



# Senior Specialist Manual



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## Credits

This manual was compiled by a committee of PSIA-NW members with the endorsement of the Board of Directors and the approval of the PSIA-NW Education, Technical and Certification Vice Presidents and the Education & Programs Director. The committee was chaired by Ed Kane who was supported by Ed Younglove, Kim Petram, Mary Germeau and Don Meyer. The Chair of this committee wishes to express his gratitude to those who contributed. This Manual would not have been possible without their help and without the support of the ETC and the E&PD.

# Senior Specialist 1 Manual

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## 1.0 Introduction

The information in this manual is only a starting point to help participants in their efforts to acquire the skills to effectively teach individuals who are in the senior demographic. Since it is recognized this manual cannot cover all the material necessary to excel with this population of students, participants may wish to continue to expand their knowledge and understanding by:

1. Keeping a running record or a portfolio of senior classes taught. A suggested format is shown on Page 45. These summary records will provide valuable “lessons learned” if they capture what went well and what could be improved.
2. Taking the time to read references listed at the end of this manual and add material as you find it in other publications. Discuss these findings with your associates at every opportunity since the shared dialog is very productive.

### 1.1 Purpose and Objectives

The purpose of the Senior Specialist program is to provide training to instructors of all ages so they have the tools and knowledge to provide high quality instruction to the senior skiing public.

A broader objective is to attract and retain seniors to PSIA-NW schools who can effectively provide dedicated, organized programs and sufficiently trained staff to accommodate the unique needs of this demographic population.

The Senior Specialist program currently consists of the Foundations and the Senior Specialist 1. The objective of the **Senior Foundations** education program is to provide overview materials that will help the participants clearly understand the unique attributes, characteristics and needs of their senior clientele and to show how a framework of Low Impact/Continuous Movement patterns can help meet these needs. The **Senior Specialist 1** education program will apply the Foundations curriculum then advance to achieve and demonstrate an understanding of how the Senior CAP Model, Teaching Model and specific movement patterns meet the needs of the senior clientele from the Beginning Zone through the Advanced Zone.

### 1.2 Requirements for Successful Completion

The content, prerequisites and requirements for achieving success and the format for providing feedback are outlined Section 1.3. It is important to note the Senior Specialist Program is an educational training opportunity, not an exam. It is assumed each participant will accept ownership of, and demonstrate mastery of, this material in both the indoor and on snow sessions. Successful participants are expected to show an appropriate blending of skiing skills and an appropriate level of understanding of senior specific teaching knowledge and theory. Senior Specialist 1 will include an evaluation of the degree of understanding and the level of mastery of the Senior Specialist material outlined in this

manual. The program will provide written feedback and suggested personal goals for continued Senior Specialist teaching growth.

### 1.3 Indoor and On Snow Format

The **Senior Foundations** introduction is intended to acquaint the participants with the objectives and material that formulate the core of this training. The prerequisite for the Foundations clinic is a PSIA Level 1 Alpine Certification. The Foundations content consists of an indoor session to briefly review the Senior Specialist Manual content and a 4 hour on snow clinic to introduce and explore low impact/continuous movement patterns specific and appropriate for seniors. At the end of the session, participants will be given written feedback with specific emphasis and focus on movement pattern(s) that could be used to help improve their mastery of senior specific skill blends and to help them decide if they are ready to successfully complete the Senior Specialist 1 requirements.

The **Senior Specialist 1** Program is intended to develop and expand the knowledge and skills gained in the Foundations course by advancing the applications and theory for teaching seniors in the Beginning to Advanced Zones. The prerequisites and requirements for successful completion include that the participant:

1. Has completed the **Senior Foundations** education course.
2. Is a Level 1 or higher Certified Member of PSIA.
3. Has completed the **Senior Specialist 1** workbook portion of the manual.
4. Has demonstrated during the two day Senior Specialist 1 program, a level of both senior specific teaching knowledge and senior specific skiing skill proficiency consistent with the National Level I standards principally measured through the performance of the skiing tasks outlined in the Senior Exercise Framework through Open Parallel.

### 1.4 Overview of the Process for Teaching Seniors

Generally speaking, one might consider seniors to be identified only by their age. It has been suggested this “defining age” might be 50 years or older. However, there are some characteristics possessed by this group that often are common with younger students in today’s environment as well. These characteristics may include alterations in sensory input, fear of terrain, conditions or injury, medical issues, physical limitations and, likely, the pursuit of the mountain experience as a social experience. So in general, it is good to use this training in any class of adults to help ensure they are continuously learning and growing and that you, the instructor, are maximizing ideal learning situations.

Senior Specialist 1 participants will be evaluated and receive feedback regarding whether they demonstrate an understanding of, and the ability to articulate and discuss, the Senior Specialist concepts including the **Learning Partnership** as it applies to seniors: Senior Student Profile and Instructor Behaviors. The **CAP Model** for seniors: **Cognitive** - developmental milestones, behaviors, learned movement patterns, roadblocks, **Affective** - desires and goals, history, **Maslow's Theory**, and **Physical** - real versus ideal movement patterns, medical issues, **VAK** (Visual, Auditory and Kinesthetic), Low Impact/Low Fatigue. **Instructor Behavior** for senior lesson (**Teaching Model**): Guest Description, Guest Needs, Pacing, Effective Use of Mountain Playground, Wrap Up. These are reflected in the Senior Specialist 1 feedback sheet found in the Appendix.

## 2.0 Identifying the Client

### 2.1 Creating the Learning Partnership

The principles of good teaching are always relevant with any class. This being the case the American Teaching System (ATS) documented in the 1996 PSIA Alpine Manual is an excellent place to start. In the class situation, the principles of good instruction are facilitated by the instructor and are characterized by:

1. Guest Services Driven by developing positive interaction with the Snowsports Area services.
2. Student Centered learning facilitated by the instructor who keeps the student needs centered in their lesson presentation.
3. Establishment of a Learning Partnership with the student through the process of continuous communication with the students.
4. Development of a flexible lesson plan that is Outcome Based so it caters on a real time basis to the needs of the students.
5. Allowance of sufficient time for the students to experiment and learn through Experiential Learning or trial and error.
6. Providing feedback and coaching that is From the Heart or is accurate and honest but diplomatic.

The principles of good teaching and skiing were further expanded with the PSIA Alpine Technical Manual (ATM) (2007, 2<sup>nd</sup> Edition) and Core Concepts for the Snowsports Instructor. The principles of good instruction were further nuanced and broken down into specific skiing models and teaching models. The senior specialist instructor will need to be familiar and accountable to these basic models as they are the foundation of all outcomes and methods. These are characterized by:

1. The Learning Partnership: student profiles and instructor behaviors.
2. The Teaching Model and Teaching Cycle.
3. Cognitive, Affective and Physical (CAP) attributes of all learners.
4. The Skiing Model: common skills and movement patterns.

# Senior Teaching Model

## Instructor Behavior

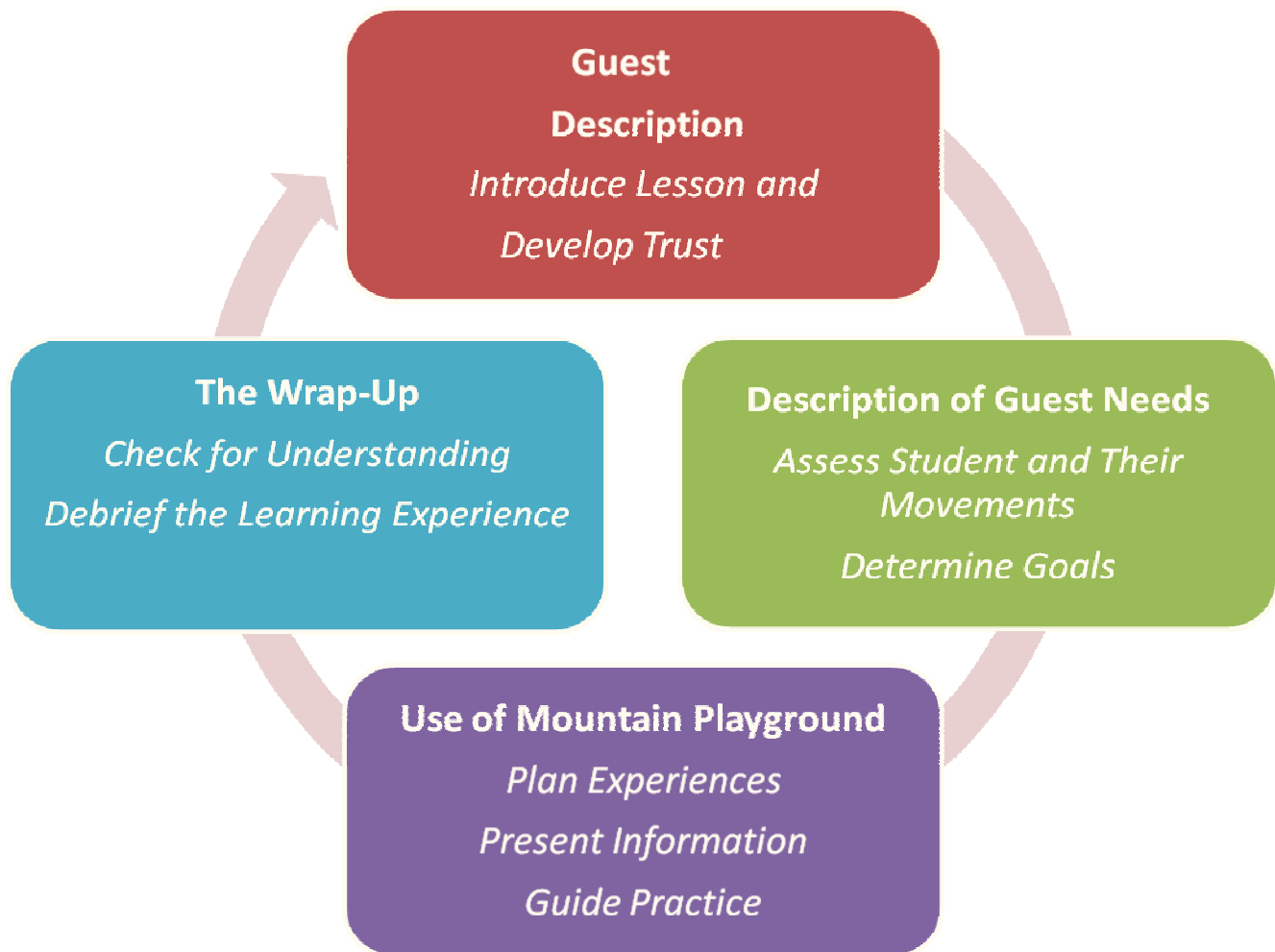


Figure 1. Senior Teaching Model – Instructor Behavior



# Senior CAP Model

## Student Profile

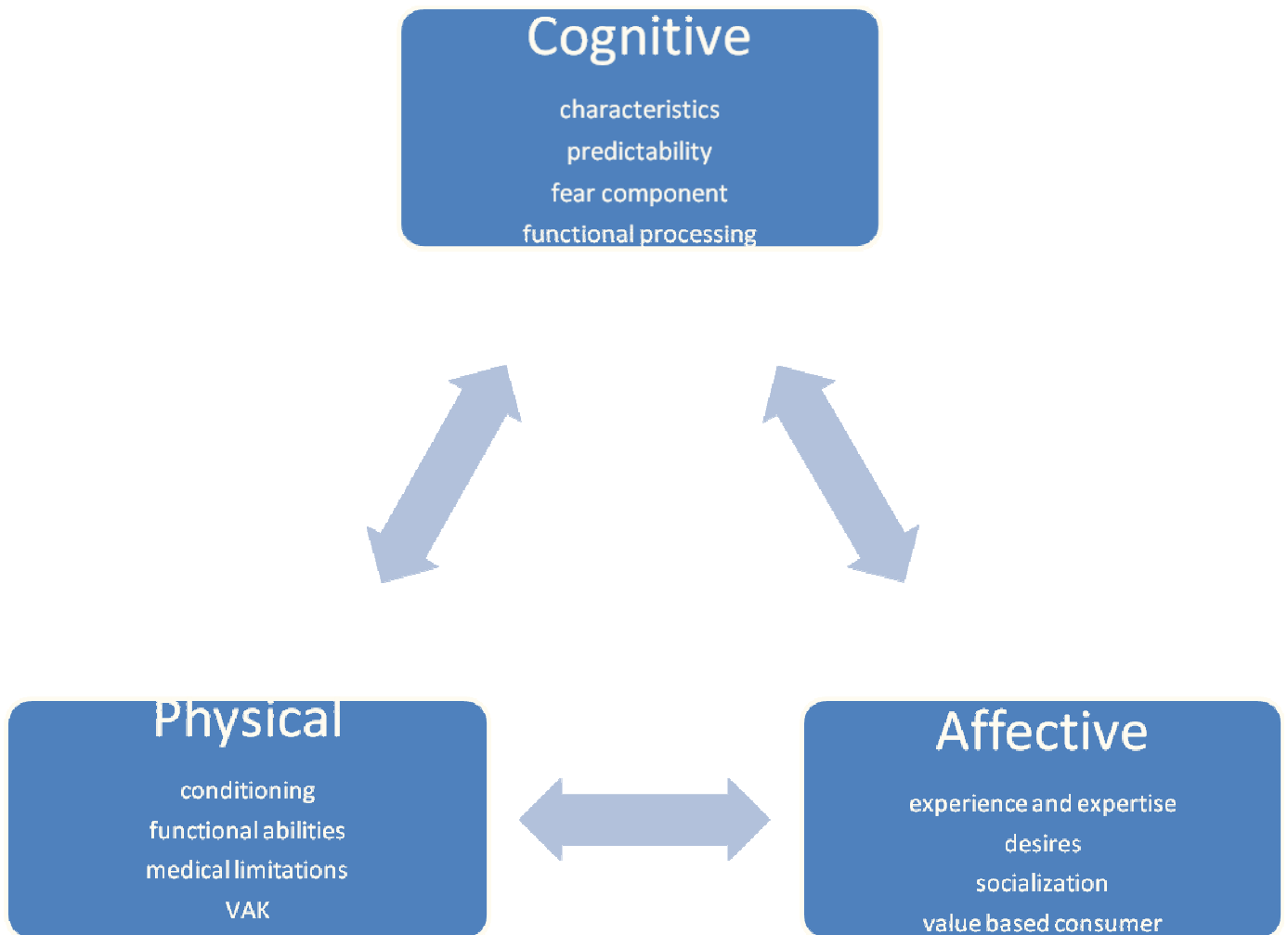


Figure 2. Senior CAP Model – Student Profile

Seniors are increasingly taking up the sport skiing to an older age than in the past. This means the likelihood of an instructor giving a lesson to a “senior” student or a class of “seniors” is increasingly likely. The National Ski Areas Association (NSAA) reports in the 2004-2005 ski season thirty-one percent of downhill skiers in the United States were over

the age of 45. Seven years earlier (1997-1978) it was only twenty-one percent. In 2006-2007, a little over seven percent of skiers were over 55. No statistics are available for those over 65, but anecdotally, industry observers report a steady increase in their number. The National Sporting Goods Association reports that alpine skiers between age 45 and 74 increased from about 1.1 million in 2002 to 1.3 million in 2003 alone.

What is a senior? *“Chronological age is a defining characteristic, but only one characteristic of a senior. People age at different rates depending upon such things as their genetic makeup, their lifestyle, and disease processes. The aging process causes a gradual breakdown of organ systems which erodes function and leaves the individual more vulnerable to metabolic disturbances, environmental stresses and disease.”* *The Aging Athlete*, Dr. Darrell Menard and Dr. William D. Stanish (1989). While there is a tendency to use the age of 50 as a benchmark, it is only useful in providing a general frame of reference. Because these changes vary in onset and development and do not reflect any particular age in years, the characteristics of the individual skier are much more significant. However, an understanding of typical characteristics can help in identifying a client profile.

The senior population of skiers presents some broad characteristics that influence their goals, needs and expectations. A good understanding of these characteristics enables instructors to be more successful in meeting these expectations and should significantly influence the format of the lesson, the pacing of the activities during the class and the specifics of the learning partnership established during the lesson. This population of potential students has a number of common traits that make up their profile. In this section information will be provided information to help the instructor readily understand how these traits should influence their approach. Each class will present specific challenges but the overview should help instructors gain a better understanding of similarities and differences that may exist among the students and should generate an overall awareness that will make the lesson(s) more effective.

From a general overview perspective, all these clients have a number of things in common. First they are middle-aged or older. They are very goal oriented, have many years of life experiences to draw from, are experts at something which will influence how they observe and learn and are generally attracted to skiing more for the social environment rather than the challenges of competition or difficult conditions.

Seniors have generally learned to set specific goals in life and in their activities. This is reflected in their approach to a lesson as they tend to have specific goals they want to achieve in their skiing. They generally have a specific “issue” they want to address and a particular level of accomplishment they hope will be the result. An important start of the lesson is discussing and understanding these goals. A more successful lesson is likely if the goal is appropriate and is one that can be reasonably achieved. This may require some

moderation of the client's initial expectation but seniors seem to be more accepting of achieving intermediate goals so long as they lead toward the ultimate stated goal.

As students, seniors come to you with many years of life experiences. This can be a rich source for "teaching for transfer." Many of their experiences will allow you to relate the movement you want them to learn to some other life activity. It should be recognized they may have well engrained stance and movement patterns which might not be easy to change. Socially, their wealth of experiences can provide a great opportunity for group and individual interactions.

During their many years they have usually become experts at something. They have experienced success and want to succeed in the lesson. They understand success does not generally happen "overnight" and are generally willing to be more patient, particularly with demonstrable progress.

Few of these skiers approach the sport with the desire to conquer the it. By this stage in life, the social interaction that can occur during a lesson, both with the instructor and the other students, has a greater importance. Participation in the lesson for the fun and the joy of sharing the experience with others, rather than to become "the best skier on the mountain" is of more paramount importance. Frequently, attributes of the experience include such things as the bus ride, lunch at the top of the mountain, a beer or glass of wine at the end of the day and a chance to recount the run with the best skiing. These times also provide an opportunity to relive and share the day's skiing experience with others in a comfortable social setting.

With these general characteristics in mind we can analyze the Cognitive, Affective and Physical (CAP) attributes of the senior population and relate them to elements of an effective ski lesson for seniors (see Fig. 2 for a summary of the following material).

It is the instructor's understanding of each Student Profile (based on the Senior CAP Model) and the instructor's subsequent development of their teaching cycle (based on the Senior Teaching Model) that creates the Learning Partnership.

## 2.2 Specific Client Characteristics – The Senior CAP Model

- **Cognitive (Mental/Thinking) Attributes of Senior Skiers**

*"Intelligence tests have demonstrated a pattern of age-related changes in intellectual functioning typically beginning after the age of 60. This 'classic aging pattern' involves somewhat poorer performance on tests of fluid intelligence, but little or no difference on tests of crystallized intelligence.*

*Not all cognitive changes in later life are negative, however. Older persons typically exhibit greater experience-based knowledge, increased accuracy, better judgment, and generally improved ability to handle familiar tasks than younger persons. Such applied*

*knowledge, or wisdom, may in fact be considerably more important to one's ability to accomplish most tasks of day-to-day life than are the abstract abilities tapped by intelligence tests.*

*Intelligence generally can be thought of as including a range of abilities that allow us to make sense of our experiences; the ability to comprehend new information, the ability to think abstractly, the ability to make rational decisions, spatial ability, numerical ability, verbal fluency, etc. Some abilities (e.g. the ability to think abstractly) are heavily biologically determined and are relatively independent of particular applications, reflecting what has been called "fluid intelligence." Other intellectual abilities (e.g., verbal fluency) are more apt to reflect the knowledge and skills a person has gained through life experience, or "crystallized intelligence."*

*Most persons experience a modest increase in memory problems as they get older, particularly with regard to the ability to remember relatively recent experiences. Decrements are found both in the ability to accumulate new information and in the ability to retrieve existing information from memory storage, although there is little decline in the ability to store new information once it is learned." Aging Successfully; the Importance of Physical Activity in Maintaining Health and Function, by Marc T. Galloway, MD and Peter Jokl, MD.*

*The most common cognitive change is a decline in speed of mental processing. (Ratcliffe & Saxton, 1998) "As we age it appears there is a decrease in the speed of evaluating the information and reacting to it. . . . Older persons also become less capable of making a decision regarding a stimulus, thereby appearing less decisive." (Working with Seniors, Health, Financial, and Social Issues (2005) Society of Certified Senior Advisors. However, these affects may not appear until the individual is much older. "[S]eniors are just as likely as younger adults to understand material being presented to them, but they would benefit from more time to absorb the information. . . . [S]eniors may be less able to 'store' new material that is presented rapidly. . . . [R]eaction time is slowed. . . . [However] it is important to note that these changes are minimal in normal aging, and do not generally impair the daily functioning of seniors. Further, there is considerable variation among seniors, and all of these changes are relative to the individual's level of functioning." Id.*

Of course, diseases such as Alzheimer's or Frontal Lobe Dementia can rob persons of intellect and particularly memory. Individuals with these conditions (even in the earlier stages) present a unique challenge both in learning (retention) and in class handling. A common attribute of someone with dementia is a lack of empathy, or tolerance, with behavioral outcomes of anger or irritation not commensurate with the trigger. Also, short term memory can be impaired so directions and coaching need to be measured. With such students you may want to consider "partnering" so the individual is always with someone else. Most seniors are sympathetic to persons with such conditions and don't mind

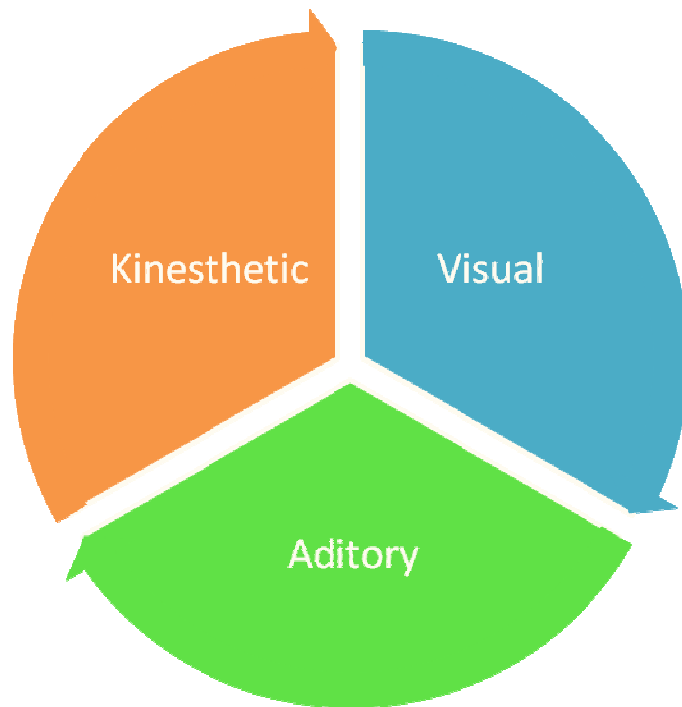
participating in helping to ensure their safety and well being. It is best to check first however, as some people feel “put upon” and it is not their job to watch out for someone else. If partnering is used, it is best to rotate the responsibility among those willing and able to participate.

According to some experts, seniors tend to be more cautious in their decision making. Once they make a decision however, they are more reluctant to revise their decisions and judgments. This tends to make them less flexible in their learning which means it may be more of a challenge to convince senior students to try new movements. This challenge may be particularly difficult if they have some history which has given them the belief their current movements are appropriate, such as an earlier “good lesson” on outdated equipment or technique. Gradual changes with incremental improvement may be the best approach, rather than trying to convince the senior student to try something radically different. Habitual patterns are ingrained cognitive functions that take time to develop and, therefore, also take time to change or alter.

Generally there is no reason the senior student should have any intellectual impediments to understanding abstract concepts and in fact while learning preferences tend to remain constant, if anything seniors may tend to be more “watchers” and “thinkers” than “feelers” or “doers.” (This may also reflect physical safety concerns addressed later.)

Cognitive development continues through an adult’s early 20’s with the brain undergoing continuous changes and remodeling. Thinking and learning occur in the amygdala, hippocampus and temporal lobe regions of the brain. Neurological research is focusing now on the mature brain with theories that the brain remains neuroplastic and that functioning can change and adapt. *Seniors involved in self improvement in the community setting with like minded goals help maintain healthy brains on holistic levels.* (Vibrant Minds, Lisa Schoonerman) As an adult matures into middle age and senior years the brain uses the greatest developed functioning areas the most. The adage “use it or lose it” is generally true.

The brain sorts and organizes information. The physical response is the motor response or outcome which starts in the brain and is involved in a feedback loop of the senses. Our senses tell us how we receive information regarding position and movement through space. Our senses are how we hear, see, feel and taste. Our three sensory receptors that relate to balance are the eyes, inner ear and soles of the feet. Visual, Auditory and Kinesthetic: VAK. This is important for the senior skier as the senses may be diminished or impaired.



### **Visual**

Acuity: vision declines as we grow older

Localization: orientation of people or objects in space

Details: fog, density, brightness, contrast

Overload: crowds, volume, terrain, fear

### **Auditory**

Determines: direction and distance

Sounds: ice, crud, powder, crowds, nature, inner voice

Acuity: may decrease with age, helmet usage, lack of eye contact

### **Kinesthetic**

Primary source of sensory input

Tactile: how it feels

Pressure: sensations on body parts

Proprioception: the body's balance receptor

Figure 3 Senior Visual, Auditory and Kinesthetic Model

Sensory input and cognitive functioning work towards creating physical outcomes. All the senses receive information. The brain processes this information which leads to the body having a motor response with the body then sending this information back to the brain via the sensory feedback loop. What is a reflex? A reflex is when the response feedback loop goes only to the spinal cord and not the brain.

The brain is the sorter and the organizer. Again, the physical response is the motor response which creates actions and reactions which allow order and predictability. Labels attributed to senior skiers of “stubbornness” or “refusal to change ways” may really be ingrained cognitive and neurological processes that take time and coaching to alter or adapt.

- **Affective (Emotional/Social) Attributes of Senior Skiers**

*“As we age, we are no longer willing to give up the pleasures of physical activity, nor should we be. However, it is difficult for us to maintain a clear perspective on just how much we can do. We do not have much in the way of role models. Our bodies and capabilities are constantly changing. We no longer have the same confidence in our physical ability. To feel apprehensive under such circumstances is not only understandable, it is to be expected. An individual experiences more apprehension the less confidence he has in his ability to perform successfully. When we find ourselves physically unable to do something we had no problem with before, when we are slower to react, when we can not rectify a mistake with the same alacrity, when we take longer to recover from an injury, we lose a clear sense of our capabilities and limitations. We lose confidences and thus we become apprehensive.*

*So how do we deal with this—with this loss of confidence and the resultant anxiety and fear? We can succumb and either give up altogether (possibly making excuses that help us save face), or perform at a level far below our actual capabilities; we can deny that any of this is happening and put up a brave but reckless front, truly endangering ourselves; or we can be realistic, see the situation for what it is and deal with it. We can learn our capabilities and limitations, set realistic goals, and build confidence. We can learn new and different ways to do things and refine skills rather than relying on an ever declining strength.*

*. . . [A]s we get older, our confidence in our physical abilities will decrease and, quite likely, our anxiety and fear will increase. An instinct for self-preservation, after all, is natural and healthy. How we deal with this, then, is up to us. The most constructive way is to rebuild confidence by setting attainable goals and finding ways to perform that require less brute strength, relying more on skill and finesse. With the right skiing attitude, you can enjoy a long skiing life and many happy turns.” Senior Skiers and the Fear Factor, by Elissa Slinger, Ph.D.*

*“Old age is typically a time when the work role becomes less important and leisure takes on more significance in life. . . . Leisure may be an end in itself, but moments of leisure also have a developmental pattern that is rich with purpose. Leisure, in short, can be serious business. For example, if we play sports or perform music or read a book, each moment leads to the next in some purposeful developmental pattern. . . . [A]s people get older they usually continue the same activities they engaged in earlier in life (Atchley,*

1999), a fact recognized by the continuity theory of aging. . . . [I]t's a mistake to resort to stereotypes about 'old people's' activities, such as bingo, or singing old-time songs." *Working with Seniors, Health, Financial, and Social Issues*, (2005) by the Society of Senior Advisors. In short, many seniors interest in and passion for skiing may actually increase with age.

At least one researcher has concluded that "[n]ext to dying our recognition that we are aging may be one of the most profound shocks we receive." *The Psychology of Old Age*, Victor Barnes, Ph.D. (2005) Barnes concludes that in this later stage of life a sign of maturity is attaining "ego integrity." He describes this as "coming to accept one's whole life and reflecting on it in a positive manner." Persons who attain this maturity have generally progressed successfully through the earlier stages of life development. He identifies a number of stresses that generally come into play in old age: retirement and reduced income; isolation (loss of loved ones); reduced physical attractiveness; and a tendency to self devaluation (loss of importance or status). Citing Maslow's Hierarchy of Needs theory, he reminds us that we are not free to pursue self actualization unless basic needs are secured. Accordingly, seniors whose financial well being is more secure, for example, tend to be motivated to pursue activities concerned with aesthetics, creativity and altruistic matters. Those who are not secure will only be frustrated by attempts to focus them on such activities.

One dominant attribute of the emotional domain for senior skiers tends to be fear of injury. In this respect the affective and physical domains intersect. Much more so than their younger counterparts seniors worry about physical injury. Risk taking is reduced with age, and with some good reason. Physical injuries may be greater or more likely with advanced age accompanied by reduced bone density, muscle loss, etc. Injury recovery time is generally much longer.

Fear for physical safety is an inhibitor for learning (Maslow) and thus providing a safe lesson environment can be critical for the senior lesson. So too are learning skiing movements that reduce the physical impacts of skiing and reduce the chance of wear and tear injuries. This is an appropriate goal for the senior skier and will provide emotional as well as physical benefits.

A key in the affective development of most senior skiers is the importance of the "whole skiing experience" and the social aspects it can involve. Competition generally will become less important for this demographic group.

Most senior skiers have learned to want to savor each run and are willing to take the time to stop, chat and observe the world around them while taking the time to "smell the roses." Most seniors favor the social aspects of skiing with a group of like minded individuals.



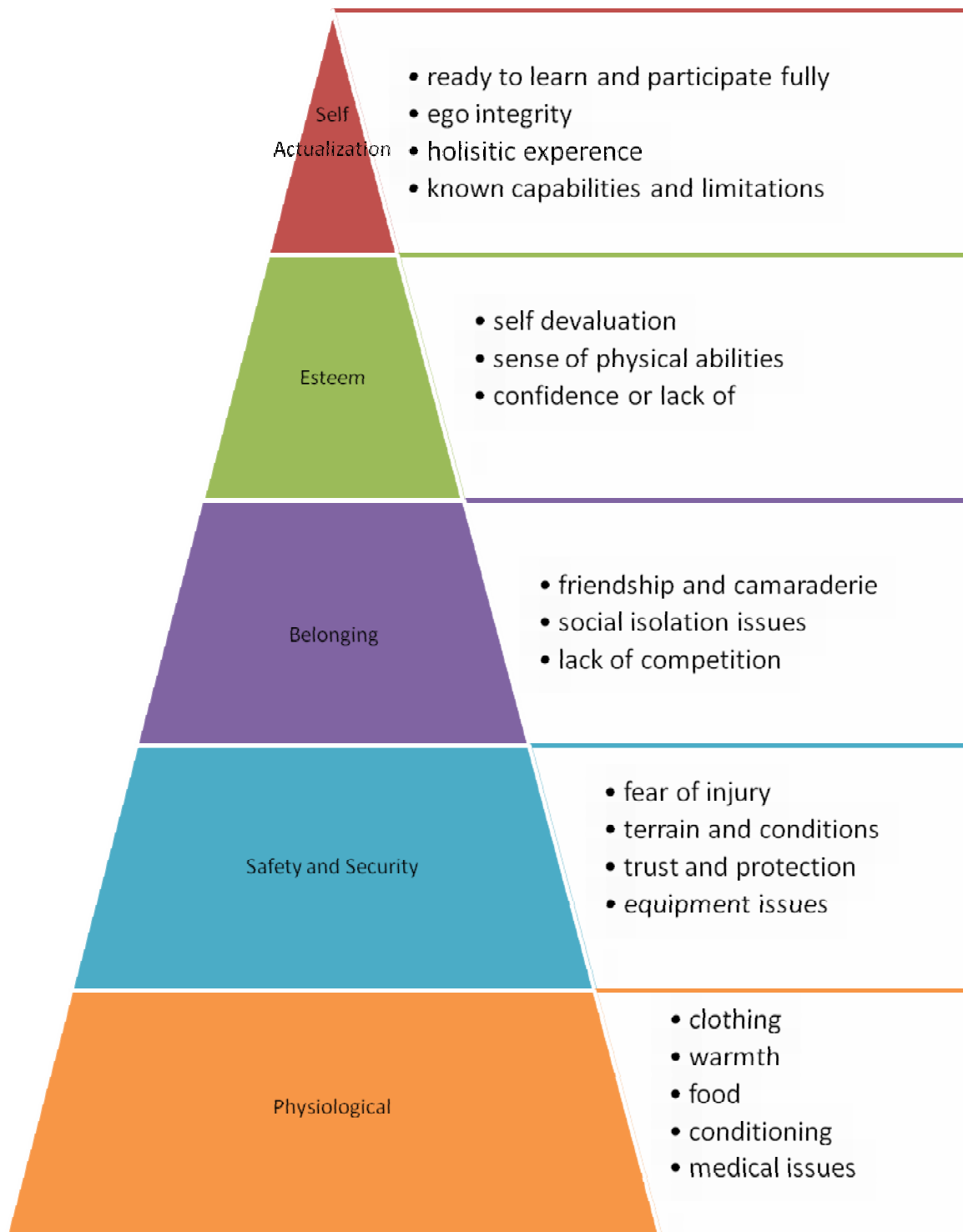


Figure 4 Maslow's Hierarchy of Needs for Seniors

### • **Physical Attributes of Senior Skiers**

Probably the most obvious attribute of advancing age is the decline in physical condition. A good discussion of the effects of physiological aging can be found in *Working with Seniors, Health, Financial, and Social Issues*, (2005) by the Society of Senior Advisors. The following is a summary of some of the findings.

With age come reduced muscle mass (loss of strength) and lower bone density (weaker bones). The average non-exercising person loses twenty-two to twenty-three percent of muscle mass between the ages of thirty and seventy. Exercise can slow the rate of loss. Beginning at about age thirty five, the average person begins to lose more bone mineral than is replaced, especially women. This loss can generally be reduced by daily weight bearing exercise.

As the aging process evolves a reduced cardiovascular capacity (reduced oxygen in the blood) occurs. The heart muscle thickens reducing the heart's maximum pumping rate and negatively affecting the ability to extract oxygen from the blood. A man's maximum oxygen capacity during exercise is reduced by about ten percent every decade. The corresponding reduction for women is about seven and a half percent. Arteries become stiffer and resistant to blood flow. Lung capacity too is decreased due generally to increased rigidity in the chest wall, decreased respiratory muscle strength, loss of elasticity in lung tissue and reduced gas exchange surface area.

Other organs are affected by age. The bladder capacity generally reduces with age and the kidneys become less proficient in removing waste from the blood. Even the brain's nerve cells (axons) may decrease.

Impaired sight and hearing are likely to accompany the aging process. Loss of close-up vision frequently occurs around the age of forty. Eyes tend to become more susceptible to glare around age fifty. At about the same time, it may become more difficult to see in low light conditions and to see moving objects. By age seventy, there is usually a decline in the ability to distinguish fine details. Most seniors notice a diminution in their peripheral vision.

One in three persons over age 60 and half of those over 85 have significant hearing loss. The ability to hear high frequencies decreases with age. The existence of background noise can affect the ability to understand speech. Men experience a decline in hearing more than women. Untreated hearing loss can lead to depression, isolation, irritability and a decreased quality of life (*National Academy on an Aging Society*, (1999). Loss of hearing and vision can be easily mistaken for impaired intellect. Older persons may be frustrated or embarrassed about not being able to understand what is being said. They may be uncomfortable asking speakers to repeat what they have said and they may hold back from participating for fear of making inappropriate comments.

Keep the following tips in mind to better help a hearing impaired individual: speak clearly and in a normal tone; get the person's attention before speaking; look directly at them at eye level; keep the hands away from the mouth while speaking; eliminate or wait for background noise to abate; express the same point different ways; build breaks into the conversation; use expressions and gestures; repeat frequently and ask how you can help. *Physical Changes of Aging*, Suzanna Smith and Jennifer E. Grove (University of Florida

IFAS Extension—[www.edis.ifas.ufl.edu](http://www.edis.ifas.ufl.edu)) and *Physical Changes in Aging*, Lopu Isbell (University of Missouri Extension –[www.extension.missouri.edu](http://www.extension.missouri.edu)).

Seniors are just not as strong, don't have the same physical endurance, stamina or physical agility they once had in younger years. Appropriate pacing becomes of critical importance. The need to balance the need for rest and recovery time while not losing attention through inactivity by "standing around on the hill" is critical. Skiing in short "bursts" i.e., breaking up the run into shorter segments is a good class handling technique to keep things moving while still providing necessary pacing. These short rests are an excellent time for information sharing and positive coaching.

*"The foot is especially susceptible to basic human declines of aging. Loss of elasticity in body tissue is stressful to the intricate connections binding together the foot's 26 bones. When connecting ligaments lose their stretchability, older people have pain and foot problems."* *Physical Changes in Aging*. This can be a particular problem for a sport such as skiing where the feet, and movements of the feet and ankles are of such significance.

Many authorities note seniors tend to be prone to greater sensitivity to sun and to cold. This may be due in part to decline in sweat gland activity, poor circulation and thinning of the skin. Drinking fluids, applying sun screen and dressing in appropriate layers can help. *Id.* Over the years past injuries tend to catch up with us and can create weaknesses in our bone, joint, ligament and muscle systems. Seniors may be weakened by past diseases or illnesses and become even more susceptible to other illnesses or diseases because of their age.

Regular exercise can forestall the physical effects of age, and we all know great senior athletes, however, eventually no one is in as good physical condition as when they were younger. These physical declines can also have an effect on the cognitive and particularly the affective domain.

Senior students should be encouraged to engage in regular conditioning activities prior to enrolling. An organized program such as Senior Aerobics or Senior Conditioning Classes would be a good place to start. These programs should stress exercises and activities that will help them improve their strength, augment their balance and enhance their endurance. Low impact activities that will create minimum stress on the joints should be used. The participants should be encouraged to consult with their doctor prior to participation.

Evaluating your students for common medical conditions is part of the Instructor Behavior assessment portion of getting to know your guest and developing trust. Listed below are potential symptoms of common ailments the older student may present. Instructors are not expected to diagnose or treat potential medical issues but are expected to be aware that students may have medical conditions. If these occur during a class, the instructor should immediately get help from the ski patrol.

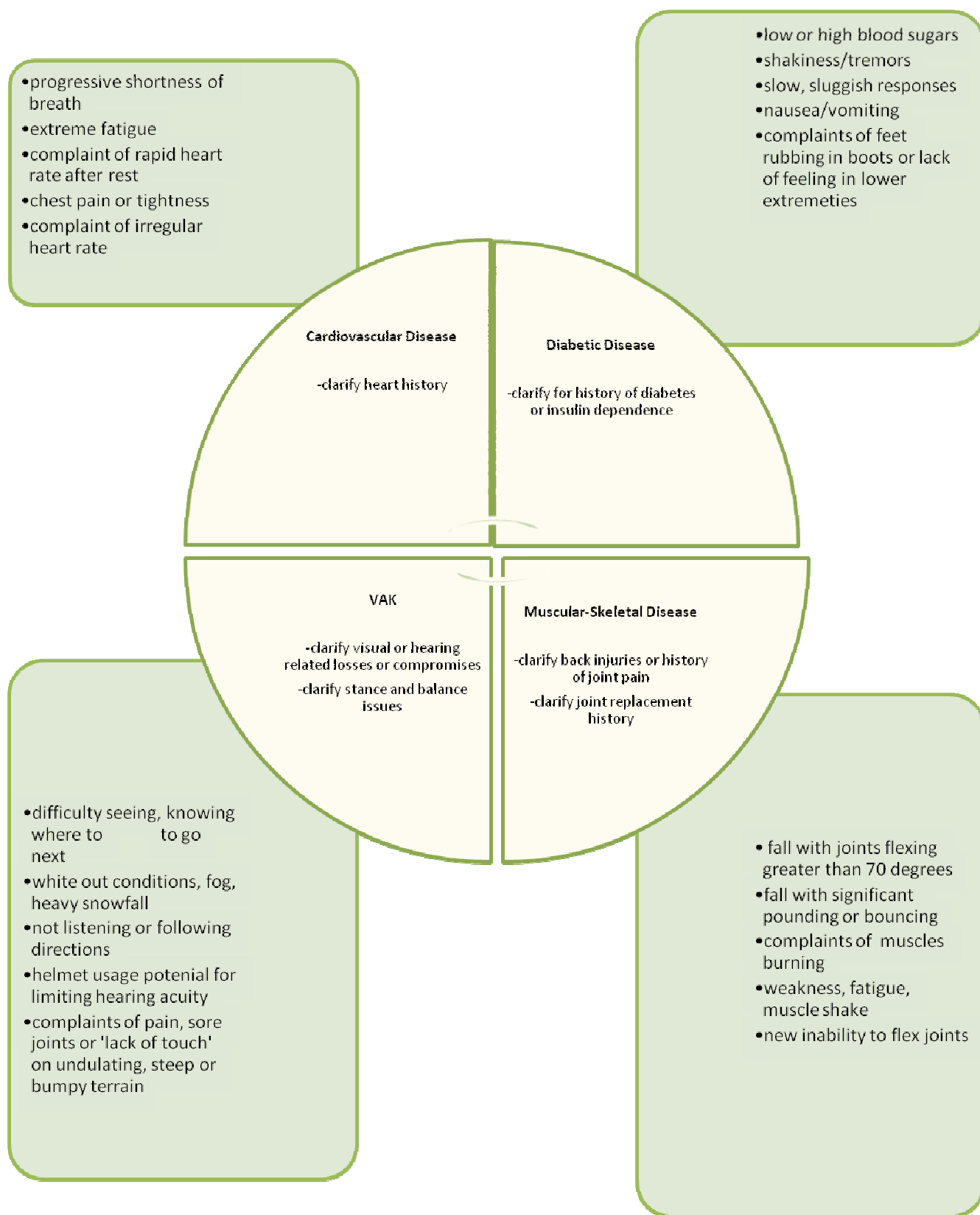


Figure 5 Senior Physical Symptoms to Monitor during Lessons

## CAP Model for Seniors (Summary)

Age Range, 20 to 50	Age Range, 50+
<b>Cognitive – How they think</b>	
Analytical (want details & reasoning why) Innovative Varied risk tolerance Aware of cause & effect Very goal oriented Like to be challenged within comfort zone Want to excel Skeptical Understands own learning style Goal oriented & self assured Intimidated by fear of failure Various levels of self-assurance	Selective about challenges Less risk tolerance More cautious Slowed decision making More reluctant to revise decisions/judgments Want measured progress Realistic or conservative goals More limited comfort zone Clear understanding of goals Expects positively directed feedback Retains feedback that is understood Decreased speed of mental processing Reduced ability to retrieve recent memories Taking lessons to achieve desired outcomes Expects to be treated as a peer (with respect) High expectations for success Open to learning Require clear feedback
<b>Affective – How they feel &amp; interact</b>	
Very socially conscious Outgoing Want to be leader of group Independent & competitive Enjoys off-color humor Husband/wife compatibility could be issue Expect <u>obvious</u> value from lesson Sensitive to performance in front of peers Uncomfortable with what they don't know Focused on outcomes	Skiing is a social experience Value whole experience Look for purpose even in leisure activities Relies on peers for support Are supportive and “team” oriented Lack confidence in physical abilities Apprehensive of new movement patterns Fearful of injury and complications Expect value from lesson Accomplishment of outcomes are obvious Prefers process to accomplish outcomes Desires instructor who is a peer Appreciates subdued humor Comfortable with what they don't know
<b>Physical – How they move &amp; their conditioning</b>	
Conditioning & strength highly variable Flexibility highly variable Endurance highly variable Reaction capability reasonably good Frequently uses strength over finesse Center of mass moving down Male & female differences in conditioning Potential visual and/or aural impairment	Conditioning & strength somewhat degraded Flexibility & endurance somewhat limited Reduced cardio capacity Reduced bladder capacity Needs to renew muscle memory Potential reaction/balance impairment Needs to use finesse rather than strength Center of mass moving down Past injuries may cause limits in movement Potential visual and/or aural impairment Increased sensitivity to sun and to cold

Figure 6 CAP Model for Adults

### 2.3 Equipment Considerations for Senior Skiers

Recent equipment developments can help seniors ski more efficiently. Ski design now enables skiers to bend the ski at moderate speeds and with less pressure against the ski and with correspondently less stress on the body from the forces necessary to bend the equipment than previously. Fat skis have made it possible for the intermediate skier to ski powder and crud snow with much less muscular effort by remaining closer to the snow's surface. Ski length should be appropriate for the desired outcome, size and skill of the skier, but as a general rule, less is more (140 to 170 cm seems to be a good intermediate range). Today's shorter skis provide great performance and stability in shorter lengths which can be guided with less effort. Even shorter skis (110 to 130 cm) for beginners lessen the awkwardness of moving around with extensions on our feet and also make getting up from a fall much easier. Today's ski design and materials allow softer flexing skis to have sufficient torsional rigidity to provide a good solid platform at moderate speeds. Generally a softer flexing ski will be easier to bend at slower speeds and with less effort.

Because of the greater susceptibility to foot problems as seniors age boot fit becomes even more critical. The caveat that the boot should fit like a snug "handshake" (about 1 ½ finger width between the heel and the boot shell) is still true. Unfortunately, the tendency seems to be many seniors pick out, or are fit in, boots that are too large. The mistaken believe is a lose fit will be more comfortable. Not only are performance characteristics of a good snug fit lost, it may actually increase the risk of blisters from movement within the boot or by wearing too thick or multiple socks in an effort to try to take up excess space, especially as the fit loosens with wear. Appropriate boot forward flex is also important. With the reduction in muscular strength with age and sometimes weight loss as well, the inability to flex a too stiff boot is more prevalent. As with any skier, proper alignment and canting is critical for an efficient and effective stance.

As a general rule, even beginning senior skiers should be encouraged to use ski poles. While they are sometimes used to assist balance this should be avoided as much as possible. More importantly poles should be used to provide propulsion and as an aid in getting up from a fall. These advantages generally outweigh the negatives (distractions, etc.) of newer senior students having poles. Pole length is very important and should be long enough to minimize changes in stance when they are used. A good starting point is the forearm should be parallel to the ground when the pole basket is ahead of the boot toe when standing on the skis and is in contact with the snow.

Because of the greater susceptibility to sun and cold, the use of sun screen, sun glasses or goggles, hats and warm layered clothing is important. Allow breaks for the removal or addition of layers of clothing, application of sun screen and intake of fluids, etc.

## 2.4 Starting and Maintaining Senior Programs

As noted above in the CAP Model, seniors view skiing as a social experience, value the whole experience, rely on peers for support and expect value from their lessons. This being the case, a great deal of the allure of lessons will come from the perception of special consideration for this group by the resort, the school and the instructor. In setting up senior programs, there are a number of features that can be readily offered by all players to make this group feel comfortable, valued and supported. Collaboration by the resort, school and instructor will be rewarded by rapid growth, consistent attendance and increased ticket sales through the desire of the seniors to include their immediate families in the experience.

- **Facilities & Perks that Attract & Retain Seniors**

Some of these features include: An indoor location or meeting place where they can gather, socialize, leave their extra gear and get together after the lessons. This same location can also be used for introducing beginners to their equipment and what they will experience their first time on snow. A convenient meeting location should be provided in an area near the indoor meeting location which is quite flat and away from the normal public high traffic areas. In addition, the area groomers could be encouraged to provide and maintain special terrain facilities that will help these students learn without excessive physical exertion. One such example is the “mini-pipe” (see Fig. 7 below) which can be used to learn to glide without the fear of stopping, learn to turn as the edge of the lip is approached and can maximize mileage by using shallow traverses between each turn. Preferably, such features should be located near lift facilities such as a magic carpet.

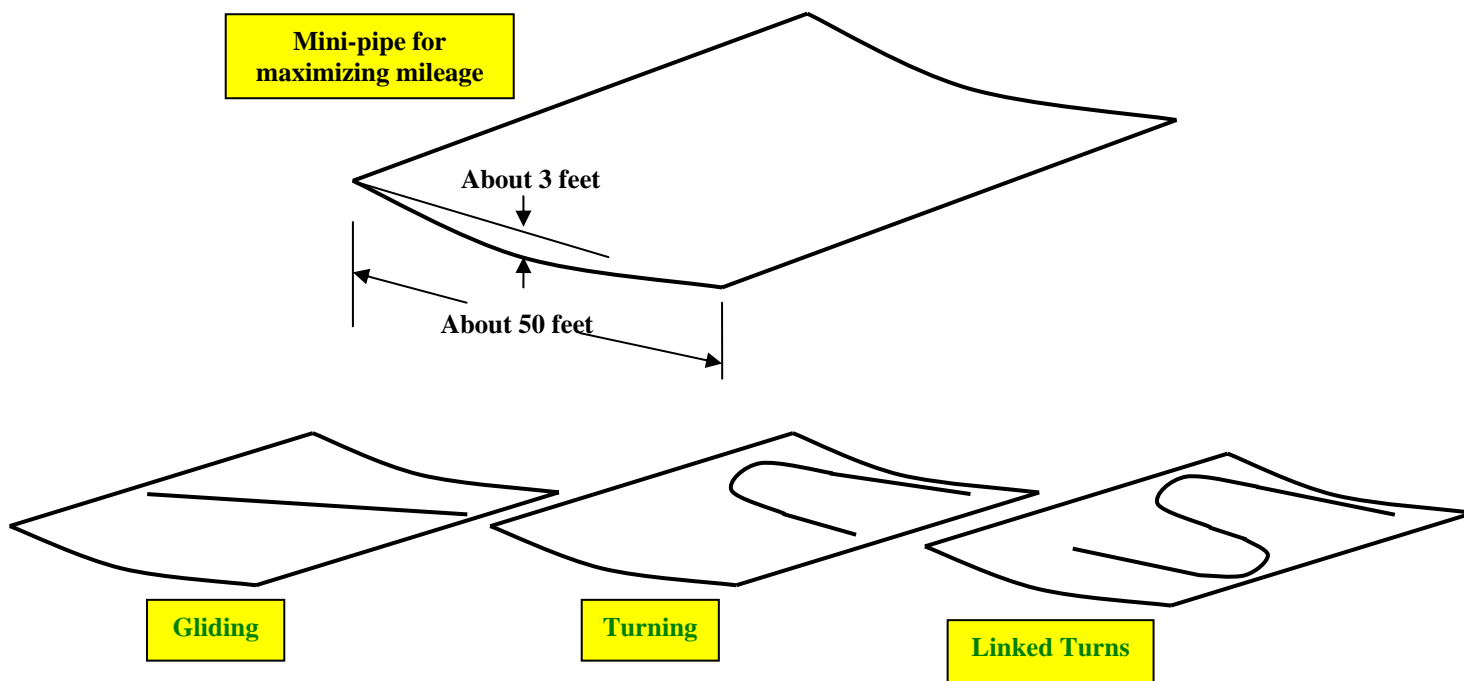


Figure 7 Mini-pipe Terrain Feature for Maximizing Mileage

- Value of Indoor and Flat Terrain

The value of having a designated indoor and outdoor meeting area is there is a location where some of the learning can take place without having to first slide on the snow while trying to accomplish some new movements. A recent article in *The Professional Skier* (Winter 2008), “*Boot and Flat Work – Do They Really Matter?*” by Bill Claire presents a pretty compelling line of reasoning and data of the value of boots only flatwork and flat terrain drills with skis prior to on snow gliding practice. The author showed an accelerated learning curve when an average of 20 minutes or so was taken from the on snow class time to experiment with some of the fundamental skill drills in a very un-intimidating environment. It is conjectured that for senior students this sort of approach would be enhanced if it could be done in a familiar area free from traffic and other distractions.

- Recruiting Senior Groups

The process of recruiting Senior students is potentially facilitated due to the fact that this demographic tends to form support groups as they approach retirement. These groups are quite well organized and usually open to opportunities for activities that interest the members. A visit to most Senior Centers in metropolitan areas can provide a resource for identifying these groups and the people who are most active within that group. Contacting such a group can lead to visits and presentations on what an area and its school can provide in the way of special programs for their interested members. In addition, most metropolitan areas have groups of skiers who band together and take a bus to one of the local areas on mid-week days when the crowds are reduced. Contacting the bus organizers can also lead to recruiting possibilities. Lastly ads in local newspapers represent a potential resource if there is a well organized and well developed program to offer. Once started, these programs tend to become self sustaining through word of mouth contacts and communication. The key enabler in any recruiting effort will be the ability to clearly demonstrate a creditable, well organized program that is available for their participation and will truly cater to their needs and goals.





### 3.0 Tailoring the Learning Process

(Use of Mountain Playground – Instructor Behavior – Teaching Model)

From the perspective of good teaching practices there is nothing new or significantly different when working with senior groups. The major consideration, however, is in how these practices are applied. There are three basic principles one must keep in mind to be successful when working with this demographic. These are:

- Use low impact drills and exercises that encourage stacking of the body over the feet to reduce the amount of muscular stress required to maintain balance and accomplish the goals.
- Encourage continuous fluid movements throughout the performance of all drills, exercises or runs.
- Pace the class so the lesson will be an enjoyable social experience while providing real value added changes by the end of the lesson without taxing the stamina and endurance of the clients.

#### 3.1 Beginners

There are a number of guidelines to keep in mind for entry level Senior students. A maximum amount of the lesson should be spent gliding with a very small percentage of the time devoted to walking, skating or climbing up the hill. This will require their first experience on skis be conducted in specially prepared areas on the hill, on magic carpets or indoors. Quite a bit of productive progress can be made indoors especially in terms of equipment familiarization, stance balancing, walking and learning to maneuver on the flat. Some resorts have carpeted areas where they can experience gliding for the first time.

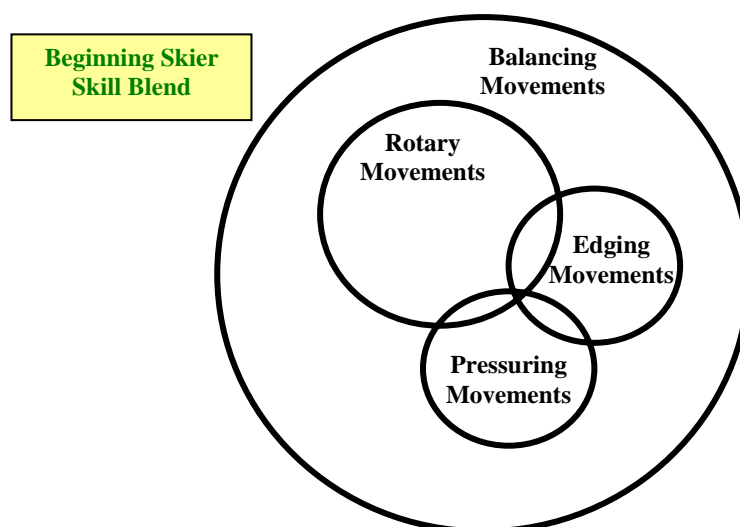


Figure 8 Beginning Skier Skill Blend

Blending of the basic skiing skills will be a bit crude at this entry level stage of the learning process. Figure 8 (above) depicts the blending of the skills (shown by the amount of overlap of the 3 inner circles) and the relative importance of each. Familiarity and mastery

of these skills enables the student to progress through being able to integrate them while gliding down the hill. The importance of each of these skills in the learning process will affect the rate at which these students will progress.

At this level, balancing movements play a significant role in the amount of energy required to accomplish the drills and exercises. Therefore, mastering this skill is paramount to continued progress. The more rapidly the student masters the ability to balance on the moving skis the more rapidly they can concentrate on mastering the other skills. At this stage, they should be able to balance over both feet with the weight centered over the arch of the foot and the posture or stance on the skis should be “stacked” so the weight of the body is carried more by the skeleton rather than the muscles. This requires some moderate flexing of all the joints in the lower body and a relaxed athletic stance so the joints remain flexible and can respond to changes in the terrain.

As shown in the diagram, rotary movements play a somewhat lesser role and are primarily introduced to change direction and control speed. The movements learned through the various drills and exercises used at this stage should encourage rotary actions of the lower body through movements of the foot and leg. Upper body movements are not desirable at this stage since they tend to move the body out of alignment with the skeleton and require muscular effort to recover to a balanced stance.

Edging movements are not particularly emphasized at this stage and are really more of an outcome resulting from the rotary movements. The student should be encouraged to move both legs in the desired turning direction so the inside ski becomes less edged and the outside ski becomes more edged as a result of the rotary action. This change in edge relationship enables the student to turn with less effort and in a better balanced stance.

There has been some consideration of the use of poles at this stage of learning. Generally speaking for seniors, it is thought they should learn to carry and use the poles from the beginning. This is to avoid the exertion of having to move from one location to another by skating or walking. The poles should be used to provide motivation but should not ever be used to slow down. From the outset, the student should learn to decrease speed by turning uphill through paddle turning or steering the skis. (Note: Poles should be used to control oneself in the lift lines where the speed is very near zero.)

On the open slope, students should develop the understanding of the need to turn uphill to slow down or stop. This will be their first opportunity to equate control and comfort with speed and good balance through shaping of the turn. If accomplished early, students will make this a habitual part of their skiing experience and the learning process will be significantly accelerated leading to high levels of satisfaction and enthusiasm for the skiing experience.

### 3.2 Experienced

Experienced senior skiers have either reached a plateau in their development or wish to improve their skills for more enjoyment, to be able to ski with their friends and relatives, or ski more challenging conditions with less effort. Students at this level need to learn to better blend their pressuring and edging skills through more efficient movement patterns that help them avoid getting out of balance. Each time they lose their balance they must use muscular effort to recover and this will cause them to rapidly tire early in the day or during the lesson. The instructor must be very aware of this during the lesson and consciously look for these signs before fatigue starts affecting their performance.

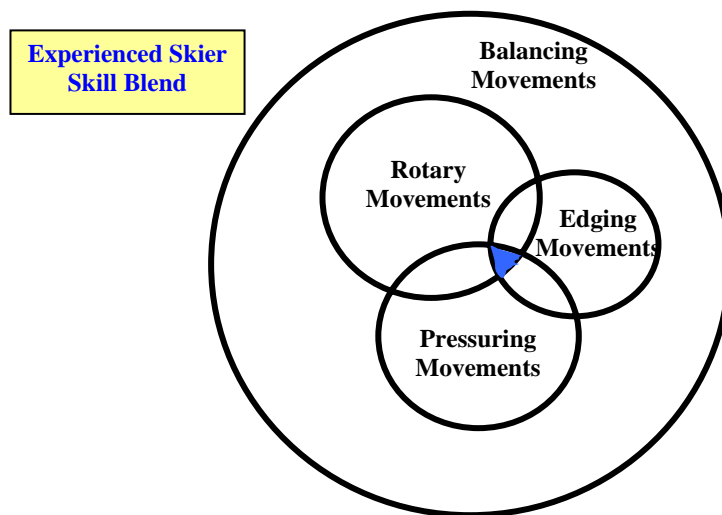


Figure 9 Experienced Skier Skill Blend

Blending of the basic skiing skills will be somewhat more integrated at this stage of the learning process. Figure 9 above depicts the blending of the skills (shown by the blue overlapped area of the 3 inner circles) and also the relative importance of each of these at this stage of learning. Familiarity and mastery of these skills enables the student to progress through being able to further integrate them while skiing various terrain and snow conditions. The importance of each of these skills in the learning process will affect the rate at which these students will progress.

The focus for experienced students should be on blending the skills to increase enjoyment and reduce fatigue as they ski. Here again, maintaining balance should become a central focus of the learning process. The more time these students can stay in balance the longer they can stay on the hill and the more rapidly they can learn. This being the case, a substantial amount of time should be spent polishing the ability to stand over the feet regardless of the skiing situation. Drills enabling the students to make the appropriate movements habitually will pay immense dividends as the lesson tactics and strategy is developed throughout the class time.

Exercises and drills used to polish rotary skills should be related to shaping turns and controlling speed in the various conditions that the class will encounter. Rotary movements

should be applied gradually throughout the entire turn and the students should be encouraged to ski round turns where they apply as much rotary effort at the beginning as at the end of the turns. Drills emphasizing turn shape are especially valuable at this stage.

Pressuring movements become more deliberate and should focus on maintaining roughly equal pressure on each foot with slightly more pressure on the outside foot in the arc of the turn. The student should be encouraged to gradually vary the pressure between inside and outside throughout the entire arc of the turn to avoid sudden movements and disturbing the balanced stance on the skis. It should be further emphasized to integrate this with the rotary movements required to shape the turn as needed for the terrain and snow conditions. At this stage in the learning process, the pole swing should be introduced so it complements the pressuring and rotary movements. In addition, the pole swing should help the body move toward the new turn direction and should complement entry into the new turn. Specific pole use drills are very useful at this stage if they help build complementary movements of the arm, wrist and body during the turn entry. Gradual introduction throughout the learning process is preferred over introducing a few drills and then expecting the student to make changes on their own.

Here again, the edging movements are more the outcome of these other movements, but skidding and slipping exercises can aid in developing an awareness of the subtle lower leg movements which can aid in shaping the turns and controlling the amount of skidding. The students should be able to accomplish slipping movements at any time and in any drill or terrain. A key consideration here is making sure they line up their parka zipper with the direction of travel down the hill and maintain a nearly equal distribution of pressure on both skis with slightly more on the downhill ski. The goal is to move toward a skidded/ carved (or “scarved”) turns. These turns allow them to control their speed through shaping of the turns rather than skidding to scrub off speed at turn initiation.

### 3.3 Advanced (groomed terrain)

Many experienced Senior skiers wish to improve their skills to be able to ski with their friends and relatives or to ski more demanding conditions. These students will need to spend some time perfecting the blending of skills necessary for these more diverse and challenging conditions. Students at this level will need to effectively and efficiently blend all of the basic skills through highly efficient movement patterns that will help them avoid getting out of balance in this more challenging environment. This desired outcome can be best experienced and perfected on groomed terrain.

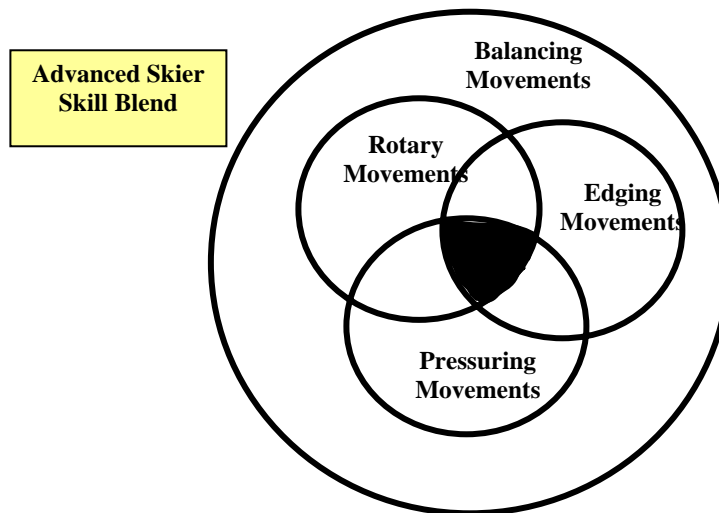


Figure 10 Advanced Skier Skill Blend

Blending of the basic skiing skills will be much more highly integrated at this stage of the learning process. Figure 10, above, depicts the blending of the skills (shown by the large black overlapped area of the 3 inner circles). It might also be noted the relative importance of each of these skills is equal at this stage of learning. Groomed conditions are very conducive to acquiring an appropriate blending of the skills through the use of drills that build on the strengths exhibited by the students. Of primary concern to these senior students is speed and direction control. Introductory skill development drills should be initially practiced on terrain comfortable for these students and then the same drills can be used on more challenging terrain to reveal weaker blending that is shown during practice. Habitual changes are developed in conditions just on the edge of the students' comfort zone.

In addition to achieving an effective and efficient blending of the basic skiing skills, the instructor should seek to perfect the ability to control direction and speed through shaping of the turns. This can be best accomplished by the senior skier through scarved (skidded/carved) turns that place much less stress on the joints and muscles. Scarved turns allow the student to more easily "go with the flow" of the intended turn while minimizing the fatigue and stress of trying to hold a precise carved line.

Once the students demonstrate an appropriate blending of skills on groomed challenging terrain they will be ready to experiment in the more diverse conditions on the mountain. In this portion of the mountain playground, there are many more alternatives for the instructor but the one of most importance to the class is to teach appropriate tactics for handling the conditions of the day.

### 3.4 Adventure (un-groomed terrain and challenging conditions)

Many senior skiers long to be able to ski conditions they once found exciting and challenging. More than likely their lack of good tactics and skills were off-set by younger

bodies and fewer inhibitions. A return to these conditions requires a more complete blending of skills so they can enjoy this environment with less strength, more finesse and more confidence. The key for success in these conditions is a good understanding of the appropriate tactics to be used. Challenging conditions include ice, steeps, bumps and un-groomed snow. For students who possess the appropriate blending of skills and who wish to return to those conditions, the instructor must be able to clearly school them in appropriate tactics that will enable them to be successful.

Terrain and condition selection is paramount for this group of senior students. Their initial attempts to experiment with these tactics must be in conditions relatively comfortable for them. In these conditions, they must also be willing to occasionally risk getting out of balance during practice without causing undue stress or recovery actions. The instructor in this situation must be very much aware of signs of impending fatigue and be willing to leave the area to return at a later time when the student has sufficiently progressed. The key here is to remain flexible and vary the lesson plan accordingly.

#### **4.0 Skiing Tasks**

When reviewing this section, it is important to understand the tasks and drills outlined serve several purposes. The first is to provide a framework for a teaching progression emphasizing low impact, continuous movement exercises which promote accelerated learning while recognizing the unique affective and physical attributes of the senior student population. These tasks should also be regarded by the participants as an opportunity to incorporate some of these efficient movements into their own personal skill pool which will enhance their enjoyment of skiing in all terrain and snow conditions. Finally, these tasks constitute a clearly defined basis for performance evaluation. It should be emphasized the evaluation is based on the demonstrated blending of skills shown during the performance of all the tasks not on the performance of any one task. Hence, training should concentrate on using the tasks to improve the overall skill blending in all terrain and snow conditions.

Participants are required to have previously attained at least Level 1 Alpine Certification and the skiing performance expectations for the Senior Specialist 1 are within the Certification Level I performance standards. The Senior Specialist 1 expectations explore skill blends within those standards that are particularly appropriate for the senior skier.

The skiing performance expectations are summarized below for easy access by the participant. The Senior Specialist 1 and Foundations Feedback sheets can be found in the Appendix. These sheets reflect the specific performance expectations on which participants are being evaluated. The ability to provide an accurate performance visual is an important teaching tool. Participants should be familiar with the expectations in the feedback sheet prior to their participation. Discussions regarding senior specific skill blending will be focused on these expectations as well.

This section contains a description of each task, the purpose for using this with senior students and a description of the skill emphasis and skill blend being developed.

- Summary of Skiing Expectations

Senior Specialist 1 instructors must be able to ski all green and groomed blue terrain demonstrating consistent balance and control of speed through turn shape. Demonstrations must display an “understandable picture” of the technical elements of Beginner/Novice zone skiing. The turn dynamics are limited by the speeds and terrain appropriate for Beginner/Novice zone skiing and tasks.

The Senior Specialist instructor is able to...

- 1. General Characteristics**

- a. Consistently link turns with sustained rhythm
- b. Maintain consistent speed by controlling the shape of a turn
- c. Maintain a balanced stance with skeletal (stacked) alignment as needed throughout a series of turns to be able to positively affect any of the skills at any time
- d. Ski a variety of turn sizes within a series of turns while maintaining speed control
- e. Low impact through continuous movements (flexion/extension) and lower edge angles

- 2. Balance** (Level I Beginner/Novice zone terrain, speed, and dynamics)

- a. Maintain lateral and fore/aft balance through common tasks and demonstrations
- b. Demonstrate the *visual cues to effective skiing (see below)* relative to balance in demonstrations and tasks common to Beginner/Novice zone skiers

- 3. Rotary Movements** (Level I Beginner/Novice zone terrain, speed, and dynamics)

- a. Demonstrate a gradual steering of the skis to assist turn shaping
- b. Demonstrate the *visual cues to effective skiing (see below)* relative to terrain, speed and dynamics

- 4. Edge Control Movements** (Level I Beginner/Novice zone terrain, speed, and dynamics)

- a. Demonstrate a gradual increasing and decreasing of edge angle throughout a series of turns
- b. Demonstrate use of ski design in Beginner/Novice zone level skiing tasks
- c. Demonstrate the *visual cues to effective skiing (see below)* relative to edge control movements in demonstrations and tasks common to Beginner/Novice zone skiers

**5. Pressure Control Movements** (Level I Beginner/Novice zone terrain, speed, and dynamics)

- a. Maintain ski snow contact with both skis
- b. Demonstrate a shift of pressure to the outside ski throughout a series of turns
- c. Demonstrate the *visual cues to effective skiing (see below)* relative to pressure control movements in demonstrations and tasks common to Beginner/Novice zone skiers

**6. Specific Movement Patterns and Skill Usages**

- a. Demonstrates the ability to utilize forward/diagonal movements to optimize pressure and edge control throughout a series of turns
- b. Distributes weight effectively from foot to foot through flexion and extension movements that keep the skier stacked over the feet and/or balancing on the outside ski
- c. Uses rotary movements that originate in the feet and legs and the legs turn more than the upper body
- d. Uses movements that are gradual, progressive and continuous throughout the turn
- e. Demonstrates the ability to incorporate forward/diagonal/lateral movements to progressively assist in edge change and edge engagement
- f. Demonstrates a gradual increasing and decreasing of edge angel throughout a series of turns through edging movements that are smooth and progressive, originate in the ankles and lower legs and are enhanced through the movements of the hips and upper body
- g. Demonstrates the ability to turn both skis simultaneously and is able to develop different turn shapes for speed control
- h. Maintains ski snow contact with both skis through stacked skeletal alignment over the feet





## Visual Cues to Efficient Skiing

### Balancing Movements and Stance

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**Skier is in balance when they can affect any of the skills throughout each turn**

- Entire body is involved in balancing
- Flexion and Extension originates in the ankles and is supported by knees, hips and spine
- The inside leg shortens as the outside leg lengthens and the skis bend from the middle
- The upper body remains more vertical than the lower body and the shoulders stay level to the horizon or they level out through the turn
- The inside hand, shoulder and hip lead the turn, resulting in a countered relationship
- Hands are in front of the body to aid balance
- Vision is directed forward and looking in the intended direction of travel
- Pole swings smoothly in the direction of travel

### Rotary Movements

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**Skier turns part of the body and combines with other skills to change direction efficiently**

- Turning movements originate in the feet and legs and they turn more than the upper body
- Legs turn underneath a strong/stable torso to guide skis through the turn
- Both skis turn together throughout parallel turn, with femurs turning in the hip sockets
- Skis are tipped and turned appropriately to create a smooth, C-shaped arc
- Rotary movements are matched in timing and intensity by tipping the skis
- Rotary movements are progressive unless needed to recover balance

### Pressure Control Movements

---

**Skier manages pressure providing the element of touch which promotes a smooth ride**

- Joints work together to apply and release pressure effectively to flow evenly and smoothly over the terrain
- Skis bend progressively through the turn, with entire ski length engaged
- Continues to move forward along ski edges throughout the turn
- Body continues to move forward with the skis throughout the turn
- Flexion and extension of legs changes in response to the terrain and pitch of the slope
- Pressure adjustments are made throughout the turn along the ski and from foot to foot
- The pole touch or pole plant complements the turn
- The upper body remains quiet and disciplined

### Edge Control Movements

---

**Skier uses edging to direct the skis to control turn radius, shape and speed**

- Edges are released and re-engaged in one smooth movement
- Center of mass moves into direction of the new turn to change edges
- Both skis tip the same amount early in the turn
- Ankles, knees, and hips roll forward and laterally to move into the new turn
- The shins make forward and lateral contact with the boot cuffs
- Tension of the inside leg helps maintain alignment

Skill usage in performing each of the skiing tasks is noted. While the desire is to achieve a uniform blending of the basic skills in every turn exercise or drill, learning is accelerated if one of these takes precedent and is emphasized during practice. These skills are shown in **red bolded** text. For each task some of the primary movement pattern focuses for seniors are also shown. While the following tasks are one possible progression for the beginning senior skier up to open parallel, these tasks are also useful drills for every level of senior skier working on developing efficient skiing movements. In utilizing these tasks either as a progression or as individual drills, the instructor should keep in mind both the elements for efficient skiing in general and some of the particular focuses for the senior student. Utilization of a stacked skeletal alignment to reduce muscle fatigue; continuous flexing and extending movements to reduce impact, balancing movements which include maintaining a strong inside half (the inside half of the body is raised and ahead of the outside half), and rotary movements where the turning of the leg is initiated with the femur rotating within the hip socket, which necessarily includes the feet, shin and whole leg are all examples of some of the movements highlighted by these tasks.

- **Straight Run**

*Description of Task:* Skis maintain a parallel relationship, gliding flat on the snow with equal weighting on each ski. Track consists of two parallel lines with roughly equal depth. Ankles, knees and hips vary flex as required by terrain variations.

*Purpose for Senior Students:* This may be the first experience gliding while in motion or a drill useful for balance and stance. Focusing on incorporating a tripod stance will help retain balance while in motion.

*Variations for Reinforcement Include:* Weighting from foot to foot, stepping from foot to foot and shuffling the feet while moving.

*Skill Blend Emphasis:* **Balance.** Skier maintains a consistent open stance width, cuff pressure on both boots and a tall skeletally aligned stance. A focus on proper balancing while in motion will enhance the ability to utilize all muscle groups of the legs, in lieu of reliance on the quadriceps, to minimize fatigue as well as a strategic skeletal alignment or stacking will maximize strength in length.

- **Straight Run with Paddle Turn to Stop**

*Description of Task:* Demonstrate a balanced stance with the legs slightly flexed, hands and arms in front of the body while in a straight run. In a series of small steps across the fall line, starting with the inside leg, transfer the weight from one ski to the other in a scissoring fashion to a stop.

*Purpose for Senior Students:* Introducing or focusing on speed control through turning across the fall line by active steering of the inside leg and proper flexion and extension to maintain balance. Focusing on movements that change direction across the fall line leads to the ability to control speed with relatively little effort, using the terrain and using turn shape while staying in a neutral comfort zone.

*Variations for Reinforcement Include:* Practicing from various angles to the fall line from a traverse to a straight run. Encourage flexion/extension of the ankles, knees and hips with each step as well as active inside edge engagement from a balanced platform to maintain the ability to balance along the length of the ski and move in the intended direction.

*Skill Blend Emphasis:* **Balance**, Rotary, Edging. Skier uses flexion and extension in the ankle, knee, hip and spine to maintain balance while moving forward and laterally and demonstrating active steering of the feet and legs to redirect the skis while stepping from the platform of a slightly edged ski. Low impact and continuous movements can assist in managing fatigue by enhancing reliance on the whole leg turning in the hip socket in lieu of reliance of the quadricep muscle and with skeletal alignment to maximize strength in length to balance against the outside ski.

- Gliding Wedge

*Description of Task:* Demonstrate a balanced stance with the legs slightly flexed, hands and arms in front of the body to assist in stance and balancing while steering the skis into a slight wedge relationship. Balance is equally weighted to both skis with a variation from gliding on a flat ski to a progression of edge engagement with significant skidding.

*Purpose for Senior Students:* Introduction to or reinforcement of gliding on a flat ski in a narrow wedge to a wider wedge with subsequent progressive edge engagement. The focus is on balancing over gliding skis in a narrow wedge. Edge engagement is managed primarily through varying the size of the wedge.

*Variations for Reinforcement Include:* Varying the width of the wedge with progressive edging to blend speed variables and a focus on maintaining balance between the skis with the center of mass keeping pace with forward movement.

*Skill Blend Emphasis:* **Balance**, Rotary. Skier maintains a tall stance with pressure to the cuff of both boots, hips centered between the feet and demonstrates foot and leg steering variations between a straight run and wedge relationship. Lower edge angles may result in progressive skidding but can promote less muscle fatigue of the lower extremities.

- Wedge Turns

*Description of Task:* Demonstrate a balanced stance in a slow to moderate speed, changing direction with slight continuous rotation of both legs. The entire ski maintains contact with the snow and the wedge attitude is maintained. The legs turn more than the upper body, the inside ski will lead by the fall line resulting in a balanced, stable upper body facing slightly downhill at the end of the turn.

*Purpose for Senior Students:* This is the first attempt, or a reinforcement of, changing direction while gliding through gradual continuous rotary movements of the legs and feet. Such movements of the legs capitalize on the design of the ski and enable the student to execute round shaped turns with minimum effort. Turning the legs requires turning the leg within the hip socket, thus by default, the entire leg assists with turning: feet, shin, thigh.

*Variations for Reinforcement Include:* Balanced stable upper body faces slightly downhill by the finishing phase of each turn resulting in the legs and feet turning more than the

upper body. The inside ski lead change takes place before the fall line with the inside leg actively steering in the direction of the intended turn to aid in shaping. The turn is initiated with a forward and lateral movement of the legs with subsequent continuous flexing of the ankles, knees, hips and spine as the turn is developed. Speed is controlled by the shape of the turn not the size of the wedge.

*Skill Blend Emphasis:* Balance, **Rotary**, Edging. A slight forward and lateral extension at turn initiation accompanied by active steering to guide both skis through round turns with the feet turning slightly more than the upper body develops a slightly countered relationship. This low impact and continuous movement pattern conserves energy and maximizes the power of the turning legs to control the shape and speed of the turn. This is also a strategic use of ski design. The focus is on managing the arc of the turn to manage turn shape.

- **Traverse**

*Description of Task:* Traverse across the hill with both skis tipped onto their uphill edges. Given slope angles, slightly more weight will be on the downhill ski. Each ski should track across the hill and not slip or skid as the result of a loss of edge angle. Position is upright with a tripod stance with shin contact to both boot cuffs. Ankle, knee, hip and spine joints are flexed evenly with the inside half of the body raised and slightly ahead.

*Purpose for Senior Students:* This is one of the key movement patterns for all advanced skill blending movements. The traverse can be used between linked turns as well to enable the skier to move to more desirable terrain or to slow the pacing to allow rest periods.

*Variations for Reinforcement Include:* Vary terrain and pitch to reinforce the forward and lateral movements to maintain balance and control the edge angle to slip, skid and carve.

*Skill Blend Emphasis:* **Balance**, Edging. A tall tripod stance with shin contact to both boots cuffs, slightly more weight on the downhill ski with sufficient counter appropriate to the pitch of the terrain. This aligned stance allows skeletal stacking to maintain a position of power and strength and minimizes the need for a reliance on muscular strength.

- **Diagonal Sideslip**

*Description of Task:* Starting from a tall, balanced, strong inside half position with both skis pointed across the hill, tip the legs to release the edges and start a skid at an angle to the fall line. Weight should be roughly equal on both skis with slightly more on the downhill ski as appropriate for the given pitch and with the center of mass moving in the intended direction of travel.

*Purpose for Senior Students:* The ability to control the direction of the skis at an angle to the fall line by tipping the feet and legs while maintaining balance. Developing slipping and skidding skills in a safe environment under low speeds is an essential element to introduce or reinforce the subsequent controlling or shaping phase of the turns. A balanced, skeletally aligned position may allow for more inclination and less counter while managing a slipping or skidding movement.



*Variations for Reinforcement Include:* Explore starting from a standstill or while in a traverse. Experiment with varying the angle of the slip relative to the fall line. Explore the stance required to control the slip or skid in the desired direction. Explore the use of inclination and angulation to determine edge angle.

*Skill Blend Emphasis:* **Balance, Edging.** Maintain an open, skeletally aligned stance with slightly more weight on the downhill ski accompanied by the ability to tip both legs to vary the edge angle and control the diagonal slip of both skis. Skidding on a flatter ski at lower edge angles allows the senior skier to minimize fatigue buildup by relying more on skeletal alignment and less on muscular efforts.

- **Falling Leaf**

*Description of Task:* From a balanced, strong inside half parallel stance with slightly more weight to the downhill ski initiate linked controlled sideslips alternating in forward and backward directions by slightly moving weight fore and aft along the length of the skis. Direction is controlled by a combination of edge angle and weight distribution along the ski. The center of mass should align and maintain pace with the direction of travel moving forward and backward to maintain balanced stance.

*Purpose for Senior Students:* This drill provides the ability for the student to learn how to control the ski direction and speed through the blending of balancing, pressuring and edging skills in non-threatening terrain. A progressive extension movement at the initiation allows the skis to easily move forward and laterally.

*Variations for Reinforcement Include:* Play with the wide range of fore/aft movements and how ski design affects outcomes. *Focus on movement that can blend into turn initiation skills.*

*Skill Blend Emphasis:* **Balance, Edging, Pressuring.** While maintaining an open skeletally aligned stance the skier moves forward and diagonally in the intended direction of travel to release the edges and causing the skis to slip diagonally. Continuous progressive flexing and extending movements facilitate skidding and cause lower impact and less muscle fatigue.

- **Uphill Christy**

*Description of Task:* From a traverse at an angle to the hill in an upright, balanced, strong inside half stance initiate a skidded, parallel, turn up the hill to a stop by steering both feet, and legs in the direction of the intended turn. Progressively guide the arc of the turn by continuous steering of the leg with progressive flexion of the ankles, knees, hips and spine as the turn develops. Maintain body alignment slightly open to the turn as the legs turn more than the upper body and as the pressure on the outside ski increases.

*Purpose for Senior Students:* This drill reinforces the ability to turn both skis at the same time in the direction of the new turn. Utilizing this task, on moderate terrain, with a slight convex face will facilitate the skidding and rotary movements to more easily control the arc of the turn.

*Variations for Reinforcement Include:* Start with a shallow traverse and progress to steeper approach from the fall line to explore rate, timing and intensity at which turns can be steered and pressure managed.

*Skill Blend Emphasis:* **Rotary**, Edging, Pressuring. Skier maintains a tall stacked stance and steers both feet and legs simultaneously to shape the turn while maintaining consistent open stance width and allowing a countered relationship between the legs and upper body to develop as the legs turn in the hip socket more than the upper body. This low impact, continuous movement explores strategies to minimizing fatigue build up and stress to joints.

- **Linked Wedge Christies**

*Description of Task:* As the previous turn is completed in a flexed, balanced and parallel stance, a new turn is initiated with an extension by steering both skis towards the fall line in a wedge relationship. The skis become parallel through more active steering of the inside leg resulting in rounded turn shape with no traverse. The inside ski and the inside half of the body lead before the fall line with the feet and legs aiding in turn shape and managing the arc of the turn.

*Purpose for Senior Students:* This task can be utilized as a platform for continued progress or for reinforcement in blending of all skills. Linked wedge christie turns can allow further exploration of the mountain with reasonable control and comfort.

*Variations for Reinforcement Include:* Experiment with turn shape, turn size and speed. The matching of the skis may be demonstrated in a variety of places in the turn, including the beginning, middle or finish. Pole touch is optional, but if used must complement the movement of the body in the direction of the new turn. Actively steer both ski tips into the new turn. Flexion of the ankles, knees, hips and spine is progressive through the turn with subsequent progressive extension of the joints at turn initiation. Shaping of the turns is enhanced through gradual continuous rotary movements of the feet and legs.

*Skill Blend Emphasis:* **Rotary**, Edging, Pressuring, Balance. A slight forward and diagonal extension at the initiation of the turn allows for flattening of the skis and facilitates steering movements which originate in the feet and legs. As the turn develops, active steering of the inside legs results in a parallel open skidded finish. Shaping the turn with skidding movements allows for lower impact while continually moving in the direction of the intended turn. A strong, stacked and skeletally aligned body position will allow for greater strength from the skeleton and can assist in minimizing muscle fatigue. This can assist with managing endurance and subsequently allow greater exploration of the mountain environment.

- **Traverse - Advanced**

*Description of Task:* Traverse across the hill with both skis tipped onto their uphill edges. Stance should be upright and balanced over the whole foot with the ankle, knees, hip and spine slightly flexed. A strong inside half is exhibited with the inside half of the body raised and ahead of the outside half. Demonstrate the ability to: lift the uphill ski while

continuing the original track of the downhill ski; lift the downhill ski while continuing the original track of the uphill ski; and alternate between the uphill and downhill ski while continuing the original track.

*Purpose for Senior Students:* This task explores the ability to move from ski to ski while maintaining balance and edge engagement. The skier demonstrates appropriate flexion of ankles, knees, hip and spine to maintain alignment and edge engagement.

*Variations for Reinforcement Include:* Addition of garlands through task exploration. Lifting of only the tail or tip of the ski while in the traverse to explore balancing while in motion. Exploration of outcomes by allowing the ski to skid while in the parallel traverse.

*Skill Blend Emphasis:* **Balance**, Edging, Pressuring. Skier maintains a tall, skeletally stacked alignment with appropriate ankle flex and shin pressure to the cuff of the boot while in motion. A strong inside half will promote strength and alignment to minimize an overly countered position and correspondingly reducing fatigue buildup.

- **Linked Pivot Turns**

*Description of Task:* From a sideslip down the hill in a flexed, balanced, strong inside half stance, extend forward and laterally in the direction of travel and simultaneously steer both skis under the torso to allow shaping of the turn with progressive skidding movements through the shaping phase of the turn until the skis are 180 degrees from the original direction of travel. The inside ski is ahead and the inside half of the body is raised and ahead by the fall line. Transfer weight to the new uphill ski and repeat.

*Purpose for Senior Students:* Exploration of changing direction relatively quickly while remaining in balance and controlling speed buildup from turn to turn. Managing flexion and extension movements of the ankles, knees, hip and spine while actively steering the feet and legs. Turning the legs requires turning the leg within the hip socket thus by default the entire leg assists with turning: feet, shin, thigh.

*Variations for Reinforcement Include:* Explore moderate to steeper blue terrain preferably where the slope is flat rather than concave or convex. Explore the range of flexion and extension of the ankles, knees, hips and spine while guiding both skis by turning (actively steering) both legs through rotation of the femur in the hip joint. Explore more pivoting (Pivot Slips) and more shaping (Pivot Turns). Explore movements shifting pressure from the downhill ski to the uphill ski at turn initiation.

*Skill Blend Emphasis:* **Rotary**, Balance, Edging, **Pressuring**. Skier simultaneously steers both legs under a quiet upper body while transferring weight and balance over the new outside (downhill) ski into a skidded finish. A tall, skeletally aligned stance with an awareness of a strong inside half at turn transition will allow for low impact and continuous movements with reduced muscle fatigue. A progressive drifting and skidding exploration to manage turn shape in lieu of a quick pivot action to turn feet promotes inherent strength, enhances balance and minimizes fatigue build up.

- **Linked Open Parallel**

*Description of Task:* Balanced, rhythmical turns with no traverse. The pole swing timing complements movements into the turn, edge change and weight transfer. The inside half of the body is raised and ahead of the outside half by the fall line with the skis remaining in a parallel relationship throughout each turn.

*Purpose for Senior Students:* Exploration of a blending of the skills especially on easier groomed terrain, maintaining a balanced stance throughout each turn with rounded turn shapes. Upper body alignment should be slightly open to the hill, moving in the direction of travel, with the legs turning more than the upper body as the turn progresses. Initiation is a forward and diagonal extension with shins maintaining contact with both boot cuffs as weight moves progressively to the new outside ski. As the turn develops the ankles, knees, hips and spine flex and the femur continues to rotate in the hip joint to guide the skis and shape the turn.

*Variations for Reinforcement Include:* Refinement of the blending of the skills by varying turn radius, seeking to increase speed on flatter terrain and controlling speed on steeper terrain through shaping of the turns. Prudent use of terrain features such as small bumps and rolls can aid in accomplishing the desired blending. Reinforcement of maintaining a balanced stance while in motion.

*Skill Blend Emphasis:* Balance, Edging, Rotary, and Pressuring: Skier maintains a stacked skeletal alignment when necessary and maintains an open consistent stance width. Turn initiation is with a forward and diagonal movement of the feet and legs while maintaining stacked skeletal alignment (hips over feet and perpendicular to the slope), accompanied by continuous progressive edging and rotary skill blends to manage the turn shape based on slope and pitch. The awareness of continuous progressive movements, maintaining an aligned stance, maintaining balancing while in motion and purposeful terrain choice will allow the senior skier to manage and maintain the arc of each turn and subsequently turn shape and consequently will be able to enjoy and explore the mountain environment.







**Mt. Hood Meadows, May 2009**

## **5.0 Workbook**

This section contains workbook material required for successful completion of the Senior Specialist 1 program. To be successful, participants must satisfactorily complete the essay questions in section 5.1 and write a lesson plan for one of the scenarios in section 5.2. The completed responses will be reviewed and discussed during the indoor sessions so these completed pages should be brought to each session. Responses can be made on copies of these pages if preferred by the participant. In addition, there is a suggested format for keeping Teaching Portfolio information. Participants may find that use of the Teaching Portfolio is a valuable tool for their future development.

### **5.1 Essay Questions for the Specialist 1**

Below are several questions covering the material you studied in this Senior Specialist 1 Manual. The questions follow the order of the material in this manual. When you answer the questions, use your own words and hit the high points. This is intended to help you retain the material you have just read.

1. In order to teach effectively, the instructor needs to establish a good learning environment and effective teaching cycle. Explain the basics of each of these important principles.

**Learning Environment**\_\_\_\_\_

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**Teaching Cycle**\_\_\_\_\_

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2. Besides age, senior clients have a number of things in common which include:

- A) being very goal oriented;
- B) having many years of life experiences to draw from;
- C) are experts at something which will influence how they observe and learn; and
- D) are attracted to skiing more for the social environment rather than the challenges of competition or difficult conditions.

Discuss how each characteristic influences teaching/instructing of the Senior client.

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3. Briefly explain the elements of the senior CAP model as it relates to how you would use your knowledge of each of these elements in planning an effective ski lesson for a senior class. Stress the parts you think are the most important and explain how you'd use them.

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4. What things are important to understand regarding appropriate equipment for senior skiers? Include a discussion of skis, boots, poles and clothing.

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5. Programs for senior skiers are being developed at many ski areas. What are some of the things that will help attract and retain seniors in these new and developing programs?

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6. List and discuss the three basic principals to be aware of when preparing to teach the senior skier. Discuss them, and explain what each means to you in terms of drills and exercises you might use during the class.

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7. Discuss the skill blend of Balance, Rotary, Edging and Pressuring movements as they relate to teaching the:

A) beginning senior skier in ability Levels 1 and 2; and

B) the lower intermediate Senior skier in ability Levels 3 and 4.

**Beginners**

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**Experienced**

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## 5.2 Lesson Planning Scenarios

- **Scenario Descriptions**

Below are 6 scenarios of possible senior skier groups or individuals. You should choose one of the 6 to develop a complete lesson plan using the **Lesson Planning Worksheet** (Figure 11). The number of sessions, ages and skiing abilities of each group is given. If you do a really thorough job, you can use these responses as references in the future.

Read the scenario carefully and first write down the primary consideration you will have to keep in mind during the lesson you are developing (i.e., what you should be very conscious of as you work with this group). Clues to this are contained in each description. The lesson plan should include your first day introduction and assessment for the class, goals for the members in the class and the ones they have for themselves, progressions to reach the goals and back-up methods if the first plans are not working, plans for the terrain you will plan to use for the lessons. Your outline will, of course, be a living thing that needs to be adjusted depending on how any daily lesson progresses. Consider the weather and outside conditions, write down your assumptions and explain how changes in these could affect your written plan.

### **Scenario #1**

You have a class of 5 housewives and professional women that range in age from 45 to 60. They are all entry-level beginners. Some are on rental equipment, others on their own equipment. A few have rear entry boots. As they approach the teaching area, you observe all are reasonably fit and have a variety of balancing skills as they walk in their ski boots. Create lesson plans assuming they are coming up to the mountain for a six-week session.

### **Scenario #2**

You have a private lesson with a 63-year-old man who took beginning lessons last season. He has his own equipment and is very enthusiastic about improving his skiing skills. His goal is to ski blue runs comfortably and try to ski some black runs with good technique. He is in average physical condition, but a little overweight and tells you when he falls he has a hard time getting up again. He shares if he is happy with this lesson, he would like, at least, 3 more private lessons with you.

### **Scenario #3**

You have a class of 6 adults that range in age from about 35 to 65 who have come to you to learn how to ski bumps. Two of the 6 are women and they have been skiing for at least 10 years. Their equipment is reasonably up to date and all are on shaped skis of recent vintage. Your observation of their skills on groomed intermediate moderately steep terrain

is that all are capable of making linked skidded medium radius turns. Draft a lesson plan assuming these folks have bought a 3 lesson package.

#### **Scenario #4**

You have a beginning private with a 55 year old man who wants to learn to ski so he can join his family and grandchildren when they go on ski trips and for weekend skiing. He is in very poor physical shape and has not engaged in sports or exercised for several years and he is also a smoker. He tells you he would like advice on equipment etc. He has signed up for 5 lessons.

#### **Scenario #5**

You have a class of 7 over 50s, which includes 4 men and 3 women. They have all skied for 5 or more years but are not comfortable with their speed. In other words, they really are not completing turns and want to feel good and look good on the hill. They can all ski blue runs, but with different abilities. Two of the women and one man are very slow, very cautious and use “zee” turns for control. The other women and the 3 other men ski very fast with little control. These people have signed up for a 5 lesson series and want to ski together.

#### **Scenario #6**

You have a class of 6 adults that range in age from about 48 to 65. They have no particular preferences for skiing goals, seem to be very compatible and really enjoy skiing and socializing with each other. Although most have them have been skiing for over 10 years, they still make skidded medium radius turns on intermediate terrain. Their equipment is quite good and all are on shaped skis. Some seem to prefer slower speed shorter turns and others enjoy higher speed cruising. Create a 6-lesson package for this “gang of six.”

- Lesson Plan Development Example

The following is an example **Lesson Planning Worksheet** to help you understand what the expected responses should include. Please use this as a guideline only. There are no wrong answers, only ones you understand.

<b>Guest Description</b> (age; cognitive, affective & physical attributes; special needs; etc)
You have a class of 4 men and women (two couples) who are aged 50 to 60, and are making skidded turns on blue terrain. Their skills are not equal. One man is definitely way back on his skis and one of the women is very tentative when the terrain gets steep. The other two are more capable but they all have stance problems at different levels. They own their own equipment, but ski size and boot type may not be appropriate. One of the men is still on straight skis. These people are good friends and want to ski together. They have signed up for 4 lessons.

### **Description of Guest Needs (key issues to remedy; their goals, your strategy & tactics)**

The key issue to be addressed is their inability to maintain balance over the whole foot controlling speed through shaping of the turns. Since the group is described as having varying skill levels, work on common problems at different levels for each one. Keep the drills interesting enough for all of the members of the group as skiing as a close-friends-group is primary to their enjoyment of the lessons. Also pay special attention to their personal equipment as boot problems could affect one's progress while straight skis could impact another.

### **Use of Mountain Playground (where to go, what to do & how to progress)**

Introduction: Since all these people know each other well, I need to get to know them, their interests, goals for these lessons, where they like to ski, what they find challenging in terms of terrain and snow conditions and finally let them know something about me that will make them comfortable and that I have empathy.

First Run or Two: Start with a warm up run or two to relax them and let them feel comfortable enough to show me how they really ski. I would use an average intermediate run and ski behind and with them so that I can be watching each observing the movements that they do well. I suspect, from the description in the scenario, that I would see some balance and stance deficiencies, less well rounded unfinished turns, but I would also expect to see some good skidded open parallel turns on the easier terrain. With this assumption, I would build on the positive movements by working on improvement of stance and balance and using steering to form rounded, complete turns.

Stance and Balance Drills on Green Terrain. I have had a lot of success with adults of this ability by starting on gentle Green slope with no poles so that they can concentrate on balancing over their feet. (I will carry the poles for them to minimize the distraction.) If the student only has his hands to worry about, he or she is much more willing to center with out the extra worry of poles. I usually suggest that the hands be held in good "ready" position with the elbows slightly ahead of the torso, forearms parallel to the ground and free enough to move to help retain balance when needed. I would introduce drills to aid in balancing over the whole foot, steering to round the turns to control speed and putting slightly more weight on the outside ski as turns are initiated and controlled.

An exercise that helps blend balancing and rotary skills is to traverse across the hill, extend in the direction of the new turn, let the skis seek the fall-line naturally and finish by shaping the turn with some lower leg steering. After a few runs on the green, it is off to an easy blue run where we will experiment with the same approach. This should be especially helpful for those who are not finishing their turns and are having trouble with speed control. By sending them on in groups of twos, I would have opportunity to give one-on-one help.

### **The Wrap-up ("closing the sale")**

As the hour or 2 hours winds to a close we would review what we have worked on and how they think it has affected their skiing. A conversation is especially useful at this stage of the lesson where they can describe what they learned during the lesson. Not only is this a good check for understanding, it also helps them retain what they have found important. I would encourage them to take some practice runs after class using the drills and skills that we practiced during the day.

### **Use of Mountain Playground (where to go, what to do & how to progress)**

Lesson 2. This lesson would begin with a welcome and questions about to help me understand how much of what we covered previously had been incorporated into their skiing. This will help me finalize my plan for this lesson. First Run again would be a warm up thinking about stance, balance and shaping the turns for speed control. If they were exhibited I could address any problems that they had brought up when we met before class. We would continue to work on larger radius turns on steeper terrain using the skills we are building. If the larger turns show the desired skill blending, we could work on varying our turn size on the steeper sections with some smaller radius turns. At this point we could start to refine our pole use to compliment the body movement into the turns so long as these drills do not cause a regression in their movement patterns. I would continue to log mileage by skiing consecutive runs while concentrating on refining the basic open parallel skidded turn on different terrain and snow conditions. As a reward and a challenge, I would get a student suggestion of a run they would like to try with their newly improved skills.

As before, class would end with a review of skills used and learned and would be held at the end of class along with suggested assignment(s) for when they free ski together.

## **Use of Mountain Playground (where to go, what to do & how to progress)**

**Lessons 3 and 4.** The content of these classes will depend on the progress made in lessons 1 and 2. It would use the group and individual feedback method used previously; use the class needs and suggestions, use my observations and capitalize on the terrain and snow conditions. For example, sometimes the upper slopes are really icy, but the green run is nice—in this case we could work on pressuring and balancing and perhaps do some 360's on a beginner hill or work on foot to foot skiing, or learning to skate. This always adds some fun and interest to a lesson, continues to develop skill blending and teaches movements that can add to controlling turns on the icy portions of the hill. It would be desirable to learn new movements on the easier terrain and test them on the more challenging terrain and conditions.

- Lesson Plan Development Worksheet

The next page contains a **Lesson Planning Worksheet** that might be helpful in responding to the forgoing written assignment. This template is offered to help you organize your thoughts and can be copied for use in providing your responses.

### 5.3 Teaching Portfolio Template

The following page (Page?) contains a **Lesson History Worksheet** template that might be useful in compiling a teaching portfolio. This template can be copied and put into a notebook. It is presented as guidance of the type of material that you might find useful in providing continuity for your classes throughout the season and over the years.



Mt. Bachelor, December 2009

## 11. Lesson Planning Worksheet

**Guest Description** (age; cognitive, affective & physical attributes; special needs; etc)

**Description of Guest Needs** (key issues to remedy; their goals, your strategy & tactics)

**Use of Mountain Playground** (where to go, what to do & how to progress)

**The Wrap-up** (“closing the sale”)



## 12. Lesson History Worksheet

<b><u>Class</u></b>		Date _____
Multi-week 1 2 3 4 5 6 7 8		Single Class _____
Ability Level _____		Ages _____
<small>(Level 1 thru 8)</small>		<small>(Mixed, Kids 4-12, Teen 13-19, Adult 19-50, Seniors 50+)</small>
<b><u>Lesson Notes</u></b>		
Conditions _____		
<small>(Terrain, Snow)</small>		
Student Notes: (Goals, expectations, needs, special notes)		
<small>(Name &amp; Notes for this day)</small>		
1. _____		
2. _____		
3. _____		
4. _____		
5. _____		
6. _____		
7. _____		
8. _____		
<b><u>Lesson Recap</u></b>		
<b><u>Notes for Next Class</u></b>		

<b><u>Class</u></b>		Date _____
Multi-week 1 2 3 4 5 6 7 8		Single Class _____
Ability Level _____		Ages _____
<small>(Level 1 thru 8)</small>		<small>(Mixed, Kids 4-12, Teen 13-19, Adult 19-50, Seniors 50+)</small>
<b><u>Lesson Notes</u></b>		
Conditions _____		
<small>(Terrain, Snow)</small>		
Student Notes: (Goals, expectations, needs, special notes)		
<small>(Name &amp; Notes for this day)</small>		
1. _____		
2. _____		
3. _____		
4. _____		
5. _____		
6. _____		
7. _____		
8. _____		
<b><u>Lesson Recap</u></b>		
<b><u>Notes for Next Class</u></b>		

## 6.0 References

### Aging Americans Ripe for Snow Sports

<http://www.chiff.com/a/ski-seniors.htm>

Aging Americans Ripe for Snow Sports.doc

“One of the great misnomers is that when you’re this age you can’t launch out and do new things,” says Chick. “In fact, you can overcome boredom, super-charge your skiing, advance your skills, empower yourself and have more fun at any age.”

### Bumps for boomers

<http://www.bumpsforboomers.com/index.htm>

Bumps for Boomers.doc

BUMPS FOR BOOMERS ® is an innovative Aspen-based ski lesson program that quickly teaches aging Baby Boomers how to confidently ski mogul and powder terrain previously considered beyond their capabilities.

### Aging skiers a vibrant market for industry

[http://www.fiftyplusadvocates.com/ews\\_article.php?id=13](http://www.fiftyplusadvocates.com/ews_article.php?id=13)

Aging Americans Ripe for Snow Sports.doc

Dick Arner hopped on his bicycle early one day last summer and rode 18 miles to Alta. Uphill. Pedaling high into the oxygen-thin air of the Wasatch Mountains, he arrived at the ski resort village, 8,500 feet above sea level, and purchased his season ski pass. Not bad for a guy who’s 71.

### Physiology of Aging

<http://ist-socrates.berkeley.edu/~aging/ModuleProcess.html#anchor157481>

Physiology of Aging.doc

As we age, we undergo a number of physiological changes which affect not only how we look, but how we function and respond to daily living. Overall, the changes in the later life span described below involve a general slowing down of all organ systems due to a gradual decline in cellular activity.

### Ski resorts expand grooming for aging boomers

by Associated Press

<http://www.msnbc.msn.com/id/9917842/>

Ski resorts expand grooming for aging boomer.doc

The ski slopes that baby boomers used to shred when they were young and reckless are being toned down in a bid to keep them coming back for more.

### Sports and Performance Psychology

<http://selfhelpmagazine.com/articles/sports/index.shtml>

Index of Sports Psychology Articles

### Belief, self-talk and performance enhancement

by Joe Kolezynski M.B.A., M.A.

<http://selfhelpmagazine.com/articles/sports/selftalk.html>

BELIEF.doc

In many of these cases the factor that separates their performance from the competitions has been found to be rooted in their belief as to their ability to outperform the competition.

### How to reach your achievement zone

By Shane M. Murphy, Ph.D. & Annemarie Infantino Murphy, Ph.D.

<http://selfhelpmagazine.com/articles/sports/achizone.html>

HOW to REACH YOUR ACHIEVEMENT ZONE.doc

What does it take to do your very best, even when the pressure is on? Have you ever watched Olympic athletes as they compete and wondered how they deal with the turmoil they experience?

#### Thought Awareness, Rational Thinking & Positive Thinking

<http://www.mindtools.com/stress/PerformanceStress/ThoughtAwareness.htm>

Thought Awareness.doc

In preparing for a performance, you may have a whole range of fears, anxieties and negative thoughts associated with the upcoming event. While this is completely normal and is something that everyone experiences, it is important that you deal with these; otherwise, they can undermine your self-confidence.

#### Senior Factoids

[http://www.jfcs.org/Services/Seniors/Senior\\_Factoids/default.asp](http://www.jfcs.org/Services/Seniors/Senior_Factoids/default.asp)

Senior Factoids.doc

Facts about Seniors.

#### Seniors Find New Skis Short on Length

[http://www.psia.org/psia\\_2002/education/TPSArticles/newtechnologies/tpsfall99seniors.asp](http://www.psia.org/psia_2002/education/TPSArticles/newtechnologies/tpsfall99seniors.asp)

Seniors Find New Skis Short on Length.doc

Elan skis were originally designed for nevers, to make a beginner's first lessons so rewarding that he or she would continue to ski. But the skis delighted an entirely different demographic--the teachers who tried them out at an instructional clinic last season. It took only a few runs before these skilled individuals were asking where they could get a short pair of their own.

#### Senior Skiers Derive Parabolic Pleasure

[http://www.psia.org/psia\\_2002/education/TPSArticles/shapedskis/tpsfall96seniorparabolic.asp](http://www.psia.org/psia_2002/education/TPSArticles/shapedskis/tpsfall96seniorparabolic.asp)

Senior Skiers Derive Parabolic Pleasure.doc

We went to custom-fitted boots and 163-cm parabolic skis. (I had previously been skiing on 185-cm skis, and Dick's were 195 cm). We're now skiing more and enjoying it more, even in questionable weather and conditions.

#### Aging Successfully: The Importance of Physical Activity in Maintaining Health and Function

Marc T. Galloway, MD and Peter Jokl, MD

<http://www.jaaos.org/cgi/content/abstract/8/1/37>

Aging Successfully.doc

Exercise on a routine basis is an important component of successful aging. It has been shown that many age-related declines in musculoskeletal function can be markedly reduced by participation in some form of regular exercise.

#### The Aging Athlete, Dr. Darrell Menard and Dr. William D. Stanish (1989)

Aging Successfully; the Importance of Physical Activity in Maintaining health and Function, Marc T. Galloway, MD and Peter Jokl, MD

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## Appendix

	<b>PSIAASI</b> N O R T H W E S T 11206 Des Moines Memorial Dr, Suite 106, Seattle, WA 98168-1741 (206) 244-8541 (206) 241-2885 (fax) e-mail - office@psia-nw.org	<b>SPECIALIST FEEDBACK SHEET</b>
		<b>SENIOR SPECIALIST FOUNDATIONS</b>

Participant \_\_\_\_\_

Date (mm/dd/yy) \_\_\_\_\_

Location \_\_\_\_\_

Clinician(s) \_\_\_\_\_

The Senior Specialist Foundations training is an educational offering from PSIA-NW. In this foundation level the goal is to introduce the Senior Specialist program, provide you with direct feedback throughout the day and written feedback at its completion as well as to assist you in

continuing to grow and develop your skiing and teaching skill set when working with the senior client. We hope this feedback helps your current level of understanding and performance and to identify areas where you can improve when working with and demonstrating to senior clients.

### SENIOR-SPECIFIC SKIING PERFORMANCE

#### Balancing Movements and Stance

- Maintains an open stance displaying lateral and fore/aft alignment.
- Uses forward /diagonal movements to maintain boot cuff contact.
- The skeletal frame is aligned and joints are stacked, minimizing muscle fatigue and stress.

#### Pressuring Movements

- Demonstrates a progressive and smooth transition of pressure to new outside ski at turn initiation.
- Demonstrates continuous flexion and extension movement patterns to enhance flow and smooth transitions and reducing impact stress.

#### Rotary Movements

- Demonstrates progressive steering of the legs to assist in turn shape and speed control.
- Demonstrates an ability to blend rotary movements with edging movements.
- Develops counter through turning the legs more than the upper body.

#### Edging Movements

- Demonstrates progressive edging and de-edging movement patterns.
- Demonstrates appropriate skidding movements to minimize pressure loading on joints utilizing a long (tall), slightly inclined stance for skeletal strength and to reduce muscle fatigue.

### WRITTEN FEEDBACK

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**PSIA-AASI**

N O R T H W E S T

11206 Des Moines Memorial Dr. Suite 106, Seattle, WA 98168-1741  
(206) 244-8541 (206) 241-2885 (fax) e-mail - office@psia-nw.org

## SPECIALIST FEEDBACK SHEET

### SENIOR SPECIALIST FOUNDATIONS

Below are the efficient skiing skills which are important to skiers of all ages, from beginner to expert. In the Senior Specialist program, critical skills and skill blends have been focused on to help the instructor when working with the senior client. Keeping these skills in mind is crucial as we work with, demonstrate to, and teach the senior client, to help them develop their movements and movement patterns to be more efficient. Outcomes will be movements and techniques enabling them to obtain

these goals: minimize muscle fatigue, minimize impact on joints, conserve energy, improve confidence, improve current skills, allow for exploration of more terrain and increase their enjoyment of the mountain experience. The feedback topics on the front of this sheet were developed to help guide you in your pursuit in working with the senior client, to help you continue to develop your own skill set, and because they are critical skills needed in order for the senior skier to reach goals.

#### Balancing Movements and Stance

##### **Skier is in balance when they can affect any of the skills throughout each turn**

Entire body is involved in balancing

Flexion and Extension originates in the ankles and is supported by knees, hips and spine

The inside leg shortens as the outside leg lengthens and the skis bend from the middle

The upper body remains more vertical than the lower body and the shoulders stay level to the horizon or they level out through the turn

The inside hand, shoulder and hip lead the turn, resulting in a countered relationship

Hands are in front of the body to aid balance

Vision is directed forward and looking in the intended direction of travel

Pole swings smoothly in the direction of travel

#### Rotary Movements

##### **Skier turns part of the body and combines with other skills to change direction efficiently**

Turning movements originate in the feet and legs and they turn more than the upper body

Legs turn underneath a strong/stable torso to guide skis through the turn

Both skis turn together throughout parallel turn, with femurs turning in the hip sockets

Skis are tipped and turned appropriately to create a smooth, C-shaped arc

Rotary movements are matched in timing and intensity by tipping the skis

Rotary movements are progressive unless needed to recover balance

#### Pressure Control Movements

##### **Skier manages pressure providing the element of touch which promotes a smooth ride**

Joints work together to apply and release pressure effectively to flow evenly and smoothly over the terrain

Skis bend progressively through the turn, with entire ski length engaged

Continues to move forward along ski edges throughout the turn

Body continues to move forward with the skis throughout the turn

Flexion and extension of legs changes in response to the terrain and pitch of the slope

Pressure adjustments are made throughout the turn along the ski and from foot to foot

The pole touch or pole plant complements the turn

The upper body remains quiet and disciplined

#### Edge Control Movements

##### **Skier uses edging to direct the skis to control turn radius, shape and speed**

Edges are released and re-engaged in one smooth movement

Center of mass moves into direction of the new turn to change edges

Both skis tip the same amount early in the turn

Ankles, knees, and hips roll forward and laterally to move into the new turn

The shins make forward and lateral contact with the boot cuffs

Tension of the inside leg helps maintain alignment





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NORTHWEST

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## SPECIALIST FEEDBACK SHEET

### SENIOR SPECIALIST 1

Participant \_\_\_\_\_

Date (mm/dd/yy) \_\_\_\_\_

Location \_\_\_\_\_

Clinician(s) \_\_\_\_\_

☐ **ATTAINED** The understanding of the material and the ability to display necessary skill blends have been shown.

☐ **DEVELOPING** Before SS1 can be attained, further development in the participant's understanding of the material and/or ability to display necessary skill blends need to be enhanced.

## SENIOR-SPECIFIC SKIING PERFORMANCE

### Balancing Movements and Stance

- ☐ Maintains an open stance displaying rotational, lateral and fore/aft alignment.
- ☐ Uses forward /diagonal movements to maintain boot cuff contact.
- ☐ The skeletal frame is aligned and joints are stacked, minimizing muscle fatigue and stress.

### Pressuring Movements

- ☐ Demonstrates a progressive and smooth transition of pressure to new outside ski at turn initiation.
- ☐ Demonstrates continuous flexion and extension movement patterns to enhance flow and smooth transitions and reducing impact stress.

### Rotary Movements

- ☐ Demonstrates progressive steering of the legs to assist in turn shape and speed control.
- ☐ Demonstrates an ability to blend rotary movements with edging movements.
- ☐ Develops counter through turning the legs more than the upper body.

### Edging Movements

- ☐ Demonstrates progressive edging and de-edging movement patterns.
- ☐ Demonstrates appropriate skidding movements to minimize pressure loading on joints utilizing a long (tall), slightly inclined stance for skeletal strength and to reduce muscle fatigue.

## TEACHING & PROFESSIONAL KNOWLEDGE

- ☐ Shows ability to articulate, discuss and synthesize the Learning Partnership as it applies to seniors.
- ☐ Successful completion of Workbook.

### Senior Student Profile

- ☐ Cognitive: Shows an understanding of developmental milestones, behaviors, learned movement patterns, roadblocks.
- ☐ Affective: Shows an understanding of client desires, goals and history.
- ☐ Physical: Shows an understanding of real versus ideal movement patterns, medical issues, VAK and Low Impact/Low Fatigue movements.

### Instructor Behavior for the Senior Lesson

- ☐ Shows an understanding of Maslow's Theory, Guest Description, Guest Needs, Effective Use of Mountain Playground, Wrap Up.

## WRITTEN FEEDBACK

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FEEDBACK KEY



Proficient



Working On

	<p style="text-align: center;"><b>PSIAASI</b> N O R T H W E S T</p> <p>11206 Des Moines Memorial Dr. Suite 106, Seattle, WA 98168-1741 (206) 244-8541 (206) 241-2885 (fax) e-mail - office@psia-nw.org</p>	<p><b>SPECIALIST FEEDBACK SHEET</b></p> <p><b>SENIOR SPECIALIST 1</b></p>
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The Senior Specialist 1 is an educational offering from PSIA-NW and regardless of the outcome active participation and gained knowledge should be viewed as success!

Senior Specialist 1 Instructors must be able to clearly demonstrate senior-specific movements and skill blends and a proficient understanding of the concepts, tactics and theory specific to coaching the senior skier.

The development of these skills and this knowledge is crucial for the instructor to coach and teach the senior client in development of efficient movement patterns. Skiing outcomes will be movements and techniques that enable the senior skier to meet the following goals: minimize muscle fatigue, minimize high impact to joints, conserve energy and improve confidence. In turn, these outcomes should assist in the improvement of skiing skills allowing for further exploration of expanded terrain and an increase in the enjoyment of the mountain experience.

This feedback sheet will assist you 1) in continued development of skill sets which are critical to assist the senior client to meet the goals and outcomes noted, 2) in the ability to demonstrate these senior specific skills and knowledge when instructing the senior clientele and 3) in

recognizing your own areas of strength and weaknesses in developing goals for future growth in the instruction of the senior client.

Remember to reference the efficient skiing skills which are important to skiers of all ages, from beginner to expert. In the Senior Specialist program, critical skills and skill blends have been focused on to help the instructor when working with the senior client. Keeping these skills in mind is crucial as we work with, demonstrate to, and teach the senior client, to help them develop their movements and movement patterns to be more efficient.

Outcomes will be movements and techniques enabling them to obtain these goals: minimize muscle fatigue, minimize impact on joints, conserve energy, improve confidence, improve current skills, allow for exploration of more terrain and increase their enjoyment of the mountain experience.

The feedback topics on the front of this sheet were developed to help guide you in your pursuit in working with the senior client, to help you continue to develop your own skill set, and because they are critical skills needed in order for the senior skier to reach goals.

## SENIOR-SPECIFIC SKIING PERFORMANCE

### General Skiing Characteristics

- Consistently link turns with sustained rhythm
- Maintain consistent speed by controlling the shape of a turn
- Maintain a balanced stance with skeletal (stacked) alignment as needed throughout a series of turns to be able to positively affect any of the skills at any time
- Ski a variety of turn sizes within a series of turns while maintaining speed control
- Display continuous flexion/extension movements and lower edge angles

## TEACHING & PROFESSIONAL KNOWLEDGE

**A Senior Specialist 1 instructor demonstrates an understanding of, and the ability to articulate and discuss, senior-specific concepts including...**

**The Learning Partnership as it Applies to Seniors**  
Senior Student Profile and Instructor Behaviors

### The CAP Model for Seniors

**Cognitive** - developmental milestones, behaviors, learned movement patterns, roadblocks

**Affective** - desires and goals, history

**Physical** - real versus ideal movement patterns, medical issues, Visual, Auditory and Kinesthetic (VAK), Low Impact / Low Fatigue movements

### Instructor Behavior for Senior Lesson (Teaching Model)

Maslow's Theory, Guest Description, Pacing, Effective Use of Mountain Playground and Wrap Up.