



Ski Spectacular Instructor Academy

**Hosted by The Hartford Ski Spectacular
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Clinic Summary Notes

Clinic Topic: Adaptive Lesson Observation: Recognizing Application of Fundamental Mechanics of Snowboarding - Christina Bruno

1. Identify range of motion: our joints can flex, extend, and rotate to create ski and board performance.
2. Observe with intent. Identify cause and effect relationships between the student's movements and the action of their skis, board, or adaptive equipment.
3. A strengths-based approach focuses on the student's assets and encourages viewing them as resourceful and resilient. Rather than asking what the rider's physical or cognitive deficits are, consider framing the following questions from a strengths-based approach:
 - What strengths does my rider have that they can use in conjunction with assistive devices to have the most successful outcomes?
 - What physical abilities am I seeing stationary and in movement, while inside and on-snow?
 - Based on my rider's physical strengths, what core fundamentals will I focus the lesson on?
 - What teaching and communication strategies will help the rider to learn best based on their cognitive abilities?
 - What kinds of directions is the rider easily able to follow?
 - How many sequential directions can the rider follow successfully?
 - How can I adjust my communication strategies to support the rider?
 - What people skills, assistive devices, or environmental modifications can I use to help the rider learn best based on their emotional strengths?
 - Based on how my rider is responding to the indoor or outdoor environment, how can I adjust the physical space to support my rider's learning?
 - Are these strengths great enough to complete the fundamental snowboarding or alpine skills, even if they do not align with traditional theory on body and board performances?

Additional Resources: AASI Snowboard Technical Manual, [Fundamental Mechanics of Alpine Skiing Across Adaptive Disciplines](#)

Suggested questions to ask before a lesson:

These questions do not take the place of a complete and continual assessment, but rather are a supplement as they integrate into the initial assessment.

1. What is my student's overarching goals and objectives?
2. What is a reasonable short-term goal/objective that we can work on today which will help my rider move towards achieving their overarching goals and objectives?
3. What body movements can the student make to affect the alpine or snowboarding fundamentals?
4. What safety considerations do you need to take with potentially unorthodox body movements?
5. Does the student need to supplement body movements with assistive devices to achieve the desired outcome?
6. What safety considerations do you need to take with these assistive devices?
7. Which skills do you need to break down into four steps within an exercise line: **Stationary, Simple, Complex, Freeride** for the plan to be successful for the rider?
8. What is the progression of terrain that you need to make this successful?

SNOWBOARDING FUNDAMENTALS	ALPINE SKIING FUNDAMENTALS	FUNDAMENTAL DIFFERENCE
Control the relationship of the center of mass to the base of support to direct pressure along the length of the board.	Control the relationship of the center of mass to the base of support to direct pressure along the length of the skis.	Despite our fore-aft movements being biomechanically different, this still applied perfectly.
Control the relationship of the center of mass to the base of support to direct pressure across the width of the board.	Control pressure from ski to ski and direct pressure toward the outside ski.	Because of snowboarders' sideways orientation on the board, we move laterally across the board's width and create pressure edge to edge.
Regulate the magnitude of pressure created through the board/surface interaction.	Regulate the magnitude of pressure created through ski/snow interaction.	We changed "snow" to "surface" to include other sliding surfaces, such as boxes, rails, logs, cement, etc...
Control the board's tilt through a combination of inclination and angulation.	Control edge angles through a combination of inclination and angulation.	We added <i>tilt</i> terminology and debated if we needed to include both inclination and angulation. "Banking" doesn't have the same negative connotation in snowboarding as it does in alpine skiing, yet it's still important to differentiate between the two for the desired outcome.
Control the board's pivot through flexion/extension and rotation of the body	Control the skis' rotation with leg rotation, separate from the upper body.	We continued to use pivot as it relates to the board and rotation as it relates to the body. Where the alpine fundamental promotes upper and lower body separation at the pelvis and femur bone, the snowboarding fundamental additionally uses spine rotation in several applications. Riders can also accomplish pivot with flex and extension movements of the knees and ankles.
Control the twist (torsional flex) of the board through flexion/extension and rotation.	N/A	Twist was added as the sixth snowboarding fundamental because we can actively twist the board with distinct movements, whereas, in alpine skiing, twist is created as a result of another movement.