn shape.



APPENDIX B

Table 1. Sample ski lessons for beginners, intermediate and advanced skiers

	Before fall line	At fall line	After fall line	Transition
Snowplow Turn	<p>Skis in a wedge position (both legs turned inward). Hips, knees and ankles are bent. Turn both feet in the direction they want to go and balance against the outside ski by reducing the weight on the inside ski.</p> <p>Skill focus – Rotary</p>	<p>Continue to turn both legs under the body and <u>set up the</u> outside ski to grip the snow, maintaining the wedge position. Maintaining a relaxed stance.</p> <p>Skill focus – Balance</p>	<p>Continue to balance against the outside ski. Increase the bend in ankles, knees and hips. External forces will start to act on the skier, helping to facilitate ski edge grip through this part of the turn.</p> <p>Skill focus - Edging</p>	<p>Release ski edge grip by bending the ankles, knees and hips. Balance with weight evenly distributed between both feet in a neutral, athletic stance.</p> <p>Skill focus – Pressure</p>
Introduction to Parallel	<p>Move skis into a wedge by turning (internally rotating) both legs. Balance on the outside ski while turning the outside leg. Bend both legs in a comfortable, athletic stance.</p> <p>Skill focus – Rotary</p>	<p>Continue to turn both legs, maintaining the wedge position. Joints continue to bend, maintaining a comfortable, athletic stance with balance against the outside ski.</p> <p>Skill focus- Balance</p>	<p>Maintain balance against the outside foot by further reducing the weight on the inside ski and overturn the inside ski until it becomes parallel with the outside ski. As the skier progresses, this can happen progressively earlier, at the fall- line, then before the fall line.</p> <p>Skill focus – Edging, Rotary</p>	<p>Maintaining parallel skis, extend the ankle, knee and hip, and balance with weight evenly distributed between both feet.</p> <p>Skill focus – Pressure</p>



	Before fall line	At fall line	After fall line	Transition
Linked parallel turns	<p>Simultaneously turn both legs in the direction of the turn. Balance against the outside ski by lightening the inside ski. Begin to tip the skis by tipping the feet to grip the snow. Lighten the inside ski to increase grip with the outside ski.</p> <p>Skill focus – Rotary</p>	<p>Maintain balance against the outside ski and continue to turn both skis across the fall line via ankle, knee and hip angulation. Continue to tip the feet to increase grip as needed. Ankles, knees and hips bend progressively.</p> <p>Skill focus – Edging</p>	<p>Continue to flex all joints to maintain balance against the outside ski as the turning effort continues. Rotary movements will allow BOS to steer back to the path of the COM as the paths of the COM and BOS cross into the new turn.</p> <p>Skill focus – Pressure</p>	<p>Flatten feet to release the grip on the snow. Begin to transfer weight from the old outside ski to the new outside ski. The paths COM/BOS cross over/ under one another.</p> <p>Skill focus – Coordination</p>
Bumps	<p>Strong movement to the outside ski, while skis are turned and edged simultaneously through lower body rotation and edging movements grip, provides a platform for balance.</p> <p>Skills – Balance, Rotary, Edging</p>	<p>Progressive and continued steering via ankle, knee and hip angulation provides continued grip. Look ahead to determine the optimal path.</p> <p>Skills – Balance, Rotational Movement, Edging</p>	<p>Continue to flex joints, timing the turning action to progress to the next bump in a planned way. A firm pole plant will stabilize the upper body and provides a timing cue for the upcoming transition.</p> <p>Skills – Balance, Rotary, Edging, Pressure, Coordinated Movements</p>	<p>A vertical movement may aid the transition into the new turn. Extend joints to recentre, allowing the COM to cross over the BOS.</p> <p>Skills – Balance, Rotary, Edging, Pressure, Coordinated movements</p>