ROCKY MOUNTAIN

Revision 09-14-24

ADAPTIVE ALPINE LEVEL 1 & Level 2 STUDY GUIDE

BI-SKI & MONO-SKI

Name: _____

This study guide is a valuable learning resource for instructors who desire to increase their knowledge of teaching adapted alpine skiing to guests with stand-up physical diagnoses (3-Track, 4-Track, or Slider ski disciplines) and prospective candidates for certification in the Stand-up Physical Diagnoses Module. Candidates must take the Adaptive Alpine Level 1 online exam for Stand-up Physical Diagnoses (3-Track, 4-Track & Sider) at least one week before the on-hill exam.

See the PSIA-RM-AASI ADA Policy Here to learn more about “reasonable accommodations” in assessments.

You can fill out this form by hand (print and write in answers) or electronically (save the document then insert responses).

All answers can be found in the following resources:

PSIA-RM-AASI
Adaptive Alpine Assessment Support Material
3-Track & 4-Track Adaptive Teaching Guide
Slider Adaptive Teaching Guide
Free download https://www.psia-rm.org/education

American Snowsports Education Association, Inc.
Adaptive Alpine Technical Manual, 2017
Adaptive Instruction Supplement: Diagnoses and Medication Classifications, 2019
Alpine Technical Manual, 2014
Teaching Snowsports Manual, 2018
Core Concepts for Snowsports Instructors
Digital manuals for every discipline

Teaching Section

Matching: Match the following words with their definition. Each definition is used only once.
Source: Children's Instruction Manual, PSIA-RM Adaptive Alpine Assessment Support Exam Material, Core Concepts

1.	Visual	A. Teaching style in which the instructor directs the students to a specific answer through a series of questions or experiences
2.	Open question	B. A teaching style in which the instructor outlines the parameters of an assigned activity. Students are free to execute and practice the activity within the given boundaries
3.	Teaching for transfer	C. Piaget's stage of development from birth to age 2
4.	Demonstration	D. A formula that combines what you want the student to learn with the situation you create to encourage learning and the appropriate terrain for success
5.	Active experimenter	E. Person who is self-smart
6.	Task	F. A system for identifying comprehensive categories of human capabilities
7.	Skill/drill/hill	G. A sensory preference in which the student learns best by seeing or watching
8.	Introverted	H. Perceives details first, then the whole; asks "how?"
9.	Multiple intelligence	I. Activities used to isolate and develop skills
10.	Lateral learning	J. Drawing upon a student's previous learning to help with present learning
11.	Physiological	K. Used to initiate a discussion or gain information about a student's insights and opinions
12.	Cognitive domain	L. Related to thinking, analyzing, and speaking
13.	Sensorimotor	M. Performing a task or exercise as an example for students
14.	Intrapersonal intelligence	N. The most pressing needs, as postulated by Abraham Maslow
15.	Guided discovery	O. According to Jung's functioning types, this type of person is tuned into his/her inner world

Fill-in-the-blank: Fill the blank with the appropriate terminology.
Source: Children's Instruction Manual, PSIA-RM Adaptive Alpine Assessment Support Exam Material, Core Concepts

1. List Benjamin Bloom's stages of learning activities, starting from the superficial and moving towards the deeper, integrated meaning.

   _____

   _____

   _____

   _____

   _____

   _____

2. Skiers with speech and language problems may prefer to use the _____sensory preference.

3. The _____teaching style is best suited for generating interaction between students because it clearly defines the roles of "doer" and "watcher."

4. Reaching one's potential while generating a peak experience is the level of _____ in Maslow's Hierarchy of Needs.

5. _____ questions limit discussions and are used to elicit information or confirm understanding and agreement.

6. When Abraham Maslow developed his Hierarchy of Needs, he visualized a pyramid with the most _____ needs on the bottom.

7. One of the first sensory systems to fully develop is the _____system, which controls balance and the sense of movement. Located in the inner ear, this system provides information about the position of the head relative to the ground.

8. As the nerve cells are stimulated with movements, thoughts, or memories, a fatty substance called _____ is laid down along the pathways which link neurons in the brain and spinal cord, thus increasing the speed of neural transmission. This ongoing stimulation is the essence of "practice makes perfect."

9. Age-related declines in endurance are _____(less/more) than declines in strength.

10. _____is defined as helping students gain ownership and understanding of skills by exploring and experimenting with their existing skills rather than introducing new ones.

Fill-in-the-blank: Fill the blank with the appropriate terminology.
Source: Teaching Snowsports Manual, Alpine Technical Manual, Teaching Snowsports Manual

1. CAP is an acronym for _____ _____ _____.

2. List the four main elements of the contemporary Teaching Cycle.

   _____

   _____

   _____

   _____

3. Cite the seven points of *Your Responsibility Code.*

   _____

   _____

   _____

   _____

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   _____

4. Verifying your student's level of physical and cognitive understanding is part of the _____ step in the Teaching Cycle.

5. Cite the four main points of the Park SMART safety message.

   _____

   _____

   _____

   _____

6. The term _____ _____ describes a collaborative relationship in a lesson that involves a shared commitment to learning, activities, active participation, mutual respect, and trust between the _____ and the _____.

Multiple Choice: Mark the answer that best completes the statement or question.
Source: Children's Instruction Manual, Teaching Snowsports Manual, Core Concepts

1. Circle all of the following intelligences that are included in Gardner's theory of multiple intelligences:
   - ☐ A. Spatial
   - ☐ B. Bodily-Kinesthetic
   - ☐ C. Chemical
   - ☐ D. Logical-Mathematical
   - ☐ E. Musical-Rhythmic

2. When students are exhibiting fear, it is best to:
   - ☐ A. Convince them that their fear is imaginary.
   - ☐ B. Try to belittle their fear in a humorous way.
   - ☐ C. Acknowledge the fear with respect and respond positively to it.
   - ☐ D. Ignore the fear and let them overcome it by themselves.

3. In sensory preferences, the initials VAK stand for:
   - ☐ A. Vibration, Absorption, Kinetics
   - ☐ B. Three types of auditory preferences
   - ☐ C. Video, Autographic, Kinesis
   - ☐ D. Visual, Auditory, Kinesthetic

4. According to Jung's Functioning Types, a sensing person
   - ☐ A. Is easily hurt by criticism
   - ☐ B. Learns by attending to facts and data
   - ☐ C. Makes decisions based on values and inner harmony
   - ☐ D. Is very intuitive
   - ☐ E. Orients to the outer world by being flexible and spontaneous

5. Wearing a helmet while mono or bi-skiing falls into which level of Maslow's Hierarchy of Needs?
   - ☐ A. Safety/Security
   - ☐ B. Recognition/Social
   - ☐ C. Self-esteem
   - ☐ D. Self-actualization

6. Which of the following is a consideration when teaching children?

- [ ] A. Strength
- [ ] B. Location of center of mass
- [ ] C. Length of limbs
- [ ] D. A and B
- [ ] E. A, B and C

7. In terms of sensory preferences, students who learn best by doing are considered which type of learners?

- [ ] A. Visual
- [ ] B. Auditory
- [ ] C. Kinesthetic

8. Which portion of the lesson is devoted to preparing for activity? This lesson segment often refers to muscles, but instructors also prepare students to learn though active listening and questioning.

- [ ] A. Initial
- [ ] B. Guide Practice
- [ ] C. Review and Preview
- [ ] D. Rapport-building
- [ ] E. Assess students

9. In Kolb's classification of the four basic types of learners, which learners see the whole first, then the parts? They respond to and trust their emotions and learn best in discussions. They ask the question "why?"

- [ ] A. Dynamic learners
- [ ] B. Active experimenters
- [ ] C. Analytical learners
- [ ] D. Innovative learners

10. _____ _____ is described as gaining knowledge and understanding after participating in and reflecting upon an action or experience.

Technical Section

Matching: Match the following words with their definition. Each definition is used only once.
Source: Alpine Technical Manual

1.	Exercise line	A. The amount a ski is tilted relative to the surface of the snow and hill
2.	Turn radius	B. Taking varying amounts of weight off the skis to manipulate and control pressure
3.	Corresponding edges	C. Situations created for learning that start with simple actions that increase in complexity
4.	Unweighting	D. The size of the turn
5.	Anticipation	E. Tipping the entire body without angulation
6.	Sidecut	F. Also called fall line
7.	Edge angle	G. Allows a skier to move in any direction at any time
8.	Carving	H. A position or movement in preparation for turning, in which the upper body actively faces down the hill rather than across the hill or direction ski(s) are facing
9.	Steering	I. The muscular effort used to direct the path of the skis
10.	Differential friction	J. The amount of “hourglass” shape or waist a ski has
11.	Gravity zone	K. When the tails of the skis follow the tips through the turn to leave clean arcs in the snow
12.	Center of mass	L. More friction created on one side of the axis of rotation to affect direction change
13.	Athletic stance	M. The left edge of one ski/outrigger and the left edge on the other
14.	Whole body inclination	N. Swing force that influences rotational movements and is affected by the distance from foot support to axis of rotation in sit skiers
15.	Moment of inertia	O. Represents the point around which a body’s mass is equally distributed

Fill-in-the-blank: Fill the blank with the appropriate terminology.
Source: Adaptive Alpine Technical Manual, Adaptive Instruction Supplement: Diagnoses and Medication Classifications

1. Stance can be affected by differences in bone length, muscle tightness or _____(in the spine).

2. List three symptoms of autonomic dysreflexia.

   _____

   _____

   _____

3. Assessment of active range of motion (AROM) provides information about the guests' ability to _____, _____/_____and create _____when skiing.

4. Guests with limited sensation are susceptible to _____or _____.

5. When a muscle performs work while getting longer, it is called _____contraction.

Matching: Match the following words with their definition. Each definition is used only once.
Source: Adaptive Alpine Technical Manual, Adaptive Instruction Supplement: Diagnoses and Classifications

1.	Anticholinergics	A. May be attached to the bi-ski for lateral support
2.	Hypoglycemia	B. Adjustments done to ski equipment to modify a skier's normal stance
3.	Evacuation system	C. Also known as Cerebrovascular accident (CVA)
4.	Fixed outriggers	D. Medications that reduce anxiety
5.	Spinal fusion	E. Removal of a limb at the joint
6.	Canting	F. A malformation of the spinal cord during fetal development
7.	Muscular dystrophy	G. Not enough sugar. Can be triggered by unusual exercise (skiing), delays in meals, or too much insulin
8.	Post-polio syndrome	H. Paralysis of the lower extremities
9.	Stroke	I. Treat bladder spasms and may cause dry mouth, constipation, tiredness, headache
10.	Autonomic dysreflexia	J. Disorders that cause progressive and irreversible wasting of muscle tissue
11.	Sedative	K. Required for all mono-skis and bi-skis used on chairlifts
12.	Paraplegia	L. Potentially life-threatening hypertensive occurrence produced by the body's inability to sense and react to specific stimuli.
13.	Linkage	M. Lingering effects of poliomyelitis, causing paralysis of muscles
14.	Disarticulation	N. Connects the seat to the ski(s) and usually consists of moving swing arms that allow the suspension to work but restrict movement in other planes
15.	Spina bifida	O. Surgery that fuses vertebrae to stiffen the spine

Fill-in-the-blank: Fill the blank with the appropriate terminology.
Source: Adaptive Alpine Technical Manual, Adaptive Instruction Supplement: Diagnoses and Classifications, PSIA-RM Bi-ski & Monoski Adaptive Teaching Guide

1. _____ _____is a neurological disability where the nerve fibers become scarred, thus interrupting the transmission of messages to various body parts.
2. _____is a class of medications that relieve muscle spasms.
3. The seat of the mono-ski or bi-ski is equivalent to a stand-up skiers _____.
4. Medium to short radius turns, upper/lower body separation and bump skiing on easy blue terrain are all skill development outcomes of the mono ski level _____ lesson.
5. _____is the paralysis of all four limbs.
6. List the regions of the spine and the number of vertebrae in each.

   _____

   _____

   _____

   _____

   _____
7. NSAIDs are a class of medications that prevent or reduce _____.
8. The two types of outriggers available to bi-skiers are called _____outriggers and _____outriggers.
9. For mono-skiers, the general guideline is that a heavier skier requires _____(more/less) suspension tension, while a lighter skier requires _____(more/less) suspension tension.
10. A bi-skier using fixed outriggers _____(may/may not) ski independent of a tetherer.

Multiple Choice: Mark the answer that best completes the statement or question.
Source: Alpine Technical Manual

1. Garlands include which phase(s) of the turn?
   - ☐ A. Initiation
   - ☐ B. Shaping
   - ☐ C. Finishing/transition

2. In terms of blending skills, powder skiing generally requires:
   - ☐ A. More rotary than hardpack
   - ☐ B. Similar skill blend to bumps
   - ☐ C. More edging than hardpack
   - ☐ D. A and B
   - ☐ E. B and C

3. Any movement that increases the angle at a joint is called
   - ☐ A. Extension
   - ☐ B. Friction
   - ☐ C. Perception
   - ☐ D. Deflection
   - ☐ E. Proprioception

4. Edge change (releasing and re-engaging) occurs through what movements?
   - ☐ A. Flexing and Extending
   - ☐ B. Tipping
   - ☐ C. Turning
   - ☐ D. Balancing
   - ☐ E. Hopping

5. A combination of sliding and slipping as the skis move forward through a turn is called:
   - ☐ A. Skidding
   - ☐ B. Sliding
   - ☐ C. Slipping
   - ☐ D. Shaping
   - ☐ E. Sloping

Multiple Choice: Mark the answer that best completes the statement or question.
Source: Adaptive Alpine Technical Manual, Adaptive Instruction Supplement: Diagnoses and Classifications, PSIA-RM Bi-ski & Monoski Adaptive Teaching Guide

1. A kidney belt may be used with a bi-skier for:
   - ☐ A. Upper body stabilization
   - ☐ B. Maintaining body temperature
   - ☐ C. Keeping snow out
   - ☐ D. Aesthetics

2. Which skill development activities are typically included in the level 3 mono-ski lesson?
   - ☐ A. Linked turns
   - ☐ B. Varying turn shape and size
   - ☐ C. Hip and lower body angulation
   - ☐ D. Hockey stops

3. During the dowel test, the student is in the apparatus and the balance point is found when the student can:
   - ☐ A. Lean forward and touch the front of the ski to the ground.
   - ☐ B. Pressure the tip of the ski with a slight head tip forward and pressure the tail with a slight tip backward.
   - ☐ C. Remain centered on the dowel while leaning from side to side and touching the outriggers to the ground.
   - ☐ D. Lean backward and touch the tail of the ski to the ground while using the outriggers for balance.

4. A person with athetoid cerebral palsy has:
   - ☐ A. Extraneous and uncontrolled movements
   - ☐ B. Diminished muscle tone
   - ☐ C. Muscle atrophy of the peroneal muscles and toe extensors
   - ☐ D. Tense, contracted muscles

5. Muscular dystrophy is a group of nine main diseases including the following types:
   - ☐ A. Charcot-Marie-Tooth Disease and Spastic Ataxia
   - ☐ B. Duchenne, Facio-Scapular-Humeral and Limb Girdle
   - ☐ C. Charcot-Marie-Tooth Disease and Friedreich's Ataxia
   - ☐ D. Meningocele and Meningomyelocele
   - ☐ E. Aphasia, Dysarthria and Bell's Palsy

6. The function of the shock absorber on a mono-ski includes controlling:
   - ☐ A. Rotary
   - ☐ B. Pressure
   - ☐ C. Edging
   - ☐ D. Steering

7. Circle all factors that determine the position of the foot tray on a mono-ski?
   - ☐ A. Contact between the thighs and the seat bottom
   - ☐ B. Spasticity
   - ☐ C. Comfort
   - ☐ D. Leg length
   - ☐ E. Hip width

8. Circle all applicable actions an instructor should take after a mono-skier falls:
   - ☐ A. Be cautious not to put yourself, especially your back, in an awkward position.
   - ☐ B. Remove the mono-skier's outriggers.
   - ☐ C. Offer to help the skier place the mono-ski across the fall line.
   - ☐ D. Help the student(s) learn how to independently rise from the fall by demonstrating for them from the ground while using outriggers.
   - ☐ E. Pull the monoskiers arm/outrigger laterally to get the person upright.

9. Glide and slide across the slope, straight run and effective outrigger and body position while moving are all skill development outcomes of which bi-ski level lesson?
   - ☐ A. One
   - ☐ B. Two
   - ☐ C. Three
   - ☐ D. Four
   - ☐ E. Five

10. Circle all appropriate positions used by a mono-skier's in describing an athletic stance:
   - ☐ A. Arms as straight as possible
   - ☐ B. Upper arms hanging vertically at the sides, with a slight space between elbows and body
   - ☐ C. Lower arms hanging at the same angle as the outrigger shafts
   - ☐ D. Torso laying on the lap to reach outriggers to the snow
   - ☐ E. Head and eyes focused down toward the foot tray