

MOVEMENT ANALYSIS

OBJECTIVE: Build from the **Observation** phase, first with an emphasis on tool/surface interaction and then **Fundamentals**, to the **Evaluation** phase, focusing on cause/effect relationship, and then progressing to a brief Prescription using the information gathered during Observation & Evaluation.

Observation

OBSERVATION: Observe and Describe the tool/surface interaction:

Describe what the tool is doing in/on the riding surface. What evidence do you see?

- Sliding, Slipping, Skidding, Gripping
- Edge angle
- Board is bending evenly from tip to tail, forward of the bindings, rearward of the bindings
- Board is pivoting from the middle, front, or back
- Board is twisting
- Turn Shape: C, J, or Z
- TID - TIRD

When and Where in the turn:

- Top half
- Apex
- Bottom half
- Transition

Describe the Board Performance and evidence of observation

- TILT
- TWIST
- PIVOT
- PRESSURE CONTROL

Observe and Describe body movements:

- Where does the movement originate?
- Body Part Specific
- Movement Pattern
- Location Specific (when in the turn)
- TID (Timing, Intensity, Duration) – TIRD and Direction

FUNDAMENTALS

Developed during Fall Conference 2016 – Describe the movements effecting the Board Performance:

Manage the board's pivot through flexion/extension/rotation of lower body, together with, separate from, or in opposition to the upper body

Manage edge angles through a combination of inclination and angulation

Manage torsional flex of the board using independent or simultaneous flexion/extension of lower body joints

FUNDAMENTALS

Manage the relationship of the CM to the base of support to direct pressure along the length of the board

Manage the relationship of the CM to the base of support laterally to direct pressure across the width of the board

Regulate magnitude of pressure created through board/surface interaction

Evaluation

EVALUATION: Aids in assessing your observations and distill complex technical information into simplified, accurate conclusions.

Real vs Ideal – Comparing the rider’s current performance to the optimal performance for a desired outcome.

Cause and Effect Relationships – Typically body movement or position is the **CAUSE** of the board performance and the ski/board performance is the **EFFECT**, however some movements or positions can be the result (EFFECT) of an earlier movement

- Where does/should the movement originate?
- Body part specific
- Movement pattern
- Location specific (when in the turn)
- TID - TIRD and Direction

Prioritize – Develop the ability to prioritize which movements, if changed, which would have the greatest positive impact on the rider’s performance or desired outcome.

- Movements that negatively affect the rider’s athletic stance?
- Movements/positions that limit the rider’s ability to move or the rider’s range of motion?
- Movements/positions that negatively affect the rider’s overall balance?
- Do I see snowboard actions I expect to see for the task/desired outcome?
- Do I see effective/efficient technique and tactical choices for the task/terrain?

Prescription

PRESCRIPTION: The Rider’s (student, instructor, and athlete) goals as the basis for your plan combined with Observation and Evaluation will guide the prescribed pathway.

Focus – Provide a focus or task

Drill – A Movement Pattern “lateral” to typical riding used to develop a specific skill or blend of skills, with a technical or tactical purpose in mind.

Exercise Line – Progression: Stationary, Simple, Complex, Whole (Riding)

Demo – Give a specific movement or action to observe, demonstrate to support your description

Provide Instruction/Feedback - Precise, Simple (to the point), Check for Understanding