SNOW OPERATING

— TERRAIN BASED LEARNING™ PROGRAM —

CHILDREN'S CONSIDERATIONS

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CHILDREN'S TEACHING CYCLE (PDAS)

Children learn in many different ways. Even big kids or those "young at heart" want to play. The PSIA-AASI Children's Teaching Cycle includes: Play, Drill, Adventure, and Summary or PDAS for short. As the name suggests, it is a cycle. Thus, in a lesson, you will go through this cycle multiple times. Take a closer look at each of these parts of this cycle.

PLAY

Who wants to play? Simple. Everybody! When starting out a lesson make a game of getting to know everyone's name. In Terrain Based Learning™, the features are designed to facilitate play. That does not mean that you say, "Go ahead, have at a feature" when talking to kids or any lesson participant. Instead, it means that you can use Play to create a learning environment that is safe for your students. Perhaps, you will play "Simon Says" on the Flats or "Follow the Leader" on the Flats. You may start off on one feature and create a new game in the Mini Pipe. What if your students like football and you make the analogy that the flat bottom of the Mini Pipe is the line of scrimmage, you can have your team "run" plays while sliding up the other side.

The possibilities for Play are endless. This is the thrill of teaching. No two lessons are alike. What games and Play (or plays for you football lovers out there) will you come up with?

STAGES OF PLAY

It is important to note how, generally speaking, children learn how to Play and interact with others. From ages 1-2, children tend to play alone and explore the world independently. Ages 2-3, children play beside one another, but not always with each other. Ages 3-7, children begin to associate playing together and enjoy games with rules, but make the rules up as they go. In other words, there are no "winners" or "losers." Everyone is a winner. From the ages of 7-11, children are interested in results and participation. In other words, generally, it is okay to play games or introduce competition with this age group. Teenagers are very conscious of their peers and do not want to look foolish in front of them. Thus, teens, typically, do not enjoy being singled out and feeling like they are "kids." They are young adults and could have an integral part in making decisions together for the group.

CHILDREN'S TEACHING CYCLE (PDAS)

DRILL

The trick with kids is to not let them know they are actually doing a drill. Stay with the theme of Play and this will even trick them into learning or experiencing something new. Some kids might want to know what they are learning so "tricking" them might not be the way to go. Perhaps, leading the learning is a better way to describe it.

How many kids are on team sports? Before they play in a game, a match, or a competition, they warm-up. Think of Play and, now, the Drill portions as this part of the warm-up for the lesson.

Drills focus on skill development and are used to get your students to do something specific. In many ways, the Terrain Based Learning™ features are created to acquire skills quicker. You could think of the features as drills in themselves. In other words, a "drill" might be going over the Rollers a number of times and focusing on the timing of flexion and extension movements your students make. This does not mean that coaches or instructors should be up at the top of a feature yelling, "drop and give me twenty," like a drill sergeant! It means that instructors and coaches are guiding the students through these features and "drilling" in the skill acquisition through repetition. This repetition allows your students' brains to make connections and create synapses so they can access the skill or movement more rapidly. Whoa! Did we just get technical with some neuroscience? Sorry, but you get the drift.

If a student is not getting something or the skill is not clicking, consider going back to the previous TBL feature and present the movement in a different way, one that will help them in the next feature. The old adage states, "You can make easy terrain harder by increasing the challenge. However, it is difficult to make harder terrain easier." Skill development takes time and as instructors and coaches, you have to be patient with students as they learn.

CHILDREN'S TEACHING CYCLE (PDAS)

ADVENTURE

This could mean different things to different people. The Terrain Based Learning™ environment is an adventure in itself. To one beginner the whole concept of learning to ski and snowboard could be considered an adventure. To another beginner, one particular TBL feature like Banked Turns or component of the lesson will be their adventure.

When teaching kids, Adventure is where you take some of those skills that you have learned in isolation (i.e. specific TBL features) and learn how to put them into application. In other words, when you were in the Mini Pipe, you were emphasizing different Ranges of Motion with your students or learning how to make one turn to the left or one turn to the right. You were breaking down some of the skills through Play and Drills.

The Adventure is where you put it all together. This is where you venture out of the Mini Pipe and Rollers and head to the Banked Turns and the Perfect Slope. Your students have mastered the art of "going" or sliding. They might even be getting the hang of turning. But you want them to be in control and "choose their own adventure."

Adventure has infinite meaning to children and any student for that matter. Some children may enjoy going on a "bear hunt." This hunt has changed the context of what they are doing. They are out on the Perfect Slope and they are "looking" for bears. They have to take what they learned and the skills they developed in the Flats, the Mini Pipe, the Rollers and Return Wall, and Banked Turns so they can successfully "look" for bears on the Perfect Slope. They may not find any bears, but they sure will have fun looking for them. It is an adventure after all!

CHILDREN'S TEACHING CYCLE (PDAS)

SUMMARY

With kids or adults, it is always useful to summarize and debrief the learning segment. This is even more important with parents of the children you are instructing. You have already "played" with your students. You have used a Drill or two in order to focus on skill development. You have used many Terrain Based Learning™ features to help Drill in this skill acquisition and to have an Adventure with your students. Remind them of all the things that you all have done. Debrief this learning segment to help anchor the learning. Masterful teachers do this and the students respond, "I thought I was playing the entire time" or the "lesson flew by… what do you mean it is over?"

As with any cycle, repeat these steps often and throughout your lesson regardless of the lesson duration. Play with your students so they have fun and the learning will come. If you are having fun, there is a good chance that your students are having fun too! Use Drills in conjunction with the TBL features to help your students acquire the necessary skills. Have an Adventure with your students. Often times if you keep asking questions, they will make up the adventure for you.

Remember to debrief the learning segment. For example, in Terrain Based Learning™, it is a good idea to recap what you were working on with your students on the Flats before moving on to the Mini Pipe. In other words, set up the learning environment so that you anchor what you have been working on before moving on to the next feature. With children, ask questions. What were we learning in the Mini Pipe? "We were learning how to slide." Are we ready to move onto the rollers and return wall? A resounding "yes," is what you will hear if they are ready for the next step.

THE C.A.P. MODEL

Another model that is very useful when teaching any student, regardless of age, is the C.A.P. model. C.A.P. stands for Cognitive, Affective, and Physical or Psychomotor. It is a model for how children think, feel about themselves and interact with one another, and how they move. The model can also be applied to adults.

COGNITIVE

How children think and develop cognitively is fascinating. There is much literature on the subject. For the purposes of teaching children, keep in mind that children develop from an egocentric point of view. That means that children believe that the world revolves around them. Ever watched two young children learning how to share? One child takes a toy and the other begins to cry. Why? Because the other child took away his or her toy or what they believed to be his or her toy. "That's my toy!" The child cannot necessarily comprehend that their toy could be used by another person and they get upset because they have "lost" the toy.

As children develop, they are capable of more thought and cognitive thinking. Thus, with young children use simple directions. Give one direction at a time. For example, if you told a 3 year-old how to get to your resort's restroom, they might look at you and blurt out, "I have a dog." Better yet, why don't you show them where the restroom is located? This will have a better outcome for everyone!

If you have ever observed a baby, they are constantly trying to interact with their world. They do this by putting everything in their mouths and trying to touch or feel everything. That is why you have to baby proof houses. Infants and toddlers are curious and will beeline it to things like electrical outlets because they are so interesting!

As children develop, they can begin to think and process more information. They are even capable of abstract thought as they approach pre-teen years. Thus, the older a child, the more information they can process. However, you can see it in your students when they are overloaded with information. They are thinking through all the outcomes that they become very quiet and tired. Yes, it takes a lot of brain power to process information. If you ask a question and you get no response or some blank stares, it is a good idea to try a different approach.

When in doubt, keep it simple. Keep instructions simple.

THE C.A.P. MODEL

AFFECTIVE

This realm has to do with how children feel about themselves and how they interact with others. For example, you are teaching a group and you are ready to move from one Terrain Based Learning™ feature to the next, but one child seems withdrawn from the group. They may be frightened about the next feature or are not confident about their abilities to be successful on it. This is where you, the coach, come in and save the day. After asking some questions of the child, away from the group so the child does not feel singled out, you confirm that the child is indeed afraid of the next step. You reassure the child that you would not be moving the group unless you knew they were ready. You also ask the child what she wants to do. She says that she wants a couple more practice rounds on the current TBL feature. Deal. After a couple more laps on the current feature, the entire group is ready for the next feature and they all succeed.

PHYSICAL OR PSYCHOMOTOR

A whole manual could be devoted to this topic. For simplicity's sake, children develop from the top down and from the inside out. What? This means that as children grow, their heads are proportionally larger than the rest of their bodies. This is why you see many young children look like "bobble heads" and bracing against their equipment. They may actually be in balance even though it looks like they are "back" on a pair of skis or putting all their weight on their rear leg on a snowboard.

Children develop from the inside out. This means that they conquer gross motor skills before fine motor skills. In other words, they can swing their arms better than they can wiggle their fingers. Sometimes infants will stop whatever it is that they are doing to examine their fingers. It is almost like they have a look on their face, "how did these get here and what do they do?" Keep this in mind when you are asking children to do specific movements. They may or may not be able to accomplish the task you are asking them. Thus, work on the gross motor skills with children first, before you work on the subtle articulation of the sub-talar joint in the ankle! Think large muscle groups (i.e. muscles in the arms, legs, and the trunk) versus smaller, fine muscle groups (i.e. fingers, toes, and ankles).

REAL VERSUS IDEAL MOVEMENTS

As mentioned above, physically, kids develop from the top down and from the inside out. Typically, around the age of 7 the proportion of a child's head being larger than the rest of their body begins to even out. This means that their Center of Mass drops from up around their head and shoulders to more around the navel in their bodies. Again, this is a gross generalization and every child is different, but age 7 is a useful guideline.

Ankle flex is important in both skiing and snowboarding, but due to the development of children, it might be difficult for them to access this particular joint. Thus, a toe-side turn on a snowboard for a four or a five year-old might be really difficult. However, they will have more success with a heelside turn. For young skiers, it may look like they are bracing against the back of their boots. However, if you looked from the side view and saw where their head was in relation to their skis/boots or their base of support, you would see that they are actually balanced.

Telling a young child to flex their ankle might be too technical for them. That is why you Play and use games like "squash the bug" or "hold the imaginary money against the tongue" of their boots.

This is an important distinction to make: The ideal movements may not be attainable for young children, however, the real movements are still functional. You just need to be aware of what those ideal and real movements are. You can coach to the ideal movements and have your expectations set-up for the real movements that will occur.

REAL VERSUS IDEAL MOVEMENTS

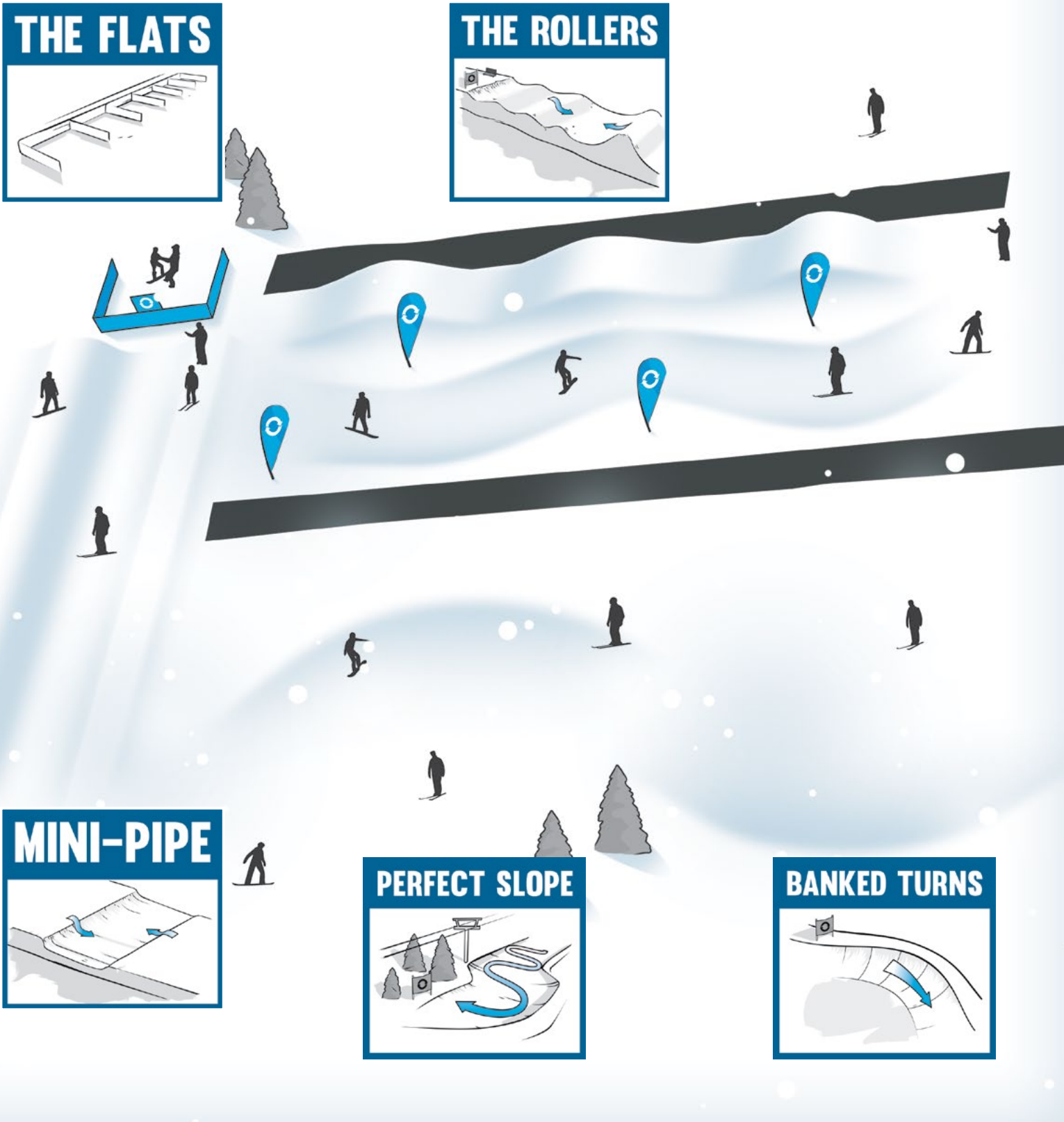
GROWTH SPURTS

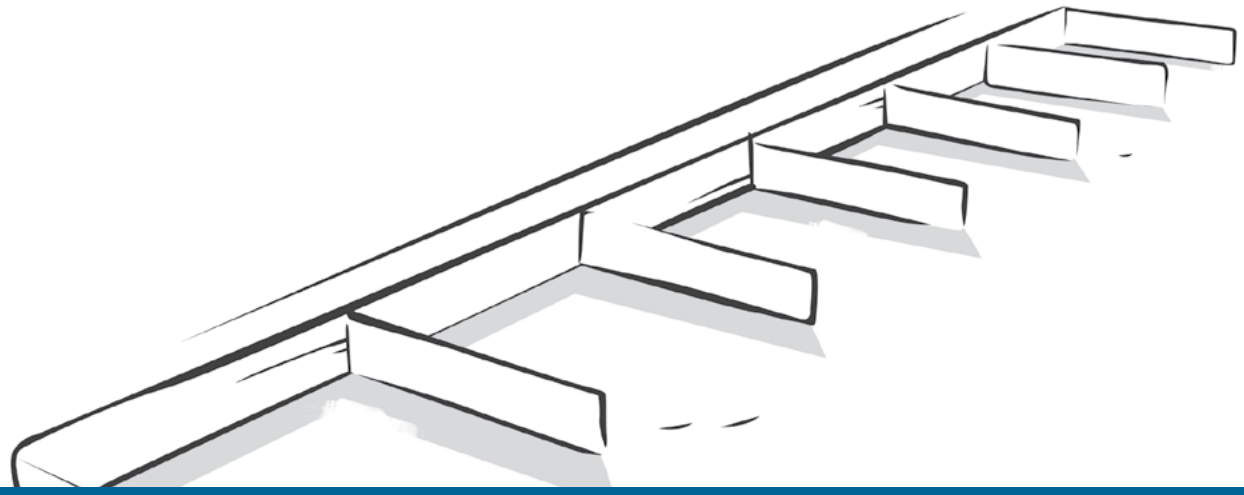
When children hit puberty which tends to happen earlier for girls than boys, a result can be a growth spurt. As children learn how to manage their bodies that have grown significantly in a short period of time, they may not have as much control over their muscles and their bodies, in terms of coordination that they once possessed. This is where patience and the ability to acknowledge that this might be contributing to their performance enter into the picture. It may take these teens or pre-teens a couple more tries to get something. And looking foolish in front of their peers can be perceived as "the end of the world" to most teens or pre-teens. Be sensitive and do not single any student out. They will get it, they are just learning how to coordinate some aspects that they thought they had already mastered.

DEMONSTRATIONS

Many kids are still figuring out how best they learn. Some will have a preference to watch, some will want to do, some will want to think about the task, while others will want to feel a sensation. Demonstrations are critical because many children are visual learners. They have mimicked movements and use this to accomplish a goal (i.e. learning how to walk by chasing around an older sibling). Thus, it is important to demonstrate multiple times what you would like children to do. It is also helpful, if you turn and face the same way that the children are facing. Now there is no confusion about left or right. Simply point to the right and tell them that you want them to go "this way."

IF IT LOOKS FUN AND FEELS AMAZING, STUDENTS WILL BE INSPIRED TO LEARN





TERRAIN BASED LEARNING™ PROGRESSION – THE FLATS

LAYERS OF FUN

Making stance and balance a fun a experience is easy to do when using creative exploration of the ranges of motion. The ranges of motion (flexion/extension, foot-to-foot, toe-to-heel, and rotation) are the key ingredients to every skill that students will learn. Once they learn how to create movements independently in each range then they can blend them together to build skills with timing and proper sequence. But it all starts with the first fun move...

CRITICAL EXPERIENCE STEPS

Snowboard

- Athletic Stance – Knees Bent, Hands Up
- Ranges of Motion – Presses/Edge hops/ Hop spins/quick drops
- Ollies
- Skating

One foot drills

- Fast plant skating
- Hop and glide
- Pivot hop and glide
- Power Steering
- Skidded circles

Ski

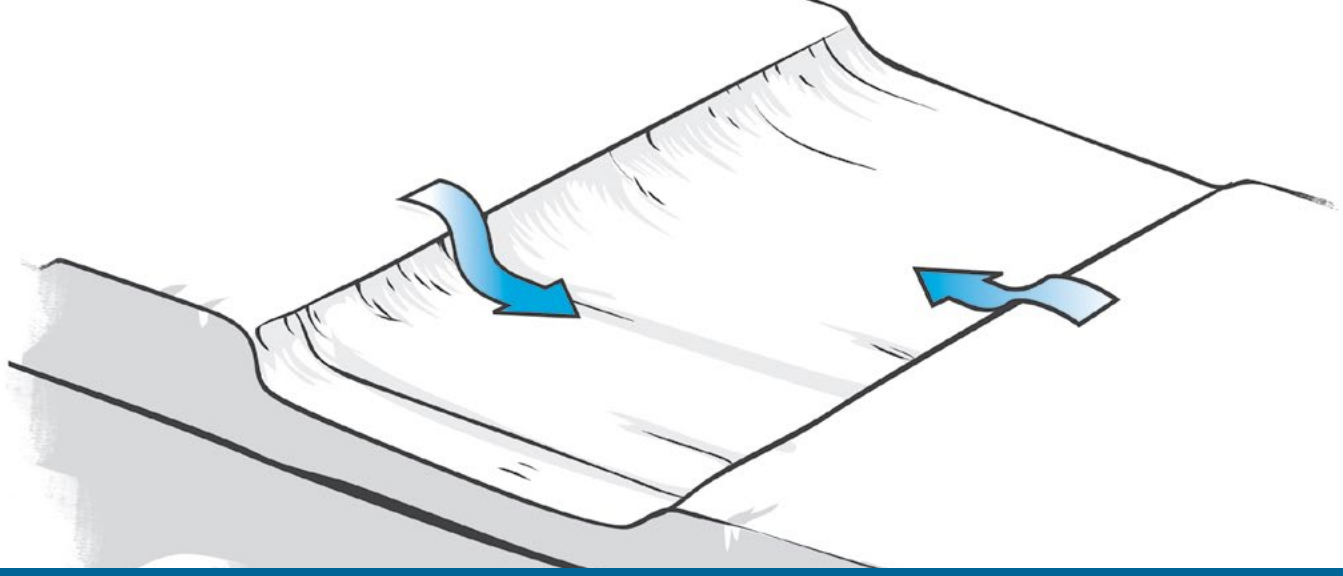
- Athletic Stance – Elbows Forward, Eyes Ahead
- Ranges of Motion – Sidestepping/ Pivoting (Leg Rotation) Hopping/Edge Rolls/ Herringbone (Skate)/ Reach for Stars & Snow
- Jumps/Ollies

One Ski drills

- Start them with both feet in!

QUICK TIPS

- Keep it simple. Give your students an introduction to (not mastery of) the ranges of motion needed. Don't overdo the one footed drills, the students will find these skills naturally by using the features. If you sense boredom – Move on!
- Focus on your students maintaining an athletic stance through all movements and highlight the sensations you want them to feel with each movement.
- Monitor their physiological needs. Students should be warming up, not overheating.
- Remember to Play with your students by creating games and keeping them moving.



TERRAIN BASED LEARNING™ PROGRESSION – MINI PIPE

THE SWISS ARMY KNIFE OF FEATURES

The Mini Pipe is designed to be used like a skate ramp and allows for rapid repetition. In this feature layer in all the tools they will need to control speed, turn and stop through fun drills that make them feel like they're experiencing a unique piece of the action sports culture. This is the most versatile teaching feature in the progression. An entire lesson could be taught right in the Mini Pipe.

CRITICAL EXPERIENCE STEPS

Snowboard

- Start in the Flat Bottom - Hands On!
- Down Pump.
- Dropping Into Fall Line.
- Tip & Tail Pump.
- Side Slipping.
- Steered Turn to Fall Line (Instructor Assist).
- Fall Line 2 Count to Steered Finish.

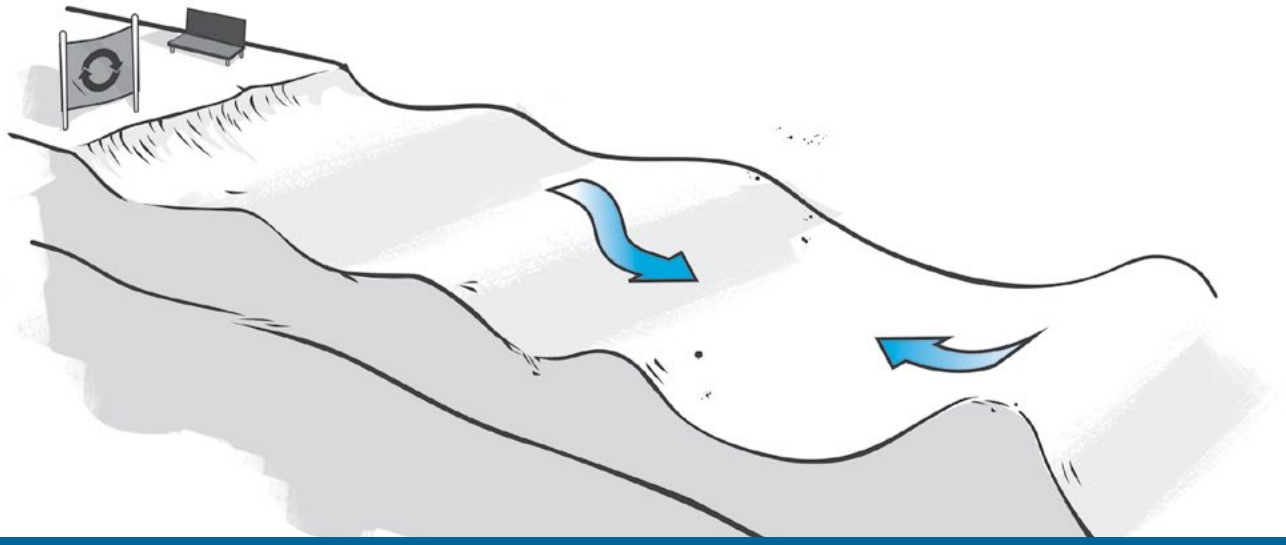
Ski

- Start in the Flat Bottom - Hands On!
- Down Pump.
- Dropping Into Fall Line.
- Sidestep Up Pipe (Instructor Assist).
- Steered Turns (Small Wedge).
- Drop In to Steered Finish.

QUICK TIPS

Look for your students to maintain athletic stance. Snowboarders should be centered over their boards. Skiers should try to stay cuff neutral in their boots when dropping in switch.

- Play and Drill with your students, especially children, in the Mini Pipe.
- What games and exercises can you come up with? Challenge yourself to create new ones every five lessons, every other lesson, or every lesson.



TERRAIN BASED LEARNING™ PROGRESSION – ROLLERS

IT'S ALL ABOUT WANTING TO GO FASTER

The Rollers are designed to force students to learn how to pump in order to make it to the end. When they ask for more speed you know its working. The goals here are to conquer the fall line, learn the pressure sequence in turning, learn fore pressure, and enjoy the ride.

CRITICAL EXPERIENCE STEPS

- Gain confidence in the fall line.
- Maintain athletic stance.
- Practice forward pressure through fall line variations.
- Learn the pressure sequence in turning.
- Start on the first roller and work your way down.
- Start low and forward.
  - Skiers pressure tongues of the boots.
  - Snowboarders tip the lead joystick forward.
- Extend legs at base of roller, flex legs over the top and reset forward.
- Skiers pump then pressure tongues when sliding switch.
- Snowboarders shift pressure to switch lead foot.

QUICK TIPS

This feature only requires a couple experiences in most cases and is all about preparing the student to overcome the fear of the fall line before they head to the banked turns. Focus on praising their ability to maintain balance and have some fun flowing.

- Since this feature helps students overcome their fear of the fall line, the C.A.P. model is useful here. Pay close attention to the Affective domain. Are students showing signs of fear by being withdrawn, quiet, or overtly expressing fear by telling you, or worse – crying? Make sure students are physically ready to attempt the Rollers before moving out of the Mini Pipe.

TERRAIN BASED LEARNING™ PROGRESSION – FIRST TURNS

LET THE BANK DO ALL THE WORK

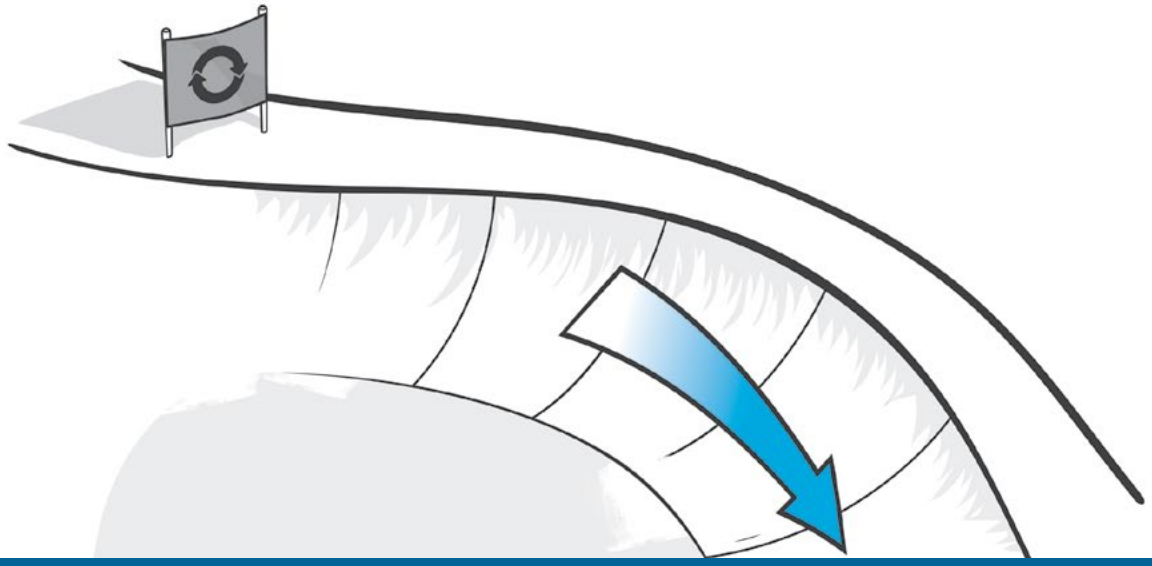
Students should experience a fully terrain assisted turn and come to a natural stop. The goal here is to keep the bases flat to start then progressively work toward basic edge control.

CRITICAL EXPERIENCE STEPS

- Maintain an athletic stance.
- As terrain redirects the skis/board feel your legs naturally turning.
- As you turn feel your weight shift – outside ski (skiers) / inside edge (boarders).
- Anticipate the turn by actively turning and shifting weight (like we did in the flats).
- Practice starting the turn low and finishing tall.
- Turn to a stop.
- Traverse to a stop.

QUICK TIPS

- This will be your students' first taste of sustained movement in the fall line. Maintaining an athletic stance and quiet upper body will help them focus on how the terrain is affecting their legs, feet, skis or boards.
- Skiers should focus on getting their weight slightly onto their outside ski.
- Snowboarders should focus on maintaining a flat base to start and allowing the bank to redirect them.
- With children, less is more.
- Let children experience the bank in their own way. Some might visualize it. Some might have to feel it. Some might need you to explain it to them before they attempt it. Listen and observe your students, they will tell you or give you clues to what they need.



TERRAIN BASED LEARNING™ PROGRESSION – BANKED TURNS

THE BEGINNER'S BANKED SLALOM

This feature is simple high visual stimulation, low speeds, and gentle redirection from the bank. This experience creates an intuitive turning trainer. The student can experience flowing for 3-4 turns without the fear of pointing downhill and accelerating all the way to the bottom.

CRITICAL EXPERIENCE STEPS

Snowboard

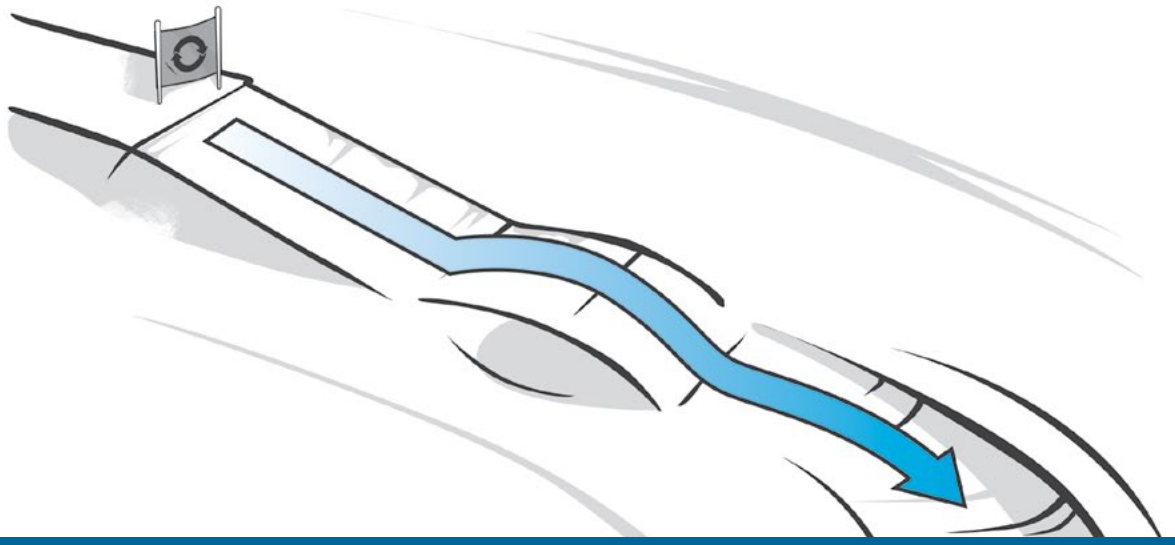
- Remind students to start with their lead joystick tipped forward and to pressure the lead tongue, then the rear tongue or the lead heel, then the rear heel to support the turn.
- Always hold their hands for the first experience here.

Ski

- Remind them to start in the tongues of the boots and that pressuring the inside edge of the outside ski will help them while they steer their feet and tip their skis toward their new turn.

QUICK TIPS

- Let them enjoy the experience but reinforce the need to steer through the shape of the bank and to engage and balance over appropriate edges.
- Make sure to remind them to traverse into the belly of the bank to ensure that they get more assistance from the shape of the banked turn.
- Teach them to finish the turn early and flow high into the next bank.
- For children, there is a lot going on here. The bank is forcing them to turn. Think simple instructions and minimal coaching. Think of the bank turns as a water slide. Let them go through it and when they get down to the bottom, they will ask, “Can we do that again?!!”



TERRAIN BASED LEARNING™ PROGRESSION – PUMP TRACK

FLOW IN THE FALL LINE INTO A GENTLE TURN

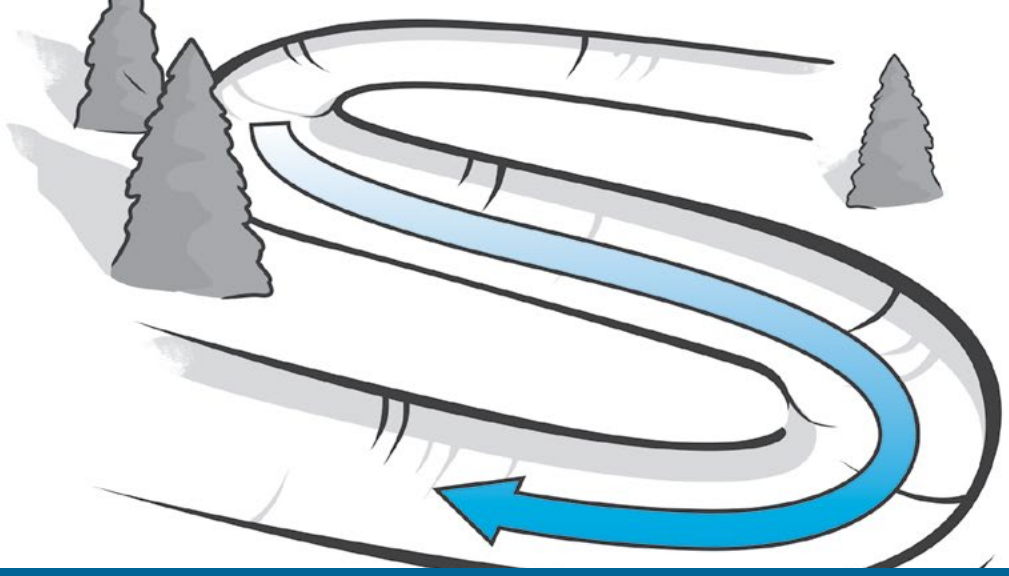
This feature is designed to help students relax in the fall line before making their first turn. It allows students to combine flexion/extension movements with turning movements. This will promote a smoother, rounder, more patient turn as they move toward the perfect slope.

CRITICAL EXPERIENCE STEPS

- Start low and pump the roller, rest low and pump through the bank.
- Skiers focus on outside ski pressure and steering both feet through the Banked Turn.
- Snowboarders work toward early edge engagement.
- Steered stops.
- Carved stops.

QUICK TIPS

- Focus on fore pressure when cresting the roller and maintain into the initiation of the banked turn.
- Make the banked turn a sensational experience by pressuring through the turn with active extension movements of the legs.
- Think about Real and Ideal movements here for children. You may be trying to teach ideal movements and then when the children go over the roller, they might still be in balance but appear to be "back" on skis or on the "uphill" leg on a snowboard. Set yourself up so that you and your students both have realistic expectations of the performance.



TERRAIN BASED LEARNING™ PROGRESSION – TRAVERSE TRACK

STEEPER TERRAIN AT SLOW SPEED

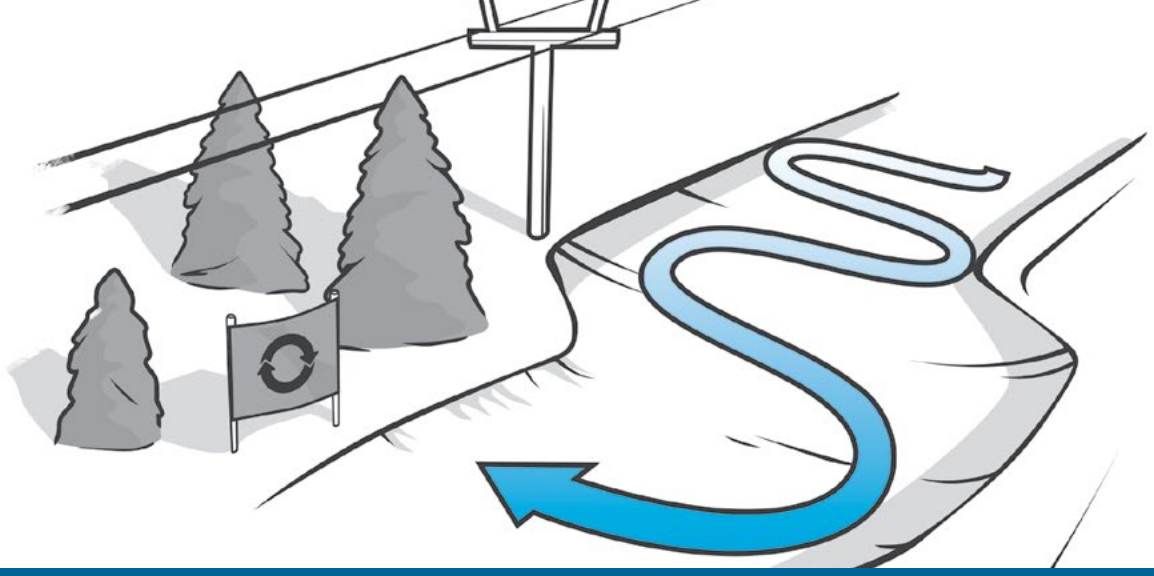
This feature is a banked slalom that fully contains the student at a steady low speed. Enabling new skiers and snowboarders to get onto the chair and manage more challenging beginner terrain with ease. The student gets to simulate a full traverse on a carefully graded road that flows into a completely contained banked, switchback turn. So fun to go to the top and cruise it all the way to the bottom!

CRITICAL EXPERIENCE STEPS

- Practice steering movements through turn shape.
- Focus on fore and aft pressure throughout the turn.
- Early edge engagement.
- Controlled fluid exits and steady flow into the traverse.
- Practice breaking mechanics in traverse.
- Range of motion drills in traverse.

QUICK TIPS

- Pacing and creating space for your students is important here. Start your students and give them clear direction as to where to pull out of the main path to allow others to navigate around them and discuss braking and passing tactics to keep slower skiers and snowboarders safe.
- For children it may be wise to do the experience together on the first descent. A “follow me” approach may work here since the banked turns contain a switchback and help the students successfully navigate a steeper slope at a slower speed.



TERRAIN BASED LEARNING™ PROGRESSION – PERFECT SLOPE

GENTLE BANKS GUIDE STUDENTS TO THE FALL LINE

We redesign the bunny slope to eliminate all of the spots that would draw students into a tough situation. The banking gently slows them down as they traverse across the slope and naturally redirects their tips into the fall line helping to initiate their turn. This is the final step before they are using their new skills to navigate the mountain on their own.

CRITICAL EXPERIENCE STEPS

Traverse – fall line 2 count – Traverse

- Traverse at a low angle until the student hits the gentle bank and slows down.
- Gravity will help guide the tips down the hill.
- Tell them to be patient and slide downhill in the fall line for a 2 count or 5-10 feet.
- Now have them steer to a finish just like they did in the Mini Pipe.
- Now traverse and repeat at the next bank.
- Snowboarders - Hold hands and support the first experience…

QUICK TIPS

- Play with different sizes and shapes of turns.
- Add in carved stops and speed checks for control.
- Play with the ranges of motion while your students traverse.
  - Skier example: alternate stepping from one foot to another to test stability over each leg.
  - Snowboard example: try shifting from the nose to the tail repeatedly as they cross the hill to test for their ability to control nose and tail pressure.
- There is an opportunity for children to “choose their own Adventure” on the Perfect Slope. Now they have some say and decisions to make in terms of where they want to go. Try having a “bear hunt” on the Perfect Slope!

NOTES

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TERRAIN BASED LEARNING™ PROGRAM

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