

BEGINNING TERRAIN PARK SKI INSTRUCTION

By

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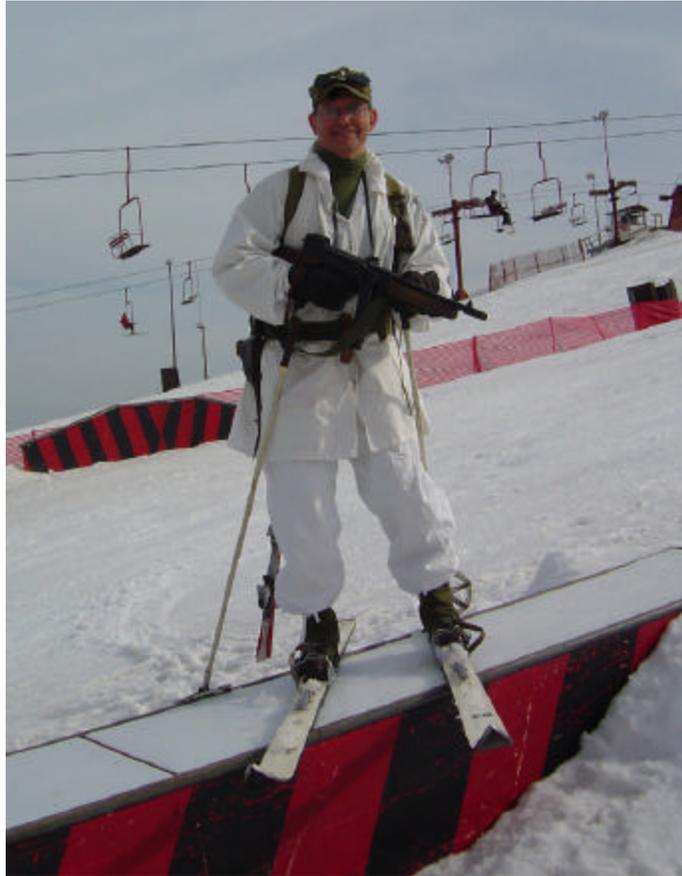


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INTRODUCTION



Terrain Parks are for Skiers, Too

This manual is a guide to teaching beginning terrain park maneuvers to relatively skilled skiers. There is a demand amongst skiers to learn how to use the terrain park and enjoy the thrill of performing. The ski instructor has an opportunity to introduce the students to basic terrain park skills that will help insure a successful outcome in the terrain park. The ski instructor teaching beginning terrain park lessons needs not be a former Olympian capable of performing a “cork 5 tail” or “alley-oop.” Like a football coach who fields a winning team without actually playing, the ski instructor can demonstrate relatively easy basic principles that will assure success in the terrain park.

TERRAIN PARKS

Terrain parks contain several jumps, rails and fun boxes called terrain park features. Below are typical terrain park boxes and rails.

Flat box



Figure 1

Kink box



Figure 2

Battleship box



Figure 3

C-box



Figure 4

Rainbow box



Figure 5

Flat rail



Figure 6

Kink rail

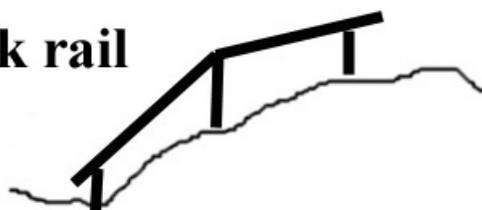


Figure 7

Battleship rail



Figure 8

Rainbow rail



Figure 9

C-rail

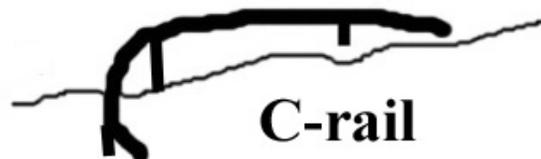


Figure 10

When setting up a progression, the flat fun box (Figure 1) is perhaps the easiest to master, followed by jumps and then rails (usually the most challenging.)

PREPARATORY GROUND MANEUVERS

SURFACE SPIN 360

Before heading to the terrain park, some preparatory ground maneuvers will help set up your students for success. Photos 1 through 6 show the classical surface spin 360. Have the class spin 180 (Photos 1 through 3) by applying forward pressure, then ski in a reverse wedge for a short distance making sure they look in the direction of travel (Photo 4) and complete the 360 with tail pressure. (Photos 5 and 6)



Photo 1



Photo 2



Photo 3



Photo 4

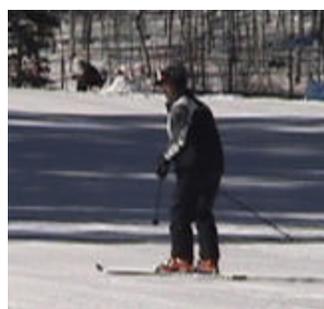


Photo 5



Photo 6

The 360 spin helps develop the rotary skills needed for the terrain park. Try this exercise both ways and on varying degrees of slope.

HOCKEY STOP

Practice hockey stops with and without counter rotation. (Photos 1 & 2) It should also be practiced with and without a jump, which is needed to mount some of the terrain park features. For 50/50 slides and board slides without spins, the countered position of Photo 1 is utilized. For spins on a terrain park feature, the non countered position, which tends to enhance rotary movements, is utilized. (Photo 2)



Photo 1



Photo 2

BEGINNING FUN BOX PROGRESSION

50/50 SLIDE (Straight Run)

As with most progressions, start simple and ratchet up in small increments. Photo 1 shows a portable terrain park feature training aid available at the ski school. This is to be used only in lessons. Assemble the training aid and place it on the snow, aligned carefully down the fall line. The lesson goal is to perform a 50/50 (straight) slide, the most elementary fun box maneuver. (Photo 2)



Photo 1



Photo 2

When approaching the feature, a slight wedge will help modulate the skier speed (Photo 3, frame 1). Mount the feature in the parallel straight run position with weight slightly back, as most box surfaces have a little more drag



Photo 3

than that of snow (Photo 3, frame 2). Straight run over the box (Photo 3, frame 3) and exit the feature with slight flexion to simulate jumping off the end (Photo 3, frame 4). Practice lining up with the feature. A bad line usually cannot be corrected on the feature since edging and pressure control are ineffective on the box surface. Once the student appears to have mastered the training aid, it is now time for the first “walk” in the park. Pick an easy flat box for the first run as shown below.



Photo 4

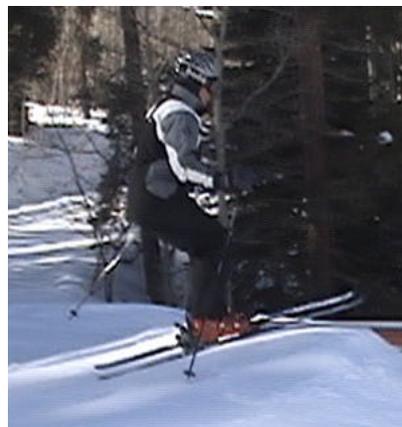


Photo 5

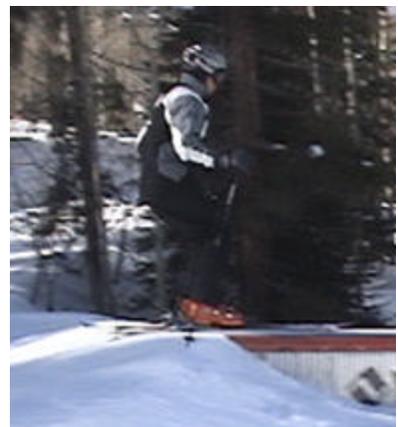


Photo 6

Approach from above, adjusting line and speed with a wedge. (Photo 4) Once satisfied with the speed, narrow the wedge to parallel with center of mass slightly back (Photo 5) to counter the drag from the box surface. (Drag on boxes varies with manufacturer and temperature so take it slow the first time.) Mount the box and straight run along the long axis looking at the exit. (Photos 6 & 7)



Photo 7



Photo 8



Photo 9

Ski along the surface with moderate flexion for balance and with feet shoulder width apart (Photo 7). Hop off the end with leg and ankle flexion and absorb the landing (Photos 8 and 9). If the skier has set up with a line that is not along the long axis of the box, then simply travel along that line and jump off the side. Remind the student that attempting to correct a bad line usually doesn't work and often leads to a fall. Then go back and try again.



Photo 10

50/50 Slide - Movement Analysis:

Photo 10, frame 1 shows a student with relatively good positioning comprising ankle and knee flexion with skis parallel and on the box running surface. Photo 10, frame 2 shows a student with a poor line up on the long axis of the box who is wedging slightly to steer a corrective path (which is not working.) Using the wedge to line up and adjust speed prior to entering the fun box is a primary skill that should be reviewed to avoid this problem. In Photo 10, frame 3, the student is trying to correct a bad line up and is trying to steer out of it with a wide wedge. Caution them to keep their skis about shoulder width apart, since a wide stance may result in straddling the box, a problem that snowboarders do not experience, that can be painful for skiers. If a student has approached with a line that is not coincident with the long axis of the box, encourage him to ride off a side and try again.



Photo 11

The first pass over the fun box is a success (Photo 11) and your students want more. Remember class handling fundamentals. Keep class to the side of the feature to avoid impeding flow of skiers and snowboarders. Send students over the box when gaps develop in the flow of users. The terrain park is typically a busy area. Remind students of terrain park etiquette which is basically: look before you leap; indicate that you are going to mount a feature; watch out for others; avoid impeding the natural traffic flow. This information is on the orange Smart Style signs at the top of the terrain park.

BOARD SLIDE

After mastering the 50/50 slide (straight run) over the fun box, the next maneuver to try in the progression is the board slide as shown in Photo 1. Static positioning helps students learn the sweet spot where the feature is just under the boots. Practice jumping onto the portable feature, landing 45 degrees to the direction of travel, and then 90 degrees.



Photo 1

Practice using the portable feature by approaching with a wedge (Photo 2, frame 1). Jump onto the feature and simultaneously counter rotate the lower body 45 degrees (crooked grind), keeping the upper body facing the direction of travel. (Photo 2, frames 2 & 3)



Photo 2

Stand over the skis and adjust body angle to the degree of slipperiness of the feature. Edging will often be ineffective and may result in a fall. Exit by rotating the lower body back to the straight run position. (Photo 2, frames 4 & 5)



Photo 3



Photo 4



Photo 5



Photo 6

Photos 3 through 6 show the skier performing the 90 degree board slide, which is the next step in the progression. When the student is ready go to the terrain park, choose an easy flat box and try it out.

Photo 7 shows the skier adjusting speed with a narrow wedge getting ready to mount the feature. Hop onto the box and simultaneously counter rotate to land in a side slide position. (Photo 8) Continue to slide at 45 degrees initially, (Photo 9) but go to 90 degrees in future practice.



Photo 7



Photo 8



Photo 9

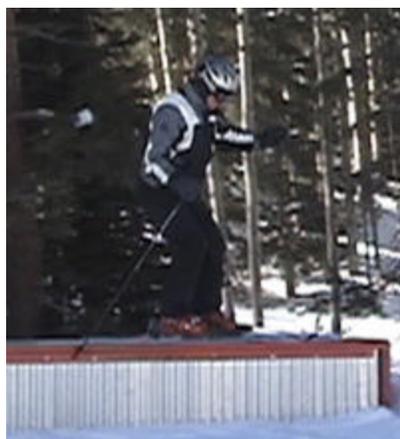


Photo 10



Photo 11

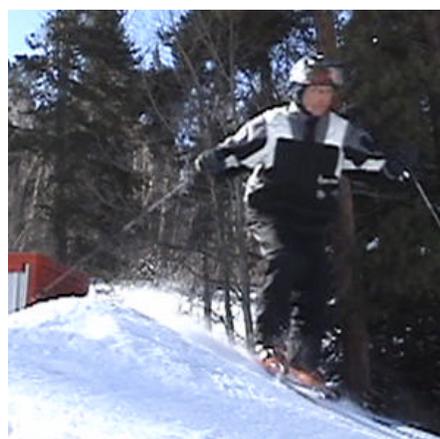


Photo 12

Continue sliding (Photo 10) and prepare to dismount (Photo 11). Now realign the upper and lower body (cancel counter rotation) and jump off the back of the feature with quick ankle and knee flexion (Photo 12). If you don't make it back to a straight run, no problem. Landing in a side slide position is acceptable. At this point the student can perform the 45 degree and 90 degree board slides.



Photo 13

Board slide - Movement Analysis:

Photo 13 shows examples of student positions for movement analysis. The skier in the pink parka (Photo 13, frame 1) has a reasonably good 45 degree board slide position with counter rotated upper body, parallel skis and motion along the long axis of the feature. The student in Photo 13, frame 2, has steered onto the feature rather than hopped onto the feature, causing the trailing edge to engage at the entry of the box. Emphasize a hop to the board slide position. The skier in Photo 13, frame 3, has mounted the feature slightly off center such that the boots and center of mass are at the edge of the feature rather

than centered. One can see the tails of the skis dragging and an attempt to stay on the feature with excessive hip flexion. Emphasize a good line up and perform some static positioning exercises on the feature. Frames 4 & 5 of Photo 13 show a classic loss of balance with excessive edging during a board slide. As skiers, we are used to edging in a side slip to control speed. As we edge on snow we often lean away from the direction of travel as the ski edges engage the snow. When performing a board slide on a box feature, leaning away from the direction of travel combined with edging, is ineffective and typically results in loss of balance and a fall as the center of mass moves outside the line between the feet. Emphasize board sliding on flat skis, shoulder width apart, utilizing a static positioning exercise on the feature. Frame 6 of Photo 13 shows reasonably good positioning for the 90 degree slide, although the lack of upper body counter rotation will make it difficult to hop back to the straight run position, so the student may exit the feature in a side slide. Arm positions tend to vary depending on the degree of rotation desired by students. Avoid excessive critiquing of arm and hand positioning and focus on what is happening at the lower and upper body when performing movement analysis.



Photo 14

180 DEGREE SPIN

For the more advanced students with twin tip skis, the 180 degree spin on the box is the next maneuver in the progression. On the portable practice feature, control speed entry with a wedge. (Photo 14, frame 1) Hop onto the feature with full body rotation. (Photo 14, frames 2 and 3) This will cause the skier's body to rotate. Continue the rotation. (Photo 14, frame 4) Exit skiing backward (Photo 14, frame 5) looking in the direction of travel. This maneuver should only be performed with twin tips. After sufficient practice, pick a flat box and perform the 180 degree spin: Approach the feature adjusting speed. (Photo 15) Hop onto the feature with rotation. (Photo 16) Continue to rotate along the feature. (Photos 17 & 18) Dismount off the back (Photo 19) and land in a backward skiing position (Photo 20), called "switch skiing." Perform this only with twin tips.



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20

Arm positions of your students may vary depending on the degree of counter rotation or rotation utilized. Avoid critiquing arm movements until the student attains sufficient skill to perform the maneuver. Instead, focus on line-up and positioning.

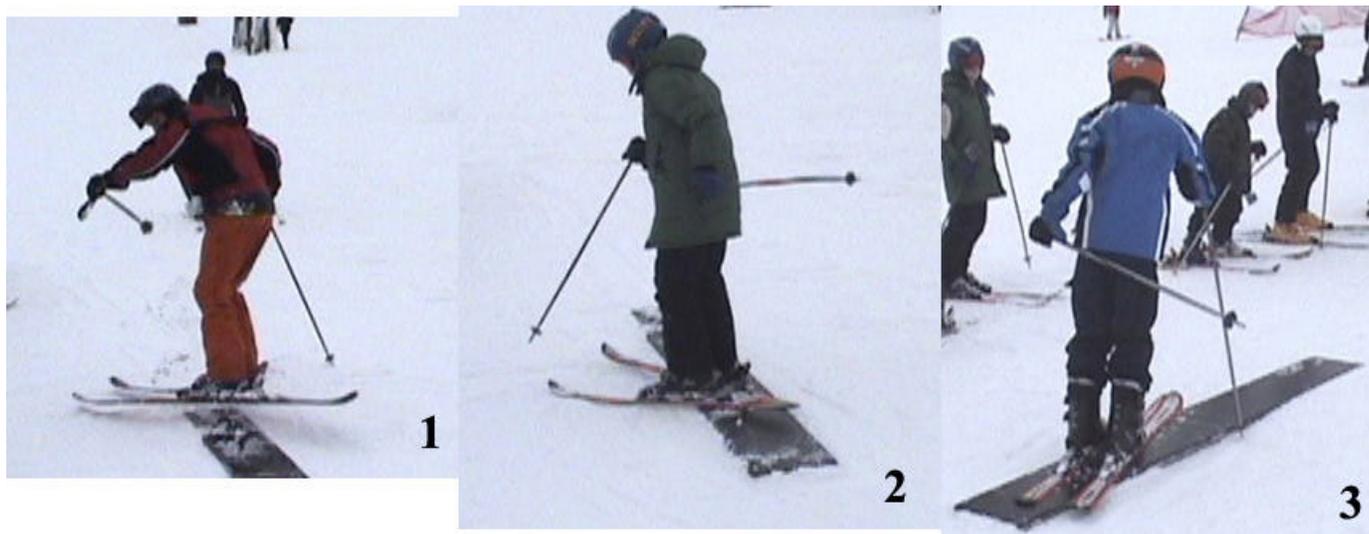


Photo 21

Movement Analysis - 180 Degree Spin:

Photo 21 shows student attempts at the 180 degree spin on a training aid. Frame 1 of Photo 21 shows a relatively aggressive hop with significant rotation. This degree of hop and rotation will not be necessary to complete the trick but will certainly set up the student for a full 360 degree flat spin. In Photo 21, frame 2, the student has chosen a poor line as his center of mass is drifting toward the edge of the feature; therefore emphasize proper line up. The student in frame 3 has done well and will complete the 180 degree flat spin before exiting the feature.

RAILS



Skiing on rails is more challenging because of the narrow riding surface, usually about 3 inches wide. Typical moves on a rail require the board slide mode as shown in the above sketch, since rails are too skinny for skiing in the 50/50 or straight run stance. The 90 degree slide is the best to use because lower angles such as 45 degrees may result in the skier straddling the rail, which you don't want to do on skis. In Photo 1 the skier approaches the rail adjusting speed and preparing to mount the rail.



Photo 1



Photo 2

Jump to the side slide or board slide position, (Photos 2 and 3) landing on the rail with the ski boots over the rail (sweet spot). Side slide (90 degrees) on the rail (Photo 4) and dismount by ending the counter rotation. (Photos 5 and 6)



Photo 3



Photo 4



Photo 5



Photo 6

Stress counter rotating while sliding to avoid a spin (which would be very challenging on this feature). Arm position may vary depending on the degree of counter rotation required.

HALF PIPE

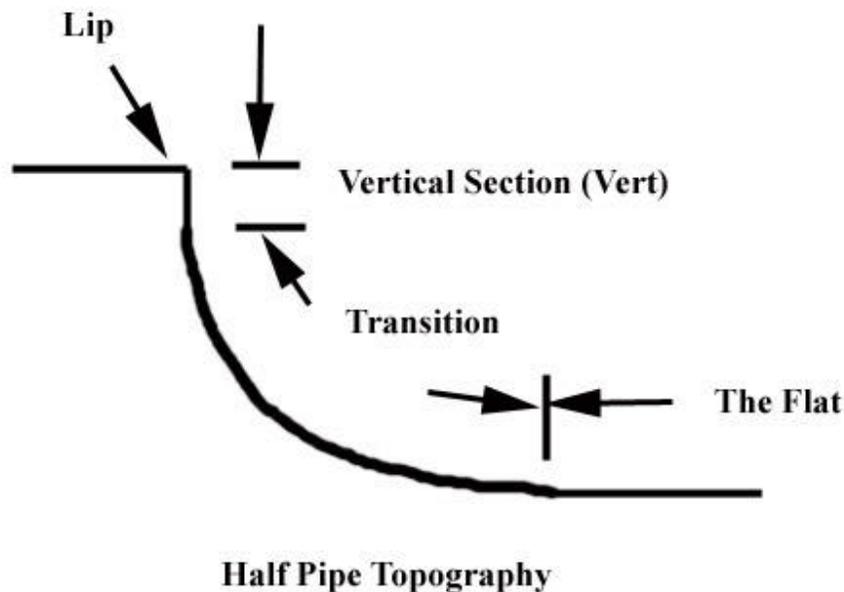


Photo 1

Photo 1 depicts the basic topography of a half pipe. For beginner half pipe students, practice in the flat and the beginning of the transition. More advanced lessons involve the upper transition, vertical wall and skiing above the lip. A typical beginning progression would be to first ski in a serpentine track, making linked parallel turns on the flat all the way down the half pipe. Next run, have the students ride up the bottom of the transition and turn in that general area.



Photo 2



Photo 3

In Photo 2, the skier approaches the transition and skis up the beginning of the transition (Photo 3) with a little flexion. The skier then extends and rotates the upper body in the direction of the turn (Photo 4) and lands facing the other side of the half pipe (Photo 5). This is essentially a 160 degree jump turn, which is also a good exercise outside the half pipe. Make sure the body is perpendicular to



Photo 4



Photo 5

the snow of the half pipe at all time. If the body is not perpendicular to the snow, the ski tips or tails may strike the snow in the transition area of the half pipe during the jump turn and limit the degree of the turn.

Continue making turns down the half pipe, encouraging the student to ride higher into the transition region. For the more advanced half pipe moves, have the student ride higher into the vertical surface, “vert.” In Photo 6, the student is in a carving traverse across the flat. He rides up the transition with sufficient speed (Photo 7) to reach the



Photo 6



Photo 7

“vert.” (Photo 8) The upper body is rotated in the direction of the turn (Photo 8) and suddenly the knees and ankles are flexed to release the edges (Photo 9), initiating the turn. In a well groomed half pipe, it is not necessary to jump at this phase of the turn. A mere flexion of the knees and ankles will do the trick. As always, keep the major axis of the body perpendicular to the snow.



Photo 8



Photo 9



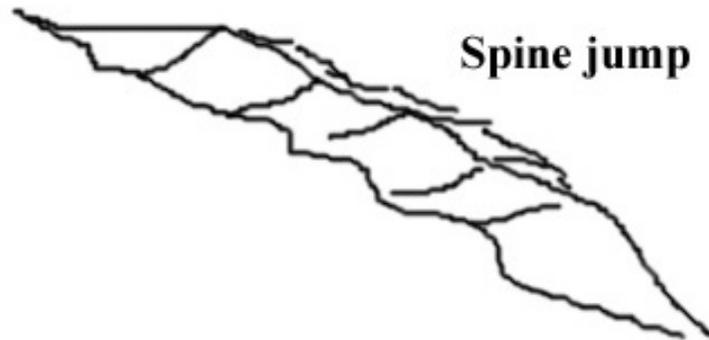
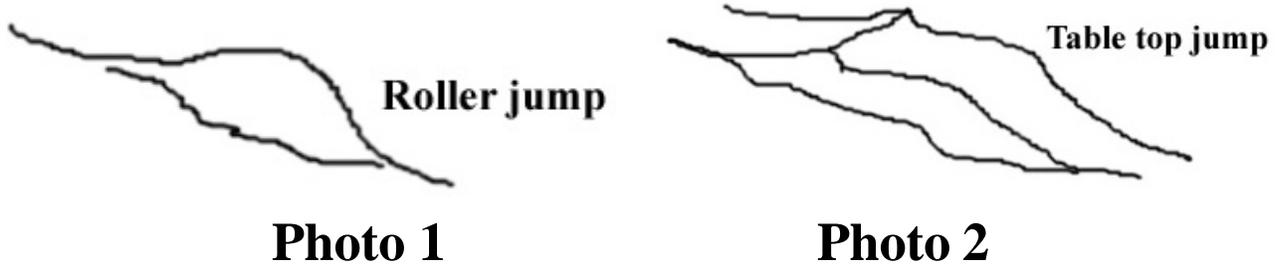
Photo 10



Photo 11

After finishing the turn in the air (Photo 10), extend for the landing (Photo 11) and head for the other side.

JUMPS



Photos 1 through 3 show typical jumps used in the terrain park. The roller jump or mogul is the easiest. The spine jump is the next more difficult. This jump is approached and landed in a traverse. The tabletop jump is for big air moves since it has a kicker at the end to gain altitude. Beginning jumps are easily practiced on rollers or small kickers. Approach the jump in a narrow wedge stance to adjust speed. (Photo 4) As the skier crests the jump (Photo 5), the legs are flexed, leaning back slightly depending on the degree of the kicker.



Photo 4



Photo 5

Get some air (Photo 6) and land with absorption (Photo 7). If there is a large kicker on the jump, then the body should be back slightly to counteract the pitching forward that occurs on severe kickers. Ratchet the speed and height up slowly in your progression.



Photo 6



Photo 7

TERMINOLOGY

BOARD SLIDE - Sliding on a terrain park feature with the skis pointing in a direction other than that of the direction of travel

BOOTER - a large jump

CENTER OF MASS - imaginary point on the body where the weight can be concentrated

COUNTERED – a body position where the upper body is rotated in a direction opposite the lower body

EXTENSION - increasing the angle between two bones at a joint. (straightening out the knees)

FALL LINE- the path a rolling snowball takes down a hill

FEATURE - a device or piece of terrain used to perform tricks such as a rail, a kicker or a fun box

50/50 Slide - Sliding on a terrain park feature with the skis pointing in the direction of travel

FLATS - the bottom of the half pipe between the transition areas; terrain with little slope angle

FLEXION - reducing the angle between 2 bones at a joint (bending the knee)

FUN BOX - a long thin box on which a skier performs various maneuvers

GRAB - grabbing a ski with one's hand to add style to a trick

HANG TIME - Length of time the skier is in the air.

HALF PIPE - a long gully used by snowboarders and skiers to perform tricks and aerial maneuvers

HIT - perform a trick, jump or maneuver on the snow or on a feature.

JIB - New school moves like skiing boxes, rails, half pipe, etc.

JAPAN GRAB - grabbing the ski with the opposite hand

KICKER - a jump with a steep lip

LIP - the top edge of the vertical portion of the half pipe; the high point of a jump

NEW SCHOOL SKIING - skiing on boxes, rails, half pipe, big air, etc.

NON COUNTERED - a body position where the upper body is aligned with the lower body

PHIL GRAB - grabbing the same ski with the same hand (right hand-right ski, etc.) This was named after Philippe Belanger

QUARTER PIPE - one half of a half pipe

RIPPER - a good skier

ROLLER - a jump with a rounded top

RAIL - a long narrow feature for performing maneuvers

SICK – cool; neat; fantastic

SPIN - a 180 or 360 degree spin on or off the snow where the long axis of the body is perpendicular to the skis

SWEET SPOT – the area just under the boots where balancing on a rail is best achieved

STICK - to land a jump properly

SWITCH SKIING - skiing backward

SKILLS - edging, pressure control, rotary and balance

TABLETOP - A jump with a flat top for take off and a backside for a landing area

TRANSITION - the terrain between the flats and a steep slope; slang: “Tranny”

TWEAK - to add features to a trick such as adding extra arm movements while doing a grab

VERT - vertical wall of the half pipe

Beginning Terrain Park Teaching Progression

1. **Fun Box (50/50 slide, straight run)**
 - a. Practice lining up with straight runs over the portable terrain feature.
 - b. Teach students how to adjust their speed with a wedge prior to mounting a feature.
 - c. Make sure they keep a neutral stance while performing the 50/50 (straight run) and adjust body position for the slipperiness of the feature.
 - d. When ready, tour the terrain park and inspect the easiest fun box to be mounted.
 - e. Ride up the lift and give it a try on the feature, slowly at first.

2. Fun Box (board slide)

- a. Practice hockey stops on the snow in both countered & non countered positions.
- b. Practice jumping to a hockey stop or jump 90 degree turns.
- c. Get out the portable terrain park feature and statically stand in the board slide position on the feature.
- d. Hike up the hill and try a 45 degree board slide on the portable feature and then 90 degrees. Remember that to mount this feature requires a slight jump onto the feature at the beginning. Trying to steer onto the feature will be difficult. After movement analysis, correct positioning by making sure the students stand over their skis while on the feature.
- e. Hit the terrain park and try a 45 degree slide first and then the 90 degree slide on a fun box.

3. Rails

- a. Only perform board slides on rails.
- b. Practice jumping onto the portable terrain park feature, making sure your students land on the sweet spot, right under the boot.
- c. Enter the terrain park and hit an easy rail.
- d. Try higher rails as students adjust to the narrow landing area.

4. Half Pipe

- a. Practice serpentine turns outside the terrain park.
- b. Practice skiing up moguls and performing 90 degree turns.
- c. Practice 90 degree turns at the edge of trails that have features like a quarter pipe.

- d. Enter the half pipe and perform linked turns with a traverse on the flat between turns.
- e. On future runs, gradually increase skiing into the transition area.
- f. Remember to keep the long axis of the body perpendicular to the snow surface. When skiing the “vert,” the long axis of the body is horizontal.

5. Jumps

- a. Pick out a mogul on the hill and practice riding over it.
- b. Take the mogul a little faster and get a little air.
- c. Enter the terrain park and hit an easy feature such as a small roller or spine jump.
- d. Make sure the long axis of the body is perpendicular to the snow with no excessive backward or forward lean during landing.

6. General

- a. Teach terrain park etiquette. Look before you jump. Take an observation run to check out the features. Call out (“dropping in,” etc.) before you take a jump to warn others not to try until you complete your maneuver. Get up as soon as possible after a fall and move down the park.
- b. Put together a simple fun run through the terrain park after the students have mastered some features. An example would be to hit a roller jump, then perform a 50/50 slide on a box, hit the kicker jump and finish with a board slide on a rail.