NSP-C Western Region - Senior Alpine Benchmarks

Contents

Warm up

Show hottest and best skiing. Get a look at their best skiing and get an idea of what they consider good skiing.

Slow, Fast, Slow, Stop

Activity Description
Start by performing a few turns at a relatively slow duration, rate, and time. Then increase the duration, rate, and time for a few more turns. Then slow the duration, rate, and time for a few more turns, and come to a **complete** stop at a designated point.

Why This Activity Will Be Useful:
This demonstrates a skier's versatility to complete a specific task, have the awareness to complete the task in the given amount of space, and stop at a designated spot such as on hill incident.

Where: Choose a safe, low traffic area for this activity

- Groomed black terrain

See Video of a Mix of turns and other skills

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Traverse/forward slip/traverse

Activity Description
Carved uphill arc/traverse, then release edges and maintain some forward travel, and then reengage back to carved uphill arc/traverse. Snow Boarders do on both edges

Purpose
This task is to demonstrate ability to control forward speed and rate of decent while maintaining a parallel/strong stance. This is a common maneuver used in toboggan work.

Falling Leaf with Pivot Slip direction change

Activity Description
Skis/Snowboard should maintain constant skidded edges throughout. No arc/traverse is preferred. After 3 or more forward and backward slips, pivot 90 degrees until they straight run in the fall line for a short distance. The skis are then pivoted 90 degrees to complete a 180 degree direction change and repeat 3 or more forward and backward slips.

Why This Activity Will Be Useful:
This activity uses pressure and rotational control skills and movements that are essential to turning the skis effectively in short turns and in narrow spaces. The skier also must refine their ability to coordinate the timing of edging movements to create a controlled pivoting activity of the skis, which will improve turn transitions in short turns, bumps, and confined situational skiing.

How the Body Moves: (CAUSE)
- Maintain a hip width stance with the hips facing predominantly down the hill.
- Keep the feet under the hips by matching the tip lead to the hip lead while side-slipping
- Manage fore/aft balance to maintain a path down the fall line and keep balanced over the middle of the skis
- Time the lateral tipping of the feet/ankles to release edges and flatten both skis to allow them to be pivoted.
- Extension/flexion movements of the ankles/knees/hips facilitate edge release by directing the COM down the fall line.
- Rotate/turn both legs (femurs in the hip sockets) to pivot the skis 90 degrees into a straight run, or into a sideslip.
- Steering/pivoting rate is relatively slow and continuous while the sideslip speed is relatively fast
- Manage edge engagement so there is no edge set or stopping during the activity

What The Skis Do: (EFFECT):
- From a sideslip down the fall line, the skis are pivoted 90 degrees until they straight run in the fall line, and then pivoted another 90 degrees until side-slipping down the fall line for a short distance
- While side-slipping, edge angles are managed to allow the skis to slip relatively fast

- Edge angles are decreased to facilitate pivoting of the skis down the fall line, and increased as skis are pivoted into the sideslip
- Ideally skis remain parallel to each other and stance width is consistent. Minor use of a platform, step, stem, push-off, or upper body rotary mechanics is allowed.
- Skis turn at similar rate and time
- Pivot points are under center of each ski
- Tip lead in side-slipping is the result of pitch of the hill and hip lead

Where: – choose a safe low traffic area for this activity

- Blue terrain, well-groomed pitch with consistent fall line

See video of Falling Leaf with Pivot Slip direction change

See Snowboard video of Falling Leaf

Learning/Teaching Cues

See Sideslips in the fall line

Again, the goal here is to develop powerful, yet controlled and precise ability to use leg rotation to the turn the skis and control their rate of rotation.

Develop awareness of the sensations of varying intensities of leg rotation.

- Static practice in boots, target hips and upper body on one direction, step/turn feet to left, back to front, and then right. Repeat
- Static practice in boots: if unable to stand on both feet and slowly rotate them at same time, practice first with one foot and then the other. Stand with both feet on ground. Turn one foot slowly in the snow, pivot in middle of boot so toe and heel move similar amounts (bow-tie shape created in snow). Practice with other leg. Then practice with both
- In static drills, if one foot turns faster or earlier than the other, focus on the less active leg and try to have it turn first and faster. Work toward similar rate and time of rotation for both legs
- Using and uphill arc fan progression, utilize leg rotation to turn skis. Think: the legs turn more than the body from fall line to finish phase. Turn the legs to tighten the radius of the uphill arc. Practice on lower edge angles so the skis can rotate as the legs turn.
- In practice, slowly increase the rate and intensity of leg rotation and decrease the time and distance that the rotation takes to occur
- Straight run to sideslip. From a straight run in an athletic stance, begin rotating skis quickly across the fall line using rapid, yet controlled, turning of both legs in the hip sockets. (Keep COM balanced over middle of skis to promote pivot point in middle of skis)
- Practice altering rate and duration of leg rotation to control the speed of the skis' pivot

Develop releasing skills to begin transition from sideslip without use of a platform, step, stem, push-off, or upper body rotary mechanics

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Rail road track turns

Activity Description
This activity consists of linked carved turns on gentle terrain done in a narrow corridor. This developmental edging activity leaves tracks in the snow that are thought to look like railroad tracks.

Why This Activity Will Be Useful:
Railroad tracks provide a training target that focuses on developing and refining the ability to utilize ski design to create a basic carved ski performance. These fundamental movements manage edge control and are the building blocks to higher-level skiing skills and are key to the elusive "parallel turn" sought by the skiing public.

What The Skis Do (EFFECT):

- Tails follow tips to create carved ski performance
- Tracks are linked in both directions and leave carved tracks in the snow
- Skis are parallel and stance width is consistent
- Edge angles of skis are increased and decreased at similar rate and time
- Fall line oriented corridor one groomer track wide

How The Body Moves (CAUSE):

- Tipping/edging comes from legs under a stable upper body
- Continuous rolling/tipping motion of both feet/ankles/legs release and then re-engage the edges simultaneously and links the one turn to the next.
- The skier maintains ankle flexion in both legs and continues to move the body forward as the skis accelerate down the slope.
- Upper body angulation/hip angulation is minimal and acts to direct pressure slightly toward the outside ski.
- No pole swing or touch is used

Where: Green terrain

See video of Rail Road Track Turns

Teaching/Learning Cues
Changing the Habitual Big-toe to big-toe Habit (sequential edge change that starts with big toe side of new outside ski changing/engaging first)

- Contrast new outside foot big-toe-down habit by starting with a concentrated focus to only move the new inside foot big toe up.
- Start in straight run, and then roll/tip the new inside (only) big toe up off the snow onto slight (little toe) edge while keeping other ski flat.
- When slight tension is felt in that lead foot/leg, simply relax that foot and allow it to go back to flat. (Repeat several times)
- Repeat with other foot leading, being aware of resisting any habit that wants to edge the other ski on its big toe edge.

- Skis may initially leave brushed tracks instead of carved tracks, but steering/rotation should not be used to create skidded turns.

It is best to have someone do movement analysis to determine the specific cause of this pattern.

Here are some cues to help achieve a carved turn outcome.

- Assess for athletic, balanced fore/aft stance. Skier should have pressure on shin of boot, and feel pressure on the whole foot, with more pressure toward the ball of the foot.
- Sometimes when skiers focus on "tipping to the little and big toe" sides of the feet, the heel of the foot looses contact with the boot, and the ski begins to pivot/skid. Think of trying to ski on the entire side of the boot.
- When trying to "make the skis turn" skiers often add rotary inputs, causing the skis to skid. In this activity, learn to gradually place the ski on edge and let the ski design cause the turning. Be patient; let the ski create the direction change. Tipping the ski up onto a higher edge angle will tighten the arc, if desired.

Short Radius turns

Activity Description

This activity involves making a series of short turns on steeper blue to easy black terrain down a corridor approximately one groomer-track wide. The skill blend creates a ski performance that leaves brushed tracks in the snow. While turn shape controls speed, energy is carried from one turn to the next, as opposed to a marked deceleration or speed check in the finish phase of each turn.

Why This Activity Will Be Useful:

The ability to make short turns is a major milestone for skiers. Short turns give skiers access to a wider variety of terrain, and can be exhilarating. The ability to ski short turns requires skiing with an aggressive intent and good tactics to execute.

How the body moves (CAUSE):

- Turning comes from consistent rotation of both legs in the hip sockets at a similar rate and time
- Tipping movements come from both legs at a similar rate and time
- Progressive flexion of the inside leg paired with extension of the outside leg from the initiation through shaping phase contributes to inclination of the lower body
- Turning movements occur at increased rate and intensity compared to basic parallel turns.
- Upper body angulation counter-balances the tipping movements of the lower body and directs pressure to the outside ski
- Subtle fore/aft adjustments keep the center of mass over the base of support
- Pole swing contributes to timing, rhythm, and flow

What The Skis Do (EFFECT):

- Skis leave brushed tracks
- Skis are parallel and stance width is consistent
- Skis tip at similar rate and time
- Skis turn at similar rate and time

- Skis remain in contact with snow
- Pivot is near middle of each foot
- Corridor is approximately one groomer track wide

Where– choose a safe, low traffic area for this activity

- Steeper Blue to easy black terrain

Teaching/Learning Cues
If tails of skis are skidding out or skier is not using leg rotation to turn skis:

- Static practice in boots. Target hips and upper body on one direction, step/turn feet to left, back to front, and then right. Repeat.
- Using an uphill arc fan progression, utilize leg rotation to turn skis. Think: the legs turn more than the body from fall line to finish phase. Turn the legs to tighten the radius of the uphill arc. Practice on lower edge angles so the skis can rotate as the legs turn.
- Straight run to sideslip. From straight run, tip skis onto slight edge while rotating skis quickly across the fall line using rapid, yet controlled, turning of both legs in the hip sockets. (Note: keep COM balanced over middle of skis to promote pivot point in middle of skis) This simulates some of the sensations and movements in the last half of the turn.
- Sideslip to straight run to sideslip. From a side slip with natural tip lead due to strong inside half, release/flatten the ski edges while turning the skis by rotating the legs in the hip socket (rapid, yet controlled leg rotation). Teaching cue: the body faces slightly downhill in a sideslip, turn the legs to realign them with the hips and upper body. This simulates some of the activities in the initiation of the turn to the fall line and develops ability to turn legs in hip sockets.
- Apply the movements from previous series of activities to skiing. Begin with medium sized BP turns. Utilize leg rotation as practiced. Gradually increase the rate and intensity of leg rotation as you proceed through a series of turns. Teaching cue: keep the legs turning, either in one direction or the other. Teaching cue: from initiation to fall line the legs turn to re-align with the body in the fall line. From fall line to finish of turn, the legs turn more than the body.
- Edging movements and rotational control movements are closely linked in this activity. Edge angles are constantly adjusting.

Medium Radius turns

Activity Description:
Linked, round turns on groomed blue terrain using a skill blend that leaves brushed tracks in the snow while the skis remain in a parallel relationship. Speed is controlled through turn shape.

Why This Activity Will Be Useful:
The ability to ski parallel turns is a major milestone for skiers. This basic blend of skills is a foundation for higher levels of skiing. Skiing parallel turns often requires offensive intent and good tactics that are needed for skiing varied snow conditions, pitches, and turn shapes and sizes.

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How The Body Moves (CAUSE):

- Flexion/extension movements of legs facilitate edge change and move the body forward and diagonal with the path of the skis.
- Lateral tipping/rolling movements of the feet/ankles through turn transitions flattens, releases, and changes the edges to allow guiding of ski tips into the fall line.
- Upper body angulation allows the upper body to counter-balance the lower body tipping/edging movements and direct pressure to the outside ski.
- Both legs turn in the hip sockets under stable upper body to control turn size and shape. Rate and intensity of the legs turning controls turn shape and speed
- Pole swing and touch enhances rhythm, flow, and timing

What The Skis Do (EFECT):

- Tracks show a drifting of skis throughout turn shape (leave brushed tracks)
- Skis maintain a parallel relationship and consistent stance width
- Skis are tipped at a similar rate and time
- Skis are turned and at similar rate and time
- Pivot point is roughly under each foot

Where – choose a safe low traffic area for this activity.

- Groomed blue terrain

See a Video of Medium Radius Turns

Teaching/Learning Cues:

- Ski uphill arcs managing tension of foot/ankle tipping (on a low edge angle). Blend tipping and turning movements to create drifting of the skis. Consider using a fan progression to build to skiing whole turns in both directions.
- Create awareness of employing efficient and effective edging movements: Both skis release and engage at the same time. This practice builds movement patterns that lead to simultaneous edge change and parallel skiing.
- Progressively fan partial arcs into, then through the fall line developing complete drifted turns
- Practice prolonging the duration of time spent on 4 edges (the bases) from transitions to fall line to learn to manage rotary and not pivot skis to start turns. (It takes less effort to turn skis that are on low edge angles, compared to skis on higher edge angles).
- Create awareness that the body flows with path of skis so there is only appropriate upper/ lower body separation, without excessive wind-up of legs through finish that would over re-direct skis into a skidded, tail out initiation.

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Variable Terrain (Bumps)

Activity Description
This activity involves skiing ungroomed or variable blue or black terrain while showing the ability to control speed through use of turn shape and terrain.

Why This Activity Will Be Useful
Intermediate zone skiers often stick to groomed terrain. The ability to explore ungroomed, bumpy, and variable terrain opens up much more terrain and challenges the skier to utilize the various skill blends that have been practiced and developed up to this point.

How The Body Moves (CAUSE):
- Flexion and extension of joints allow for absorption of terrain
- Flexion/extension of joint allows for COM to maintain fore/aft and lateral balance over base of support
- Legs turn under a stable upper body and allow for upper/ lower body separation
- Turning movements are progressive and appropriate to the terrain
- Edging movements originate in the lower leg under a stable pelvis and upper body
- Turn shape is round, and size is varied to reflect tactics that reflect offensive skiing

What The Skis Do (EFFECT):
- Skis maintain contact with the snow when appropriate
- Skis bend under foot in majority of turns
- Pivot point is under center of foot in majority of turns
- Skis rotate from center at similar rate and time
- Skis tip simultaneously and show same edge angles
- Pole plant is functional

Where – choose a safe low traffic area for this activity
- Ungroomed blue or blue/black terrain

See Video to Variable Terrain (Bumps)
See video of Variable Terrain (Bumps)

See Snowboard video of Variable Terrain (Bumps)

Teaching/Learning Cues
Practice and proficiency in L1 variable terrain, basic parallel short turns, retraction basic parallel turns, dynamic medium radius turns.
This task is about applying the skills of strong intermediate zone skiing and adjusting the D.I.R.T. of movements to match the demands of the snow and terrain.
Common themes and some suggested corrections:
Traverse between turns. This is often coupled with a short shaping phase of the turn.

- Adjustments: As in medium radius turns, change the skis edges and establish a platform for balance prior to turning/pivoting the skis
- Progressively add rotational control movements that come from the legs
- Allow the skis to seek the fall line, and then slowly turn out of it. If the skier is not ready to make another turn, instead of traversing, continue to turn the skis as if getting ready to make a "J" shaped turn, then begin the next turn

Pressure too far aft or too much on inside ski

- The undulating terrain and varied resistance from variable terrain presents many pressure management challenges
- **Fore/Aft**. The perceived risk of "going over the handle bars" often leads skiers to not move far enough forward to access the skis sidecut, which leads to a loss of access to turn shape and speed control. Continue to make fore aft pressure adjustments through all phases of the turn. Depending on snow conditions, these movements may need to happen over different durations of time, and with more intensity than on groomed surfaces
- **Lateral.** While the snow surface is soft, there should still be more pressure on the outside ski than on the inside ski (there may not be as marked of a difference in foot-to-foot pressure depending on snow conditions). Continue to use upper body angulation to counter balance lower body tipping movements and the pitch of the slope to direct pressure to the outside ski. Utilizing the outside ski turn to practice in this terrain can be helpful.

Repeat tasks if necessary