PSIA AASI ROCKY MOUNTAIN DIVISION
Professional Ski Instructors of America
American Association of Snowboard Instructors

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Adaptive Teaching Guide: Slider

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Local regulations and safety guidelines take precedence over this information. It is in your best interest to exercise due diligence in determining the appropriateness of the information for your particular circumstances. In addition, please take into account any and all factors that may affect your lesson. This includes, but is not limited to the health, well-being, and fitness of the student; weather conditions; terrain; other people on the slope; your own abilities, as well as those of your student and anyone who may accompany you.

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The slider was developed from a standard walker mounted on skis and has gone through several iterations since but still provides the same basic function for the user. The slider provides great stability for skiers who have challenges standing up due to balance, strength, or endurance. People who use a slider may also be candidates for 3-tracking, 4-tracking, bi-skiing, mono-skiing, or dual-skiing. Often, the slider will serve as an entry portal apparatus for stand-up skiing. It can also be used as a physical therapy modality for wheelchair users or others recovering from injury or disease.

Diagnoses Common to Students Using a Slider

Slider use includes people with a wide variety of diagnoses such as the following:

- Amputation
- Balance impairments
- Brain injury
- Cancer
- Cerebral palsy (CP)
- Cerebrovascular accident (CVA or stroke)
- Epilepsy
- Multiple sclerosis (MS)
- Muscular dystrophy (MD)
- Paralysis & Paresis
- Poliomyelitis

- Post-polio syndrome
- Spina bifida
- Spinal cord injury (SCI)

Medications Common to Students Using a Slider
This category includes a variety of medications which may be used by students using a slider such as the following:

- Analgesics
- Antibiotics
- Anticoagulants
- Anticonvulsants
- Antiemetics
- Anti-inflammatories
- Antispasmodics
- Chemotherapy
- Immunosuppressants

Almost any standing student with challenges to balance, strength, cognitive understanding, or even psychological fear may benefit from the stability of the slider.

NOTE: The slider is limited to beginner terrain as it has no capacity to accommodate the long-leg/short-leg characteristics needed to level the device when operating on terrain with a pitch. The fixed leg position does not allow for safe and balanced positioning on steeper slopes.

Student Assessment
A complete and detailed student assessment is needed to determine if students are good candidates for using a slider. Assessments should explore students' diagnosis. However, complete assessments go beyond this and are imperative to determine the physical, cognitive, and emotional strengths and challenges of each person. A thorough check of current medications provides important information relative to stamina and sensitivity to the environment, as well as attentiveness and interpersonal skills. Treat every student as an individual; effects of the same diagnosis can vary dramatically from student to student.

The physical assessment (i.e., mobility, balance, coordination, strength, endurance, range of motion, ability to rotate leg(s), and strength of limbs) provides helpful insight. The assessment provides indications of the equipment needed to create a successful learning environment. Even after an assessment is completed, adjustments may need to be made, due to students' abilities demonstrated throughout the lesson.

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A review of current medications should be discussed during the assessment. Medications taken by students have an impact and need to be reviewed. It is important to learn about any medication effects students may experience or are experiencing. Side effects of medications can, for example, make someone listless, slow to respond, nervous, sensitive to the sun, or muscularly weak. Accurate timing of medication administration is important to prevent adverse reactions due to lack of medication, or low medication levels in the body. Instructors should not administer medications unless qualified to do so and permitted by program, school, and/or resort. Instructors or helpers should not carry the medication of a student.

In addition to the physical analysis, cognitive and affective assessments should also take place. This helps to determine if students have specific triggers that could cause hyper-reactivity and more as well as other activities they participate in, likes, dislikes, motivations, goals, and fears. This provides a platform from which to design the lesson plan. Determination of learning preference is ongoing throughout the assessment process and during the lesson. Students' learning preferences can be matched with complementary teaching styles and an acceptable pace, which is based upon the cognitive, affective, and physical assessments.

It is valuable to know other interests and sports activities in which students participate. Two, three, and four-wheeled bicycle riding indicates some balance, judgement abilities, and/or independent leg or arm action. Ball activities indicate eye-hand coordination and some spatial judgment. Knowledge of sports, activities, and interests, plus information about students' daily schedule can help you assess both physical and cognitive abilities. This may also be useful while teaching and the use of teaching for transfer.

Skill development should be modified to align with the physical and cognitive abilities of students. Matching learning preferences with teaching styles enhances the learning environment for students. Frequent demonstrations and a focus on small, obtainable goals and accomplishments is one of the most successful teaching strategies. Providing individual positive feedback along the way helps to maintain motivation and interest. As with all students, those who have physical and/or cognitive diagnoses benefit from an individual assessment and tailored lessons.

In addition to students, other resources may offer valuable insights. Parents/guardians, spouses, or other caregivers can provide information regarding a students' physical abilities and cognitive processing strengths and needs. Many schools have a Special Education Team that creates an Individualized Education Program (IEP) for school and the parents/guardians of children with special needs. This information may assist with your initial assessment of students. Be sure not to ignore students as you are gathering additional information.

One-on-one phone conversations are extremely valuable prior to the actual lesson. The

more communication and assessment done up front, the better!

Finally, it is extremely important to help this group of skiers develop sound fundamental skills. The lesson plan follows the alpine skill development progression with obvious modifications to maximize students' physical abilities. The focus is the development of the three skills supported by the five fundamentals, regardless of where the movements originate. Skill development and alpine fundamentals are often ignored by Slider instructors but serve as a solid foundation for skier advancement and reduced reliance on the instructor.

Equipment and Set Up:
Use the initial assessment to determine how to set up the slider. Re-assess students once in the slider to make sure the adjustments are correct. Do not rush the set up for first time skiers. Proper time spent during the initial set up will equal success and enjoyment for students in the long term.

The slider provides assistance with balance and stability. Many adjustments to the slider such as height, use of hand grips or, if necessary, forearm trays, stance width, etc., can augment the functional stance and stability of skiers. Consideration should be made for tip and heel stabilization with the use of bungee cords, metal tip connectors with bungee, fixed metal tip connectors, spacer/spreader bars, etc. Additional considerations should be given to the height of the slider and length of slider skis for tall or top-heavy participants. It is much easier for both the skier and the instructor tethering the skier if the skier is stacked and balanced fore/aft and side-to-side.

Both the tipping angle and wedge angle on the slider skis are adjustable. For safety, both should not be set to their maximum at the same time as turning the slider may be problematic causing the slider to perform ineffectively or unsafely.

The slider can be partially/minimally controlled by the skier and therefore, tethering by the instructor is mandatory to assist students and safely control sliders. Skiers may not be able to stop the slider by themselves, particularly if a sudden stop is required. When the student is out of the slider, place the device on its side or anchor it to something stationary. Be sure to follow industry best practices and program, school, and resort policies, procedures, and practices. Note that a slider can slide downhill by itself with or without a skier.

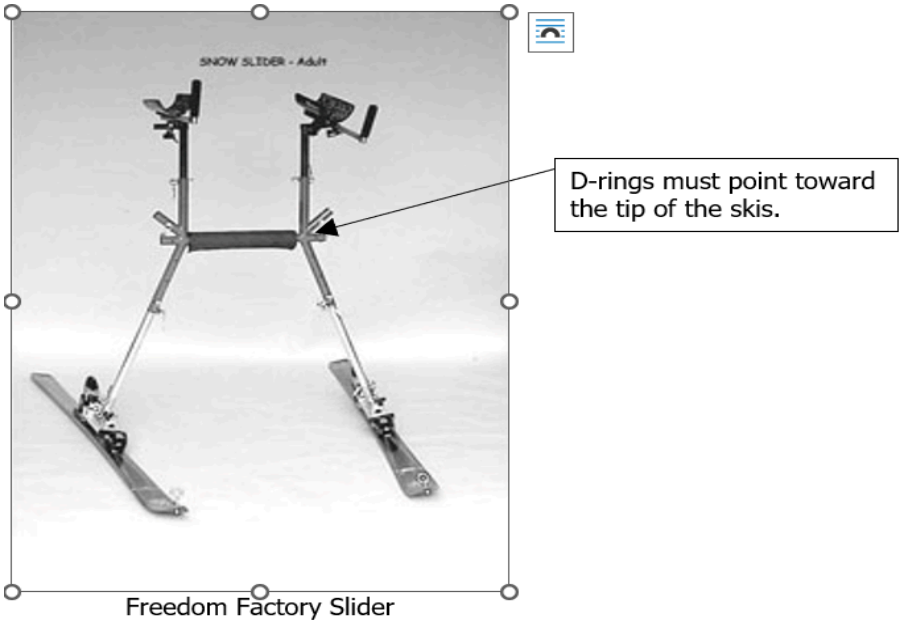
Lift Loading Procedures
The safety of students, instructors, lift operators, and the public should be considered when selecting a lift-loading procedure. The slider may need to be sent up the lift ahead or behind students and instructors. It is best to use a triple or quad chairlift with a slow

down to enable students to load the chair with the assistance of two instructors (one on each side). The instructors will assist the participant on and off the chairlift with or without the slider.

An alternative method for a four-person chairlift, or larger, is to load the slider directly in front of students on the same chair. The slider is available to students on the way to the loading point and away from the unloading point, except when the slider must be maneuvered around or over entry gates. With some students, it is possible to load a slider onto the chairlift with one instructor. With children, it may be advisable to load the slider separately but on the same chair. The slider may also need to be loaded on a different chair, as the slider may not fit in front of students and/or students may need additional assistance getting on or off the chair. Individualize plans for each student and each chairlift. Practice a load and unload on a stationary chair before heading to the actual lift.

Tethering a Slider

When tethering a slider, the goal for instructors is to provide a safe environment and smooth assistance, as needed, for speed control, turn initiation, slowing, stopping, and obstacle avoidance. Since tethering procedures can vary, it is imperative to understand and adhere to the tethering and tether safety protocols of the program, school, and resort.



Freedom Factory Slider

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Enabling Technologies Slide Unique

Attaching the tethers to the slider

The tethers should be attached to the D-rings in front or on the side of the crossbar of the slider. This provides the maximum resistance to tipping, reasonable turning control, and the most reassurance for skiers. There is no braking mechanism or ability for the students to stop the slider. In this situation, the instructor tethering controls the ability of the slider and student to turn, slow, or stop. Be sure to follow program, school, and/or resort practices and procedures for attachment of the tethers to the slider.

Attaching the tethers to the instructor

There are several key points to remember when attaching the tether to yourself:
You must always maintain tether contact. There is no braking mechanism or ability for the students to stop the slider. Be sure to follow program, school, and/or resort practices and procedures for attachment of the tethers to the instructor.

- Attach the tethers to your wrists using a girth hitch, maintaining skin contact. Tethers should be beneath your gloves and jacket.
- Do not attach the tethers to your upper arms. Attaching to your upper arms is less effective and efficient. Sometimes instructors attach tethers to their upper arms because the tethers are too long. Adjust tether length, if necessary.
- Use a second back-up safety attachment when required by your local program/resort. One end is fastened to the tether and the other end is fastened to your wrist, arm, or waist. A carabiner is often used for this attachment.

Body position

You should be positioned behind and slightly uphill of skiers in the slider. Tethering a slider is similar to tethering a student using a bi-ski or standing-up skiing. The key difference results from the slider not inclining or angulating to create angles for edging

or resisting centrifugal forces. When tethering a slider, it is good practice to maintain tension on the tether on the inside of the turn until skiers have passed the point of high centrifugal force.

Stay in sync with the students using the slider. Look for subtle cues, such as a turning of the head, to time your assistance with students turn initiation.

Feet and skis

Ideally, you can make stem/step turns in sync with the slider skier. Practice this and all footwork maneuvers to gain confidence and proficiency.

The wedge may also be used to effectively tether slider skiers, especially when coming into crowded areas or on flat terrain. Beginning tetherers' often learn to tether using the wedge to master body and hand position. Progressing to stem/step turns is generally kinder to your hips and knees, is usually a stronger position from which to tether, and can impart smoother turn transition for students.

Hand and arm position

For maximum control and stability, hands and arms should be closer to your center of mass. This is known as the tetherers' "power box." In this position, hands are between hips and chest; arms are flexed, with elbows ahead of your spine (similar to carrying ski poles). When hands and arms are outside of the "power box," you may reduce your ability to guide, control and stop the student. Arms should be used as extension and retraction tools while remaining neither at full extension nor retraction.

Tether handling

There are several different techniques that can be employed to initiate turns, including smoothly pulling the inside tether to initiate a turn and wrapping and unwrapping the tethers to control length and tension. Regardless of what technique is used, practice is critical to develop a feel for what is most effective and to gain competence in tether management.

Smooth tether handling is critical for students' safety, skill development, skiing ability and enjoyment. You should be able to release and gather the tether with ease; there should never be so much slack that you risk tripping/skiing over the tethers or getting tethers caught under the slider skis.

The tightness of the tether lines can vary based on the needs of students. More advanced students usually benefit from light guiding of the tether lines, used as 'teaching tethers,' not a control device. Beginning students, on the other hand, may need greater instructor control that is available with tighter tether lines.

Tethering exercises

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The following exercises may be used to improve tethering techniques:

- Develop strong skiing skills. Mastery of the following maneuvers can improve tethering skills:
    - Stem/step turns
    - Falling leaf
    - Side slip to hockey stop
    - Synchronized skiing (with visual and verbal cues)
- Practice tether management. At home attach tethers to a chair and practice simultaneously wrapping (gathering) each tether around individual hands and unwrapping (releasing) the tethers from the hands. Next, practice smoothly releasing the tether and then gathering it back up. Make sure you do not have slack to trip over.
- Practice tethering without the slider. Use a stand-up skiing partner who is skiing in front of you, just as a student in a slider would be in front of you. This partner should not be attached to the tethers but, instead, should hold them loosely at the hips (to protect his/her shoulders).
- Use guided discovery to find the tetherers' "power box" hand and arm position. Hold your hands high, low, and in-between until the height of the "power box" is established. Then determine the width of the "power box" by holding your hands close together, far apart, and in-between. Finally, play with the flex of your arms, moving from straight arms to a tight-angled bend and in-between. As above, this practice exercise should be done with a stand-up skiing partner, not with students in a slider.
- Practice tethering and emergency stops with other instructors in the slider. If possible, practice these maneuvers on people of varying weight and height. Have them role play different levels of ability. Practice until you consistently use effective body position and foot movements. Feel how different techniques affect the students and the slider. Notice the difference between full control and gentle guiding.
- Be tethered by another instructor in a slider. Notice which tethering techniques are helpful and which techniques hinder your progress.

Skill Development for Common Slider Outcomes

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as well as those of students and anyone who may accompany you.

Beginner / Novice Zone Outcomes

Level 1: Welcome to Skiing / Build the Foundation

- Perform student assessment.
- Discuss medical history.
- Determine and share goals.
- Select, introduce, and set up equipment.
- Agree on student / instructor communication, safety, and emergency stop.
- Perform static balance exercises and develop athletic stance, in the slider indoors.
- Perform pushing, turning, pivoting, and balancing drills in the slider on flats outdoors.
- Begin to understand the fall line and terrain changes.
- Learn about safely and how to be assisted in rising if a fall were to occur.
- Learn to slide at slow speed in a wedge or parallel as dictated by student stance and balance requirements with a tetherer attached to the slider.
- Glide and slide across the slope with a tetherer attached to the slider.
- Perform a straight run to a terrain-assisted stop with a tetherer attached to the slider.
- Develop effective hand grasp on the slider and body position within the slider while moving with a tetherer attached to the slider.

Level 2: Introduction to Turning

Note: Turning at this level achieved through balance and rotary or edging skills and with tetherer input.

- Develop stopping and slowing skills via skis and tetherer.
- Turn left and right to a stop with a tetherer attached to the slider.
- Perform linked turns with a tetherer attached to the slider.
- Begin to vary shape and size of turns with a tetherer attached to the slider.
- Develop effective body position for turning with a tetherer attached to the slider.
- Perform any wedging movements possible to aid in tetherer slowing/stopping.
- Learn how to ride chairlift.
- Learn safe positioning of the slider and timing while loading, riding, and unloading with instructor assistance.

Level 3: Introduction to Easy Green Terrain

- Explore terrain – go for lots of quality mileage with a tetherer attached to the slider.

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- Actively, but gently, skid or edge the skis for turn shape and speed control as possible and with tetherer input.
- Begin to use turning movements as much as possible to initiate a turn with a tetherer input.
- Explore balance/strength activities to support advancement toward outrigger use.