

# BEST IN THE WORLD

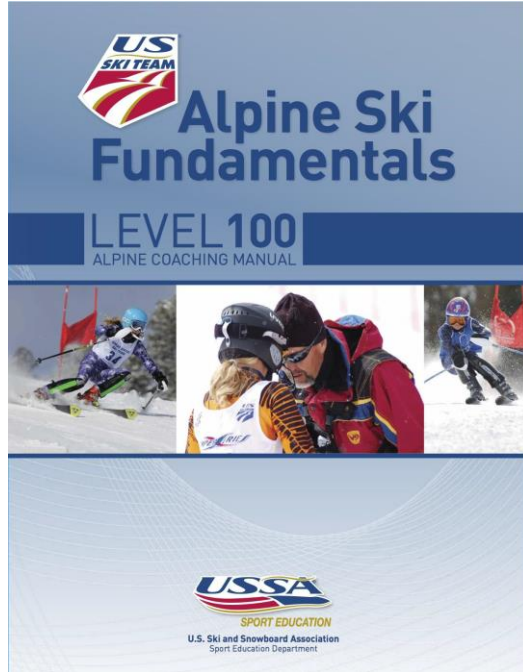


**Common coaching language and curriculum**

Club Excellence Conference

Tuesday, May 13, 2014

# What is our Coaching Curriculum?



- Is it important ?
- Why should we speak the same language?
- “I need to differentiate my program from all the others and sign up some athletes, so why not have my own special language, culture and system?”

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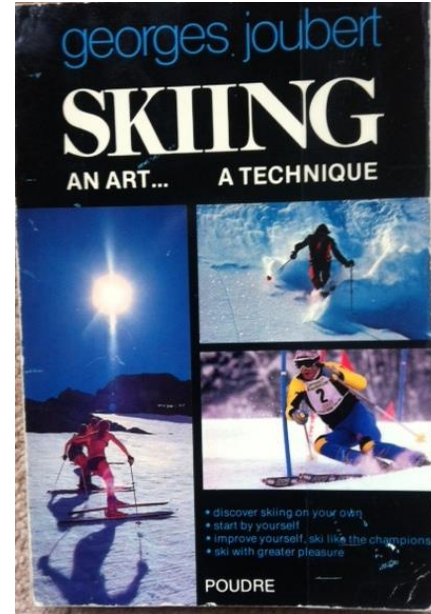
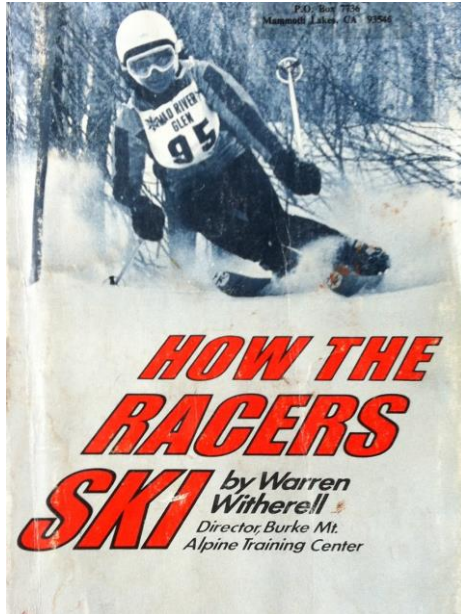


# PSIA: A national body with a national curriculum since about 1961



- Students began to travel by trains, planes and automobiles to ski.
- Took 11 years of meeting and gaining trust before becoming a national organization.
- 1975 Skills concept at Interski.
- Student centered outcomes
- National manuals, magazines and publications
- National Education Teams in all disciplines.
- National Standards, divisional implementation and some adaptation.

For many, this was “IT” long ago.. (1970’s). Two of the most thorough and detailed books in English on skiing and racing at the time.



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# USSA Alpine Education, as one example:



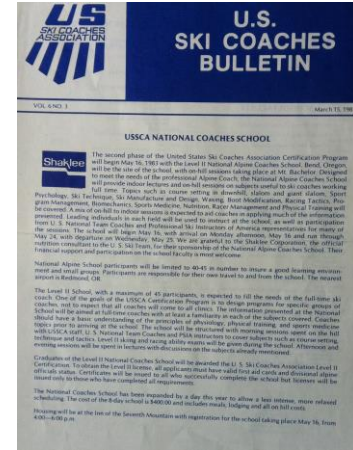
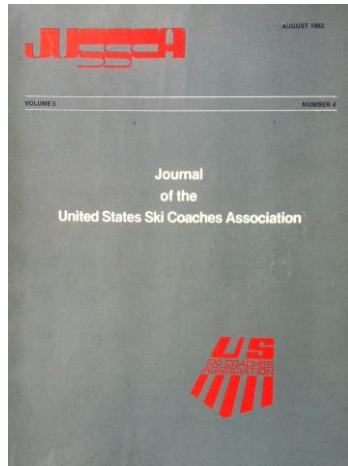
- National School in 1980 at an Olympic Training Center in Squaw Valley
- Clinicians travelling the country presenting material on snow and in the classroom
- National Certification exams
- Manuals
- Magazines
- Newsletters
- Club Coach travel program



# A national language, concepts and understanding was developed.

Tribes could communicate.

Athletes could travel and move around....



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# The flow of information: concepts, technique, tactics, methodology

- **Vertical:** World Cup Coaches to Regions, Divisions, Camps, Programs. Clubs and Academies to National Team Staff. (Works both ways.)
- **Lateral:** Region to Region
- **Formal:** At seminars, events and meetings.
- **Informal:** On the side of the hill at special projects, age class championships, nationals and even at social events.
- **Television** language and concepts: NBC, NBC Sports, Universal Sports
- **Internet:** You Tube, Center of Excellence TV, Euro Sport.
- **Partners:** USSA and PSIA sharing material, along with other sports science partners, including USOC.



# Training Systems Today

- Fast Start Course
- Education Shop
- Level 100-500
- Newsletters
- Webinars
- Partners



## Watch and learn from the best!

The USSA has many resources to help you ski like a pro!

in partnership with 



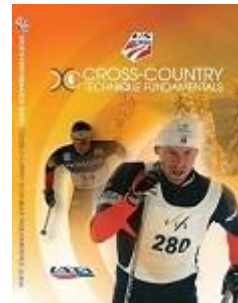
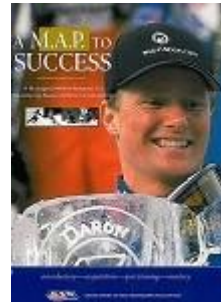




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# Men's Alpine Team Partners with PSIA

- SNOWBIRD, UT (April 29) – U.S. Ski Team men's alpine athletes and coaches spent the past week learning the latest teaching techniques from the Professional Ski Instructors of America (PSIA) at Snowbird Resort.
- In addition to earning level three PSIA National Ski Instructor certification, the group will apply the latest knowledge of skiing fundamentals to foster faster skiing at all levels of the U.S. Ski Team development pipeline.
- U.S. Ski Team fundamental skills development coach Michael Rogan and men's alpine Head Coach Sasha Rearick spearheaded the weeklong camp, which included all men's assistant coaches and four Olympic athletes.



# PSIA & USSA Coaches Curriculum:

- The weeklong camp involved all men's alpine assistant coaches and 11 athletes, including Olympians Marco Sullivan (Squaw Valley, CA), Steven Nyman (Sundance, UT), David Chodounsky (Crested Butte, CO) and Jared Goldberg (Holladay, UT).
- The educational experience also enhanced the U.S. Ski Team's ability to provide leadership to the national development pipeline **by reinforcing coaches understanding in the value of teaching fundamentals.**



# Men's Alpine Team Partners with PSIA: Our curriculum base just got bigger....

**Sasha Rearick**, Head Coach – men's alpine

"The week we spent with PSIA brought our athletes and staff full circle through the process of teaching skiing from the true foundation up. From that, we've gained an invaluable perspective on how to be faster in every condition, every gate set, basically every variable that you can possibly be presented with on snow."

**Steven Nyman**, Three-time Olympian

"I enjoyed the simplicity in learning about skiing all over again, specifically as it relates to how athletes can learn from each other. We had 18-year-olds going through the same process with guys like Marco Sullivan and me. **That helped create a common form of communication across every level, which will for sure help us learn from each other.** I can't wait to try some of these techniques out next season to see how they translate into racing."



# Stefan Abplanalp: Women's DH

- “It’s good because I didn’t know Mike Rogan before, but I met him at the meetings in Park City and had a talk with him there.”
- “I think it is good to involve also the ski instructor side to make this bridge between coaching and education in the USSA,” noted Abplanalp.
- “One reason I wanted him to come here was to really make sure we talk the same language to learn about the technical culture in the U.S.”



# From *too little* available information to a confusing amount of too much stuff?

Sooner or later we have to make the national curriculum  
**OUR** curriculum:

- Make it your own. Involve your staff. Find out what everyone thinks.
- Keep it simple and able to be remembered
- Does the language make sense to most people?
- Can all of your coaches use the language and concepts comfortably?
- When you share it with athletes and parents can they understand it?





# Your Club Curriculum

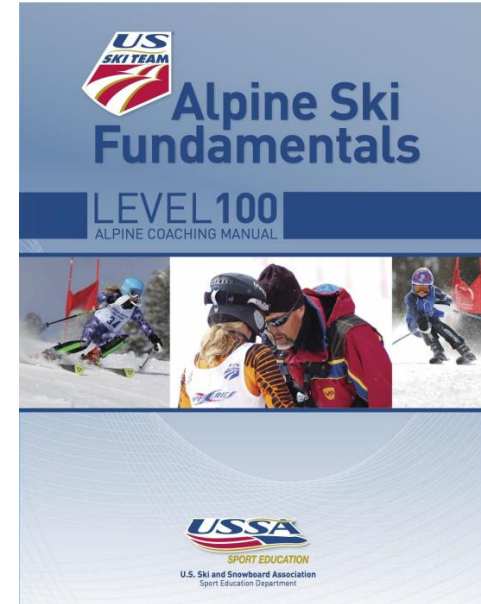
1. Glossary of terms
2. Technical Statement
3. Tactics Statement
4. Common Progressions
5. Fit the above into Long Term Athlete Development model



# Level 100 Alpine Ski Fundamentals

A very good foundation for any club to use as a technical statement and starting point.

All coaches should be able to talk through this manual in a consistent manner.



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# ROWMARK TERMINOLOGY

## An example of this process:



### Rowmark Technique and Tactics Terminology

draft 6-13

#### Technique Terms:

Flexion-Ankle, in all joints, bending boot, pressure the tongue, set the ankles, cock the hammer

Parallel position vs. A-Frame, Diverging Skis

Matched Feet and tips vs. Inside Foot Lead / Scissoring

Center of Mass/ Center of Gravity

Movement into the new turn/Recentering

Extension and Retraction

Early Pressure/Carving vs. Suck and Chuck

Angulation/Deangulation (Ankle, Knee, Hip)

Pinching (the good kind)/ Upper-Lower Body Separation/Hip Angulation

Level Out (with shoulders, hips, hands)

Inclination, Banking, Leaning In

Long Outside Leg

Weight on Outside Ski vs. Inside Ski-percentages (continuum)

Railroad track turns-2/4/2 edges

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# ROWMARK TECHNICAL

What  
do you  
talk about?  
What do  
you mean?

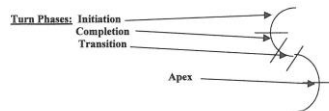


## Rowmark

SKI ACADEMY

Alpine Ski Racing Basics-Technique, Tactics and Progressions

updated 6-13



### Balance, Stance, Technique and Tactics:

#### Giant Slalom

1. Arc to arc skiing in flat to medium pitches. Steering begins to occur when pitch becomes steep and/or gates are set well out of fall-line. (A,P, L, T)
2. Both skis keep snow contact. Emphasis on parallel skis and shins with both skis creating the same edge angle. Stance is about hip to shoulder width-athletic, powerful and supple. Flexion in knees and ankles. Arms are always up and forward in peripheral vision. Inside arm should not drop down near snow. (B,S)
3. Upper body is erect with rounded back and shoulders, not bending forward at waist. Lowness to snow surface is created laterally with angulation. (B,S,P)
4. Arc is initiated with shovel of the ski using ankles and knees as hips move ahead and inside path of skis. Arc is completed with pressure in the middle of the ski. Tail of ski is only utilized on flat pitches. Flexion of knees and ankles maintained throughout the turn. Outside leg maintains its length throughout turn while inside leg is flexed due to the hips proximity to snow surface. (B,P)
5. Building pressure and angulation. Light but clean to start. Strong and powerful to through fall-line. De-angulation to finish. Inclination, knee and ankle start arc, and hip angulation becomes major source of angulation into fallline. (A,P)
6. Shoulders and hips level off through arc.(A)
7. In the beginning of the turn, the shoulders and hips are in line with the skis. Once skis are in the fall-line, shoulders and hips remain perpendicular to fall-line and slightly countered in relation to the skis. (In modern skiing we are starting to see more of a trend to stay more square to the skis below the fall-line especially in speed events.) (S)
8. Feet remain about matched with the inside foot lead not more than a few inches. (S)
9. When the arc is completed, quick but smooth movement of skis (switch) underneath the body occurs while hips move forward and down the fall-line. (L.)
10. Hips are moving more forward down the fall-line than up and down. Excess extension of body between turns is necessary only when steering is necessary (when pitch is steep and/or gates are set well out the fall-line). (B,P)

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# Example:

## ROWMARK CURRICULUM STATEMENT

### Love to Ski

Skiers in this phase are in the optimal window for them to acquire and hone fundamental skiing skills. They are also in an optimal window to develop agility and quickness, and very short duration speed (5 seconds or less). They also have relatively short attention spans and do not have a well-developed anaerobic energy system for sustained high-intensity skiing over a long course. Skiers in this phase are encouraged to use one pair of skis for all events. Recommended disciplines include giant slalom, slalom, Kombi, dual courses, obstacle courses, and skills competition.





# Another example – from Mammoth

- Collaborative effort to produce a technical statement
- Started with the end in mind and worked back to the point of J3 athletes and what they should be able to do.
- Worked from Mighty Mites up to J3 level.
- All coaches involved in creating document



# Mammoth: Performance Evaluation: The Athlete's abilities

- Coordination
- Balance
- Timing
- Movement Speed
- Build
- Strength
- Endurance
- Power
- Flexibility
- Vision
- Touch
- Intelligence
- Personality
- Emotions
- Equipment



# Mammoth: The Performance

- Speed: Of body part movements. Right move at the wrong speed?
- Timing: What is the sequencing and flow of the movements?
- Accuracy: Are the movements accurately directed and controlled?
- Technique: What technique do they actually use? Does an obsession with style defeat their technique?
- Adaptability to conditions and variables. One turn for every condition?
- Tactics for course, terrain and snow condition



# Mammoth: Elements of Athletic Stance in Ski Racing

## MM - J1

- Skis parallel and hip width apart
- Weight distributed equally on both feet
- Ankles, knees and hips flexed
- Parallel shafts / Space at knees
- Hips over the feet
- Hands up, elbows in and in front of rib cage.
- Baskets back.
- Angle of back and shins matching
- Head up, eyes forward.



## **Mammoth: J4 Lateral balance**

- Shoulders level (with horizon) while standing on the outside ski from the apex to completion of the turn on blue slopes.
- Hip angle closely matches slope in a traverse/parallel position
- Maintains strong inside half to achieve the above.
- Has movement of CM in the direction of the turn during the transition
- Ankles knees and hips all engaged in this process.
- Can move to the uphill edge of the uphill ski , achieve balance and glide on UH ski in a traverse exercise.

## **J3 Lateral Balance**

- Proper direction of the hips in the transition on World Cup GS slope, derived from ability to stand, balance and initiate a turn from the uphill edge of the uphill ski
- Long outside leg use
- Hip angle closely matches slope in a GS Turn shape on Broadway

## **J1,2:**

- Ability to initiate from uphill ski is powerful in all conditions.
- Correct alignment is present in virtually all turns in a course.





# Connect language, technique, tactics, training and racing to Long Term Athlete Development Principals

“Using the guidelines put forth by USSA, coach/practitioners throughout the US can assemble their own long-term athlete development plan for their athletes and better align their pipeline of talent.

We have used it as a resource for our parents as well as our staff. We continue to work with the staff at USSA Sport Science on long-term athlete development and feel that they have been an incredible resource to our continued success.”

*John "JC" Cole, Director of Human Performance at Ski and Snowboard Club Vail and Colorado State Program Director for the National Strength and Conditioning Association*



# What is LTAD? Long-Term Athlete Development

LTAD, or Long-Term Athlete Development, is the managed developmental progression for an athlete that will both maximize their long-term potential and enjoyment in their sport.

- It is individualized, based on science, and factors one's development physiologically, cognitively and socially, as well as their experience in their sport.
- LTAD identifies optimal training, competition and recovery programming with relation to biological development and maturation (Balyi).
- With the LTAD approach, the athlete, coach and parents are more focused on long-term gains than immediate, short-term competition successes.
- Without realizing the hazards of a short-term approach, many athletes find that success early in sport does not translate to future performance because they neglected key developmental areas, or failed to maximize their opportunities at the right times in their development.





# Alpine Training System



## Foundation Stage

### PHASE 1

**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

### PHASE 2

**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

## Pre & Post Puberty

### PHASE 3

**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

### PHASE 4

**Biological Age**  
Puberty

(Growth Spurt)

#### Age

Girls: 11–14: J3 (J4–J3)

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

### PHASE 5

**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

## World Class Performance Full Maturation

### PHASE 6

**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

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## Cross Country Training System

Foundation Stage		Pre and Post Puberty			Full Maturation
PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
<p>Biological Age Pre Puberty</p> <p>Age 2-6 years old</p> <p>Play Age 1-4 years in sport</p> <p>Participation Ski around 1-3 days a week, or as much as is enjoyable</p> <p>Emphasize outdoor recreation Parents encourage play versus training</p> <p>Participate in all sports, including balanced-based sports like gymnastics</p> <p>Sensitivity Windows Basic motor skills, balance, coordination</p>	<p>Biological Age Pre Puberty</p> <p>Age 6-10 years old</p> <p>Training Age 1-4 years in sport</p> <p>Participation Ski 2-6 days per week, or as much as is enjoyable</p> <p>Emphasize outdoor recreation Parents emphasize activity versus training</p> <p>Fun races</p> <p>Play many other sports</p> <p>Sensitivity Windows Males: Suppleness, Speed #1, Beginning of Skills Females: Suppleness, Speed #1, Skills</p>	<p>Biological Age Pre Puberty (Before Growth Spurt)</p> <p>Age Girls: 10-13: (J4-J3) Boys: 11-14: (J4-J2)</p> <p>Training Age 4-8 years in sport</p> <p>Participation Ski 4-6 days per week Emphasize outdoor recreation Introduce fun competition period: Jan.-April</p> <p>Number of race starts: 5-15</p> <p>Play many complementary sports</p> <p>Sensitivity Windows Males: Skills, Stamina, Speed #2 Females: Skills, Stamina, Speed #2, Strength</p>	<p>Biological Age Puberty (Growth Spurt)</p> <p>Age Girls: 11-14: (J4-J3+) Boys: 12-15: (J4-J2)</p> <p>Training Age Train 4-6 days, 5-8 years in sport</p> <p>Participation Emphasize fun training Competition Period: Dec.-April</p> <p>Number of race starts: 10-20</p> <p>Play complementary sports</p> <p>Annual Training Volume: J4: Emphasize daily skiing, J3: 250-350, J2: 350-450+</p> <p>Sensitivity Windows Males: Stamina, Speed #2 Females: Stamina, Speed #2, Strength</p>	<p>Biological Age Post Puberty (After Growth Spurt)</p> <p>Age Girls: 12-16: (J4-J1) Boys: 14-17: (J2-J1)</p> <p>Training Age 6-11 years in sport</p> <p>Participation Train 5-6 days, 6-10 sessions / week Competition Period: Nov/Dec-April</p> <p>Number of race starts: 20-30</p> <p>Play complementary sports that do not impede year-round training</p> <p>Annual Training Volume: At least 500 hours by age 17</p> <p>Sensitivity Windows Males: Stamina, Speed #2, Females: Stamina, Speed #2,</p>	<p>Biological Age Full Maturation</p> <p>Age Female: 16+ J1+ Male: 17+ J1+</p> <p>Training Age Minimum 10+ years in sport</p> <p>Participation Ski / Train 6 days a week Competition Period: Nov-April</p> <p>Number of race starts: 20-40</p> <p>Annual Training Volume: 16-17: 450-500+, 18-19: 550-600+, 20-21: 650-700+, 22+ 700+</p> <p>Sensitivity Window Males: Strength Females: End of Strength</p>
Training Emphasis					
Emphasis on play, fun, skiing, enjoyment and balance.	Emphasis on play, fun, basic agility, balance and coordination. Incorporate activities that develop explosiveness (1-10 sec) and general endurance.	2-4 training sessions per week year-round in addition to other sports and outdoor activities. Further development of previous components. Emphasis on aerobic training and speed play. Incorporate own body weight training and body awareness training.	3-5 training sessions per week in season. 2-4 training sessions per week out of season. Athlete is introduced to structured training, including aerobic, anaerobic and strength training. In addition to ski training, athlete is engaged regularly in cross-training activities including balance and coordination, endurance, speed and strength building.	5-7 training sessions per week in season, including some two-session days. 4-6 training sessions per week out of season. Athlete implements a periodized training program that places stress on the body and subsequently gives it time to recover. Athlete uses both low-intensity aerobic training and high-intensity aerobic and anaerobic training to improve race fitness. Athlete maintains a training log.	6-10 training sessions per week in season, including some two-session days. 7-12 training sessions per week out of season. All components of the athletes training are now fully periodized and individualized. Athlete maintains a training log.
Technical and Tactical Emphasis					
Has fun on snow. Games and play on skis enhances skier's enjoyment and skill on snow.	Has fun on snow. Games and play on skis enhances skier's enjoyment and skill on snow.	Has fun on snow. Demonstrates basic athletic stance on skis. Exhibits natural body mechanics on skis. Is eager to explore all different types of terrain and snow conditions. Able to balance on one ski while skiing gradual downhill. Understands difference between running, classic skiing, and skating. Can herringbone and snowplow.	Good body position, balance and weight shift. Demonstrates ability to maintain appropriate balance and stance while skiing in all terrain and under a variety of conditions. Understands concept of changing tempo to suit conditions and terrain ("changing gears"). Discusses racing strategy and pacing with a coach.	Refines technique and tactics after growth spurt. Integrates increased strength, power and body size to achieve a stronger skiing technique. Effective use of different techniques to correspond to changing terrain and conditions. Changes techniques smoothly and quickly. Discusses racing strategy and pacing with a coach.	Masters all techniques and develops personal style. Athlete is comfortable with race strategy and pacing and continues to refine technique and tactics with a coach.

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# The USSA Training Systems for each sport provide recommendations for athletes, parents, coaches and clubs in six primary areas:

1. **Sport participation** - how many days or skiing/riding, number and time period of competitions, and training to competition ratios
2. **Conditioning** - volume and content for physical training outside of skiing or riding
3. **Technique and tactics** - specific skills for the sport
4. **Equipment selection** and preparation - the essential equipment needs for proper development
5. **Performance psychology** - mental strength activities
6. **Competition** - appropriate type and level of competition

There are recommendations in each of these areas based on the athlete's developmental phase.





# Your Club Curriculum

1. Glossary of terms
2. Technical Statement
3. Tactics Statement
4. Common Progressions
5. Fit the above into Long Term Athlete Development model
6. Be ready for what's new this Fall. Use it.



**As inspected.  
Send it!**

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