

# **Crotched Mt. Race Team**

## **Technical Statement on Skiing**

The following document is for all members of the Crotched Mt. Race Team community to use to guide their acquisition of skiing skills. It provides a useful template for coaches to monitor their athletes development. Further parents may find it useful to understand what the coaches are trying to achieve with their children. (Concepts developed by the PSIA National Alpine team)

**UTILIZING THESE CONCEPTS:** When working with these concepts, remember to adjust the skiing focus to different age groups, equipment types, personal style and desired outcomes.

### **STANCE, BALANCE AND DIRECTIONAL MOVEMENTS**

- The skier is in balance when he or she has a positive, selective effect on any of the skills with either leg at any time.
- The entire body is involved in balancing.
- The skier needs to anticipate forces as the turn develops, aligning balance in the “future.”
- A versatile, adaptable stance requires a functional distance between the legs as it applies to the desired outcome.
- The position of the hips over the feet (fore/aft) plays a major role in the parallel relationship of the skis and will promote the ability to use corresponding edges.
- Flexing originates in the ankles to help generate movements through the boot cuffs.

### **FUNCTIONAL BODY ALIGNMENT**

- As the turn develops, the focus should be to keep the inside half of the body (foot, knee, hip, arm, hand, and shoulder) raised and ahead of the outside half (re: “Strong Inside Half”).
- A strong inside half will help produce accurate diagonal movements early in the turn, creating a turn that arcs into the apex.
- A strong inside half will help maintain a powerful stance through the finish, resulting in maximum strength/length of the outside leg, and the greatest angles during the highest loading portion of the turn.
- The amount of tip lead should match the alignment of the body and is influenced by a variety of factors (i.e., turn shape, speed, pitch of the slope).

### **LOWER BODY ROTATIONAL MOVEMENTS**

- Functional tension supplies strength to the core to facilitate the simultaneous steering activity of the legs.
- The skier’s legs and feet should ski into and out of a countered relationship with the upper body, allowing the lower body to realign with a stable core rather than making an active countering movement with the upper body.

- Steering action of lower body is coordinated with tipping the legs to maintain balance and alignment throughout the turn.
- Steering the legs and feet is one way to adjust the radius of the turn.

### **EDGE RELEASE / ENGAGEMENT**

- The skier should focus on moving in the direction of the new turn to release and re-engage both edges in a single, fluid movement.
- The skier should release both skis, moving to the new edges simultaneously while maintaining ski-to-snow contact.
- The positive, early engagement of the skis' tips should draw the skier into the turn, arcing into the turn's apex.
- Skiers should strive to use the design of the skis as effectively as possible in controlling turn shape.
- Shortening the inside leg helps shift the center of mass to the inside of the turn and thus can allow greater edge angle.
- Increasing or decreasing edge angle can influence turn radius.

### **PRESSURE MANAGEMENT**

- Flexion and extension movements enhance lateral weight redistribution. Such movements can be applied progressively or abruptly, depending on the desired outcome.
- The skier should maintain the "strength in length" of the outside leg during the highest loading portion of the turn, unless he or she is yielding to the influence of terrain and snow conditions or releasing the turn.
- Tactics, terrain, speed, snow conditions, and turn shape will alter the timing, intensity, and the amount of weight distribution along the length of the ski and from foot to foot.
- Pressure redistribution is controlled by aspects of fore/aft adjustments, lateral movements, and flexion/extension.
- Increasing or decreasing pressure on the ski can influence turn radius.

### **POLE USE / ARM MOVEMENTS**

- Functional pole use can be used to help the skier secure/maintain the present turn or initiate the next turn.
- Effective pole use requires discipline and accuracy of arm/hand movements.
- Effective pole use requires a pole swing but not always a pole plant.
- The skier uses a disciplined upper body and core position to position the arms; conversely, excessive movements of the arms can shift the upper body out of position.
- A linear/direct pole swing will help to accurately guide movements into the new turn.