

# Snowboard Training System

## Development Phases Domain

Elements	Phase	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	<b>Biological Age</b>	Early Childhood	Late Childhood	Pre-puberty before growth spurt	Puberty and growth spurt	Post Puberty after Growth Spurt	Full Maturation
	<b>Chronological Age</b>	2-6 years old	6-10 years old	Girls: 9-13 Boys: 10-14	Girls: 11-15 Boys: 12-16	Girls: 12-17 Boys: 14-18	Girls: 16+ Boys: 17+
	<b>Time in Sport</b>	1-4 years in sport	2-5 years in sport	4-7 years in sport	5-8 years in sport	6-11 years in sport	10-15+ years in sport
	<b>Training Volume</b>	50 hours per season; 1-2 sessions per week	150 hrs/season; 2-3 sessions per week	220 hours/season; 3-5 sessions per week	360 hours/season; 4-6 sessions per week	460 hours/season; 5-7 sessions per week	500 hours/season; 5-7 sessions per week
	<b>Summer/Off season Training</b>	None	0-5 days	10 days	20 days	25 days	30+ days
	<b>Coached Freesriding</b>	75%	60%	40%	30%	20%	15%
	<b>Coached Drills</b>	10%	20%	20%	20%	20%	15%
	<b>Coached Venue Training</b>	10%	20%	30%	35%	40%	45%
	<b>Full Run Competition Simulation</b>	5%	5%	10%	15%	20%	25%
	<b>Freeride with friends and family</b>	As much as enjoyable	As much as enjoyable	As much as enjoyable	As much as enjoyable while balancing rest, travel and recovery needs.	As much as enjoyable while balancing rest, travel and recovery needs.	As much as enjoyable with necessary balance of rest, travel and recovery needs.
	<b>Complementary Sports</b>	Participate in many physical activities. Explore individual coordination or balance-based sports. Team sports to build teamwork, ethics and fair play.	Play many sports. Active participation in coordination or balance-based sports. Participation in team sports build teamwork, ethics and fair play.	Continue to participate in many activities and sports. Begin to identify with primary vs. complementary sports.	Continue to participate in complementary sports while identifying clear goals in primary sport.	Use complementary sports and activities for variety and to enhance aerobic conditioning by increasing training volume in all activities.	Use complementary sports and activities for injury prevention, avoiding burnout, and to maintain all aspects of physical fitness.

## Physical Fitness Domain

<b>General Concepts</b>	Begin to develop fundamental movement skills through play, fun, novel activities.	Increase play to enhance specific elements of physical fitness in open environments.	Start to incorporate focused dryland training 1-2 days per week. Enhance body awareness, balance, and spatial anticipation through games and drills.	Physical fitness is becoming an integral part of the season. 1-3 sessions per week. Increase hours of training with varied volumes and intensity.	Implement periodized training with varying volumes and intensity. Training is now essential to seasonal programming with 2-3 sessions per week and off-season fitness plans.	Year-round, periodized training plans with varying volumes and intensity are essential to prepare for full competition and training loads.
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Elements	<b>Growth and Development (Body Composition)</b>	Body begins to develop into adult-like proportions in terms of how various body parts relate to each other. Muscle mass increases, heart and respiratory rates are similar to that of adults.	Body finishes developing into adult-like proportions. Rate of growth slows, strength increases and ability to perform fine motor skills increases.	Rate of growth increases again in preparation for adolescence. Weight and height increases. Shoulders broaden in males and hips widen in females.	Rate of growth reaches peak (Peak Height Velocity). Bodies reach adult heights, muscles grow rapidly while muscle to fat ratios differ between males and females. Heart rate and respiratory capacity increases leading to greater tolerance for exercise.	Growth rate slows and stops. Bodies are adult in proportion and muscle to fat ratios. Very little change in height from this point forward. Muscular, skeletal, cardio and respiratory functions are fully formed with capacity for heavier exercise or training loads.	Body finishes adolescent growth and development.
	<b>Endurance</b>	Foundations of endurance is established through sustained activity and play.	Continue to establish foundations of endurance through sustained activity and play. Add duration to activities and games. Manage duration of activity by introducing time-structured games and activities.	Develop aerobic conditioning with scheduled activities along with increased time spent in games and training	High duration, low intensity activities such as running, swimming, biking or hiking are incorporated into the training plan. Include team sports and multi plane activities such as soccer, basketball, ultimate frisbee, etc.	Develop understanding of the inverse relationship between volume and intensity. Maintain a sport specific and training endurance level.	Develop and/or maintain appropriate energy systems for success in discipline.
	<b>Mobility</b>	Explore activities and games that use a variety of body movements.	Introduce and practice mobility exercises through unorganized play and some structured activities.	Introduce range of motion, mobility drills, general exercise preparation and coordination through semi structured play.	Incorporate daily flexibility training. Limit the loss of mobility, functional strength, balance and coordination during growth spurt through multi joint and whole body exercises.	Practice a variety of core stability exercises. Incorporate mobility training specific to the sport or discipline.	Incorporate varied and sport-specific core stability exercises.
	<b>Strength</b>	Explore whole body movements which encourage range-of-motion and exploration of movement options.	Continue with whole body activities and exercises. Introduce more targeted focus on specific body movements.	Implement structured body weight exercises with proper technique to develop overall strength.	Majority of time spent in movement, mobility, warm up and mechanics. Short duration (20 min) in structured strength and power movements. Light resistance work including bands, med balls, etc.	Practice safety and competence with free weight techniques. As technique is mastered, increase external loads with focus on whole body movements while addressing any imbalances.	Master Olympic lifts and supplemental lifting exercises. Utilize eccentric training for overload.
	<b>Power</b>	Fast movements developed by running, jumping and throwing.	Use fun playful activities to enhance body awareness, spatial awareness and object manipulation. Incorporate activities that develop quickness (0-10 sec bursts).	Appropriate volume and intensity of body-weight training. Use dynamic vertical exercises such as hopping, skipping and jumping to enhance power movements.	Practice Olympic lifting technique with no weight. Target all major muscle groups with body weight exercises. Add light weights for biologically advanced athletes. Continue jumping exercises and introduce limited plyometric training.	Continue to incorporate full body movements while increasing volume in jumping, etc. Add duration to strength portion of the workout with continued emphasis on mobility, movement, mechanics and warm up.	Strength and Power programs become more planned and periodized. Workouts become more individualized. Still fun but purposeful in developing the needs of the individual athlete.

<b>Motor Skills</b>	Create a foundation for agility, balance and coordination (ABC) through participation in multiple sports or physical activities.	Increase ABC through fluidity of movement and range-of-motion in simple activities.	Incorporate multi-plane movements that increase ABC and range of motion across all planes of movement. Begin to use focused exercises to target specific movements.	Limit the loss of flexibility, functional strength, balance and coordination during growth spurt. Use mobility training along with agility, balance and coordination through growth spurt.	Use sport specific exercises and more complicated ABC drills to enhance range of motion that target sport specific movements patterns.	Increase difficulty of balance drills for precision of motor control. Increase flexibility exercises consistent with specific demands of the sport.
<b>Nutrition, Hydration, Recovery</b>	Well rounded nutrition is practiced by parents, child, coaches and club. Proper rest and sleep habits help with recovery and energy management.	Basic athletic and healthy nutrition concepts are addressed by parents, child, coaches and club.	Athlete awareness increases about importance of nutrition. Healthy sleep habits becomes a component of training and physical fitness.	Athlete can identify nutritious from non-nutritious food in their diet. Begin to link nutrition with performance. Hydration is monitored. Introduce cool-down, sleep, rest and recovery as part of the training plan.	Implement plans for a balanced diet to enhance performance. Keep a logbook of all training related activities such as hydration, diet, rest, recovery, sleep, and other factors that contribute to or diminish physical fitness.	Athlete uses diet planning to maximize training and recovery. Utilize physiologic measures and logbook diary to monitor training. Respects supplement limitations and consequences of illegal drug violations.

**Technical Domain**

<b>General Focus</b>	Active start - Learning and fun environments	Adventure stage - Riding all terrain, exploring the mountain	Technical stage - Developing precision of basic skills while learning advanced techniques over a variety of terrain and features	Tactical stage - Application of technical skills to Event/Discipline specific tactics.	Technical and Tactical Stage - Refinement of Event/Discipline specific technical and tactical skills	Mastery and Innovation stage - Event/Discipline specific technical and tactical mastery
<b>Skill Development</b>	Learn to snowboard. Focus on basic movements and foundation skills.	Riders are learning basic turn shapes and riding styles. Through effective stance and efficient movements, they are learning to control the board to perform a variety of fundamental tasks in a variety of terrain.	Riders are learning to apply different turn shapes, board performance and movement patterns to a variety of terrain.	Maintain technical skills through the growth spurt and refine tactical skills. Begin to feel the subtle differences between different board performance concepts and how it affects the skill, trick or technique they are mastering.	Refine technique and tactics after growth spurt. Integrate the increased strength, power and body size into their riding.	Masters discipline specific skills. Optimizes technical skills for ability maximum performance in competition situations.
<b>Turn Shape and Technique</b>	Linked skidded turns on beginner or intermediate terrain. Learning basic carving movements and exploring variety of turning techniques.	Riding in control turning from toe to heel, simple switch riding on green terrain, basic carve turn, basic Ollie, ability to ride flat base for short periods of time, riding easier moguls, tree runs and powder turns.	Riders are learning to apply different turn shapes, board performance and movement patterns to a variety of terrain. Can carve turns on a variety of terrain with a variety of turn shapes.	Riders can confidently adapt turn shape and technique in rapid sequences in order to achieve multiple tasks on any terrain.	Riders have mastery of a wide variety of turn shapes, styles and techniques both regular and switch. Precise controlled movements dictate turns in all conditions.	Can ride anything, anywhere in any any condition with confidence, speed and style.
<b>Athletic Stance and Balance</b>	Learn fundamentals of stance and balance on a snowboard.	Mastery and confidence in fundamental stance and balance on the snowboard.	Ability to dynamically adjust balance and stability to match terrain or task.	Ability to dynamically adjust balance and stability with precision and coordination.	Mastery of balance and stability in all situations. Recovery moves are inherent to maintain balance.	Completely at home on the snowboard where all movements and dynamic balance is second nature.

Elements

<b>Alignment and Separation of Movements</b>	Learn effective body alignment in relation to the snowboard and terrain.	Mastery of effective body alignment on the snowboard in a variety of terrain.	Develop ability to separate movements of upper and lower body.	Ability to use a variety of high intensity movements to maximize performance in competitive venues, significant use of upper-lower body separation.	The rider is using separation of movements across multiple planes and aspects to create complex chains of movements.	Able to link complex chains of movement together in a smooth and fluid manner with exact precision.
<b>Rotary, Edging and Pressure</b>	Gain comfort with basic skidded turns exhibiting change in pressure on each edge. Learning how to ride flat board for short periods of time.	Riders are combining fundamentals of rotary, edging and pressure to achieve a variety of turn shapes and techniques to match their task and terrain choices.	Sound fundamental skills are mastered and integrated in the rider's movement patterns. Higher intensity and complex movement patterns are emphasized to achieve a desired outcome on specific terrain.	Ability to ride flat base at high speeds. Can ride switch confidently in most terrain with precise movements. Able to adapt and refine pressure movements on the fly to maximize effectiveness and fluidity in all terrain.	Ability to ride flat base at high speed both regular and switch with complete mastery and confidence on any terrain around the mountain. Switch riding is as effortless as regular. Exact precision of pressure and edge movements is mastered.	Exact and precise rotary, edging and pressure movements are utilized in complex chains of movements to accomplish a variety of task, tricks or skills. These movements are ingrained, habitually and occur automatically.
<b>Terrain Parks and Features</b>	Starting to catch air on small, natural features. Learning basic flatground tricks involving simple rotations and variable pressure on the board.	Riders are getting comfortable grabbing over small jumps and exploring small rotations 180 to 360, both front side and backside. Riders begin to explore simple rail features.	Riders should be competent on small to medium jumps, basic grabs, ability to ride comfortably in halfpipe and rail features.	Riders should be comfortable spinning over large jumps as well as in the pipe. Riders begin experimenting with single inverted maneuvers and should be able to handle the more technical rail features with confidence.	Full HP and SS runs with speed, confidence, amplitude and style. Creativity in trick selection and flow. Beginning to experiment with double cork and multiple, linked rotations beyond 900 (HP) and 1080 (SS).	Riders are pushing the envelope of what they are capable of. They have a deep and automatic understanding of the cause and effect of various movements and can link together complex runs at the highest level of difficulty with the highest level of precision.

**Tactical Domain**

<b>General Focus</b>	Have fun with snowboarding and gaining confidence on a snowboard. Mileage around the mountain is maximized with an emphasis on fun, freeriding with friends. Learning safety and etiquette around the mountain.	Tactics are learned through self-discovery by riding around the mountain and adapting to different terrain. Respects and rides challenging terrain or difficult snow conditions.	Gaining comfort in applying various tactics in order to ride terrain using different strategies to achieve differing results.	High intensity and more complex movement patterns are mastered. Dynamic and complex movement patterns are emphasized to achieve a desired outcome on specific terrain and features.	Refine event specific technical and tactical skills to achieve desired outcome. Integrate the increased strength, power and body size to achieve more complex movements and precision of skill application.	Mastery of tactical strategies based on the individual's style, discipline and goals.
<b>Terrain</b>	Explore the mountain and gain confidence on variety of groomed runs. Starting to catch air on small, natural features.	Explores the mountain environment and riding in variable terrain. Learning to perform a variety of tasks all over the mountain and in the park.	Confident on most terrain and comfortable on small to medium jumps, rails and the halfpipe.	Confidence on the mountain. Ability to ride anywhere in any condition with confidence and speed.	Innovation on the mountain. Ability to ride anywhere, anytime in any condition using the whole terrain with speed, style and creativity.	Complete mastery of all environments. Ability to ride anywhere with creativity and innovate on the fly.

<b>Elements</b>	<b>Halfpipe</b>	Ability to adapt to changing terrain pitches using effective stance and balance.	Learning to ride transition by adapting body alignment and movements in the pipe. Using effective edge control to manage speed and gain amplitude. Reaching the lip of pipe with straight airs and basic spins below the lip.	Gaining confidence in the halfpipe. Learning straight airs above the lip of the pipe and basic spins at the lip. Using effective pressure control to pump transition to maintain speed throughout the pipe.	Dynamic drop-ins, active pumping to generate speed in transition with effective edge transfers. Ability to air out of the pipe and rotate in multiple directions beyond 360.	Dynamic drop ins with speed and control. Starting to be comfortable with up to head high amplitude all the way down the pipe. Linking tricks together regular and switch while beginning to incorporate inverted movements in to the HP routine.	Full pipe runs with maximum amplitude and speed from top to bottom. Linked tricks with multiple rotations. Incorporating single and double inverted tricks into full runs. Creatvity in run choice is essential. Ability to revise trick sequence as conditions or events dictate.
	<b>Slopestyle</b>	Beginning to catch air on natural features and perform some simple flatground tricks such as ollies, butters, presses. Entry into terrain park on smaller jumps or rails.	Riders are getting comfortable grabbing over small jumps and exploring small rotations 180 to 360, both front side and backside. Riders begin to explore simple rail features.	Riders are learning to spin beyond 360 frontside and backside both riding forward and switch.	Riders should be comfortable spinning over large jumps in multiple directions beyond 360 and starting to experiment with inverted or off-axis skills.	Riders are completing full slopestyle runs with multiple directions of rotation both regular and switch with some off-axis manuevers. SS Routines are planned out and incorporate a variety of jump and rail tricks.	Full runs with maximum amplitude and speed from top to bottom. Linked tricks with multiple rotations. Incorporating single and double inverted tricks into full runs. Creatvity in run choice is essential. Ability to revise trick sequence as conditions or events dictate.
	<b>SBX</b>	Beginning to ride with confidence all over the mountain. Gaining mileage and confidence around the mountain.	Learning a variety of movements through freeriding that will transfer to a race course. Gaining confidence gliding on flat terrain around the mountain. Learning to hit jumps at variable speeds.	Riders can effectively follow a race course by using a variety of turn shapes or and matching changes in terrain. Rides berms using one edge and can remain flat base through vertical features. Hitting larger jumps at varying speed to learn different jump techniques.	Further refinement of tactics to maintain speed and manage course through a combinations of movements and skills. Riding berms with abiliity to maintain speed and gaining confidence switching between jump techniques. Gliding is precise and effective.	Using all skills to achieve precision of movements to generate speed. Development of race tactics and strategies.	All SBX skills work together smoothly to maximize speed on the course. Race tactics are thorough and complete with a deep understanding of the "flow of the race".
	<b>Alpine</b>						
	<b>Competition Planning</b>	None at this time.	Entry level competitions designed to reward skill progression, teamwork and fun.	Developing strategies and skills to gain confidence in the competitive venues.	Trains and competes in all events.	Begin to specialize in specific disciplines but may still compete in many events.	Yearly training plan based on athlete yearly and multi-yearly goals.

## Equipment Domain

	<b>Boards</b>	Choose based on height, weight and skill level.	Choose based on height, weight and skill level.	Choose based on height, weight, discipline and skill level. Introduce basic snowboard tuning and board preparation skills.	Based on height, weight, disclpine and skill level. Begin to test discipline specific boards. Tuning skills continue to improve	Discipline specific boards. Tuning skills continue to improve.	Discipline specific boards. Professional support or consultation is recommended for preparation.
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Elements	<b>Boots</b>	Proper boot fit and flex to facilitate a balanced, athletic stance.	Proper boot fit and flex to facilitate a balanced, athletic stance.	Proper boot fit, flex and performance.	Proper boot fit, flex and performance. Begin to test discipline specific boots.	Discipline specific boot to maximize performance.	Discipline specific boot to maximize performance.
	<b>Protection</b>	Helmets required at all times.	Helmets required at all times.	Helmets required at all times.	Helmet required; back protection, impact shorts, and mouth guard recommended.	Helmet required; back protection, impact shorts, and mouth guard recommended.	Helmet required; back protection, impact shorts, and mouth guard recommended.

**Mental Training Domain**

Elements	<b>Environment and Motivation</b>	Foster an environment that promotes enjoyment amongst the participants. Provide participants opportunities to experience success with even the most fundamental of tasks and positively reinforce these behaviors. Participants to begin to develop fundamental skills, confidence to inspire passion for the sport.	Continued cultivation of a fun environment to allow participants to continue to experience success. Coach acts as a mature role model in order to build long-term coach-athlete relationships through mutual trust and respect.	Coach-athlete relationships, based on trust and respect, are built through effective communication before, during and after practice. Consistency in talk and behavior is key to developing a trusting relationship.	Identify relevant factors from prior successful performance. Athletes create a detailed list of what they do prior to the competition from a physical, mental, and environmental aspect. Athlete focuses on what they can and can't control. During practice sessions, the athlete follows the same pre-competition routine.	Reinforce the idea that hard work creates more opportunity for success. Accountability is important. Self-analysis and the acceptance of feedback is encouraged. Athletes analyze their own performance and identify areas for improvement. Enforce the concept that success is attributable to personal effort.	All of the aforementioned strategies need to continue to play a role at this level. Athletes continue to have opportunities to experience success and the coach-athlete relationship is built on a mutual trust and respect. The coach-athlete relationship develops into a collaborative partnership with the athlete "self-coaching" and sharing feedback with coaches.
	<b>Positive Self Talk and Mental Imagery</b>	Reinforce the skills learned in the practice session by making a game out of the skills. Ending the session with successful completion of a fun activity or game will encourage continued participation and enhance interest in the sport.	Basic strategies of mental skills specific to sport are introduced. Use simple self-talk cue words to reinforce task-oriented behaviors. Have participants repeat the words to reinforce the importance of certain skills or concepts.	Develop positive self talk, work ethic and perseverance. Focus on the process, not results. Implement imagery into sessions by performing a skill correctly and then having participants imagine seeing themselves perform the skill correctly	Promote consistent use of self-talk and imagery in training and competition. Begin to challenge athletes with more competition-specific scenarios, but maintain opportunities for athletes to experience success.	Develop race day routines and practice with distractions present to simulate the competitive experience. Introduce relaxation techniques to control competitive anxiety. Teach athletes to implement these techniques into event day routines. Discuss progressive relaxation and imagery techniques. Help the athlete understand the source of any anxiety. Creating positive self-talk is critical.	Athletes refine their use of positive self-talk and imagery. Work towards mastery of more complicated techniques. Practice with distractions to challenge athletes. Identify the ideal performance state and implement strategies to achieve this state consistently. Work towards mastery of all aspects of preparing mentally for competition.

	<b>Goal Setting</b>	Make goals a daily game or team activity to accomplish. Fun, skill based and tangible.	Introduce goal setting. Goals should be skill, process or task based. Focus on the love of the sport. Everyone should experience some level of success.	Goal setting should play a larger role at this stage. Have participants set performance goals for learning skills. Short-term goals can be set for each practice as well as each week. The simple, achievable goal is important with increasing difficulty. The coach, athlete and parent create goals together.	Continue to use goal setting as a tool for gaining skills and making fitness gains. Goals should still be primarily focused on process and improvement of skills.	Continue to use goal setting to acquire skills and fitness. Explore long-term performance plans and introduce outcome goals to motivate the athlete. Challenge athletes in training while providing opportunities for success. Encourage self-evaluation and logging of training. The athlete lists specific areas they are do well and items for continued improvement.	Encourage the opportunity to overcome challenges and view them as opportunities for improvement. Viewing challenges as opportunities for improvement changes the focus from a negative (anxious) one to a positive (excited) one. Continue to help the athlete focus on what works specifically for them.
	<b>Social Grouping</b>	Group kids by peer groups.	Group kids by peer groups. Appropriately introduce challenges for kids skiing beyond peer group.	Group athletes by peer groups. Biological age becomes a factor in assigning groups. Begin incorporating some opportunities for exposure to ability and developmental age groups.	Group athletes by peer groups by biological and training ages. Incorporate more opportunities for challenge and exposure to ability and developmentally appropriate groups.	Group athletes by ability, relative development and goals in sport while maintaining appropriate social bonds.	Group athletes with competitive peers. Foster a team dynamic of support, encouragement and positive pushing amongst teammates.

## Competition Domain

<b>Elements</b>	<b>Focus</b>	Love the Sport for Fun	Compete for fun	Compete for skill development	Compete for skill acquisition	Compete for skill mastery	Compete to Win
	<b>Number of competitions</b>		1 or 2 local events	4-8 events per season	6-12 events per season	8-15 events per season.	10-16 events per season.
	<b>Events</b>		Fun local or club based competitions that emphasize skill progression.	Regional USASA	USASA Regional and Nationals. Potential for USSA Revolution Tour.	USASA Regional and Nationals, USSA Revolution Tour, FIS races for SBX/Alpine at age 15.	USSA Grand Prix, FIS NorAm and World Cup, Other pro level invite events (US Open, Dew Tour, etc.)
	<b>Organizations</b>			USASA	USASA, USSA, WST	USASA, USSA, WST, FIS	USSA, WST, FIS
	<b>Disciplines</b>			Experiment with all disciplines	Compete in many disciplines	Begin to specialize	Specialization