



# 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><b>Biological Age</b> Pre Puberty</p> <p><b>Age</b> 2–6 years old</p> <p><b>Play Age</b> 1–4 years in sport</p> <p><b>Participation</b> Ski around 1–3 days a week, or as much as is enjoyable Emphasize outdoor recreation Parents encourage play versus training Participate in all sports, including balanced-based sports like gymnastics</p> <p><b>Sensitivity Windows</b> Basic motor skills, balance, coordination</p>	<p><b>Biological Age</b> Pre Puberty</p> <p><b>Age</b> 6–10 years old</p> <p><b>Training Age</b> 1–4 years in sport</p> <p><b>Participation</b> Ski 2–6 days per week, or as much as is enjoyable Emphasize outdoor recreation Parents emphasize activity versus training Fun races Play many other sports</p> <p><b>Sensitivity Windows</b> Males: Suppleness, Speed #1, Beginning of Skills Females: Suppleness, Speed #1, Skills</p>	<p><b>Biological Age</b> Pre Puberty (Before Growth Spurt)</p> <p><b>Age</b> Girls: 10–13: (J4–J3) Boys: 11–14: (J4–J2)</p> <p><b>Training Age</b> 4–8 years in sport</p> <p><b>Participation</b> Ski 4–6 days per week Emphasize outdoor recreation Introduce fun competition period: Jan.–April Number of race starts: 5–15 Play many complementary sports</p> <p><b>Sensitivity Windows</b> Males: Skills, Stamina, Speed #2 Females: Skills, Stamina, Speed #2, Strength</p>	<p><b>Biological Age</b> Puberty (Growth Spurt)</p> <p><b>Age</b> Girls: 11–14+: (J4–J2+) Boys: 12–15: (J4–J2)</p> <p><b>Training Age</b> Train 4–6 days, 5–9 years in sport</p> <p><b>Participation</b> Emphasize fun training Competition Period: Dec.–April Number of race starts: 10–20 Play complementary sports Annual Training Volume: J4: Emphasize daily skiing, J3: 250–350, J2: 350–450+</p> <p><b>Sensitivity Windows</b> Males: Stamina, Speed #2 Females: Stamina, Speed #2, Strength</p>	<p><b>Biological Age</b> Post Puberty (After Growth Spurt)</p> <p><b>Age</b> Girls: 12–16: (J4–J1) Boys: 14–17: (J2–J1)</p> <p><b>Training Age</b> 6–11 years in sport</p> <p><b>Participation</b> Train 5–6 days, 6–10 sessions / week Competition Period: Nov/Dec–April Number of race starts: 20–30 Play complementary sports that do not impede year-round training Annual Training Volume: At least 500 hours by age 17</p> <p><b>Sensitivity Windows</b> Males: Stamina, Speed #2 Females: Stamina, Speed #2,</p>	<p><b>Biological Age</b> Full Maturation</p> <p><b>Age</b> Female: 16+ J1+ Male: 17+ J1+</p> <p><b>Training Age</b> Minimum 10+ years in sport</p> <p><b>Participation</b> Ski / Train 6 days a week Competition Period: Nov.–April Number of race starts: 20–40 Annual Training Volume: 16–17: 450–500+, 18–19: 550–600+, 20–21: 650–700+, 22+: 700+</p> <p><b>Sensitivity Window</b> 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 downhills. 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.
Equipment Selection and Preparation					
<b>Skis:</b> Skis on one pair of waxless skis, soft flex and between nose and forehead in height. <b>Boots:</b> Uses boots that are comfortable and warm. <b>Poles:</b> Uses one pair of poles for all techniques, or skis with no poles. Poles should fit snugly under the armpit. <b>Ancillary Equipment:</b> Clothing should provide appropriate protection from the elements and keep children comfortable for extended periods of skiing to ensure enjoyment of sport. Eye protection should be worn at all times when skiing. Uses sunscreen.	<b>Skis:</b> Uses waxable skis that are to be properly waxed by the athlete, parent or club leader for every day of skiing. <b>Boots:</b> Uses boots that allow for natural ankle movement. <b>Poles:</b> Uses one pair of poles for all techniques.	<b>Skis:</b> May be using classic and freestyle skis for racing and training. Skis should be selected to fit the skier's weight and height. Skis are to be properly waxed by the athlete and coach for every day of skiing. <b>Boots:</b> Uses boots that allow for natural ankle movement. <b>Poles:</b> Uses one pair of poles for all techniques at beginning of phase, but uses two pairs—one for skate and one for classic later in the phase. Poles should not be above mid shoulder.	Adheres to USSA and FIS rules for all equipment selection. <b>Skis:</b> Begins using classic and freestyle skis for racing. Skis should be selected to fit the skiers' weight and height. Fit is critical! No more than two-three pair for each technique should be owned by athlete. Is responsible for maintaining skis at all times. <b>Boots:</b> Classic and freestyle. <b>Poles:</b> Should be using poles specifically for classic or freestyle. <b>Ancillary Equipment:</b> Hill-bounding poles. Appropriate footwear and clothing during all physical activities. Athlete has a backpack for extra clothing, water bottle, water bottle carrier, waxing equipment, etc.	Adheres to USSA and FIS rules for all equipment selection <b>Skis:</b> Uses classical and skate skis. Fit is essential and quality over quantity is emphasized. Skis are properly waxed and maintained at all times by athlete. The athlete carries appropriate supplies for training. <b>Ancillary Equipment:</b> Both classic and skate roller-skis. Helmet and bright, reflective clothing for roller-skiing is mandatory. Uses road-tips on poles when roller-skiing.	Adheres to USSA and FIS rules for all equipment selection. Is responsible for having all equipment in perfect working order, to World Cup standards, at all times.
Performance Psychology Emphasis					
Fun, variety, positive reinforcement and perseverance. Positive parental support is essential.	<b>Sampling Years</b> 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. Fair play is emphasized.	<b>Sampling Years</b> Positive self talk, work ethic, perseverance, goal setting with a focus on the process and not on the results. Encourage the use of imagery and visualizing good technique. Demonstrate teamwork and sportsmanship. Positive parental support and club involvement. Fair play is emphasized.	<b>Sampling Years</b> Positive self talk, work ethic and perseverance, goal setting with a focus on the process and not on the results. Fair play is emphasized, and an understanding that performance-enhancing drugs are unethical is imperative. Effectively uses imagery and visualization practices.	<b>Commitment</b> 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. Parents continue to support the commitment of the athlete in the sport. Fair play is emphasized, and an understanding that performance-enhancing drugs are unethical is imperative.	<b>Specialization and Mastery</b> Refine performance psychology skills: Imagery; goal achievement; performance planning; attention and focus; self regulatory talk and confidence. Identify optimal performance state. Dealing with competition, risk, failure and fear. Parents continue to support the commitment of the athlete in the sport. Exemplifies the importance of fair play.
Competition Emphasis					
Competition only exists in the form of games on skis.	Local competition: innovative with a fun focus on interclub competition. Age-appropriate distances.	Local racing leads to state and divisional championships which may lead to regional events. Age-appropriate distances.	Local racing leads to state and divisional championships which may lead to regional events and Junior Nationals. International experience may be initiated in Canada. Age-appropriate distances.	Appropriate level and number of race starts ranging from local to national and international competition. Age-appropriate distances.	Seeks to compete at the highest appropriate level including regional FIS and local USSA club races, Continental Cups, European FIS races, World Junior Championships, U23 Championships, World Cups, World Championships, Olympics.