



LEVEL 100 COURSE: ALPINE SKI FUNDAMENTALS

INSTRUCTOR'S MANUAL

Edition 12/9/2014

Welcome Instructors

The USSA Sport Education clinic instructor embodies the ideal of an educated, experienced and certified coach. As a clinic instructor, your role encompasses a variety of responsibilities: from organizer and leader, to teacher and evaluator. The many hats you wear are indicative of your professional reputation, training, and the high expectations placed on you by the United States Ski and Snowboard Association (USSA). The clinic instructor is the representative of the educational program for the national governing body of alpine skiing.

As the representative of USSA, you are expected to conduct yourself with the highest standards of personal behavior. The host ski area and ski club are to be treated with courtesy and respect at all times. The instructor conducts him or herself with the knowledge that ski racing exists at the good will of the ski area and that ski clubs are asking for more and more assistance from the ski area for training space and time, including the necessary terrain to support that effort. Every action must be undertaken to maintain or improve the working relationships between USSA and the host ski area and ski club.

The **key** professional attributes of an instructor are:

- A passion for skiing and competition
- An awareness of current ski racing issues, trends, and resources
- A sincere interest in the professional development of all participants
- A thorough understanding of and enthusiasm for the clinic curriculum
- A concern for the safety and well being of all participants
- An organized plan and timely clinic presentation
- Communication skills that are enthusiastic, engaging, and inclusive
- A professional appearance and conduct that sets the standards for participants to emulate

The lesson that USSA Sport Education has learned, from hundreds of evaluations from past clinic participants, is the educational value and ultimate success of a clinic is in direct proportion to the quality of, and delivery by, the clinic instructor. Candidates comment again and again on how their instructor brought the material to life, making it relevant to their needs, whether in the classroom or on-snow. Even though the content represents the best of the U.S. Ski Team (USST), it needs to be delivered in a manner that illustrates how the USST expects the best coaches to coach.

Level 100 Alpine Ski Fundamentals Course

This course is designed to be the first step in the formal education process for alpine ski coaches, covering the fundamentals of alpine skiing at the core, while also introducing the topics of philosophy, coaching style, coaching ethics, pedagogy, communication, learning styles, progressions, feedback, alpine competition rules, the Alpine Training System and long-term athlete development, and about the tools and resources available to coaches through the USSA Sport Education program. There is much to cover in a short period of time. The instructor's goal should be to cover the fundamentals thoroughly, and give the participants in the clinic base knowledge along with motivation to learn more about the supporting topics.

At the conclusion of this 14 hour course, the participant will be able to:

- **Lead, manage and inspire a group of athletes**
- **Create yearly, camp, lesson, and drill plans**
- **Understand the concepts of the skiing skills identified in the SkillsQuest skiing assessment**
- **Demonstrate the SkillsQuest skiing exercises in phases 1-3 to a podium level**
- **Evaluate skiers using the skiing skills model**
- **Develop basic progressions to teach and correct skiing skills**
- **Understand and present the USST philosophy and principles of athlete and coach development**
- **Exhibit a passion and love for skiing**

Instructors are urged to manage the clinic as they would a group of racers learning new skills, with an energy and commitment that is immediately felt and contagious. A coach is a teacher who works with people who want to learn. Leave the clinic with the knowledge and satisfaction that, as an instructor, you did all that was possible to make it a valuable professional learning experience.

CLINIC RESOURCES

The content for the clinic is based around the fundamental skill areas that make up the SkillsQuest skiing assessment – pressure, edging and rotary. Participants should be familiar with the SkillsQuest program and know how to access its materials. Participants will receive all of their clinic materials online through the Alpine Ski Fundamentals course on the USSA Sport Education Center (<http://my.ussa.org/ussec>). The primary resource here is the Level 100 Alpine Coaching Manual which covers the alpine ski fundamentals, concepts of long-term athlete development, coaching principles and more. Participants are expected to review this manual on their own time and are asked to be familiar with its contents prior to the clinic. Clinic and classroom time should be spent bringing important topics from these resources to life through hands-on practice, group discussion and reflection as much as possible. In addition, participants are expected to use USSA Center of Excellence TV to access over 100 coaching tips and drill ideas (all USSA members have full access, non-members may subscribe to the full collection at the USSA Education Shop (<http://educationshop.ussa.org>)).

CLINIC FORMAT

The clinic consists of 10 hours on-snow and 4 hours in the classroom. The objective of the Education Department is to have the schedule set prior to the clinic, to inform the candidates of the schedule (through the website at registration), and to adhere to the schedule if at all possible. However, the schedule can be distributed or altered in any fashion that will make the clinic fit the time needs of the participants, the site, or complications with the weather. A generic clinic schedule is presented here, with the understanding that circumstances (ski area complications, adverse weather, or other factors) may require a change in the schedule. Any schedule change is left to the discretion of the clinic instructor(s).

Indoor (classroom) - Used to discuss USSA philosophy, the Alpine Training System (ATS) and SkillsQuest, the USSA Sport Education Program, USSA Competition Guide and Rules, and review of the alpine ski fundamentals.

On-snow – A day and a half or some combination of 10 hours of on-snow time is used to cover the content outlined in the clinic schedule that follows.

Level 100 Clinic Policies and Procedures

Age – All candidates must be 16 years of age by the first day of the clinic.

Pre-registration – All participants must pre-register with the USSA Sport Education office. Registration information is available at www.ussa.org. The registration deadline is seven days before the clinic.

Medical Emergency during the clinic – If a non-life threatening injury happens during any part of the clinic, contact the appropriate medical services immediately. Complete a **First Report of Accident** form and mail it to: USSA Human Resources Department, 1 Victory Lane, Park City, UT, 84060. If a life threatening or very serious injury occurs, phone Athletic Vice President, Luke Bodensteiner, first at 435.647.2055 (office), or 435.640.8541 (cell). Next call The Human Resource Director, Shauna Vanderlinden, immediately at: 435.647.2003 (office), 435.645.9295. USSA will not refund any fees after the first day of the clinic.

Injury or Illness (missing the clinic) – The participant should send a letter or email from a medical doctor, on the doctor's letterhead, to USSA for review, to see if any portion of the fee can be refunded.

Pre-Clinic Activities

Haley Smith, with the host area, will finalize all plans for both the indoor and on-snow portions of the clinic. The clinic information will be posted on the coaches education webpages.

Clinic Roster:

A roster will be emailed to clinicians several days before the clinic unless the clinic is full and the list can be generated one week prior. The instructor is encouraged to follow up with an email of their own to the participants with a greeting and any additional information to help your participants feel welcome and excited to take part.

USSA Educational Clinic Material:

All course materials are delivered to the participants electronically through the Level 100 online course. Haley will enroll each participant in the online course when registration for the clinic is closed. Ask the participants at the clinic if they have logged in and if they have any problems, have them contact Haley. Clinicians should have notebooks for the participants to hand out, if you don't have any contact Haley.

Key Site Requirements:

Lift ticket price, purchase and distribution location to be determined – Haley's responsibility. Haley may ask the instructor or host contact for help to negotiate with the ski area for a free or reduced ticket. This information will be posted on the on-line registration page. Instructor will be notified of the ticket policy.

Meeting location and time to be determined – Haley's responsibility. Since Haley will post the location, meeting time, complete schedule and ticket information, the location will be determined with the host area contact (and instructor if need be). Instructor will be notified of the location.

Classroom location & facilities to be determined – Haley's responsibility, with host contact and/or instructor. A quiet room with seating for all participants; preferably close to the on-snow site. Desks or tables would be optimal. Dry-erase board or flip chart and screen (or white wall is a necessity) would be useful.

On-snow – The instructor will select a specific area(s) to implement appropriate areas for drills and free skiing exercises. Ideally, the site should contain a wide variety of teaching terrain (flat to steep and all snow conditions) to demonstrate on. In addition, a closed area for setting drills (a ski club's training hill) is desired.

On-snow – Athletes to demonstrate drills: Instructor responsibility: contact host / ski club; find out their training schedule so you can watch athletes in training for movement analysis. **This is not a required part of the clinic**, but would enhance the learning experience.

Equipment:

LCD projector & Laptop – For classroom presentation of USSA CDs. Haley will assist in locating a projector for the instructor's use. Instructor should verify with Haley prior to the clinic.

USSA Sport Education Contact Info

Mailing/shipping address: USSA Sport Education, PO Box 100, 1 Victory Ln, Park City, UT 84060

Fax number: (435) 940-2790

Email: education@ussa.org

Staff contacts:

Haley Smith, Program Coordinator	435.647.2050 (o)	435.640.1576 (c)
Ron Kipp, Alpine Sport Education Manager	435.647.2049 (o)	435.714.2923 (c)
Jon Nolting, Sport Education Director	435.647.2078 (o)	435.602.9828 (c)

USSA CRITICAL INCIDENT COMMUNICATIONS

The USSA is a sports organization with business activities spanning the entire globe. As a major world-class sports organization, the USSA is in the public spotlight. Any incident, large or small, carries with it the opportunity for public exposure. It is the responsibility of every USSA athlete and staff to be aware of the potential for incidents to have impact on the organization.

Critical Incident Communications

The USSA maintains a simple, straightforward incident communications procedure. It involves a single point of contact in the USSA office for the immediate reporting of any incident, large or small. From that initial point of contact, determinations will be made as to what next steps are appropriate.

The simplicity of the system is such that anyone in the field who is involved in an incident need not think or worry about anything other than managing the situation at hand and making one simple contact to the USSA to report. USSA management will oversee all further communications.

Critical Incident Examples

Given that the USSA is in the public spotlight, even the smallest of incidents may result in public impact. In every case, contact should be immediate. Examples include:

- Any emergency in which the staff or athletes require immediate assistance
- Any level injury or accident involving any national team athlete or staff
- Any public or private incident or altercation involving any athlete or staff
- Any vehicular incident involving athlete or staff
- Any potentially controversial comments or situations involving any athlete or staff
- Any situation where an athlete scheduled to compete cannot start

Communications Procedure

1. Incident occurs
2. Athlete or staff stabilize and manage situation on-site
3. Immediately upon stabilization (minutes, not hours) contact Luke Bodensteiner USSA EVP, Athletics.

Luke Bodensteiner

Office: 435.647.2055

Mobile: 435.640.8541

Home: 435.654.1460

If unable to contact, then:

Tom Kelly

Office: 435.647.2010

Mobile: 435.602.9799

Home: 435.649.6704

1. USSA EVP, Athletics will evaluate situation and make determination on next steps
2. USSA EVP, Athletics will make all next contacts including USSA CEO, Medical, Communications, Legal, etc.
3. **ANY PUBLIC COMMUNICATIONS WILL COME IMMEDIATELY FROM USSA COMMUNICATIONS ONLY, BASED ON EVALUATION WITH USSA EVP, ATHLETICS AND/OR MEDICAL DIRECTOR.**
4. Any private communications will come immediately from respective areas, based on evaluation with USSA EVP, Athletics.

ON-SNOW SCHEDULE & COACHING POINTS

This is a proposed schedule – Haley and the instructor should determine ahead the final schedule, copy and distribute if possible. The schedule may change depending on the lift operation schedule.

By the end of the day the coach will have an understanding of:

- Rules-of-thumb for a general skiing stance
- Balance/Equilibrium with regards to fore/aft, side-to-side, and rotational balance
- An appreciation for the dynamic aspects of technique
- Identify fore/aft balance and demo pertinent drills for improvement
- How to manage and adjust pressure
- Identify side-to-side balance and demo pertinent drills for improvement
- Identify rotational balance and demo pertinent drills for improvement

Day One

Arrive: At least 1 hour before the clinic begins for set up and preparation to greet participants (may need to arrive the night before).

8:00 a.m. – 8:10 a.m.

Registration: (meet in designated area) There is no formal registration, check off attendees on the registration list sent by USSA.

8:10 a.m. – 8:40 a.m.

Introduction - First meeting – may take place indoors or out, try for indoors for 30 minutes – quiet corner of the base lodge or classroom.

Welcome – Your name and experience with USSA Sport Education, participants introduce themselves - home area, brief coaching/racing history, what age/ability level athletes they coach (for instructor's information as well as participants).

Overview – State the goal of the clinic: to develop into great ski racers one must first be a great skier, this clinic will focus on becoming a great skier. Review the two days, schedule, classroom location, and any on-snow issues. Let them know that safety will always be a primary concern for the group and the individuals involved. If at any time they feel uncomfortable doing a drill or any other aspect of the day, they should feel free to excuse themselves from that aspect of the clinic.

8:40 a.m. – 9:00 a.m.

Warm-up & Group Dynamics – Ask for volunteers (or select one or two participants) to lead a group warm-up, while waiting for the lifts to open.

On-snow: Ski racers (and coaches) cannot learn without skiing! For the instructor, there is always a fine line between how much time is spent explaining the drill/concept and taking the time to comment on everyone's skiing, and skiing. There is no easy answer; it depends on the ski and experience level of group, weather, snow, etc. This may be the most important component of the entire Level 100 Club Coach clinic: the clinic participants should leave understanding that racers will improve their skills the most by skiing, even if they do not fully understand every little technical element. The coach's role (and instructor's) is to exhibit a passion for skiing so that the racers

(and participants) leave excited to come back for more. Having said that, a clinic with coaches only may result in a little more time spent talking than skiing (tell them this ahead of time, warn them against using excessive talking when back with their athletes).

As coaches, we don't have complete control over all of the factors that determine athlete participation, enjoyment, and finally sport retention. However, the one critical element a coach does have control over is their own enjoyment of skiing and ski racing and how they demonstrate that passion. This is particularly relevant for younger racers (and coaches) who are just beginning or "testing" the sport.

9:00 a.m. – 12:00 a.m.

Free ski warm-up as a group

30 min: Free ski in a group as a warm-up, instructor observing and evaluating overall level of participant's skiing skills. Begin to explore ski area, main training area, and any other on-snow issues. If the group is made up of participants from all over, instructor may want to suggest specific ski warm-up exercises: SL turns, GS turns, a variety of turn shapes, etc. Learn the participants' names.

General Stance

30 minutes: Start with key features or rules-of-thumbs for a "general stance". Be sure coaches understand that "stance" is a very dynamic and it will change with every moment of the turn. Specifics of stance are a product of the environment and situation only. Rules of thumb that can be used for a reference-of-correctness:

- Feet are hip width apart
- Ankles are of even flex
- Center-of-mass is above the feet
- Back is rounded
- Hands are held out and in front of the body
- Vision is forward
- Muscles are in tension but not stiff

Balance/Equilibrium

1 hour: Experiment with positions/postures/motions that effect balance. Include fore/aft, side-to-side, and rotational situations that get athletes into balance problems. Ask them what they see in their athletes, and try and mimic these techniques. You can include:

- Skiing extremely forward and back
- Tipping in at start and end of turn
- Rotating the hip, shoulder, and entire body to start the turn
- Tip to rotate (use for cause and effect)
- Rotate to tip (use for cause and effect)

Fore/aft Balance

1 hour: Spend some time with specific drills. The object is not just to check the drills off the list but to leave the coach with a level of mastery that they can impart a good demo to their athletes. If the group is of a low skill level, it would be better to concentrate on fewer drill with the objective of some level of mastery. Use one or two of the drills and break them down into a progression so the coaches can see the logic of a progression.

- Statically leaning far forward and moving far aft-ward
- Push and pull on ski tips
- 1000 steps
- Backwards skiing
- Hop turns with tips on snow
- Hop turns with tails on snow
- Hop turns switching between tips and tails on snow
- One ski skiing
- Patience turns
- Skating
- Skiing in moguls
- White Pass turn

Pressure Control

1 hour: Ski terrain, moguls that will challenge ski to snow contact. Ski turns that reduce in radius and turns that increase in radius. Ski turns that have flexion in the lower body and turns where the lower body stays at the same length and turns where the lower body extends during the turn. Encourage coaches to try determine where the pressure is in the turn. Some pressure control exercises:

- 1000 steps slow, fast
- Airplane turns landing lightly
- Falling leaf
- Fish hook shaped turns
- Flexion/extension during long turns
- Large radius turns with multiple snow sprays
- Leg extension during the turn
- Leg flexion during the turn
- Long radius turn in the moguls
- Shuffle feet forward and back during the turn
- Ski 50/50 between left and right ski
- Ski 60/40, 70/30, 80/20, 90/10
- Skiing in the crud
- Step turns from downhill ski only
- Step turns from uphill ski only
- Turns on the flexion
- Whirlybirds
- White Pass turns

Side-to-side balance

1 hour: Explore the needs for inclination and angulation changing with speed and radius. This is a good time to also start to sneak in the what body mechanics it takes to angulate as this will come back around in the rotation section.

- 1000 pole plant exercise
- 1000 steps
- 2 step turns
- Arms crossed across chest with short turn
- Changing corridor
- Changing radius
- Double pole plants
- High tuck turns
- Long radius turns in the moguls
- Schlopy drill
- Sideslip drills with edge sets
- Step turns
- Swallow
- Synchronized skiing
- Traversing with downhill hand on downhill knee
- Wedge turns emphasizing angulation
- White Pass turns

12:00 p.m. – 12:45 p.m.

Lunch – Summarize the morning, explaining how the pieces are starting to fit together. If you cannot eat lunch together let the coaches know where and when to regroup. Be aware some coaches may have brown bag lunches. Lunch is a good time to talk with participants and ask them how the clinic is going. You can also answer specific questions in more detail with time to give more philosophical rationales for some coaches seeking further justification.

12:45 p.m. – 3:30 p.m. (or 4:00 p.m.)

Free warm-up run

Take one or two runs to warm-up. Hopefully you have created or stimulated a lot of thought within the coaches. This is a good time for them to sort out some of the morning endeavors.

Summarize the morning again.

Ask again for questions and let them know what the afternoon brings.

Rotational balance

1-2 hours: This is the most difficult section to comprehend, and with extreme side-cut ski, a generation may see rotational balance as irrelevant. You may need to spend additional time to stress its importance. You can demonstrate by pushing on a shoulder or hip of a skier standing still. As you push a countering of your push is provided by the standing skier. Point out that something needs to be done by the skier or they will just spin in circles. (If you need more background check out the Level 300 GS DVD and script).

Exercise to explore rotational balance:

- Double pole plants
- Hands in front holding shafts of poles horizontally like a tray
- High tuck turns
- Hockey stops
- Wedge swing hops
- Counter rotation emphasis
- Emphasis on facing down the hill
- Garlands
- Hands folded across chest
- Hands in front
- Hands in front as if holding a tray
- Hands in front holding pole shafts vertically like looking through a window
- Hands in front of body
- Javelin turns
- Moguls
- Pole plants with bamboo gates
- Ski poles strapped on hips
- Turns on outside ski only
- Wedge swing hops with matching
- Zottos, Pole walks, Speiss, Hop turns
- Zottos, Pole walks, Speiss, Hop turns without poles

Technique

2-3 hours: Now that they have learned to separate movements you can start to put them back together and concentrate on the blending and timing of movements. Incorporate a movement analysis section here. If athletes are available use them. If not you can use the group for the movement analysis. Direct them in their analysis to specifics. Such as; "does the athlete re-center and *then* cross over?" or "where in the turn does the leg extend?" or "where is the weight (percentage of inside or outside ski) when they release their edge?". Ski a lot in this section. Everyone has "their" turn. This is a great opportunity for them to have fun breaking down dependent aspects of their technique. Can they only plant one pole? Can they flex or extend in differing parts of the turn?

4:00 p.m. – 4:30 p.m.

Break between on-snow and classroom session – set up for indoor session. Note: Instructor should decide ahead whether or not to have a late afternoon (4:30 – 8:00pm) classroom session or an evening (6:00-9:30pm) session. Location of classroom may be an issue, if it is a fair distance from the ski area. Dinner is also a factor for a late afternoon session; encourage participants to snack before coming to the classroom. Frequently, the host club will order pizza or the instructor will organize a pizza dinner (ask all participants to contribute a small amount, or pay for all of it, and submit receipt to Haley for reimbursement).

TYPICAL CLASSROOM SCHEDULE/COACHING POINTS

3-4 hours: This indoor section covers skiing fundamentals and teaching concepts. For the skiing section this is where drills and exercise that were learned, performed, practiced and mastered are given greater life. While the goal on the hill was execution, the indoor goal is understanding. Drills in which the skis were tipped up on their sides are now seen as edging drills.

Day Two**8:30 a.m. – 9:00 a.m.**

Meet (same place – depending on lift opening time – could be earlier) Group warm-up – ask for different volunteers or set up the night before so they are prepared to lead the group.

9:00 a.m. – 12:30 p.m.**9:00 a.m. – 9:15 a.m.:**

Review day one – Ask participants to explain what they felt were the key concepts they learned and demonstrate if possible. Ask if there are any questions – something they don't understand or don't agree with. Deliberate practice was touched upon during the indoor session. Re-emphasize this aspect of training and how it pertains to your day. Mileage is important, but deliberate mileage or practice is where learning and improvement comes from. Practice can be made deliberate through challenge of the task or conditions, but many times it is the mental aspect to the turn. For example, rotation of the skis for an advanced skier is easy. Although to maintain a WALL it takes a continual cognitive feedback during every part of the turn. Remember that the WALL is not an average position throughout the turn but an exact position for every moment of the turn. This could be a segway into the rotational balance review.

Note: if all of day one's content could not be accomplished, you may want to use some of this time to finish it.

9:15 a.m. – 9:30 a.m.:**Rotational balance review**

30 minutes: The coaches have had time to think and reflect about rotational balance. Now that you know the coaches a bit better see if you can review or present the concept in a different format.

Phases of the Turn

The class room portion broke up turn phases by ski actions and technique. While amorphous in nature it can be used to describe gross motor movements in the turn. Spend a bit of time asking for specific problems the coaches may see and how these relate to phases of the turn. Be mindful for cause and effect. At this level inexperienced coaches will come up with effects. Rewind these backwards so they can start to tease out the causes. For example; the athlete that ends up on his inside ski at the end of the turn. Was it from banking?... or was it from the over-rotating earlier in the turn which lead to the banking?

9:30 a.m. – 10:00 a.m.:
Pole usage

This is the easiest aspect of technique to see because it is set apart from the skis and the body. Poles usage is a dilemma in that their action needs to have a independent aspect while at the same time be able to contribute to the timing and rhythm of skiing. For example we don't want the athlete that can only initiate or release their edges or transfer their weight after some sort of arm/pole movement. Meanwhile we want the athlete that can utilize the pole to assist movement of the center-of-mass into the turn or assist with stabilizing the upper body during an edge set. Be sure and cover pole two types of pole action; one that coincides with edge release/center-of-mass movement and the other with a pole touch or plant that coincides with edge set.

10:00 a.m. – 10:30:
Gliding

Aerodynamic and ski/snow interaction. We don't want to be screaming around the mountain in a tuck, but we do want the coach to be able to demonstrate and appreciate the critical aspects of an aerodynamic or tuck position. This is probably best learned or examined statically. Check for parallel skis and vision forward. Explain that every body type will have a slightly different position, but there we want to present a small frontal area to the wind. Therefore hands are used to break or pierce the air and while the rest of the body follows in this hole made in the air. You can start to bring in ski/snow interaction with regards to the tuck that is over constricting will not allow lower body movements necessary for optimal ski snow interaction. With this in mind have the coaches move into and out of a high and low tuck.

For the ski/snow interaction, have the coaches experiment with making round carved turns with minimal ski penetration. Also experiment with pressure in differing parts of the turn and what influences that has on turn shape.

Jumping

By now you have explored the mountain and seen what features, natural or man-made, are available. These do not necessarily need to be used but can create conversation as to the advantages there use can afford the developing athlete. We include jumping bullet points in the indoor lecture and these can be also performed statically.

10:30 a.m. – 1:00 p.m.
Teaching segment

Each coach should get the opportunity to lead the group. They should have something in mind after the classroom presentation. This should be delivered in a progression of two to four steps. The idea is that they need to demonstrate their "coaching" skills for Level 100 and this will provide the group a greater opportunity to gather additional progressions. Remember that this group of coaches may have limited experience, so there may be repeat drills. Use these instances to break drills down further or extend the learning into a more advanced stage.

1:00 p.m. -1:30 p.m.:

Designed as a review period and finishing any drills still remaining or one final free skiing run working on participant skiing skills.

1:30 p.m.

Wrap-up

Brief review, collect anonymous participant evaluation forms to be returned to Haley. If available distribute CD-ROM sales form, Q & A. Encourage participants to follow through on earning their Level 100 certification. Thank all participants, hosts, ski area, ski club, & assistants.

Take a few minutes in private to hand out the USSA Level 100 Skiing Fundamentals Evaluation to each coach. Discuss their skiing skills and recommendations for their next clinic (Course Setting, Level 200, or other suggestions).

After Clinic is Over:

- Email Haley list of attendance if anyone was added or did not attend.
- Let Haley know if anyone did not meet the skiing standard – a copy of the evaluation form on page 16 must be attached for anyone not meeting the standard. If you don't have a copier on-site, you can use a scanner app on your phone and send that copy to Haley. It is important that the participant and USSA have copies for those who don't pass.
- Send Haley your receipts and expenses within seven days of the clinic.

USSA LEVEL 100 SKIING FUNDAMENTALS EVALUATION

Clinic Date: _____

Clinic Location: _____

The Level 100 Ski Coach is able to demonstrate to a Bronze level through Phase 3 of SkillsQuest:

This would imply, but not necessarily involve, skiing each individual drill in Phase 1, 2 and 3 of SkillsQuest. In other words the coach has demonstrated the skill level needed to perform at the bronze level by the conclusion of the Level 100 clinic.

Free skiing on intermediate terrain the Level 100 Coach exhibits:

Stance:

- ☐ Fore/aft positioning appropriate to phase of the turn
- ☐ Equal flexion in both ankles
- ☐ Alignment of the knees, hips and shoulders in a parallel relationship
- ☐ Outside ski dominant

Pressure control skills:

- ☐ Maintain ski-snow contact with both skis
- ☐ A gradual increase in pressure to the outside ski in linked round turns of varying radius
- ☐ Able to adjust to terrain variations without disrupting balance

Edging skills:

- ☐ Begin tipping of the skis from the uphill edges to the downhill edges before turning the skis toward the fall-line
- ☐ Progressive increase and decrease of edge angle through the turn in groomed and ungroomed terrain
- ☐ Utilize ski side-cut as a component of turn shape and speed control

Rotary skills:

- ☐ Quiet upper body
- ☐ Maintains a WALL relationship established by and efficient equal ankle flex
- ☐ Rotation of the lower body is within or from the hip joint(s)
- ☐ Can release the old turning ski without a weight transfer to the new ski

Suggestions for continued improvement:

_____ ☐ Has ☐ Has not,
demonstrated the skiing skills to be qualified as a USSA Level 100 Coach.

Printed name and signature of USSA Clinician

Date

Level 100 Certification Requirements

Attendance of this clinic does not fully complete the requirements for Level 100 certification for coaches. In the folders sent for each participant there is a document that explains these full requirements to complete the Level 100 certification. Please review this with your coaches and encourage them to finish these steps so they are ready for the next level of training.

Requirements for certification:

- 1) Level 100 - Alpine Ski Fundamentals Course: attend the course, pass the ski evaluation and written exam (see below).
- 2) First Aid/CPR certificate: Pass and maintain certification, send (or fax) a copy to USSA Sport Education. Any recognized course will do, there are a wide variety of classes available in all communities. Email to education@ussa.org, or fax to 435.940.2790, or mail to USSA Sport Education, PO Box 100, Park City, UT 84060.

Criteria for – Skiing Evaluation: The candidate for Level 100 needs to be able to demonstrate skills to a bronze level through Phase 3 of SkillsQuest: This would imply, but not necessarily involve, skiing each individual drill in Phase 2 and 3 of SkillsQuest. In other words the coach has demonstrated the skill level needed to perform at the bronze level by the conclusion of the Level 100 clinic. Furthermore, they must demonstrate that they have the physical fitness to maintain a high level of skiing performance throughout the entire 10 hours of the clinic. There is no formal ski exam process. The candidate is evaluated during the entire clinic on their overall skiing skills as well as drill demonstration abilities. The instructor will notify the Sports Education department (Haley) of any failing coaches and must send in a copy of the skiing evaluation form on page 16. Instructors should offer feedback to all the candidates on their skiing, both positive attributes and areas needing improvement. For a failing candidate, the instructor should keep detailed notes on his or her skiing weaknesses for immediate feedback to the candidate.

Criteria for – Online Exam: The exam is included with the Alpine Ski Fundamentals online course that each participant is enrolled in prior to the clinic. Encourage the participants to follow through on taking the exam. The exam will cover topics from the USSA Level 100 Alpine Coaching manual, indoor presentations, and the on-hill activities along the current USSA Alpine Competition Guide rules and regulations. The test is an open book exam. It should be completed within a year of the course, but strongly encourage the participants to finish it right after taking the course.

Criteria for - Failing any part of the exam process is considered non-certification: **Skiing:** If the candidate does not pass the skiing portion of the clinic, the candidate must attend, at their cost, the Level 100 Alpine Ski Fundamental clinic again until their skiing skills meet the certification criteria (the cost would be 50% off (\$80.00), plus lift ticket). They do not have to retake the written portion if they have previously attained a passing mark. **Online Exam:** If the candidate receives a failing mark twice, they may, at their discretion, retake the written exam for a fee of \$20.00 (two attempts) until they achieve a passing mark.

Maintaining Certification – To maintain certification, a coach must have a USSA coaches membership, and every two years, take one continuing education unit (refer to the USSA.org Sport Education website for further information on continuing education requirements).

Rules and Regulations Review

The purpose of this section in the indoor presentation is to impress upon coaches they need to learn the rules in the Alpine Competition Regulations (ACR) section of the USSA Competition Guide and if their athletes are competing in USSA events, should teach their skiers important basic rules such as proper gate passage, interference rules, continuing after a stop, and reruns. **This is best learned through the USSA referee course, offered by the divisional or state officials committee in the early season.** There is not time in this clinic to cover all the topics.

Review these points regarding single pole SL:

- Where must both outside pole and turning pole be installed? *Start, finish, delay, combinations (hairpin, flush, vertical)*
- What is the definition of "gate line" for single pole SL? *Imaginary line from turning pole to turning pole*
- What is the definition of "clear passage"? *Skier follows the natural race line **above** the turning pole*
- How far does a hiking competitor have to hike after missing a single-pole gate? *Back up and **around the top** of the turning pole*

The rules for interference, provisional starts, and reruns are often misunderstood by coaches. You can review these questions with the coaches:

PROVISIONAL STARTS OR RERUNS: When making a determination on the validity of a provisional rerun, the Jury must evaluate the following, many of which are included in the very clear provisions of 623:

1. Did the competitor cross the finish line?
2. If obstructed while racing, did the competitor stop immediately and apply to any member of the Jury for a rerun?
3. Does the claimed obstruction meet the requirements of 623.2 – Grounds for Interference?
4. Did the claimed obstruction cause significant loss of speed or lengthening of the racing line and consequently affect the competitor's time?
5. Was the competitor's request for a rerun not valid because they had committed a fault (gate fault or start procedure fault) prior to the obstruction/interference? (628.7)
6. Does the Gate Judge have any comments or notes? (666.1)
7. Any competitor who is granted a "provisional" start or run must be reminded of its provisional nature. Granting a "run"/"start" and not clarifying its "provisional" nature will not allow the Jury to address the validity of the competitor's request.
8. Only the Jury can validate a provisional start or run.

There are no provisions in USSA/FIS rules that allow for the penalization of a competitor who is having a slow run and who is subsequently granted a provisional rerun because of an obstruction as defined by the rules.

RERUNS REQUIRED BY BROKEN GATES: Every case must be checked individually; the Jury on site is the only group that can decide, based on the particular and detailed circumstances, if interference occurred.

INTERDICTION TO CONTINUE AFTER A COMPETITOR STOPS: If a competitor comes to a complete stop he must no longer continue through previous or further gates in events with a fixed start interval (GS, SG and DH). The exception is in SL, as long as the competitor does not interfere with the run of the next competitor or has not been passed by the next competitor.

If time allows, review these questions from the Alpine Referee Study Guide. Encourage the coaches to find the specific rule references in the Competition Guide – Alpine Competition Regulations to support their answer.

1. A racer falls, misses a gate and hikes back up. Because of the delay, a course worker mistakenly believes the racer is DNF and moves into the race line. The racer, who is back on course, sees the course worker, stops and immediately skis out and requests a provisional rerun based on interference. His provisional rerun is successful and the Jury must now decide whether or not to confirm the rerun. What issues must the Jury address? Does the fact that the racer had to hike prior to the interference have any bearing on the Jury's decision? What is the racer's status? ***Assuming the racer hiked the appropriate distance and was not disqualified prior to the interference with the course worker, the rerun will stand, if it is a slalom race. The fact that the racer hiked before the interference has no bearing on the validity of the rerun as long as the racer legally passed the gates prior to the interference.***
2. A racer falls and hikes in order to complete passage of a missed gate. Because of the length of time involved, it becomes apparent that he will be overtaken prior to crossing the finish line. What options are available to the approaching racer? What options are available to the overtaken racer? Are sanctions available in a technical event? Are sanctions available in a speed event or training run? ***Approaching racer may stop and request a rerun to a jury member if the preceding racer interferes with their line. An overtaken racer cannot continue.***
3. A competitor misses a gate just before crossing the finish line. He quickly stops; he then hikes back up through the finish line, completes passage and crosses the finish line a second time. What is the competitor's status? What if he makes an attempt to stop *prior* to crossing the finish line but is unsuccessful? What should the Finish Referee do? What should the manual timekeepers do? What is the decision of the Jury? ***Competitor is disqualified. Once he/she has crossed the finish line, the time for the competitor is taken (611.3.1). It does not matter if the competitor tried to stop prior to the finish. The Finish Referee should***

direct the skier around the finish. Hand timers stop the clock when the competitor first crosses the finish.

4. In Slalom, a competitor falls, slides past a combination and hikes back up. What is the competitor's responsibility? What is the Gate Judge's responsibility to the competitor? If the event is a Single Pole Slalom, how far does the competitor have to hike to clear a missed single-pole gate? A missed double pole gate? ***It is the competitor's responsibility solely to know how far to hike. The gate judge, if questioned by the competitor, must inform him if he has committed a fault, using the commands "Go" or "Back". For a missed single pole gate the competitor must hike back up and around the top of the turning pole. For a missed double gate, the competitor must hike back up and across the imaginary line from the outside pole to the turning pole of the missed gate.***




Alpine Training System



Foundation Stage		Pre & Post Puberty			World Class Performance Full Maturation
PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
Biological Age Pre Puberty Age 2–6 years old Play Age 1–4 years in sport Participation Ski around 1 day a week 20 days a year At least 95% free skiing Play many other sports - gymnastics or balance-based sports	Biological Age Pre Puberty Age 6–10 years old Training Age 1–4 years in sport Participation Ski 2–3 days a week 50 days a year At least 90% free skiing Fun races Play many other sports	Biological Age Pre Puberty (Before Growth Spurt) Age Girls: 10–13: J4 (J5–J3) Boys: 11–14: J4 (J4–J3) Training Age 4–8 years in sport Participation Ski 3–4 days a week 70 days/year At least 60% free skiing Competition Period: (Jan.–April) Number of race starts: 10–15 Ratio 1:6 (race:training) Play complementary sports	Biological Age Puberty (Growth Spurt) Age Girls: 11–14: J3 (J4–J2) Boys: 12–15: J3 (J4–J2) Training Age 5–9 years in sport Participation Ski 4–5 days a week 100 days/year At least 30–50% free-skiing Competition Period: (Dec.–April) Number of race starts: 15–30 Ratio 1:5 (race:training) Play complementary sports	Biological Age Post Puberty (After Growth Spurt) Age Girls: 12–16: J3 (J4–J2) Boys: 14–17: J2 (J3–J1) Training Age 6–11 years in sport Participation Ski 4–5 days a week 120–140 days/year At least 15% free skiing Competition Period: (Nov.–April) Number of race starts: 25–max 45 Ratio 1:4 (race:training) Play complementary sport	Biological Age Full Maturation Age Female: 16+ J2–J1 Male: 17+ J1 Training Age Minimum 10+ years in sport Participation Ski 4–5 days a week 130–150+ days/year At least 10% free-skiing Competition Period: (Nov.–April) Number of race starts: 55+ Ratio 1:3 (race:training) *based on the number of disciplines
Conditioning Emphasis					
Emphasis on play, fun, skiing and balance.	Emphasis on play, fun, basic agility, balance and coordination. Incorporate activities that develop explosiveness (0–10 sec) and general endurance.	1–2 conditioning sessions per week in season. Further development of previous components. Emphasis on aerobic conditioning. Incorporate own body weight training and body awareness training.	1–2 conditioning or recovery sessions per week in season. Increase aerobic conditioning and balance/agility/coordination, particularly through growth spurt. Begin light external resistance work including bands, med balls, etc.	2–3 conditioning or recovery sessions per week in season. Strength and power, introduce progressively more anaerobic training, endurance, complex agility and balance.	4–5 conditioning or recovery sessions per week. Eccentric strength, power & explosivity. Aerobic training, especially efficiency and recovery work. Core strength. Produce force in skiing specific positions.
Technical and Tactical Emphasis					
Active start – learning and fun environments Ski and play on skis	Adventure stage – skiing all terrain Free play, guided free skiing and drills are an integral part of development. On snow time needs to be spent skiing. Apply the fundamental skills in achieving consistent and symmetrical parallel turns with rhythm and timing. Introduction to carving, use of upper and lower body separation for angulation, and pole plant.	Technical stage – Develop the skills to carve Instill sound fundamental technical skills. Execute linked, carved turns with all the technical components in a variety of terrain. Acquire specific technical and tactical skills including gate blocking, speed elements, course inspection, anticipation of terrain, line and turn shape. Free ski all terrain with competence, with an emphasis on balance and carving.	Tactical stage – Learning line and strategy Actively maintain technical skills through the growth spurt. Emphasize use of tactics to achieve carved turns on the most appropriate line for the athlete. Develop speed and efficiency by refining carving and steering movements to achieve the desired turn radius in courses. Use a variety of course sets, conditions and terrain to teach the skier to adapt to different situations.	Technical and Tactical Refinement stage – event specific technical and tactical skills Refine technique and tactics after growth spurt. Integrate the increased strength, power and body size to achieve a more optimal line. Refine event specific technical and tactical skills (jumps, terrain, traverse, long turns, etc.). Advanced tactics for difficult situations (a-rhythmical course sets, difficult conditions and terrain).	Mastery or innovation stage – Event specific technical and tactical mastery Mastery of technical and tactical skills based on the individual's style. Optimizes line for ability level and conditions in race situations. Apply equipment innovations.
Equipment Selection & Preparation					
Equipment Selection & Preparation Skis: Chest high with a variation based on height, weight and skill level Boots: Proper boot fit with soft even forward flex for ankle movement to facilitate a balanced, athletic stance Protection: Helmet required at all times Poles: Optional - introduce at older levels as skill level develops	Learn USSA rules for all equipment selection Skis: 1 pair of skis is sufficient for this group. Head height with a variation based on height, weight and skill level. Introduce ski preparation. Boots: Proper boot fit with soft even forward flex for ankle movement to facilitate a balanced, athletic stance. Protection: Helmet required. Older athletes may need shin/arm protection. Poles: Standard length = forearm horizontal with pole tip in snow.	Adhere to USSA rules for all equipment selection Skis: Slalom, GS and super G skis. Develop tuning skills. Boots: Proper boot fit and flex are critical for performance. Boot flexes and responds as it interacts with the ski and plate. Protection: Head, arm, hand, shoulder, back, teeth (mouth guard) and shin protection recommended, based on event. Poles: GS-standard length. SL-pole guard for blocking & protection, pole may be slightly shorter.	Adhere to USSA and FIS rules for all equipment selection Skis: Slalom, GS and super G skis. Refine tuning skills. Boots: Proper boot fit and flex are critical for performance. Boot flexes and responds as it interacts with the ski and plate. Performance considerations may include flex, cant, forward lean, ramp angle and foot beds. Protection: Head, arm, hand, shoulder, back, teeth (mouth guard) and shin protection recommended, based on event. Poles: GS-standard length. SL-pole guard for blocking & protection, pole may be slightly shorter.	Adhere to USSA and FIS rules for all equipment selection Skis: Slalom, GS and super G skis with training skis. Tuning skills continue to improve. Insight into waxing and grinding necessary for speed skiers. Boots: Proper boot fit, flex and performance. Boot flexes and responds as it interacts with the ski and plate. Performance considerations may include flex, cant, forward lean, ramp angle and foot beds. Protection: Head, arm, hand, shoulder, back, teeth (mouth guard) and shin protection recommended, based on event. Poles: GS standard length. SL-pole guard for blocking & protection, may be slightly shorter. Custom pole sizing and contouring for individuals.	Adhere to USSA and FIS rules for all equipment selection. Equipment testing including skis, boots, plates, bindings and poles is recommended to maximize performance. Skis: Race and training skis for all disciplines. Professional support or consultation is recommended for preparation. Boots: Discipline specific boots may be necessary to maximize performance. Protection: Head, arm, hand, shoulder, back, teeth (mouth guard) and shin protection recommended, based on event. Poles: GS standard length. SL-pole guard for blocking & protection, may be slightly shorter. Custom pole sizing and contouring for individuals.
Performance Psychology Emphasis					
Fun, variety, positive reinforcement and perseverance. Positive parental support is essential.	Sampling Years Teamwork and sportsmanship. Encourage a balanced lifestyle that encourages healthy habits and promotes success in sport and life. Positive parental support is essential. Families get involved with clubs.	Sampling Years Positive self talk, work ethic and perseverance with a focus on the process not results. Encourage the use of imagery and visualizing good technique. Demonstrate teamwork and sportsmanship. Positive parental support and club involvement.	Sampling Years Positive self talk, work ethic and perseverance, goal setting with a focus on the process and not results. Continue to use imagery and visualize good technique. Teamwork and sportsmanship. Positive parental support and club involvement.	Commitment Develop and refine race day plan. Develop mental rehearsal routines, refine goal setting process, what to focus on, what works on race day, develop "athletic plan" to approach training sessions and life. Document through journaling. Parents continue to support the commitment of the athlete in the sport.	Specialization and Mastery Refine performance psychology skills: Imagery, goal achievement, performance planning, attention and focus, self regulatory talk & confidence. Identify optimal performance state. Dealing with competition, risk, failure and fear. Parents continue to support the commitment of the athlete in the sport.
Competition Emphasis					
Local competition: Innovative with FUN focus interclub competition.	Local racing leads to state and divisional championships which may lead to regional events.	Local racing leads to state and divisional championships which may lead to regional events and Junior Olympics.	Appropriate level and number of race starts ranging from local to national and international competition.	Regional FIS Series, FIS U, NOR-AM and European FIS races Olympics, World Cup, World Ski Championships, World Jr. Championships, European Cup	



	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
<i>Pressure</i>	Steps & jumps	Pole jumpers	Pole jumpers in tuck	Straight run in wave track	Linked turns in wave track	Camel jump in wave track
<i>Edging</i>	Basic outside ski turns	Outside ski turns	One ski skiing	One ski skiing with lane changes	One ski skiing without poles	One ski skiing hourglass
<i>Rotary</i>	Hockey stop	Straight run to sideslip with edge set	Pivot slips	Sideslip to straight run to sideslip	Hop turns	Vertical brush quickness course
<i>Balance</i>	Freeski with parallel skis	Freeski with pole usage	Freeski – lane changes	Freeski – hourglass	Freeski – varied terrain and snow conditions	Freeski – moguls in “V” shaped corridor

<http://ussa.org/alpine-programs/athletes/development/skillsquest/resources>



Scoring

SCORE		SKILL	TASK
10	Perfect	Flawless execution	Nothing to change
9	Outstanding	Smallest of change needed	Smallest of alteration desired
8	Excellent	Couple small changes needed	One turn or dimension may need slight refinement
7	Very Good	Skills are refined	Several turns or dimension may need slight tuning
6	Good	Skill level is above average	Task is performed above average
5	Average	Skill level is average for this level	Average performance of task
4	Fair	Adequate skills	No problem identifying the task although needs refinement
3	Mediocre	Substandard skills	Slight problem identifying the task although need improvement
2	Poor	Vague demonstration of the skills	Task performance is vague
1	Very Poor	Grossly deficient skills	Task performance is difficult to distinguish
0	Inability	Nothing resembling the skills	Task is unrecognizable

NOTE: The participants will take this exam on-line (the question order will be different), with the exam code sent to them after the clinic via email from Haley. This is for your reference as an instructor to check that you cover the material they'll need to know to pass the exam. All of the exams are under review by the Sport Education staff and may be modified later this season – we'll update instructors if changes are made.

LEVEL 100 ALPINE SKI FUNDAMENTALS - EXAM

The following exam contains true & false, and multiple choice questions interspersed. There is only one answer per question. Based on the information in each question, select the answer letter that most correctly answers the question. All questions are of equal value.

What is the most important consideration in the development of a ski racer?

- a. they are tall and heavy
- b. they have fun
- c. they have DIN appropriate ski boots
- d. they are able to squat their body weight
- e. they master competition strategies before their growth spurt

What is the purpose of the Alpine Training System (ATS)?

- a. provide a framework for athlete development
- b. create a system of progressions for skill development
- c. be used as a tool for talent identification
- d. reward those athletes that are biologically fast matures
- e. to show the importance of running lots of gates prior to puberty

Why are the sensitivity windows in the ATS important?

- a. they point out critical periods when certain aspects of sport may be more advantageous to emphasize
- b. they show that males and females mature and progress at identical rates
- c. they are used to determine the appropriate ATS Phase
- d. they are used to establish when an athlete enters puberty
- e. they can be used to translate chronological age into biological age

At what age do motor skills make the most rapid gains?

- a. 6-8 years old
- b. 8-12 years old
- c. 12-15 years old
- d. 16-18 years old
- e. 19-21 years old

Once the sensitivity window is past there can be no physical gains.

- a. true
- b. false

Why is biological age important to the coach?

- a. it determines the size and fit of the speed suit
- b. it gives some insight to the athletes maturity development
- c. it reveals genes and DNA that can help match the athlete with a potential sport
- d. it will determine at which level the athlete should race
- e. it is an indication if the athlete is maturing successfully

Athletes that mature faster will have more success in slalom and those that mature slower will be more successful in speed events.

- a. true
- b. false

What is a use of SkillsQuest?

- a. to put athletes in stressful situations other than gates
- b. make skill achievement fun
- c. measure the level of an athlete's skill
- d. motivating athletes outside of the gates.
- e. all the above

What is the purpose of the "general stance"?

- a. so the athlete will know exactly where to be
- b. so that the athlete is standing in the middle of the ski
- c. to create a reference-of-correctness for the body
- d. to keep the athlete forward and out of the backseat
- e. to make sure the athlete understands how to bend their ankles

Which one of the following is not a characteristic of the general stance

- a. hips are feet width apart
- b. ankles are of even flex
- c. center-of-mass is balanced over the feet
- d. back is rounded
- e. hands are held out and in front of the body
- f. vision is forward
- g. muscles are in tension, but not stiff

What determines if an athlete is "in" or "out" of balance?

- a. the forward lean of the boot cuff
- b. delta angle on the ski binding
- c. the balance between internal and external forces
- d. the amount of tip pressure on the ski
- e. how much the skier leans in to the turn

What is an underlying goal of technique?

- a. to achieve the desired "race" stance.
- b. to maximize the turning force of the upper body
- c. to be forward on the skis
- d. to always have the hands forward
- e. to be in equilibrium

Which ski should be farther forward during a sidehill traverse?

- a. uphill ski
- b. downhill ski
- c. they should be equal
- d. depends upon the speed
- e. it does not matter

Why do we say "technique is not static"?

- a. because ski racing is a dynamic sport
- b. the angle of the hill relative to the skis changes every moment of the turn
- c. the ability to stay in balance requires gross technical movements
- d. flexion and extension of the ankles should never stop
- e. technique is static

Why isn't the ski racer that is in the best balance position always the fastest?

- a. balance and speed don't always correlate
- b. aerodynamics need to be taken into consideration
- c. high external forces are difficult to deal with
- d. they might not be pressuring the front of the ski
- e. gate contact reduces the kinetic energy of the skier

What is a good way to get an athlete out of the "backseat"?

- a. thrust their hands forward
- b. push their hips forward
- c. tension in muscles around the ankles along with extension of the knees and hips
- d. flex the knees
- e. direct vision down the hill

What is a good exercise to improve fore/aft balance?

- a. backward skiing
- b. hop turns
- c. patience turns
- d. skating
- e. all the above

When should the spoiler on the back of the boot be used?

- a. at the completion of the turn
- b. at the start
- c. at the finish line to get as low as possible
- d. in emergencies
- e. never

In theory, or ideally, to generate the fastest turn; what would be the optimal ski/snow pressure after the turn is started?

- a. increase throughout the turn
- b. decrease throughout the turn
- c. increase then decrease through the turn
- d. decrease then increase through the turn
- e. stay consistent

What happens to ski/snow pressure against the ski if the skier flexes their knees and ankles through the turn?

- a. pressure increases
- b. pressure decreases
- c. pressure stays the same

What happens to ski/snow pressure when edge angle is increased?

- a. pressure increases
- b. pressure decreases
- c. pressure stays the same

What happens to ski/snow pressure during a turn when speed is increased?

- a. pressure increases
- b. pressure decreases
- c. pressure stays the same

What happens to ski/snow pressure when the turn radius is increased?

- a. pressure increases
- b. pressure decreases
- c. pressure stays the same

How does pressure migrate along the length of the ski during a ski turn?

- a. from tip to tail
- b. from tail to tip
- c. stays under the ball of the foot
- d. from tip to tail until the fall-line then tail to tip
- e. from tail to tip until the fall-line then tip to tail

What is a way to control and/or manipulate edging and pressure?

- a. lateral movements
- b. vertical movements
- c. fore/aft movements
- d. rotational movements
- e. all the above

A turn with less speed and less radius should be more angulated than inclined.

- a. true
- b. false

What type of side-to-side movement will be most efficient at resisting large external forces?

- a. inclined
- b. angulated
- c. banked
- d. counter-rotation
- e. braquage

In which joints does (biomechanically efficient) angulation occur?

- a. spine, hip
- b. hip, knee
- c. shoulder girdle, spine
- d. knee, ankle
- e. spine, knee

What is an advantage of angulation over inclination?

- a. resist greater external forces
- b. easier to make larger radius turns
- c. less distance for the upper body to travel
- d. easier to maintain ankle flex
- e. more efficient at higher speed

Why do skiers bank?

- a. trying to create an edge
- b. to resist external forces
- c. to make shorter radius turns
- d. to assume a racing stance
- e. to help in ankle flexion

A ski racer can end up banking as a result of inefficient rotation.

- a. true
- b. false

To initiate rotation requires energy.

- a. true

b. false

What happens if rotation is left unchecked?

- a. the object flies off in a tangent
- b. the object continues to rotate
- c. the object will eventually slow down
- d. the object will speed up
- e. nothing

If the upper body looks quiet in space it means that it is not doing anything.

- a. true
- b. false

How is Newton's third law important in rotational balance?

- a. the rotational impetus should be initiated with the upper body
- b. it explains the rotation of the ski turn
- c. if the lower body rotates to the left the upper body must rotate to the right
- d. the action of the pelvis is a reaction to the ground reaction force
- e. when the femur flexes and extends it creates an equal force on the snow

The femur rotating in the pelvis is the same as the pelvis rotating on top of the femur.

- a. true
- b. false

Rotary, edging and pressure skills occur in all ski turns.

- c. true
- d. false

Rotary, edging and pressure skills occur in differing demands in different exercises.

- a. true
- b. false

What skill would be good to target if a ski racer is fairly good at rotary and edging skills?

- a. angulation
- b. pole plant
- c. pressure
- d. vertical movement
- e. balance

A ski racer is either "in balance" or "out of balance".

- a. true
- b. false

Ideally a ski racer should be skilled enough at the mechanics used to maneuver the skis that ski poles would not be needed.

- a. true
- b. false

Learning effective pole usage skills is an essential part of a young skier's development.

- a. true
- b. false

As a general rule what influence does the direction of the pole swing have on the skier's center-of-mass?

- a. it raise the skier's center-of-mass
- b. it lowers the skier's center-of-mass
- c. mimics the skiers center-of-mass
- d. it allows the skier to ski through the gate
- e. none

There is one ideal way to use the ski poles.

- a. true
- b. false

In what discipline is pole usage the most dominant?

- a. slalom
- b. giant slalom
- c. super G
- d. downhill
- e. all the same

A speed specialists should not worry about learning pole usage.

- a. true
- b. false

What two components is "gliding" composed of?

- a. edging & pressure
- b. wax choice & ski base grind
- c. frontal area & speed
- d. aerodynamics & ski/snow interaction
- e. ski tip profile & and ski dampening characteristics

What is a disadvantage of a "low tuck"?

- a. difficult to pole plant
- b. athletic freedom is sacrificed
- c. not as fast in the air
- d. ski poles will not fit tight against the body
- e. airflow around the helmet is altered

Which type of tuck has the most aerodynamic advantage?

- a. high tuck
- b. low tuck
- c. l'ouef
- d. bullet
- e. bully

Which type of tuck will yield the most advantageous ski/snow interaction?

- a. high tuck
- b. low tuck
- c. l'ouef
- d. bullet
- e. bully

What is not a key point for a good tuck:

- a. vision forward
- b. skis parallel
- c. elbows outside of knees
- d. ankles, knees, and hips flexed
- e. hands and elbows in front of chest

What is not a critical component concerning the interaction of the skis with the snow?

- a. parallel skis
- b. similar edge angles
- c. simultaneous release of ski edges
- d. ability to adjust pressure fore and aft
- e. parallel shins

The ATS specifies that "terrain" is best learned in the gate environment.

- a. true
- b. false

What skill does ski/snow interaction challenge the most?

- a. rotary
- b. edging
- c. pressure
- d. balance
- e. aerodynamics

What is a key upper body consideration when skiing challenging terrain?

- a. maintenance of the tuck
- b. rounded shoulders
- c. limited movement
- d. flexed at the waist
- e. scanning vision

What would be a good all-purpose coaching cue in bumps and rolls?

- a. "Extend your legs at the top of the bump".
- b. "Flex your legs at the top of the bump".
- c. "Extend your legs in the troughs".
- d. "Flex your legs in the troughs".
- e. "Keep your belly button at the same height".

What would be a good coaching cue for a U16 skiing from flat to steep terrain?

- a. "Move or thrust your hands forward as you approach the apex of the terrain".
- b. "Flex your knees and keep shin pressure".
- c. "Keep your skis parallel to the slope and your body perpendicular to the skis".
- d. "Round your back and suck up your legs".
- e. "Keep your tuck by slightly leaning back on your boots".

Why is learning to jump important to the young ski racer?

- a. it will help create courage
- b. it will teach looking forward
- c. creates body awareness
- d. leg extension is an important pressure control skill
- e. landing with the skis running straight is fast

When skiing rolls, what determines if the legs should be allowed to flex as opposed to actively flexing?

- a. side hill or camber of the roll
- b. snow texture
- c. speed
- d. length of the ski relative to the trough
- e. radius of the turn

What should the skier do when going from a flat to a steep?

- a. keep their upper body perpendicular to the skis
- b. push their hands forward
- c. concentrate on shin to cuff pressure
- d. look two gates ahead
- e. plant their pole

Time between turns has decreased in modern ski racing.

- a. true
- b. false

What does it mean when you hear a coach say "she didn't finish her turn"?

- a. the athlete needs more direction at the top of the turn
- b. the athlete needs more edge and pressure during the turn
- c. the athlete stopped moving during the turn
- d. a & b above

- e. all the above

Turning phases can overlap.

- a. true
- b. false

What is a characteristic of every good coach?

- a. they demand respect from their athletes
- b. they are always seeking ways for self improvement
- c. they were good ski racers
- d. they understand everything about sport psychology
- e. they tell jokes all the time

What is not a job of the ski coach?

- a. ski with athletes
- b. analyze technique
- c. teach skills
- d. complain about athlete's parents
- e. provide feedback
- f. devise lesson plans
- g. supervise daily on-snow activity
- h. discipline when necessary

How can a coach find the underlying problem of a ski racer?

- a. study biomechanics
- b. understand conditioning
- c. appreciate psychological issues
- d. learn about tactics
- e. all the above

Since coaching is an "art" and "science", a coach that has coached a long time does not need to understand the science of skiing to be a great coach.

- a. true
- b. false

Personal philosophy does not change.

- c. true
- d. false

What is the most important attribute that contributes to children staying in a sport?

- a. success or winning
- b. money they will make when they turn pro
- c. fun
- d. achieving the goals of their parents
- e. accolades or notoriety

What is the most successful coaching style?

- a. command
- b. submissive
- c. cooperative
- d. lenient
- e. passive

A coaching style that provides a balance between directing the athletes and letting them direct themselves produces the best results.

- a. true
- b. false

Why is knowing your coaching style important?

- a. when you demo athletes can conform easier
- b. ski size and sidecut will determine the radius of your demo
- c. to be able to relate better to your athletes
- d. when traveling you can better arrange accommodations
- e. this will determine you DIN setting

What is pedagogy?

- a. study of children's feet
- b. a Russian analogue of periodization
- c. art and science of teaching
- d. teaching on your feet
- e. child development

Using technical terms is an effective way for athletes to understand, and eventually learn, the vernacular of ski racing.

- a. true
- b. false

Feedback to athletes should be positive.

- a. true
- b. false

When weather and hill conditions are a challenge you have an excuse for mediocrity

- a. true
- b. false

What is the most important element during a ski training session?

- a. number of runs
- b. how much fun the athletes had
- c. feedback
- d. athlete behavior
- e. athlete safety

Where is the best place to stop when skiing in a group?

- a. beneath a blind roll
- b. under the chairlift
- c. middle of the ski run
- d. edge of a cat track
- e. side of the trail

What should you do if you want an athlete to remember something?

- a. tell them in descriptive terms
- b. let them read about it at home
- c. have them repeat it back to you
- d. have them watch it
- e. have them tell you and show you

Where should you stand when communicating with a young athlete?

- a. uphill standing tall
- b. in front of them
- c. at their level
- d. on their right side if they are right handed
- e. into their left ear so the left side of the brain will be stimulated

It is okay to smoke and drink alcohol in front of athletes as long as you inform them they are bad habits and can be detrimental for their health.

- a. true
- b. false

When should you demonstrate?

- a. for a new skill
- b. confusing skill
- c. a skill that may be wordy if explained
- d. to a visual learner
- e. all the above

You should always criticize the skier and not just the turn so the athlete takes ownership of the problem.

- a. true
- b. false

When you demonstrate the vantage point is not important.

- a. true
- b. false

Since ski racing is an individual sport, group dynamics are not important.

- a. true
- b. false

How can the coach create group cohesion?

- a. play the name game
- b. ride the chair with a different partner
- c. have athletes find something interesting about someone they don't know well
- d. use a buddy system
- e. all the above

What is the most important communication path in the "coach-athlete-parent" paradigm?

- a. coach ↔ athlete
- b. coach ↔ parent
- c. athlete ↔ parent
- d. they are all equal

Why might knowing an athlete's learning style help in coaching that athlete?

- a. knowing their grades will tell you how smart they are
- b. knowing their GPA will tell you how hard they work
- c. it will help you create a complementary teaching style
- d. knowing the subjects or classes they excel in will help with teaching metaphors
- e. it will help in understanding them when their chronological age does not match their biological age

What would be the best guess as to their style of learning if an athlete said "show me again"?

- a. feeler
- b. doer
- c. thinker
- d. watcher
- e. b & c

What would be the best guess as to their style of learning if an athlete said "let me try"?

- a. feeler
- b. doer
- c. thinker
- d. watcher
- e. b & d

Since we tend to coach according to our own learning style we will be best at that learning style. With this in mind we should not try to use other styles to coach.

- a. true
- b. false

Success in athletics is primarily determined by genes.

- a. true
- b. false

How can you make "directed free skiing"/ "guided free skiing" more effective as a learning tool?

- a. incorporate pole plant drills
- b. make practice "deliberate"
- c. ski in balance
- d. incorporate jumping and terrain
- e. ski non-stop runs

When is the ideal time for feedback?

- a. during the task
- b. right after the task
- c. waiting a few minutes after the task
- d. when it is convenient for the coach
- e. it should not be given without solicitation from the athlete

Feedback can only come from the ski coach.

- a. true
- b. false

Which type of feedback is most objective?

- a. knowledge of performance
- b. knowledge of results
- c. inherent
- d. augmented
- e. verbal

How can you make feedback more effective?

- a. make it more descriptive
- b. make it more prescriptive
- c. make it more instructive
- d. use video with overlays
- e. use the delayed method

Feedback is so important that as long as the message is right it makes no difference when it is delivered.

- a. true
- b. false

What should you do if you suspect your athlete suffered a TBI?

- a. give fluids immediately
- b. give fluids with electrolytes immediately
- c. observe their balance while skiing
- d. remove them from the sporting activity
- e. have them sit quietly in a dark room

What is not a symptom of concussion?

- a. headache
- b. confusion
- c. difficulty remembering or paying attention
- d. balance problems or dizziness
- e. feeling sluggish, hazy, foggy, or groggy
- f. feeling irritable, more emotional, or “down”
- g. nausea or vomiting
- h. bothered by light or noise
- i. double or blurry vision
- j. slowed reaction time
- k. high energy
- l. sleep problems
- m. loss of consciousness

What should an athlete do if they lose their ski half way down a USSA race course?

- a. try and finish with one ski on
- b. put it on as quickly as possible and finish
- c. pick it up and carry it through the rest of the course
- d. immediately exit the course
- e. put it on and hike above the last gate not completed on two skis