***Mt. Holly******& Pine Knob***

***2016 Instructor's Manual*** ***®***

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***Teaching (how to)***

Good instructors love teaching. You need to be friendly, confident, knowledgeable, and very attentive to your students. Each person learns differently so teaching is very creative.

Students need clear goals and precise feedback. In addition to a brief explanation and a static demonstration of one move at a time, be sure to watch your students perform and provide feedback. This requires a lot of attention and concentration.

Feedback should happen during or immediately after performing. Be specific such as, turn both feet, flex your ankle more, or good job! If students are having difficulty, physically assist them. Use the appropriate exercises. Treat your students like customers, don’t swear or act unprofessional with difficult children. Imagine their parents are always standing next to them, kids will tell their parents what you say. Always think about safety especially with lifts and traffic. Lessons are fun for the students if they are taught well.

 ***Skiing Overview***

People ski an average of four times a season, and only about 15 percent take a lesson. Skiers use the natural moves they use every day which are opposite skiing moves. Natural moves are: moving back, rotating, and banking. After years of reinforcement, these moves become habits that are hard to change. Turning also creates forces that push skiers back and inside the turn.

The key move in skiing is to keep the body moving forward and to the outside of the turn relative to the feet. This is done by progressively flexing the ankles and tipping the upper body to the outside of the turn (angulation.) Defensive natural movements are replaced with offensive skiing movements. The result is a smooth flowing image of the skier moving toward the next turn that defines good skiing.

Even though skiing moves are very simple, they are very difficult to execute because they are opposite our natural movements. It is a constant challenge to maintain and apply skiing moves, even for top ski racers who have daily coaching. And even with clear goals it is hard for skiers to feel how they are actually moving. Ski moves have not changed in a long time, so searching for the “new” technique makes the difficult process of improving even harder.

Most of our students ski for fun; they don’t have the time money or desire to become a great skier. Some may have unrealistic expectations about what a lesson can do, but they expect to make some improvement. Almost all skiers will have the same three problems because they are using natural movements. But getting skiers more centered so they use the front of the skis rather than just the tails is a very long and hard process that most skiers never achieve.

So we have to find what creates the greatest improvement in the limited time we have to work with our customers. If we can get them moving a bit more forward, turning their feet rather than rotating, and creating some angulation, it will provide them with more control. It is hard for skiers to know how well they ski. Some don’t care because they ski for fun, but others don’t realize they could improve. If they take a lesson they may return if we give them clear goals.

New skiers need to get comfortable sliding down the hill in a wedge with some speed while standing centered over the middle of their skis. Speed will reduce friction so it is easier for them to either turn their skis, or to flex one ankle and feel the ski respond by turning. Speed also allows the skis turn sooner, and then helps skiers feel their momentum carry them toward the next turn when they release the ski. This is their first feel of smoothly flowing toward the next turn.

***Skiing Moves (what to teach)***

We teach control by making turns so skiers can safely stop and turn when they want. There are two ways to turn, you turn the skis or the skis turn you (skidding/carving.) Turns can be a combination of the two.

The majority of recreational skiers work on skidded turns. The key moves are starting in a skiing stance over the center of the ski, transferring weight to the outside ski, creating inside lead, turning feet, progressive ankle flex and angulation.

Faster carved turns that end closer to the fall line can be a goal for some skiers. The key moves here are starting in a skiing stance, transferring weight to the outside ski, creating inside lead, and progressively flexing the ankle and creating angulation.

 Turns can be small or large, and they can be finished more across the hill, or closer to when the skis are pointing downhill (fall line.)

Vary speed, steepness, and conditions, as skiers advance.

***Why (understand moves)***

 Turning increases pressure that pushes skiers back and inside the turn. Progressively flexing the ankle and tipping the upper body outside the turn (angulation,) keeps the skier moving forward and downhill relative to the feet. When the skis are released the skier is already in motion toward the new turn. Most skiers will rotate and bend their knees more which uses the tails of their skis. Inside lead advances the inside half of the body, so the hips are in a position to create angulation. Starting with a skiing stance over the center of the skis allows a skier to move fore and aft through the turn. An early weight transfer allows the ski to start working early in the turn.

***Natural Moves (details)***

The three main natural moves people make are leaning back so they use the tail of their skis, rotating the upper body in the direction of the turn, and tipping their upper body inside the turn.

When standing on a slope without skis on, the body has to lean back to keep from falling forward, so people naturally lean back which can be at the ankles, knees, and or waist. Fear also causes people to back away from the bottom of the hill.

It can be very hard to flex the ankles in ski boots, especially for new skiers who often just flex their knees. Even on a flat surface, without skis on the ankles can’t be flexed very much before falling forward because our feet are not very long. And skis can accelerate before the body, so for all these reasons it is very hard for people to learn how to flex their ankles, it is the most common and hardest problem for most skiers to change.

When walking, we turn our shoulders and upper body before our feet so this natural movement gets applied to skiing. It moves the hips in the wrong direction which limits angulation. If skiers are back on the tails of their skis, the tips are not being pressured to help start the turn, so skiers are even more likely to rotate because they do not feel the skis working.

When rotating, skiers lack the necessary angulation to: grip the slope, tighten the turn, increase downward pressure, and maintain offensive movement toward the next turn. So skiers tip their upper bodies inside the turn to get more edge which is called banking. This is also how the body moves naturally in a car or on a bike by leaning inside the turn and against the forces to the outside of the turn.

Unlike top racers who get daily coaching, most skiers never take lessons so they use natural moves they make every day and apply them to skiing. These moves get more ingrained as habits that are very hard to change, especially in an hour lesson.

Skiing moves are simple but hard to develop because they are opposite natural movements. Even when people have clear and consistent goals is hard for them to know if they are doing it right because the body does not provide accurate feedback, which is why instructors need to provide it.

***Evaluating Skiers (movement analysis)***

The natural movements are usually easy to see. Start evaluating at the cross over point when the skis are flat between turns. See if the skier is moving back, rotating, or banking.

Advanced skiers can be more difficult to evaluate as their moves may be more subtle. If the natural moves aren’t visible, look for the skiing moves: stance, weight transfer, inside lead, progressive ankle flex or steering, and angulation. Can they make different size turns, or finish them enough to control their speed. Do they turn better in one direction (right hander turning better to the left?)

If you are still having trouble look for where their body, or center of mass which can be in front of their body, is moving relative to their feet. Is it offensive forward and down the hill or is back, inside, or down. Advanced skiers can often maintain offensive movement by bending a lot at the knees relative to their ankles, but they will end up using more of the tail of their skis. It is necessary to use the knees more in very completed turns, or in some deep heavy conditions.

It is helpful to use video, which also allows students see differences, especially if you use V1 to make a side by side comparison. An easy thing to do is to look at the position they are in when they finish edging their skis. Look for the classic position with ankle flex, angulation, inside lead, weight on the outside ski, and stacked over the center of the ski. Then see if the skier skied into this position or just got there at the last second.

***New Skiers***

Pace is critical, not too fast that they are afraid or in a dangerous situation which is what most friends and family members do when teaching. Students need to be in a comfort zone where they feel confident. but don’t go so slow they are bored. Keep them moving and don’t talk too much.

After walking and static exercises on the flats, work on a gentle slope to develop a skiing position over the center of the ski and stopping. Provide verbal feedback while they perform; hands up, look downhill, move forward. Spend plenty of time so they get comfortable with some speed and are able to make several wedges a row and stop. Support them so they don’t fall when using the rope.

When they are ready for turns start with some speed skiing straight down hill, count to at least three, make a very slight turn; then go straight before turning in the other direction. The pattern is straight—turn—straight so they feel their momentum carry them down the hill.

They can try turning both feet or flexing an ankle to make the ski turn. Static practice is important before trying to flex the ankle. Show them, but you may have to physically assist them. Try big turns and smaller turns by changing from three turns one run, to six turns the next run. Make three turns to a stop. Tell them what to do after the lesson and tell them to ski in control so they can stop or turn before hitting anyone.

***Exercises (intermediate/advanced level)***

Exercises help to develop or refine movements; they can be physical task or a mental focus. They break a movement in smaller pieces or add tasks to create new sensations.

**1- Progressions**- Do a move statically, then in a traverse, half of a turn, whole turn, then link turns. A fan exercise is uphill christies from flat to steeper traverses. Garlands are repeating a move in a traverse. Do in both directions.

**2- Extreme and opposite movements-** Skiers can be very unaware of how they are moving; sometimes they will make the opposite move that you ask them to make. To increase their awareness and break old movement patterns, have them practice the opposite move, or an extreme version of the desired move so they can feel the difference.

**3- Challenge**- Once the moves can be made on gentle slopes; gradually progress to steeper slopes, higher speeds, and different snow conditions. Make small then bigger turns. Each step will challenge the new movement, and old habits will often return.

There are four basic movements: fore/aft, up/down, lateral, and rotary. These moves affect the edging, pressure, and rotary movements of the ski. Exercises can be organized around these movements; or they can be organized in order of the formula or way they are applied: **S**tance, **W**eight transfer, **I**nside lead, **F**lexing ankles, and **T**ipping (S.W.I.F.T.)

**Skiing stance**

The skiing stance changes throughout the turn as skiers move fore and aft, and up and down. Practice the starting stance by; statically comparing standing tall to a skiing stance which often called an athletic stance. Do this by flexing slightly lower over the middle of the ski with the hands out in front so the forearms parallel to the ground and elbows in front of the body. Return to a tall position and then repeat the skiing stance. The ankles, knees, hips, waist, and back all flex smoothly so the chest stays over the center of the skis.

Demonstrate in front of students standing perpendicular to them so they can see the side view. Then watch them from the side and provide feedback. It is common to see people flexing their knees too fast, too much, or too soon relative to their ankles which puts them back on the tails of their skis where most people ski. Some skiers will stand too low and have their feet wider than their hips; others will be tall with their feet together.

**Weight transfer**

1. Do a progression with weight on the downhill ski; static, traverse

2- Thousand Steps

3- Retract the new inside ski at cross over, but keep it on the snow

4- Extend the new outside leg after releasing the edges (early weight transfer)

5- Ski straight down a gentle slope with speed in a small wedge, then add quick weight transfers to automatically create parallel turns.

6- Converging, diverging, parallel step turns

**Inside lead**

Also called: parallel position, strong inside half, counter, active anticipation

1- Do a progression (static, traverse, fan, link turns) advancing the inside half: foot, knee, hip, shoulder hand

2- Shuffle feet back and forth through turns.

3- Do uphill christies or link turns with:

 - Poles horizontal

 - No poles hands as if using poles

 - No poles arms crossed

 - No poles hands on hips

 - No poles hands on thighs

 - No poles arms in front with palms together

 - Grab the outside thigh with the inside hand (face the force)

 - No poles hands together behind the back

 - Poles on shoulders (cross style)

4- Garlands advancing the uphill half (turn finish,) repeat advancing the downhill half (turn start)

5- Compare turns with rotation to creating progressive lead

6- Compare a lot of quick early lead to progressive lead

7- Connect poles around hips

**Flex ankles**

Lack of ankle flex is common and causes additional rotation and banking

1- Statically stand in a skiing stance and flex forward at the ankles. Be sure the skiing stance is maintained. No extra movement at the waist or knees. Check the boots to be sure they are not too stiff. Loosen the power strap and top buckles for the following exercises:

2- In a traverse:

 - Repeatedly flex ankles way fore/aft (weight on downhill ski with inside lead)

 - Flex ankles just a little forward and back (no extra: knee, waist, or back)

 - Flex ankles way forward and back to center (in ski stance, stop when centered)

 - Flex ankles just a little forward and aft

 - Flex ankles forward and back to center

3- Do fan exercises with progressive ankle flexing and lead. This is where skiers add extra moves: watch for rotation, leaning in, backing up especially at the ankles or waist and back, dropping down quickly at the knees or with the ankles and knees. Have them do an excessive amount of the problem move and then compare it to proper amount.

4- Focus on the bottom of feet; try moving weight from the arch to the ball of the feet

5- Raise the toes to help produce the flex

6- Focus on the hips, move from above arches to behind heels, to in front of the balls of the feet

7- When you steepen the traverse and add more speed, watch for unwanted movements back, down, or inside

8. Add a pole touch at the end of the fan exercise, for short radius christies

9- Link the turns with progressive ankle flex. Watch for problems as rhythm triggers old movement patterns

10- Focus on making a move like pushing on a gas pedal to start a turn; then letting off to finish.

11- Compare progressive flexing ankles: to turns with ankle flex that ends quick or starts late

12- Compare turns flexing the ankles versus the just the knees. Flexing just the knees or flexing the knees too soon, too quick, or too much is a common problem.

13- Link the ankle flex with other sensations to reinforce it. Connect the flexing with rounding the upper back

14- Gradually buckle the boots and tighten the power strap to return their normal sensations. Watch for the ankle flex to disappear. They may also have been making their upper buckles and power strap too tight, or the boots are too stiff

15- Challenge the ankle flexing with more speed or steepness

16- Side slip straight down the hill

17- Falling leaf

**Tip (angulation)**

Hip angulation for GS turns: the progression- fan then linked turns

1- Statically stand in a skiing stance with inside lead. Practice flexing the ankles and tipping (flex and tip.) Use a ski pole, wall, or partner for support. Then in motion -

2- Hold poles horizontal; progressively tip the poles and shoulders to the outside

3- Slide downhill hand from the hip to the knee (combine with ankle flex for the “flex and tip” drill.)

4- Put hand on knee and continuously increase pressure on outside knee

5- Put hand on hip and progressively push the hip inside the turn

6- Cross- put poles on shoulders with hands or arms on top of poles; compare to arms by sides

7- Outside hand pushes the inside knee inside the turn

8- Focus on internal tasks such as touch the downhill rib to the hip, raise the inside hip, raise the inside shoulder, drop the downhill shoulder, or tip the head to the outside of the turn(back vs hip)

9- Progressively angulate until the tip of the downhill pole touches the snow and increase pressure on the pole tip until the end of the turn

10- Hold poles like pointers with arms horizontal; progressively angulate until the downhill pole touches the snow. Watch for angulation that is too soon or too quick.

11 -Ski below the student pulling on the end of their poles to help them create angles

12- Extend poles like outriggers to touch the ground and match the slope angle

13- Turn on the outside ski only, then the inside ski only, and then ski on just one ski.

14- Finish edging later( more completed turns) closer to the next crossover point. More vertical movement by progressively flexing the knees is necessary to keep COM moving downhill

Knee angulation task for small turns:

1- Side slip edge sets with pole touches vary the tempo; focus on ankles, knees or toes.

2- Moon turns – lock the downhill edge and ski across the hill.

3- Edge lock – start in a wedge then simultaneously lock one edge then the other. These can start from a wedge turn for wedge locks.

4- Crab walk – step from edge lock to edge lock in a wedge.

5- Hop turns – hop from edge set to edge set with the skis parallel.

6- Weeble wobble – roll from inside to outside edges in a straight run.

7- Hockey stops

8- Partner pull – lead skier pulls the follower using poles; rear skier makes small turns.

9- Railroad track turns.

10- Make hard pole touches.

11- Hold poles below the grips.

12- Tuck turns

13- Edge the inside ski first; compare to edging both simultaneously.

**Rotary movements (turning feet active and passive)**

1**-** Statically lift one ski and turn it

2- Traverse steering both feet uphill

3- Do a fan exercise with steering movements

4- Steer the start of a GS turn (Stivot)

5- Straight run then pivot to side slip, slide straight downhill to show weight is centered

6- Linked pivot slips weight on downhill ski when release, keep facing downhill

7- Hold poles as a window frame vertical in each hand, focus on fixed target below.

8- Linked hockey stops

9- Link steered turns

**Vertical Movements**

1) Static move up and down while centered over the middle of the ski

2) Traverse with moving up and down while staying centered

3) Fan moving down and staying centered

4) Link turns with a lot of up and down staying centered

5) Pivot slips with a lot of down and up, maintain straight path to show centered

5) Leapers and almost leapers

6) Compare extension to retraction turn

7) Retract both legs at the fall line

8) Finish edging well after apex, use progressive knee flex to keep COM moving

Task for small turns-

1- Statically jump with hard verse soft landings.

2- Make small turns with a lot of smooth down and up, and then make a quick down with a hard stopping of the down motion.

3- Hop turns with hard then soft landings.

4- Bounce through the turns.

5- Quick down motion with strong steering and hard edge sets and in mogul drills

**Rhythm and symmetry (holistic tasks when linking turns)**

1- Change the rate or amount of pole swing

2- Make soft pole touches

3- Just the swing with no pole touch

4- Just touch one pole

5- Put both poles in one hand but make normal pole touch motions with the empty hand.

7- Synchronized skiing; then ski turning opposite to the leader

8- Ski from large to small turns and back

9- Ski three small, then three medium turns, keep repeating the pattern.

***Private lessons***

Most private lessons are taught during the day on weekdays, weekends, and holidays, but they can be arranged at the customer's convenience. New instructors normally use the student lessons as a guide for what to teach. Some students live close by, so it is possible to establish repeat business all season. Provide clear goals and precise feedback .

**Introduction** - Make eye contact, smile, and be enthusiastic. If it is a child, greet the parents and get down to the child’s level to say hello, be sure to use their name. Check their gear to see if they are dressed properly, their boots are comfortable, properly buckled, and flex well. Ask about their experience in skiing or other sports.

**Goals** - Most students just want to improve and will leave it up to you to decide what to do. Ask if they have a specific goal, maybe it is getting ready for a trip or skiing steeper terrain. Develop a plan to reach their goals. Encourage them to ask questions. Always keep them safe especially on chairlifts and heavy traffic areas, and be sure to have fun!

**Personalize** - Everything is custom tailored for each customer. There are many different approaches that can be used such as working directly on parallel skiing rather than starting in a wedge with athletic students, especially if they have a lot of roller blade or ice skating experience.

This can be done with fan exercises or in the fall line on gentle terrain.

By focusing on small wedge turns with more speed; wedge skiers can move directly into parallel turns. On gentle terrain with speed, focus on early weight transfer when making incomplete turns. Adding some down and up can also help introduce matching the skis. Then add pole touches.

Teach turns that will work best for the student. Older or nonathletic students who ski infrequently and want more control do not need to learn how to carve the top half of their turns. A skidded turn with some edging later in the turn will work well for them. If they are on fat powder skis with rocker, you may want to work on more steering movements to skid the skis.

The hardest things to change can be getting a skier in a good stance, and then progressively flex their ankles. This is made even harder if the skier has very stiff boots. Some people also have a limited range of motion flexing their leg toward their foot, this is called dorsal flexing.

Spending time on stance and progressive ankle flex can be good so they understand it and have an exercise for it, but the greatest change will probably be focusing on turning the feet, creating angulation. You can also explore turn size, shape, and speed.

Everyone learns in their own way, some like to watch then ski, others want to follow you, and some prefer to have you give verbal instructions from behind as they ski. There are ways to categorize how people learn; thinkers, doers, watchers, and feelers, but that is just a starting point in private lessons. Become very aware of the unique qualities of each person, how do they respond to feedback and how much of an issue is fear. All students are different; one may learn almost instantly what takes weeks for another.

Talk with them throughout the lesson about their friends, family, pets, school, or other interest. Give them your undivided attention, so keep your phone in your pocket

**Summarize** - At the end of a private lesson, briefly review what you worked on and talk about what you would work on next. Thank them and invite them back. If the lesson was with a child,

Do this with the parent present. Sometimes great progress is made, but there can also be little if any change. Some students expect that a lesson will quickly improve their skiing, but normally it takes more effort especially if there are ingrained habits; or if the student is not athletic and does not ski frequently. The frequency, duration, intensity, and type of practice will affect their rate of improvement. Help them create clear goals and understand the process of improving.

***Student Lessons for patches***

Children must be at least 7 years old to be in the program. Patch lessons are taught to school groups weekday evening at 5 pm - 6 pm and 7pm some Thursday and Fridays. Pine Knob has patch lessons on Sunday evenings at 4 pm. Children receive a special lift ticket which restricts where they can go until they pass the required lesson. Keep your customers safe! If any children are a discipline problem, correct the behavior. Never swear or act unprofessional in front of customers. Imagine their parent is there, because what you say or do will get back to them.

**Fun**

Make your lessons fun! Think of your customers as friends you hope will love the sport. Share your passion and excitement. Keep them moving, give short explanations/demos, and make the feedback positive and encouraging. Provide a lot of feedback especially when they are successful: good, great, that’s it, you got it!

**Improvement**

The skiing moves we teach replace natural movements the customers make. Skiing movements are not intuitive, they take a lot of time and work to develop. Most of the students will not ski enough or have enough feedback to develop ski moves. So even though we teach ski moves, we need to be realistic about how well they are performed when grading.

Most of the customers ski only a few times each season. It is an activity for them, not a sport they practice daily. You may only give each of them brief feedback during a lesson, then they might leave and have no practice time, or ski with their friends and reinforce their natural moves without feedback. Even if they try to work on what you taught them, it is hard for them to know if they are doing it right.

**Grading**

They will not ski like you when grading them. So look for: the ability to make turns to control their speed, the maneuver you taught, and some improvement in their ski moves. If they are a bit more centered, rotating less, and can tip their upper body a bit to the outside of the turn by the end of the program; that would be success.

It may be weeks between their lessons, the snow conditions may be different, and they may be on different skis, so the customers may not to perform as well as when they earned a patch. This is why it is it is important to go back as far as necessary and review.

**Overview**

Most people have a hard time flexing their ankles, so teach them how to turn their feet. Ski straight downhill with some speed and turn both feet a little one way then back downhill; and then turn to the other side. Turning will pressure the ski. If they can flex their ankles try that approach too.

Right from the first turn we help people develop a feel for how the ski works to make turns. When one ankle is flexed the ski responds by turning, and the person makes the connection between flexing their ankle and turning. They also feel their body automatically move downhill when they stop flexing the ankle which releases the edge of the ski, because that is where their momentum is going. Students ski straight down the hill with some speed and make a very slight turn, and then go straight, before turning again. This helps to prevent rotation.

**Time management**

Finish on time, some parents leave immediately after the class. It could be ten or fifteen minutes after the hour by the time you have a class assignment. Figuring the time it takes to move the class, wait in lift lines, and do the grading, you might have less than thirty minutes to work with a large class. Make sure your customers know how to get back to the lodge if on Quicksilver.

**General Points**

Customers need a lot of feedback especially in the first couple of patch lessons. This is not the time for follow the leader except to move from place to place. Save that for Kindersparks or private lessons.

1. Introduce yourself, and speak loudly enough for all to hear.
2. Collect lesson tickets. Put in a secure place. You are not paid for lost tickets.
3. Know how many are in your class and periodically check to make sure they are all with you.
4. Be encouraging at grading time, especially with children who are about to cry.
5. In case of an accident; shelter the injured student, send for help, don't move the student, look for any witnesses, talk about the details only with ski patrol and the ski school director
6. On first chair explain how to get on and off. Only two ride at a time and hold onto the chair. Ask for help from lift operator, and slow chair down if necessary

**1- No Patch-** stopping and turns

**Walking**

Speak loud, say your name, and check boots, gloves, hats, clothes. Know how many skiers you have, make sure they follow you. Poles can help if they have them; walk on one ski if necessary.

Ask if their feet hurt, pull pants out of the top of boots, and loosen buckles if necessary.

**Static practice**

1- Skiing stance**-** Compare standing tall to a skiing stance over the center of the ski (flex ankles, knees, waist, and back; feet apart, hands in front, looking downhill). Always say start this way!

2- Flex ankles in a skiing stance- flex forward with the ankles; then return to the centered position, not bending the waist. Demonstrate, provide feedback, and if necessary assist.

3- Wedge- make a small wedge, do one ski at a time if necessary, then make a bigger wedge.

**Stopping**

1- Side step and make a straight run in a skiing stance. If students have trouble side stepping go to wonder carpet. The key is knees pointing uphill so skis grip. Make small, slow, even steps. This helps them stand on and walk across a hill too.

2- From a straight run in a skiing stance push the tails of the skis apart evenly. Don’t lean back. Try pointing the big toes at each other, some speed makes it easier. Provide feedback: hands up, look downhill, forward, good! Knees apart like sitting on a saddle. Position them if needed.

3- Use the wonder carpet. Make three wedges in a row, then two, then one. Use some speed and make several runs. Don’t rush to turning, they need to get the feel of sliding and making wedges. Look for a good stance in the **center** of the ski as the speed increases. The wider they make the wedge, the greater the stopping power. Problems: leaning back at the ankles or waist, driving the knees together, crossing tips. Correct mistakes with static comparisons of what they are doing verse what they want to do. After the wonder carpet, show them how to use the rope tow.

**Turns**

1- If they have been having trouble flexing their ankles try turning their feet first. Start skiing straight downhill turn both feet slightly, then back downhill, then in the other direction.

2- If they are having trouble turning their feet, have them try flexing one ankle to turn the ski.

Practice statically facing the same direction they are. Show which ankle they should flex first. Help them flex if necessary. Be sure they flex and not edge or flatten the ski. Start in a skiing position with speed by counting 3 seconds. Flex ankles for a slight turn, stop flexing to go straight, then flex the other ankle. Pattern is straight turn straight.

3- Keep student moving in a loop so they don’t have to wait for ones having trouble. Stop as a group for a demo and new instructions. Provide a lot of individual feedback, especially good job!

**Safety**

End the lesson with a short review of skiing stance, wedge, and the two ways to turn. Tell students how far they should go uphill, and that they must be in control to stop or turn around any skiers in front of them. Ask if they have questions and tell them to have fun!

**2- Yellow Patch-** better wedge turns

**Review**

1- Students may have only skied one time several weeks ago, so they are basically a first time skier. Ask who has used the rope. Statically review, stance, ankle flex, stopping flex. Give feedback and help. Provide a lot of help getting on and off rope. Keep them moving.

2- Wedge stops- hands up, look downhill, forward.

3- Turns- ski straight downhill in a skiing stance with some speed, turn both feet slightly, go straight, then make a slight turn in the other direction.

**Wedge turns**

1- Stay low on the hill until for several runs. In a skiing stance, ski straight downhill for three seconds before turning, slight turn-straight-slight turn. Give them a specific number of turns to make, go from 3 to 6, and then make 10 smaller turns in the same distance.

2- Mix the turn sizes, 3 big 3 small, then 3 small to three big, or 3 big 3 small 3 big.

3- Three turns to a stop. Use a lot of feedback and positive reinforcement

 **Option 2**

1- Try flexing ankles to make the ski turn. Stand in a wedge facing the same direction as the students. Show them which ankle to flex first. Make sure they are flexing forward and not edging the ski, or making the ski go flat. Flex the right ankle for a left turn, and flex the left ankle for a right turn. Ski straight downhill in a skiing stance with some speed and make slight turns.

2- Tipping exercise- Flex ankle and slide the hand from the pocket toward the knee (flex and slide,) or just flex the ankle and touch the knee. Or flex ankle and bounce 3 times on each ski.

3- If necessary combine flexing the ankle and turning, or turning and flexing the ankle.

**Grading**

1- Work up to a steeper part of the hill if the class is ready. If the whole class is ready go to the chair. If not, grade on the rope. Explain how to use the chair.

2- Tell students where they can ski with a yellow patch, and that they must ski in control to avoid the skiers below them. Tell them where to go to buy the patch.

3- Make 5 turns to a stop. Have students ski down one at a time. If they don’t earn their patch, tell them why and what they should practice.

**Yellow patch hills**

Mt. Holly- up through Grant's Trail chair

Pine Knob- up through the beginner chair

**3- Brown Patch-** parallel in second half of turn

**Review**

1- It may have been several weeks or last season since a student has skied, and some may not have been taken to the chair in their yellow class, so start on the rope tow. Ask who has used the chair. Teach how to use the chair. Much of this lesson can be reviewing wedge turns.

2- Skiing stance, ankle flex, stopping, and turns. Some kids may already be matching.

**Wedge christie**

1- This is the first step toward parallel skiing, when the skis start matching in the second half of a turn. Using a small wedge, ski straight downhill in a skiing stance for three seconds. Begin making slight turns and matching may occur naturally.

2- Try turning both feet or flexing the ankles to make the turns. Watch for students being back, using too large of a wedge, or rotating. Focus on transferring weight to the outside ski.

3- Practice matching the skis actively by standing across the hill in a narrow wedge. Flex the downhill ankle and tip the upper body over that ankle (flex and tip.) Then match or steer the uphill ski parallel. Try pushing down on the little toe of the uphill ski, or roll the ankle uphill, if it has too much edge

4- Speed - ski straight down a gentle part of the hill in a narrow wedge with some speed, the pattern is: flex-tip-match. Be sure they don’t turn so far that they slow way down. If a student matches earlier or skis parallel, don't make them match later.

**Grading**

1- Tell students where they can ski with a brown patch, and that they must ski in control to avoid the skiers below them.

2- Grade on the flatter part of the hill, use a centered skiing stance, some speed, and a small wedge. At Pine Knob ski Cedar Bowl if they are ready.

3- Make 5 wedge christie turns to a stop. Have students ski down one at a time. If they don’t earn their patch, tell them why and what they should practice.

**Brown Patch Hills**-

Mt. Holly- Up through Woodward

Pine Knob- Up through chairs 1, 2, 5, 6 slopes- Quicksilver and Cedar Bowl

**4- Blue Patch-** Parallel by the fall line

**Review**

Skiing stance, ankle flex, and wedge christie on a gentle part of the hill.

**Wedge christie 2**

1- Ski on a gentle part of the hill. Using a small wedge, ski straight downhill in a skiing stance for three seconds, make turns and focus on transferring weight to the new outside ski early. Matching may occur naturally in the first half of the turn before the fall line (pointing downhill) which is a wedge christie 2.

2- Static exercise on a gentle slope; stand in a narrow wedge with skis pointing downhill at a steep angle, and plant both poles downhill for support. Transfer all the weight to the uphill ski and match the skis. Upper body moves downhill toward poles. We are now starting the top half of the turn first.

3- On a gentle slope, use a steep traverse and a narrow wedge. Transfer weight and match the skis, just as in the static exercise. In the second part of the turn, flex the ankles and tip (angulate.) The ankle motion is like pushing or stepping on a gas pedal to start and letting off to finish. The pattern is - step, match, then flex and tip. Turn both feet if they can’t flex their ankles.

**Exercises**

1- Fan - Start in a shallow traverse with the skis parallel, flex the ankles and tip (angulate) to make an uphill christie. Then use a steeper traverse

2- Fan - Focus on inside lead, as they flex the ankle and angulate.

3**-** Introduce pole use ***-*** Have students bend their elbows and hold their hands in front of them. Swing the poles using their wrists. Then just swing the downhill pole, touch it to the snow by moving in that direction. Use the right pole before a right turn and the left pole before a left turn. The proper sequence is touch, match, and turn. If there is time they can try making turns with a pole touch. Focus on up touch and turn to develop timing and coordination.

**Grading**

1- Tell students where they can ski with a blue patch, and that they must ski in control to avoid the skiers below them.

2- Grade on the flatter part of the hill, use a centered skiing stance, some speed, and a small wedge. Focus on an early weight transfer to the outside ski.

3- Make 5 wedge christies 2 turns to a stop. Have students ski down one at a time. If they don’t earn their patch, tell them why and what they should practice. Make sure they can get back to the lodge.

**Blue patch hills**-

Mt. Holly- All but Lightning and Thunderbolt

Pine Knob- Up through chairs 1, 5, 6, same as brown patch

**5- Red Patch-** parallel turns

**Review**

Skiing stance, ankle flex, wedge christie 2

**Parallel Turns**

1- Statically**-** On a gentle slope plant both poles below the downhill ski, stand with skis parallel at a n angle point downhill, and weight on the downhill ski. Transfer weight to the uphill ski and move downhill using the poles for support.

2- Link turns*-* Ona gentle slope use a steep traverse and make less completed turns. The pattern is weight transfer to start, then flex ankle, and tip to finish. Turn skis if they can’t flex ankles.

Students regress on a steeper hill by leaning back, rotating, leaning inside, or reverting to a wedge, so develop confidence by first skiing faster on a flatter slope.

3- Pole touch*-* Statically review swinging and touching the downhill pole as the weight is transferred (move toward the pole touch.) Add to the turns, the sequence is swing, touch, and turn.

4- Inside lead- statically practice creating inside lead. Then do fan exercises; from a gentle traverse advance the inside half and come to a stop (uphill christie.) Next use a steeper traverse.

**Exercises**

1- Fan- uphill christie with horizontal poles to help create inside lead

2- Uphill christie - on a steeper slope. Students will lean back, rotate, and lean in on a steeper hill. Work on uphill christies (second half of the turn) to establish a sense of control and progressive ankle flexing and tipping (or turning of the feet if necessary.) Focus on any weak basic; stance, ankle flex, tip (angulation,) and inside lead, or steering. Also watch for excessive knee flex.

3- One turn- On a steep slope do one full turn to a stop to build confidence and maintain good basics. Focus on a good start and finish. Then link turns with smooth up and down.

**Grading**

1- Tell students where they can ski with a red patch, and that they must ski in control to avoid the skiers below them.

2- Grade on a steeper part of the hill to be sure they can control speed. Watch out for high school racers.

3- Start from a traverse, make the top half of a parallel turn first. Link 5 turns with pole touches. Student can be a bit back, but turning their feet or flex their ankles should replace most of the rotation, and some angulation should be visible.

 If they don’t earn their patch, tell them why and what they should practice

**Red patch hills**

Mt. Holly- All but Thunderbolt

Pine Knob- All but the Wall

**6- White Patch-** slightly bigger and faster parallel turn

**Review**

Stance, ankle flex, parallel turns (stance, weight transfer, inside lead, flex ankle, tip; or steer)

**White patch turns**

1- Are slightly bigger and faster parallel turns. The focus is on speed control, so the edging finishes well after the fall line, and can have some skidding. This is different than the GS turns a high school racer makes, which are faster and finished closer to the fall line.

2- Uphill Christies*-*from a steep traverse flex the ankles and tip more slowly to make a larger arc, but keep the flexing/tipping progressive (not park and ride.) Practice in each direction. Watch for traffic, these can be dangerous if there are a lot of high school racers on the hill.

**Exercises**

1- If there are problems making larger turns, go to a flatter slope to increase the size and speed first. Make slower movements for larger turns.

2- On a steep slope, perform uphill christie exercises focusing on any basic that needs work, stance, inside lead, ankle flex, or tipping (angulation/edging.): or steering

3- Do opposite and extreme exercises to increase awareness and break old movement patterns. Make turns flexing way forward verse back, compare rotation to inside lead, compare leaning inside to angulation, use a lot of knee flex then just a little.

4- Make some turns that are more completed, and then make less completed turns. Do this by changing how long you edge the skis (duration.) The rate of your movements should stay the same, so the size of the turn will be about the same. Smooth up and down with pole touches.

**Grading**

1- Tell students where they can ski with a white patch, and that they must ski in control to avoid the skiers below them.

2- Grade on a steeper part of the hill to be sure they can control speed. Watch out for high school racers.

3- Start from a traverse, make the top half of a parallel turn first. Link 5 larger and faster turns with pole touches. Student can be a bit back, but turning their feet or flex their ankles should replace most of the rotation, and some angulation should be visible.

 If they don’t earn their patch, tell them why and what they should practice

**White patch hills**

Mt. Holly- Entire area

Pine Knob- All but the Wall

**7- Black Patch-** small turns and mogul skiing; the wall at Pine Knob.

**Review**

Stance, ankle flex, white patch turns.

**Small turn exercises-** small turns use quicker moves with more knee angulation

1- Side slips- Find a steep smooth steep slope. Practice knee angulation exercises statically. Then do side slip edge sets, and then add the pole touch, do in each direction.

2- Side slip pivots**-** Face a target at the bottom of the hill. Ski straight downhill and pivot the skis. Keep the upper body facing the target while side slipping straight at it. Pivot to a side slip in the other direction.

3- More edging exercises**-** Moon turns, edge locks, crabwalks.

4- Pressure control exercises**-** static jumping with hard verse soft landings, hop turns, fast small wedge down the fall line with quick weight transfers, skis automatically match.

5- Small turns- Make some small turns. If at Pine Knob try a lower part of the wall. Start with an uphill christie with pole touch facing downhill (The second half of the turn first, also called pre-turn) this will establish a sense of control. These small turns are for speed control with skidding the edging finishing well after the fall line.

6- Turn Shapes- Make more completed small turns and then less completed ones. More completed ones will be especially important for turns on the Wall at Pine Knob.

 **Mogul skiing**

Lift one knee at a time toward their chest to show how to absorb moguls, then compare that to bending forward at the waist. Traverse a few bumps to practice absorption. Flex low on top of the mogul and extend in the valley. Then work on the proper line, drive the feet down the back of the moguls. Steer and edge on the downhill side of the mogul to control speed. Keep the hands up and forward making solid pole touches. Start with the last few moguls to show the proper path, and then work up the line.

**Grading**

Tell students they must ski under control. Most just want to get to the terrain park, so control is more important than great execution.

1- Small turns with pole touches

2- Ski one line through the moguls to a stop.

3- At Pine Knob make small turns under control from as high as possible on the Wall. Pick a place that is not too bare, icy or bumpy.

**Black patch hills**

Black patch skiers can ski all runs at both resorts.

***Kindersparks***

Kindersparks is a program for kids ages 4-12. The program is offered Saturdays, from 1:30 pm to 3:00 pm. In addition to Kindersparks, many private lessons are taught to children. Safety and fun are major concerns when working with kids. Coordination and behavior depend on a child's age, but this can vary greatly in individual cases. Use a lot of imagination and create games to make learning more fun. Take time to talk with parents so they know what you worked on and how their child did. Kindersparks clinics provide many useful ideas for teaching children, here are some basics.

**Connect-** Get down on their level, look them in the eyes, smile, and say their name. Some kids have a hard time relating to adults or strangers and some may not want to take a lesson, so be excited and let them know how much fun they will have. Ask them questions so they get comfortable talking to you. You might ask how old they are, what games /sports they like, do they have brothers or sisters, do their friends ski, do they have any pets, and what is their favorite game, show, or book. Your energy and personality are important. Be playful and have fun!

**Problems-** Take breaks when necessary especially in the cold weather to use the bathroom, get a hot chocolate, or play in the snow. You can’t fix every problem, but sometimes a break helps.

**Props-** Cone are used for setting a slalom course. A hula hoop or slalom pole can help you work with kids who have problems walking, getting up (have them do most of the work,) or slowing down. Tip ties can help with stopping. The T-bar made of racing gates will help them stop.

**Games-** Walking and gliding on the flat with one ski; switch feet, and turn around poles. Walk with both skis. Statically, pretend to jump on a trampoline or diving board to develop a good stance.

**Straight run**- Do the trampoline bounce it in a straight run. Draw a line in the snow to jump over. Be a giant then midget. Put hands on knees, or hips. Make orange juice with their shins.

**Stopping**- Show them what to do so they see it first. If necessary position them in a wedge and ski backwards holding their tips together, have them go from French fries (parallel) to pizza slice. Make three slices in a row. Then make one stop half way down. Finally ski French fries all the way to the bottom (on wonder carpet hill) and then make a pizza slice and orange juice.

**Turns**- Show very slight turns. If necessary you can ski backward and have them look at you. When they turn their body to look at you, their feet will turn too. Add speed and turn a bit more across the hill with each turn. Try pointing the feet one way, downhill, then the other way.

Do bunny rabbit turns; make a pizza slice have everyone raise the same hand and hop on that foot. Ski downhill in a pizza, raise that hand and bounce on the outside ski, then hop on the other side. Ski downhill in a wedge and make orange juice with one ski then grape juice with the other, which juice do they like best!

Make a pizza and imaging you have twinkies in the front of your boots. Squeeze the cream out of one side then the other. Ski downhill in a wedge and do it again. Then eat the cream!

Try playing follow the leader, you can ski backward if necessary to coach them. Change the leader if the kids are getting it. One at a time have the kids make a certain number of turns and count as they turn. Then change the number so they have to make either larger or smaller turns in a given distance.

***About Instructing***

Most people teach part time as a way to improve their skills and interact with others who share their passion. It is also a way to earn some extra money and make the sport more affordable. But it is very important that you enjoy helping people learn.

**Season**

 The season usually starts on Thanksgiving and runs through early March. Periods of rainy weather or extreme cold can interrupt the season. Christmas through the second week of February is the busiest time. If you take a winter vacation, plan it as late as possible. March is when conditions at the larger resorts are the best. Early December is an important time to clinic.

**Programs**

Student patch lessons are given to groups of school children on weekday evenings. Kindersparks are provided for children on weekends. Adult league racing and Thunderbolt racing are offered evenings and weekends. Private lessons are taught mostly during the days.

**Schedule**

Each season you must submit a schedule. Four days are requested, but a minimum of three days per week must be worked. Weekday evenings from 5 pm - 7 pm and weekend mornings starting at 9 am are the busiest times when you're needed the most. Any extra days you can work are helpful, especially during holidays

**Requirements**

1. Instructors are independent contractors, so you are responsible for buying your own equipment and ski school Jacket. You do not receive health insurance, workers compensation, or unemployment. Instructors must purchase liability insurance from the ski school. New instructors go through a trial period when they are evaluated on their work habits, involvement, attitude, and ability. Instructor status is usually achieved after several weeks of acceptable performance.
2. Instructing is more casual and fun than other work, but you must remember that it is a real job and treat it as such. Teaching requires hard work and commitment of time. Be on time to work and call when you can't come in. Maintain a professional appearance and keep your uniform clean. Be polite, courteous, and helpful to all the customers and employees at the resort.
3. All instructors, new and returning, should re-evaluate the reason they want to be instructors. If you don't love teaching, or if other priorities prevent you from meeting ski school requirements, you should reconsider your participation.

**Policies**

1. You are responsible for your lesson tickets and will be paid only for what you turn in. Submit them on Monday, and receive a check on Thursday.
2. Sign in and out every time you are at the resort. Any time you are at the resort, we may ask you to work if a need arises.
3. No guests are permitted in the instructor's room. You are allowed to keep only one set of equipment (snowboard and skis) in the instructor's room. Remove your equipment before the end of the season. It will not be safe during the summer.
4. Instructors are not allowed behind the ski school desk unless asked to help out.
5. You are not permitted in the bar before 9 pm.
6. The ski school uniform must be worn: jacket with ski school pass
7. Always listen for pages and frequently check if instructors are needed, especially when the resort is busy.

**Training**

You can always improve your teaching and skiing. As you improve, instructing becomes more fun and rewarding. Customers who were frustrating become an interesting challenge and achieve greater success. Private lesson customers may return to take more lessons so you earn more money!

Review this manual and watch the online patch lesson videos at [www.instructorssite.com](http://www.instructorssite.com)

Hour long patch lesson review clinics will be offered early in the season. Instructors are required to take two patch clinics for the lessons you teach most, but we encourage you to take as many as you like. Review the instructor’s manual before taking the lesson.

The review clinics will be taught as the leader would teach a real group of customers so you will receive feedback as you do your demos. But there will be a brief explanation of why something is being done. The review clinics should be no larger than six people so everyone can receive good feedback.

Other clinics that are about an hour long will be offered on a variety of topics, most of the clinics will be offered in December.

**Instructor Evaluation**

Instructors are randomly evaluated throughout the season so we can identify teaching areas that need improving. Emails are sent to the entire staff with recommendations for improvement.

***Racing***

Our Thunderbolt Racing program provides race training for kids. Training is offered weekday evenings and weekend for a variety of ages and abilities. NASTAR racing happens on weekends. Adult league racing is Monday night at Mt. Holly, and Tuesday night at Pine Knob.

Racing requires good technique and tactics. Tactics is finding the fastest line through the course and it takes a lot of practice. Carving a tight line at the gate to reduce the distance skied is the goal, but a common problem is skiing too direct and turning late below the gate and skidding. Sometimes racers purposely skid the start of a turn to stay on a tighter line. Even if they lose a little speed, the shorter line can still be faster. Skidding in the top half of the turn loses less energy than skidding later in a turn because the forces are lower.

An important tactic in racing is trying to carve early in a turn so most of the turn is completed by the by the gate. This requires a lot of inclination in the first half of the turn, and angulation at the apex that creates level shoulders. The key is not turning too much or little above the gate.

***Skiing Principles***

**Turning** - Skis have an hour glass shape called sidecut (narrow in the waist.) If the ski is put on edge and pressured, it bends into an arc to make a turn. Skiers can also use active or passive rotary movements to pivot or steer the skis. So the ski turns you or you turn the skis, or both.

**Forces -** Motion is normally in a straight line, when turning, forces build and can push skiers uphill so skiers tend to brace against the force. Progressively flexing the ankles and creating angulation keeps the skier’s momentum moving forward and downhill relative to the skis. The force increases with speed, steepness, and type of turn.

Think of the body separate from the skis. This is also referred to as the center of mass (COM) and the base of support, the COM can be in front of the skier. The body can be discussed in two parts, upper and lower, and they can work in opposite directions.

There are two types of forces in skiing, internal and external. The external forces are gravity and resistance from the snow and air. Internal forces are created by the body. Things move in a straight line unless some force changes their direction (inertia.) When the skis turn pressure increases as the body tries to go straight. Pressure is greater later in a turn when, gravity and centrifugal force begin to work in the same direction.

Pressure is needed to bend the skis, but there can be so much pressure that the skis will skid or chatter. To reduce the pressure, distribute it more evenly between the skis, use some down motion, or end the turn sooner.

Momentum moves a skier downhill when the edges are released. We can absorb any rebound and allow our skis to cross under our body, or extend toward the next turn and cross over our skis. The closer to the fall line the turn is ended, the greater the momentum is downhill over the skis.

**Turn parts-** Turns can be divided into at least two parts. The first half is from the crossover point to the apex, the furthest point of the turn. Then from the apex to the next crossover point is the second half. This describes a turn relative to the skis, but the skier starts moving in a straight path when the edges are released at the apex or later.

In the first part of the turn the skier’s body moves inside the new turn and starts edging the skis. The skis turn a skier until the edges are released. Then the skier start to move in a straight path while the skis continue turning until the next crossover point.

The longer edging movements are made past the fall line, the more the upper body moves across the hill and works against gravity. If the edges are released closer to the fall line, the skier’s inertia will move the skier downhill sooner for a quicker crossover.

**Size and shape** - Turns have a range of sizes from small to large. Speed is controlled by the shape of the turn, which means turning more across the hill; or the skis can be skidded. These are the two main characteristics of a turn; size and shape.

In small turns, skiers travel straight downhill while the skis turn beneath them. Small turns require quicker movements and more knee angulation. When making large turns, the skiers actually turns and follows the skis until they are released. Small turns can be made at slow and fast speeds, just like larger turns.

**Four types of Movement**

These four moves affect how we **edge**, **rotate, and pressure** (fore/aft, ski to ski, overall,) our skis. Think of a body in two parts, an upper and lower half.

**Fore/aft**- moves maintain balance in the center of the skis, adjust pressure on the front and back of the skis, and can keep momentum moving forward relative to the skis. The ankles, knees, waist, and back play a major role. Most skiers will lack ankle flex, or flex their knees too; soon, quick, or long which reduces progressive forward movement for the next turn. Progressively moving forward and angulating, keeps the momentum moving toward the new turn.

**Side to Side** – moves are also called lateral movements and include weight transfer from foot to foot, inclination (the body moving inside to start the new turn,) and angulation which is tipping the upper body to the outside of the turn. Most skiers will naturally lean inside the turn and don’t add the angulation (this is called banking.)

Inclination and angulation control edging. Inclination occurs in the first part of a larger turns as inertia moves a skier inside the new turn. This passive movement can be supplemented with an extension of the new outside leg (long leg.)

Then angulation continues to increase edging and maintains lateral balance so you don’t fall inside the turn, and maintains upper body momentum to the outside of the turn. Angulation can be created from the feet to the neck, but more knee angulation is used for small turns and hip angulation is used more in larger turns. Angulation should be progressive to the end of the turn to maintain the downhill momentum of the skier.

The rate of edging movements controls the size of a turn, quicker moves make smaller turns. How long edging movements are made determines how far across the hill a turn is made. Keep clear the difference between rate and duration, they are not the same.

**Up and Down** – moves are also called vertical movements; they adjust pressure and affect the lateral range of movement. Extending the new outside leg as the edges are released begins to apply pressure which increase throughout the next turn. Moving down can absorb the increasing pressure faster, slower, or at the same rate it is building. It can also maintain the non-stop movement of the body downhill when pressure builds quickly from moguls or deep snow.

In racing turns where most of the turn is in the top half of the turn, there is usually not much down motion, until retraction after the edges are released. But when turns are completed later, the pressure can get very high and create a skid or push the skier back if it is not absorbed. Moving down also allows more knee angulation. When the edges are released the pressure can be absorbed, or skiers can extend through the transition.

Vertical moves can change the overall pressure on the skis. Moving down quickly reduces pressure at first and then increases it as the down motion stops. For every action there is an equal and opposite reaction, so if the down motion stops abruptly the energy rebounds and can un-weight the skis. Moving up quickly increases pressure at first, then decreases it near the top of the up motion which is another way to un-weight the skis.

Some skiers have a tall stance and not much vertical movement, but others have low stance and can move down too far. A low stance feels stable and allows more lateral motion for knee angulation, but it also is harder to resist the force of the turn.

The lower position results in a square stance, which means the upper and lower body are facing the same direction, so there is no inside lead (also called counter, parallel position, anticipation, strong inside half, upper lower body separation.) This makes it hard to angulate, so the skier will often brush the outside ski downhill to find the edge (called an abstem.) These skiers have a hard time making quick small turns because they cannot quickly stop the down motion.

**Rotary** – moves produce an internal turning force to pivot or steer the skis. Pivoting is turning about the vertical axis of the body, such as hopping up and turning the skis. Steering is done by turning the feet over a longer period with weight on the skis, as when making a turn.

Rotary moves can be active or passive and they can occur in the upper or lower body. Skiers often rotate their upper body in the direction they want to turn, especially if they not moving forward and using their skis to turn. But turning the upper body first is how people move when they are walking, so it is very natural to rotate on skis. At the end of the rotation the turning force is transmitted to the skis. Rotation makes it hard to angulate.

In small turns the lower body turns under a stable upper body that is already facing downhill. It produces a wound up position with the lower body facing across the hill and the more massive upper body facing downhill. When the skis are un-weighted they automatically unwind or pivot to face downhill like the upper body. For every action there is an equal and opposite reaction so the upper body will start to rotate at a slower rate in the direction the skis were facing. A pole touch will block this rotation of the upper body.

**Timeless versus trends**

When shaped skis became popular in the 90’s; it allowed much of the turn to be done in the top half of a turn rather than the second half. Many new theories about technique were introduced then which were not correct, but are still taught by some instructors. Instruction has a history of creating new techniques from a time when there were many different techniques. This tendency to produce new theories is still common in instruction, even though the basics of good technique have not change for a long time. The challenge is a solid execution of the basics. But skiing is not intuitive, and people can have a hard time feeling how they are actually moving, so it takes clear goals and continuous precise feedback to ski well.

Here are some of the theories that were incorrect: ski more centered with less tip pressure, stay square with less inside lead, use equal pressure on both skis when racing, edge the new inside ski first, make only cross under turns with retraction and no crossover turns with extension, make only carved turns with no skidding, keep shins parallel throughout the turn, (but there is so much inclination in some turns that a new type of “A” frame occurs in the top half of the turn; and it is created by the inclination rather extreme knee angulation in the second half of the turn which created the original “A” frame.) Full rockered skis may require less tip pressure, but the body still needs to move forward relative to the feet to use the whole ski.

***PSIA***

The Professional Ski Instructors of America (PSIA) is an organization that creates teaching methods, skiing techniques, and certifies instructors in these techniques. With PSIA certification an instructor can earn a bit more money and teach higher level lessons at some resorts.

If you decide to pursue PSIA certification, understand that the student lessons at Mt. Holly and Pine Knob are different. Mt. Holly and Pine Knob instructors should focus on becoming very competent at teaching the student lesson program. If at some point you want to get PSIA certified various clinics will be available.

Keep clear the differences in the programs so you can pass your PSIA exam and teach the student lesson program properly, you will have to be good at both and not confuse them. PSIA has a strong focus on the edging, steering, and pressure movements of the new inside ski at the start of a turn. This is very different from our focus on maintaining the momentum of the upper body, and using the new outside ski to turn with early weight transfer, and progressive ankle flex and angulation (flex and tip). This uses the ski and builds offensive movements right from the start. Steering is very important for the vast majority of skiers who will not ski enough to make offensive movements and use the front of their skis. It is also valuable for certain situations.

***Your Responsibility Code***

The National Ski Area Association has developed this list of items for safe skiing. Every instructor should know this list.

1. Always stay in control and be able to stop or avoid other people or objects.
2. People ahead of you have the right of way. It is your responsibility to avoid them.
3. You must not stop where you obstruct a trail or are not visible from above.
4. Whenever starting downhill or merging into a trail, look uphill and yield to others.
5. Always use devices to help prevent runaway equipment.
6. Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
7. Prior to using any lift, you must have the knowledge and ability to load, ride, and unload safely.

***Resources***

1- NBC and NBCsn for World Cup Ski racing

2- Ski Racing online- <http://www.skiracing.com/>,

3- FIS ski racing web site - <http://www.fis-ski.com/uk/disciplines/alpineskiing/>

4 - Video analysis helps the instructor analyze and students understand, PC or

V1 app. for Apple and Android devices [www.v1sports.com](http://www.v1sports.com)

5- US Ski Team training videos and CD’s- <http://educationshop.ussa.org/>

6- PSIA- [http://www.psia.org/](http://www.psia.org/%20)

***Mt. Holly******& Pine Knob***

***2013-2014 Instructor's Manual ®***

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***Understanding your customers***

Children who are in lessons can be over confident and want to progress too fast, but some will be afraid and need a lot of encouragement, so pacing is important. Read your customers and keep the pace fun but safe.

Adults taking lessons usually are beginners or they just want a bit of improvement. They don’t have the time or desire to pursue expert skiing. Try to get the most from the time you have.

Most skiers use the tail of their skis, rotate, and bank. Work on stance and ankle flex, but move on and work on inside lead and angulation. Turning the feet will be a good option for many because it is so hard to learn how to use the front of the skis.

 ***Improving***

The best ski racers receive coaching daily, but only about 15 percent of skiers have had a lesson. Most skiers take natural movements they use every day and apply them to skiing. However skiing moves are not intuitive; they can be opposite our natural movements.

Some people think skiing is easy and just takes time. Others ski only a few times each season enjoying the fun, freedom, and social aspects of the sport, they are not trying to become great skiers.

It is hard for those who do want to improve to know how well they are doing because skiers don’t keep score like golfers. Some think they are experts when they can ski expert terrain. It is not easy to know what to work on, or evaluate how well you are doing.

Even with clear goals, skiers are often moving very differently from how they think or feel they are moving. Years of skiing with natural movements reinforces these moves and creates habits that are even harder to change, so skiing frequently is not enough.

Some people who do want to improve don’t take lessons because they can be expensive. Others have been confused with over technical teaching, did not like the feedback, or thought the lessons were not effective. Good instruction can eliminate these problems and help skiers understand what it takes to improve.

A few simple ski moves are needed, but they take years of practice to develop and constant effort to execute, even for the best skiers. Each change in terrain, conditions, and speed challenges these moves. Improving requires clear goals and specific feedback.

***Natural moves***

These are natural movements people make every day that they apply to skiing.

1- Leaning back

2- Turning the upper body in the direction of the turn

3- Leaning the upper body inside the turn

People will lean back when standing on a slope facing down so their back is vertical. This maintains balance without skis, but it puts skiers on the tail of their skis. Fear can also cause skiers to back up as well as their feet moving before the body. Without pressure on the tip of the skis, skiers will rotate more to help the skis turn.

When walking, people lead with their shoulders to make a turn. This is what they do on skis, it is called rotation, and it reduces edging as the hip moves forward. It is also harder to create hip angulation.

People lean their upper bodies inside a turn to resist the force to the outside of the turn. This reduces the amount of edge they can get compared to using angulation near the finish of the turn. Angulation increases edging, maintains balance by directing more force into the hill, and maintains the offensive movement of the body to the outside of the turn.

Understanding natural moves provides a framework to understand and analyze skiers. When a skier makes a turn, the force increases and the snow pushes back against the skier. This can move skier back more, increases rotation, and leaning of the upper body inside the turn.

All three of these moves keep the upper body from smoothly moving forward and over the skis toward the next turn.

***Ski Moves***

What to Teach

Skiers can turn their skis or the skis can turn the skier; and turns can be a combination of these two.

The key moves are keeping the body progressively moving forward and to the outside of the turn relative to the feet as the skis are edged. This is done with a progressive flexing of the ankles and tipping the upper body to the outside of the turn which is called angulation. For short we call these moves (Flex and tip)

This applies pressure to the tips of the skis to help them start the turn. It also keeps the skier’s body is moving continuously toward the new turn so it helps start the next turn when the edges are released.

Three additional moves are: a skiing stance, weight transfer, and inside lead.

 To remember the moves think **S.W.I.F.T**

1- **S**kiing stance- flex ankles, knees, waist, and back over the center of the ski; hands in front

2- **W**eight transfer - to the new outside ski

3- **I**nside lead- advance the new inside ski tip, hip, shoulder, and hand

4- **F**lex ankle- pressures the ski tip and keeps the body progressively moving forward

5- **T**ip (angulation) - progressively tip the upper body to the outside of the turn

The skier is in a good skiing stance with most of his weight on the outside (left) ski-



A turn can end at the apex or later. When the edges are releases the body starts moving in a straight path over the skis. The skis keep turning until the crossover point for the next turn.

The later the edging is finished after the apex the more vertical movement is needed to maintain the offensive movement of the body toward the next turn.

***How to Teach***

Knowing what to do is different than knowing how to do it. To teach a move or exercise:

**Demonstrate and explain** - Focus on one movement. Demonstrate statically while giving a brief explanation.

**Provide feedback** - Have the students perform statically and provide feedback as they perform. If the student can’t make the move, physically help them. When they ski, give feedback as they perform or immediately after they finish. Make specific comments such as: more ankle flex, less knee flex, or good when they do it right! Feedback is a critical part of teaching; it requires a lot of concentration.

***Evaluate*** (Movement analysis)

Most people ski on the tail of their skis, rotate, and bank. Look for the upper body moving in a defensive direction back and inside the turn.

Each time the slope get steeper skiers have to adjust or they will be back when they progress to intermediate or advanced slopes. Fear and increased speed plays a large role in leaning back.

Skiers can lean back at their back, waist, or knees, but the joint closest to the ground that has the largest effect on fore aft movement is the ankle. When people first put on ski boots, they find it hard to flex their ankles which can make it even more difficult to get centered.

One move can cause another, so look for the cause not just the visible effect. Natural moves make the upper body go back or inside the turn, rather than moving forward and downhill.

More advanced skiers can be harder to evaluate. Try looking for offensive moves from the cross over point in the transition when the skis are flat. Have the student ski past you to get the front, side, and rear view. Look at the skier’s body; is it moving offensively (progressively flexing and tipping) or is it moving defensively: back and inside before the edges are released.

Problems with flexing the knees are very common. Knees can be flexed too soon and too quick, usually as an alternative to flexing the ankle. As a result the body moves back and down rather than forward and downhill.

Also check for symmetry problems, right handed skiers tend to turn better to the left, and left handed tend to turn better to the right.

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