PSIA-*Rocky Mountain*-AASI
ADAPTIVE EXAM GUIDE
for
ASB Visually Impaired Riders

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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.

This guideline provides diagrams from third party sources. The content of any such third-party diagrams are not within our control, and we cannot and will not take responsibility for the information in them, nor should any references to them be considered any endorsement by PSIA.

Please refer to the Adaptive Alpine Manual, available through PSIA/AASI-RM or PSIA/AASI National: http://www.thesnowpros.org/shop/catalog/details?productid=%7B7E0BC90B-4972-45FA-8C89-E8C432745502%7D and all the addendums available to it. Especially useful should be the "Disability and Medication" one schedule to be online fall 2019 where you can find much more of the disability information and Snow sport specific comments. Also helpful will be the **online Adaptive-specific course on Visual Impairments** offered through https://members.psia-rm.org/events/events-listing

Students with **visually impairments** are usually stand-up riders. A kinesthetic and concise verbal approach to skill development is most effective with these students.

The student with a visual impairment may utilize his/her other senses (auditory, kinesthetic, etc.) to process information. For example, use "molding" of your student's body when teaching the instructor or draw with fingers on the student's hand. Verbally paint pictures, but still ask them about their preferred learning style and address it.

Common Visual Impairments

These are some of the most common visual impairments:

- Cataracts
- Corneal Diseases
- Detached Retina
- Diabetic Retinopathy
- Glaucoma
- Macular Degeneration
- Myopia
- Retinitis Pigmentosa
- Strabismus

In addition to these specific eye diseases, here are some other **causes of visual impairment:**

- Cerebrovascular accident
- Cerebral Palsy
- Diseases, such as Diabetes, Friedreich's Ataxia, Lupus or Multiple Sclerosis
- Toxins, such as mercury
- Traumatic Brain Injury
- Tumors
- Vascular disease
- Excessive UV exposure, such as “welder’s flash” or “snow blindness”

Also, be aware that some medications have vision-related side effects. For instance, anti-spasmodics like Flexeril and Valium can cause blurred vision. Plaquenil, which is used to treat rheumatoid arthritis, among other conditions, can cause color blindness.

Evaluation of Student

Visual acuity, field of vision, depth perception and the presence of color blindness can vary greatly among people with visual impairments. Secondary disabilities may be present as well, so a thorough student assessment is necessary.

The first focus is to evaluate your student's:

- Visual abilities
- Cause of visual impairment
- Medications
- Medical precautions
- Hearing and other sensory abilities
- Secondary disabilities, if any

The second part of the indoor assessment relates to your student's guiding preference, both indoors and on snow. As you are working with your student to determine the most effective guiding method, you may want to consider the student’s:

- Visual acuity and field of vision
- Ability to hear
- Riding skill level

It is important to understand that you may need to reassess your guiding method based on what works for your student, as well as changes in light conditions, terrain and snow conditions.

Testing your student’s vision

As your student walks in the door, you can begin to assess his/her vision. Does your student wear glasses? Walk independent of aids? Walk self-guided with a cane? Walk with the assistance of a guide or service dog? Move closer to or further from an object in order to see it? Tilt his/her head in order to see or to control eye movement?

After making this initial appraisal, it is essential that you perform a thorough vision assessment. This should be done both inside and outside. You may need to test again if light conditions change.

Find out if the student can **distinguish colors**. Which colors are the easiest to see? Some people who are color blind can only see colors on a grayscale, while others can see some colors but not others. You can easily test this by asking your student to identify the colors of nearby objects. Remember that a person with color blindness cannot rely on color-coded trail markers and may not easily see your blind guide vest, should the two of you become separated.

Test the student's **acuity** by asking him/her to identify objects at varying distances. Test his/her **field of vision** by slowly moving your fingers in an arc, starting from either side and slowly moving toward the student's center of vision. Be sure to test both sides and maintain a seeable distance while doing this (putting your fingers too close to or too far from your student can cause an inaccurate appraisal).

Can your student see better out of one eye or the other? Remember that this can impact depth perception and field of vision.

While **depth perception** is harder to evaluate, it is valuable to make note of clues. For instance, a student who lacks depth perception may not be able to distinguish a white table next to a white wall; from the chairlift, a fence may look like it is laying flat on the snow instead of standing up.

Guiding the Student

The goal of guiding is to provide clear, concise instructions which lead the student to ride. Verbal as well as kinesthetic cues are utilized to establish a solid communication base between you and the student. If the student has some level of vision, you may also be able to perform a visual guide.

It is critical that you and your student set up an EMERGENCY WORD that warns the student of imminent danger. This word needs to be established before the first lesson. When spoken, this word results in the student immediately falling/sitting to the ground and covering himself/herself the best way possible.

It is also important that you and your student **create a plan in case you become separated or lose your guiding connection** (for example, if your student no longer hears your verbal commands).

Guiding methods

Following are some of the most popular guiding methods. Adapt these methods as needed to provide your student with the most effective and fun skiing lesson possible.

Guiding inside and on flat terrain can be done in several different ways, so check with your student to see if he/she has a preference. Your student can **place one hand on your shoulder** as you lead the way. Alternately, the student can **hold onto your elbow** and you can move your elbow in the direction you want to student to move.

Verbal Commands are simple, basic words that can serve as the basis for communicating with students on and off the slope, regardless of their skill level. This method includes such commands as: "*stop," "go," "Toe-side" or "toe" "Heel-side" or "Heel", "hold,"* "*steeper", "quick Toe" or "Long Toe-side turn"* etc. Movement-based commands, like "*Roll knee out*" are especially effective because the student can often understand a movement better than the resulting outcome. Verbal Commands can be used with any rider who has a visual impairment, as long as the rider can hear you. The commands need to be clear, concise and in general are universally understood. However, you still need to verify that you and your student attach the same meaning to each of the commands you use. Also, be sure that your student does not have any issues with directional dyslexia.

When using Verbal Commands, establish the words you will use prior to going on the slope. Experienced students may have their own preferences. You might need to adjust on the hill if certain commands don't work for you as a team!

Remember that the cadence of your words is critical. A consistent cadence allows the student to establish rhythm & flow. That cadence can also be used to subtly teach turn size and shape, simply by extending or shortening the timing of your verbal commands.

The **Clock System** is commonly used with the visually impaired population. The student is always facing 12 o'clock and the clock "resets" to 12:00 after the student moves. For instance, if you want the student to complete a 90 degree turn to the right, your instructions would be to turn to 3 o'clock. IN SB, IT IS ESSENTIAL TO ESTABLISH IF 12:00 IS THE TIP OF THE BOARD OR FACING TOESIDE AT 90 DEGREES. This guiding technique may be used inside, in corrals and on the slope. It is very useful in intermediate/advanced guiding and in racing.

The **Grid System** allows you to describe trails and terrain by breaking an area up into imaginary units. For example, one side of the trail can be *"0,"* the other side *"10"* and the center of the slope *"5."* Utilizing the Grid System plus directional commands, your student can be kept well informed of his/her position on the slope.

The Grid System should never be utilized simultaneously with the Clock System. It is best used with intermediate to advanced skiers. Since it is more complex and less intuitive than simple directional commands, you should practice it extensively before using it with a student.

Auditory Cues are specific sounds made by you as you are skiing in front of the student. The sounds can be made in a variety of manners, such as using jingle bells, clapping your hands, or blowing a whistle . . . Based on the direction of the sound, your student can tell which way to turn. This system can save your voice and it provides constant auditory connection between you and your student, which can be reassuring to the student.

You may choose to do a **Visual Guide** if your student has some level of sight. This technique is especially useful on crowded or noisy runs or when verbal guiding is straining your voice. It is also helpful when you or your student is experiencing sensory overload. Just as importantly, it can be used when your student wants to experience the joy of skiing uninterrupted by your voice.

If you are performing a **Visual Guide, be sure to remain in the student's field of vision** and let the student know that he/she should immediately stop if you can't be seen. **Auditory clues** can also be used for students with a very limited field of vision. They can still follow their guide in order to get auditory feedback from the board-snow interaction, but then hone in on the auditory clues if they lose sight of their guide.

As a **Kinesthetic Guide**, you will most likely be riding hand-in-hand with your student in a position called "The Dance". You might also use a bamboo pole or a "Ski-Pal" / Hula Hoop to gain a little more distance and maneuvering space for yourself and your student.

Because timing is critical in upper level riding, the need for an agreed-upon, concise guiding system greatly increases your ability to become a successful team with your student.

Guiding position

The position you take on the slope relative to your student can vary based on the guiding technique you choose; your student's visual range and riding ability; how crowded the slope is; and your student's personal preference.

Guiding while facing your student is useful for beginning students riding on easy terrain. This technique allows the student to easily hear your directions and lets you see his/her movements. It also allows you to start riding with Kinesthetic feedback "Dance" and then progress to verbal commands.

Guiding from the front while riding forward is often used with advanced riders, especially on a racecourse. If you are using Verbal Commands, this technique requires you to turn your head back over your shoulder when speaking, so that your student can hear your voice. This can impact your stance, so it can be difficult at high speeds or on challenging terrain. However, this guiding technique can give your student a lot more auditory feedback from you riding the course down in front of him/her.

Guiding from behind allows you to easily evaluate your student's riding while offering you a view of upcoming terrain and obstacles. Your student can more readily hear your voice with this technique, but he/she may be disoriented by the fact that your voice is coming from behind, instead of coming from the direction in which he/she is headed.

Tips for guiding

Regardless of which method of guiding you use, these tips may help you to more effectively guide your student:

- Speak up! It may be harder for your student to hear with a helmet.
- Remember there is a delay between your command and the student's response.
- Be aware of the distance between your student and obstacles or other skiers/riders. Observe your student's reaction time and allow extra distance.
- Understand that stress or fatigue may aggravate your student's visual impairment. Pace your lesson to avoid this and adapt your guiding technique, if necessary.
- Avoid superfluous chatter & too much information, which can cause sensory overload for your student and can tire you out.
- When it is safe to do so, you may want to stay in the middle of a run and avoid the edges.
- Prepare your student for changes in upcoming terrain. If there is a dramatic change of terrain (for instance, moguls after skiing an easy blue cruiser), you may want to make a complete stop to further emphasize the difference.
- When possible, use kinesthetic words to describe terrain. Use words like "*dip*," "*flats*," "*washboard*" or "*bumps*." Avoid non-kinesthetic words like "*moguls*" or "*groomed terrain*" unless your student is already familiar with these terms.
- Listen intently to what your student hears and be prepared to describe it if your student wants more details. For instance, the whirring noise of a snow maker may be disconcerting until the student realizes that beautiful noise is putting more snow on the slope.

Equipment and Physical Assists

Students with visual impairments often have difficulty with balance, since the visual system is one of the major components of balance. Additionally, a student with a visual impairment may need a kinesthetic experience as opposed to a visual demonstration when learning a new skill. Adaptive equipment such as bamboo poles, Delaney Sticks, Kahuna Stix and tethers may be utilized to increase special awareness and provide a kinesthetic experience of where you are at in space and effective riding movements.

Blind rider/guide bibs

These brightly colored bibs (usually bright orange or neon green) are worn by you and your student over jackets and any other gear so that they are visible from both the front and the back. They alert the public to the special needs of the skier/rider and are sometimes used for guide identification by the participant with low vision.

Sunglasses and goggles

As with all riders, a student with a visual impairment should wear sunglasses or goggles to prevent further damage from ultraviolet light. If you are riding on rugged terrain, use goggles to avoid eye trauma from rocks or chunks of ice.

Personal two-way radios

Personal two-way radios can be a useful aid when you are giving verbal commands. While they may save your voice from yelling, some students feel uncomfortable with a "disembodied voice" guiding them. If you use personal two-way radios, be sure to check the batteries and if you are planning to ride for a long time, you may want to bring a back-up set of batteries. You should realize, however, that the radios may still not work in all areas and establish an alternate signaling system in case of signal failure.

Physical assists

Physical assists are useful methods to for a student to experience how a turn should feel. You can also use them in a situation where unexpectedly advanced terrain or fear can prohibit your student from riding down on his/her own. Remember to always ask your student's permission before making physical contact.

The **Dance** is often used to assist the student in turning and stopping. It is also an effective way to kinesthetically teach a new movement to a student with a cognitive or developmental disability. To perform the two-point hold, ride facing your student, holding on to his/her hands (so you can let go if needed). This will require the instructor to ride switch, so practice this before using it with your student.

Assist from behind: Similar to the Dance, with the instructor riding behind the student, holding on to the student's belt loops or a seat harness. This might work better if your switch riding is not so great, your student tends to lean on you if you ride in the Dance or is bigger than you.

Stand-up tethering

Stand-up tethering is another assist technique that utilizes a either a seat harness to tether from your student's hips or a SB clamp/s and tethers. Practice this before trying it with students as it takes skill and finesse to ensure safety and enjoyment for the student.

As the tetherer, you have the ability to:

- **Assist with turns and turn shape** - with active tethering in different parts of the turn
- **Control speed** - by utilizing the slope and through turn shape – NOT BY SIMPLY HOLDING YOUR STUDENT BACK AS HIS ANCHOR!

By doing all of this, you can help a student create muscle memory and with enough practice, their newly developed skills should allow the student to eventually ride independently.

As a general rule, stand-up tethering is only appropriate on easy terrain (typically greens and easy blues). If the student is capable, the tethers can eventually be removed for greater independence

Bamboo Pole / Delaney or Kahuna Stick

A bamboo pole offers many options for your student to get more feedback from the snow. Held like a "gondolier rudder," the pole will not only give your student a feel for where they are at in space, how fast they are going and the angle of the slope, it will also help with occasional balance assist or propelling themselves on the flats with both feet strapped in.

Hula Hoops®[1], Ski-Pals®[2]and Sno-Wings™[3]

Hula Hoops, Ski-Pals and Sno-Wings offer great flexibility for teaching adaptive students. The student can be positioned inside of these devices with you riding directly behind or in front of your student. You can then guide turns in a manner similar to tethering.
Using the a Hula Hoop or a Ski-Pal between the two of you allows you to lightly guide the student's turns and give him/her the sense of security that comes from being able to hold onto something, while still allowing for more space between you than in the Dance.

Using other adaptive equipment

Some students may require the use of more involved adaptive equipment, such as a rider bar, sit-down skis or outriggers. See the other PSIA-RM Adaptive Exam guides for information on this equipment.

Service Dog Etiquette

Some people with visual impairments use a service dog to guide them. Together, the person with the visual impairment and the dog make up the **service dog team**. If there are secondary disabilities, the service dog may also be trained to assist in other functions, such as providing stable support for a person with a balance impairment or alerting the person prior to the onset of a seizure or migraine.

A service dog is not a pet! Never interact with a service dog in training. For service dogs who are not in training, always ask the person of the service dog team whether you may interact with the dog. This includes petting, feeding, whistling, calling or talking.

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[1] *Hula Hoop® is a registered trademark of Wham-O, Inc.*

[2] *Ski-Pal® is a registered trademark of Ski-Pal, LLC.*

[3] *Sno-Wing™ is a trademark of Johnny Boy Enterprises, Inc.*

Adaptive SB Teaching Objectives for riders with Visual Impairments

The following is based on the AASI Snowboard Teaching Handbook
https://www.psia-rm.org/product/snowboard-teaching-handbook/

Please refer to the Handbook. Leave out exercises that do not make sense for your student or unnecessarily wear them out and focus on what the student can do!

It is in your best interest to exercise due diligence in determining the appropriateness of the information for your particular circumstances. In addition, please consider 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.

Beginner / Novice Zone Objectives

Level 1: Welcome to Riding / Build the foundation

Level 2: Introduction Sideslipping and Direction Change

Level 3: Introducing Turning

Level 4: Refining Turns on Green Terrain

Intermediate Zone Objectives

Level 5: Exploring Movement Options and Terrain Variety

Level 6: Mastering Blue Terrain and Developing Versatility in Movemet

Expert Zone Objectives

Level 7: Introducing Black Terrain and Increasing Movement Intensity

Level 8: Mastering Black Terrain with active retraction

Level 9: Riding Anything, Anywhere in Any Condition