

Nordic Program Manual

IV. Nordic Program Description

The Jackson Hole Ski & Snowboard Club Nordic Program is designed and developed around the U.S Ski & Snowboard's Long Term Athlete Development (LTAD) model. Professional coaches pay attention to and understand that each athlete may enter the pipeline of development at different level that is not necessarily associated with their chronological age. An athlete's biological age, overall physical fitness, technical ability, tactical knowledge, mental and social maturation, and competitive history are all factors that play into which team best suits them. With that understanding, the pipeline is designed to progress athletes to reach the 5th phase of development the end of their career at JHSC.

Each of our offerings is consciously designed to link with the next. We use and adapt the work of top programs around the country and of national systems from the worlds' best ski nations including the US, Canada, Sweden and Norway. The athletes' individual needs and the programs' goals steer the ship. The Training Systems are charts, and sources for ideas.

The JHSC Nordic Coaches follow a principle of building solid foundations through fun and hard work, encouraging patience, appreciation of personal progress, and a willingness and eagerness to test oneself in higher and higher levels of competition.

The Nordic program offers year round training options for athletes ranging from the Development Team to the Comp Team. Seasonal options are offered to our younger, Teewinot and Lollipopper Teams.

A. Lollipopper Team

1. General Athlete Development

As athletes become comfortable on skis, athletes primarily focus on their body awareness while on skis and slowly incorporate coordination drills and fun technique drills taught through the games approach. "Adventure" skiing on the trails of trail creek slowly becomes a standard part of the practice routine. As a Lollipopper athlete develops, their adventure ski may begin with a ski in the nearby field close to the ski cabin. By the end of the season Lollipoppers learn and explore the wider trail system of trail creek. We require very little of an athlete at this level as our primary objective is to keep light and fun, and instill a love for the sport. As in most phases of development, multi-sport participation is recommended at this age.

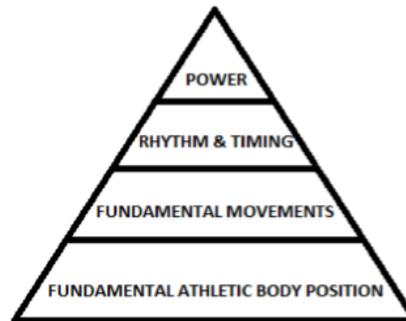
2. Physical Fitness

The Lollipopper Team focuses primarily on fun, adventuring and games. Games like sharks and minnows, ski soccer and diminishing equipment relays teach mobility, endurance and strength. A positive and engaging attitude goes a long way during the some of the more physically demanding activities. Although things are meant to be light and fun, coaches will pay attention to how each athlete responds to the group activities that require a little motivation and willingness to participate. We do not offer programing outside of the winter

season, but encourage kids to participate in other seasonal sports and activities that benefit the development of their skiing.

3. Technical

We use the below “continuum of development” model for every team, younger athletes in phases 1-3 primarily focus on fundamental athletic body position and fundamental movements.



Lollipopers not only learn how to be mobile on their skis, and gain a sense of body awareness on skis, but we begin to introduce the fundamental athletic body position and fundamental movements of skate and classic technique. An athlete's technical ability will be partially evaluated based on the JHSC Lollipopper Skill Assessment test and partially on coaches observation during drills, games and adventure skis.

4. Tactical

In the beginning of the season we focus on acquiring basic skills on flatter terrain through games and fun drills. Later in the season we often venture into the woods on adventure skis as athletes become more confident. Athletes at this level are often taught how to approach different and varied snow conditions and terrain. How each athlete manages and responds to the different challenges can be an evaluation point for the coaches.

5. Equipment

In the pre-season parent meeting we outline the necessary equipment needed to participate. The importance of warm clothing is reiterated. We offer lease equipment for these athletes that is sure to fit them appropriately. We plan on providing fish scales for these athletes for classic days, unless the coach decides to use kick wax. One pair of universal skis and poles and combi boots is the extent of required equipment.

6. Mental and Social

It's important that we divide the kids into groups according to their ability and peer groups in this phase. Creating a positive environment and positive reinforcement is essential as this phase. The daily routine is explained to the kids before each practice so the goals of each practice are acknowledged.

7. Competition

Games during practice and the Mini Moose Chase, a .1/2 km race in the stadium at Trail Creek is the extent of competition for Lollipopers.

B. Teewinot Team

1. General Athlete Development

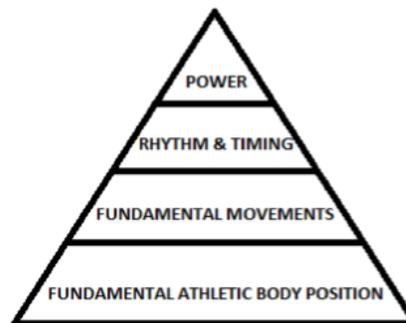
Just as in the Lollipopper program, as athletes become comfortable on skis, athletes primarily focus on their body awareness while on skis and slowly incorporate coordination drills and fun technique drills taught through the games approach. "Adventure" skiing on the trails of trail creek slowly becomes a standard part of the practice routine. By the end of the season, Teewinots learn and explore the wider trail system of trail creek. We require very little of an athlete at this level as our primary objective is to keep light and fun, and instill a love for the sport. The mental and social maturation of this phase enables the group to practice two days per week, one more day than the Lollipoppers. As in most phases of development, multi-sport participation throughout the year is recommended at this age.

2. Physical Fitness

The Teewinot Team focuses primarily on fun activities, but we begin to challenge the kids more with speed play and exercises that allow them to practice their agility and coordination. Slightly more physically engaging and advanced games such as speed ball, capture the flag and treasure hunts are incorporated into the Teewinot practice plans. We do not offer programming outside of the winter season, but encourage kids to participate in other seasonal sports and activities that benefit their skiing.

3. Technical

We use the below "continuum of development" model for every team, younger athletes in phases 1-3 primarily focus on fundamental athletic body position and fundamental movements.



Teewinot athletes alternate between skate and classic weeks. They not only learn to be mobile on their skis, and gain a sense of body awareness on skis, but we build on the fundamental athletic body position fundamental skate and classic movements. An athlete's technical ability will be partially evaluated on the JHSC Teewinot Skill Assessment test and partially on coaches observation during drills, games and adventure skis.

4. Tactical

Just as in the Lollipopper program, we allow the kids to play and explore varied terrain. Basic skiing skills and a heightened sense of body awareness is acquired through

adventuring, games and drills. Downhills, the NordicX, small jumps and managing agility and obstacle courses become more of a tactical focus at the Teewinot level. How each athlete progresses on specific hills and courses may be a point of evaluation for the coaches.

5. Equipment

In the pre-season parent meeting we outline the necessary equipment needed to participate. The importance of warm clothing is reiterated. We offer lease equipment for these athletes that is sure to fit them appropriately. We plan on providing fish scales for these athletes for classic days, unless the coach decides to use kick wax. One pair of universal skis and poles and combi boots is the extent of required equipment. Some more advanced Teewinots will graduate to specific skate and classic poles.

6. Mental and Social

As with the Lollipoppers, it's important that we divide the kids into groups according to their ability and peer group for the Teewinots. The daily routine is explained to the kids before each practice so the goals of each practice are acknowledged. Each athlete will be assigned to a group within the Teewinot team based on the ability level and their mental, social and physical maturation. We will focus more on process and performance oriented goals and evaluate them on their follow through and effort in a positive manner.

7. Competition

Teewinot athletes are welcome to join the West Yellowstone Intermountain race in January. Parents are required to travel with their athlete but JHSC will provide coaching and wax support at the venue. There are a number of local events that best suit Teewinot athletes as an introduction into racing. A highlight for the 2017-18 season will be the Intermountain Youth Festival held at Trail Creek. Athletes from around the intermountain region will join us for a skate race, classic race, NordicX race, and skills assessment competition.

B. Development Team

1. General Athlete Development

As athletes physically develop and have gone through the earlier phases of development in skiing, and have been connected to other sports at different times of the year, they are ready for the introduction of dry-land training. Summer dry-land that includes the introduction to roller-skiing is offered one day per week. Starting in November athletes start dry-land again with fundamental movement exercises, games, and ski imitation activities. The Development team will train regularly, two days per week throughout the season. More advanced Development athletes may be invited to train with the Junior team one day per week.

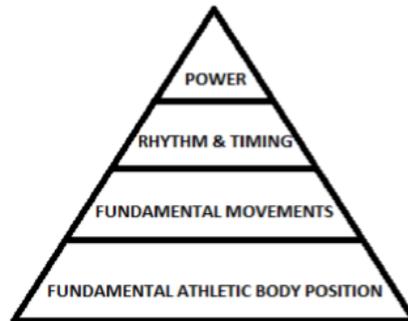
2. Physical Fitness

Dry-land activities include a body weight circuit routine, light running, games, dynamic stretching, and basic mobility exercises. Hopping, basic bounding technique and explosive drills games are introduced. More complex technical and tactical games and drills are introduced, but modified for skiers at the beginner level. Athletes at all ability levels are encouraged to participate as we continue to promote the idea of multi-sport activity throughout the year. Development athletes are given another month to build upon their skill set and typically go on more and longer adventure skis than the Teewinot team. We do not implement physical tests at this level, but we do incorporate a skill assessment drill set

where the kids can perceive their own person growth and development.

3. Technical

We continue to use the “continuum of development” model for every team, younger athletes in phases 1-3 primarily focus on fundamental athletic body position and fundamental movements.



Development athlete continue to focus on the technical elements taught at the Teewinot level while the challenge of skiing in different and more varied terrain requires more balance and coordination. The basic athletic stance is reiterated along with fundamental movements of skate and classic. An athletes technical ability will be partially evaluated on the JHSC Development Skill Assessment drill set and partially on coaches observation during the drills, games and adventure skis.

4. Tactical

Adventure ski touring is a big part of the Development program. The challenges they encounter while on adventure skis will encourage self taught skills in varied terrain. We continue to alternate between classic and skate weeks and introduce the different between running and gliding on skis. How to shift tempo gears relative to terrain variances during adventure skis is taught, observed and evaluated by the coaches.

5. Equipment

Just as in the Lollipopper and Teewinot programs, we offer lease equipment to Development athletes. At this level we still recommend that skiers use combi skis, but some choose to purchase skate and classic skis. Having skate and classic specific poles will help the progression of their technique. There is more of an emphasis on teaching the different aspects of waxing for skate and classic.

6. Mental and Social

The coach athlete relationship is very important at the Development level. We try to support and encourage kids to enjoy the sport with positive queues while also teaching the importance of positive self-talk. Communication is clear and the goals of each week are reiterated to the parents and athletes. There is a focus on process-oriented goals with the athletes, while keeping the parents involved in this process through a mid-season and post season evaluation report. If coaches observe an athlete’s social or biological age and abilities are at a different level, groups will be formed or that athlete will be invited to join the Junior team one day per week.

7. Competition

Development athletes are welcome to join on any one of the four regional circuit races. Parents are required to travel with their athlete, JHSC will provide coaching and wax support at the venue. There are a number of local events that best suit Development athletes as an introduction into racing. A highlight for the 2017-18 season will be the Intermountain Youth Festival held at Trail Creek. Athletes from around the intermountain region will join us for a skate race, classic race, NordicX race, and skills assessment competition.

C. Junior Team

1. General Athlete Development

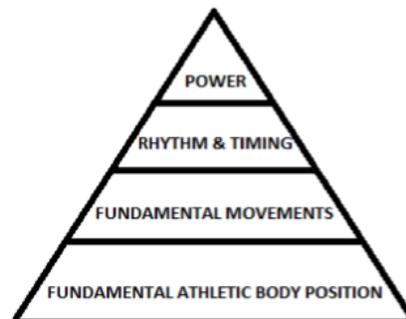
We build upon the summer training routine with an additional day of dry-land training. There is an opportunity to interact with Prep and Comp team athletes one day per week in the summer, couple with one day of roller skiing. Regular scheduled training for the season starts in November; with four days of training. This schedule will remain consistent through the remainder of the season. Given the wider range of biological development and sometimes ability in this phase, athlete participation may vary from summer training and 4 days per week in season to starting at 3 days per week only in season. The overall emphasis is fun and enjoyment of the sport, but we incorporate more complex training through the framework of fun and games. Strong athletes with no prior experience in the sport are encouraged to participate.

2. Physical Fitness

Junior team athletes are encouraged to participate in multiple sports throughout the year where overall physical fitness and activity is emphasized. Summer training sessions focus on roller ski agility, basic body weight strength, on foot agility and mobility exercises. Regular scheduled training begins in November, where we incorporate all of these activities. We also begin to incorporate a fundamental movement assessment and focus on neuromuscular development during the dry-land period of training. Athletes enter the testing realm with a one mile run during dry-land, a basic strength and plyometric test, and an on snow skill assessment drill set.

3. Technical

We continue to use the “continuum of development” model for every team, younger athletes in phases 1-3 primarily focus on fundamental athletic body position and fundamental movements.



We do incorporate structured training on the Junior team and balance aerobic, anaerobic, and strength conditioning activities during November dry-land. Neuromuscular adaptation and strength training becomes more important as athletes at this phase begin to focus on rhythm at timing and power application. On snow training includes a balanced routine of speed play, games, adventure skis (aerobic) relays and intervals (anaerobic) and some specific strength exercises like no pole skating, single sticking, and double pole progression drills. At least once per week there is an emphasis on maintaining correct body position, equal weight transfer and providing specific technical feedback for individuals. Technical video review takes place twice per month.

4. Tactical

Just as in the Development program, adventure skis, speed play and games play a large role in training. As the athletes naturally become more competent and confident on their skis we continue to teach the concept to tempo and how to shift gears in varied terrain. Athletes begin to learn when to apply V2, V2 alternate, V1, Double Pole, Double Pole Kick and striding depending on terrain variances. Interval workouts, time trials and relays give the athletes an opportunity to become familiar with pacing and how to ski effectively and efficiently in a group and alone. Before each race there is a discussion about their race plan and how they plan on mentally approaching their race.

5. Equipment

We recommend one pair of skate and classic skis and poles. Younger Juniors may use combi boots for skate and classic. We recommend that older Juniors get skate and classic boots as the support and design will help with their technical progression. These athletes learn to wax their own skis for skate and classic at practice. Roller skis are bounding poles are provided by the club during the summer and fall months.

6. Mental and Social

Athletes create process performance goals and one outcome goal. We hold this session in the middle of the season so they have a better grasp on what they want to accomplish. Mid season and end of season reviews are offered to the athletes and parents from the coaches. Feedback includes a review of their overall attitude towards the team and coaches along with the JHSC mid and end season evaluation that is based on these 7 elements in this phase of development. There is discussion of positive self-talk, focusing on their individual progress vs. their competitors and what they can and can't control. Several times, usually before big races we go over a pre-race routine that they can execute come race day. Athletes are broken up into different groups relative to their social and biological age for key workouts like distance and interval/relay sessions.

7. Competition

Athletes on the Junior team are invited to all of the Junior National Qualifier weekends (3), and are encouraged to participate in local races. Younger Junior team athletes may pick one race weekend as a preview to the competitive realm. The Solder Hollow Super Qualifier at the Olympic venue in Midway Utah is a great event and introduction to competitive racing for athletes at this phase. A highlight for the 2017-18 season will be the Intermountain Youth Festival held at Trail Creek. Athletes from around the intermountain region will join us for a skate race, classic race, NordicX race, and skills assessment competition.

D. Prep and Comp Teams

1. General Athlete Development

Prep and Comp team athletes follow and begin to understand period based training. The periods are broken down into a balanced yearly, monthly and weekly training schedule. The overall yearly plan for these athletes equates to about 400 hours for U16s and 450hrs for U18 and U20 athletes. However as athlete are involved in other sports, take time for family vacation and are involved in other activities, the plan is dynamic and can be modified to each individual's needs. Some athletes are involved in other sports, others focus on Nordic training year-round. Coaches pay attention to each athlete's goals inside and outside of Nordic racing and training. This plays a factor in how we design their individual training plan while still adhering to the overarching plan of the team's periodized plan. There is an increase in volume training, but we still emphasis speed, agility, technique and strength given that we primarily race and train at altitude. While volume training becomes more important at the Prep and Comp team level, there is currently a larger national discussion about the importance of emphasizing speed, agility and overall athleticism on skis.

2. Physical Fitness

We hold training for Prep and Comp team athletes 10 months out of the year from June through March. For the summer session, the plan for prep team athletes calls for 3 days of training with the team with two of those days involving '2 a days' with strength in the p.m. The plan for comp team athletes calls for 5-6 days of training with the team; with the same strength sessions. On your own training is recommended by the coach one day per week for both teams. For the fall session we offer 3 days per week of training for U16 Prep team athletes that are in middle school. All other U16 Prep team athletes are scheduled to train 4 days per week, and Comp team athletes 5-6 days per week. In the winter, all Prep team athletes train 4 days per week and Comp team athletes 5-6 days per week.

Athletes understand the difference between volume and intensity training and have a good grasp of their different training zones. Strength training begins in June and ends before fall camp in November. We do incorporate a very light 'strength maintenance' session one day per week during race season depending on the race schedule. Our strength plan is broken down into 6 different phases. Athletes start with a functional movement assessment in the beginning of June then move through the 6 periods – Anatomical Adaptation. Base Strength One. Max Strength Two. Power One Fundamentals. Specific Strength. Power 2 High Intensity. Each strength session incorporates mobility exercises and a core stability routine.

At least once per week throughout the entire year, speed and agility exercises on skis keeps the athletes progressing technically and tactically. Because athletes jump in and out of training at different points throughout the year, training is regularly modified relative to their fitness, background and schedule.

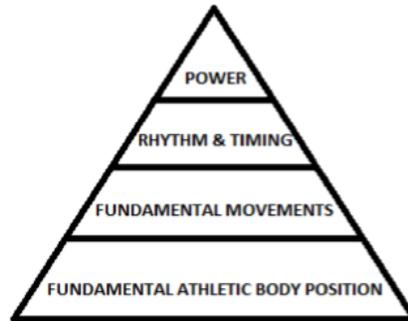
The discussion of nutrition, rest and recovery, and mental training is framed such that the athlete understands that these elements are equally important aspects of the training as any other aspect. Prep athletes

Prep team athletes are encouraged to participate four test weeks and it is highly recommended that all Comp team athletes participate in these test weeks. The first test week is in June and the last in late October or early November. These tests include the 3000m track time trial, a double pole time trial, the Canadian strength test, and a trail run

time trial.

3. Technical

We continue to use the “continuum of development” model for every team, younger athletes in phases 1-3 primarily focus on fundamental athletic body position and fundamental movements.



Technique is worked into a training schedule that balances volume, high intensity, strength, mobility, flexibility, speed, and agility. The coaches understand that there is a balance of needing a certain level of strength to effectively apply one's technique and making sure we're correct with the fundamentals before we apply power. The technical part of training follows every element in the continuum of development model: 1. Fundamental Body Position. 2. Fundamental Movement. 3. Rhythm and Timing. 4. Power Application, but it's important to understand that each individual may need to focus on a different element to better the other element even if not in alignment with the continuum of development. Video review, mimicry, direct and positive feedback, and agility and strength help each athlete better develop every aspect of their technique on this continuum.

4. Tactical

The discussion of race tactics is discussed and practiced during training sessions, especially for sprint racing. Understanding the pace and quickness of a sprint race vs. a 5km and a longer distance race is discussed and worked on in training. Athletes understand how to change gears within each respective distance and continue to learn how to race in a group and as an individual. Tactical discussions between the coach and athletes take place the day prior to the race and the day of the race.

5. Equipment

Prep team athletes have access to top of the line Rossignol skate and classic race lease skis for the season. Athletes are required to have at least one pair of skate and one pair of classic race skis and one pair of skate and classic training or warm up skis. JHSC has a fleet of 'Zero' skis for difficult waxing conditions at races. Athletes wax their own skate and classic skis at practice and are encouraged to do so after every training session. JHSC provides roller skis and bounding poles, but Comp team athletes are encouraged to purchase their own roller skis.

6. Mental and Social

Athletes on the Prep and Comp team are introduced to the concept of the 24 hour athlete. This model helps them understand all of the different factors in their life that contribute to their performance on skis. They are taught and begin to understand what they are in control of and what they are not in control of, and where to place their energy to create the largest impact on their performance. We begin to teach the athletes that they are their own measure, and that they have control over their process, performance and outcome goals. With guidance and feedback from their coaches, they establish their own goals based on their desire to achieve and their perceived personal ability. The coaches job is to teach them to believe that their potential is limitless with the understanding of setting realistic goals. Relaxation techniques and arousal techniques are taught at practice and then again discussed the day prior to each race and on race day. Breathing, yoga, and imagery techniques are taught during practice and prior to competitions to help with anxiety. Race day routines are simulated at practice and reiterated the day prior to the competition. The Prep and Comp team are considered separate teams which places each athlete in the most appropriate learning environment according their social, biological age and ability level. With that said the Prep and Comp team spend 70-80% of the time together to reinforce comradery and team spirit.

7. Competition

Comp team athletes compete at all of the Intermountain Junior National Qualifier. Prep team athlete have the option, and are encouraged to compete at JNQs (3 weekends), 2-3 Wyoming High School races and HS State. 3-4 local competitions are encouraged. Athletes compete at Junior Nationals if they qualify. Some Comp team athletes are invited to U.S. Nationals depending on the location and their commitment to the sport.