



NORTHERN ROCKY  
MOUNTAIN DIVISION

ADAPTIVE ALPINE LEVEL I  
GENERAL KNOWLEDGE WORKBOOK

Name: \_\_\_\_\_

School: \_\_\_\_\_

This workbook is a tool for you to develop your general Snowsports knowledge in preparation for your Adaptive Alpine Level 1 Evaluated Clinic. As you are preparing for your Evaluated Clinic, include comments and notes that you find beneficial, including notes from your trainers. At the time of your Evaluated Clinic, you will be required to turn in the development workbook for your Clinician to review, in electronic format or hard copy. It will be returned to you after the exam so that you can use it as an ongoing resource. **Please note: The outcome of your Adaptive Alpine Evaluated Clinic does not depend on how much you write herein, but rather the content.**

\*\*You will be graded on this workbook, but it is expected that you have conversations with co-instructors and your trainers if/when you do not know an answer, or to gain a deeper understanding of the contents. At Level 1, it is expected that you can retain basic book knowledge regarding Alpine Skiing, Adaptive Skiing, and Adaptive Knowledge that will lead to a safe and effective lesson, as well as have enough entry-level experience to teach a safe and effective novice lesson in the discipline chosen for the exam.

You must score at least 102 of 128 points to pass.

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You may refer to the PSIA-AASI NRM Americans with Disabilities Act (ADA) Policy for further information.

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*claims, promises, or guarantees about the timeliness, accuracy, completeness, or adequacy of the contents of this guideline, and PSIA-AASI NRM assumes no liability or responsibility and expressly disclaims liability for any errors and omissions in its contents.*

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

*This guideline provides links to other resources as well as websites owned by or maintained on behalf of third parties. The content of any such third-party source or site is not within our control, and we cannot and will not take responsibility for the information in them, nor should any references to them be considered any endorsement by PSIA-AASI NRM.*

## Manuals and Study Materials

For this exam, you are expected to have read and understand the basic principles outlined the following manuals. All out-of-book questions in this workbook come from these resources in their current editions:

- [PSIA/AASI Core Concepts](#)
- [PSIA Alpine Technical Manual](#)
- [PSIA Adaptive Snowsports Instruction Manual](#)
- [PSIA-AASI-NRM Adaptive Disabilities, Medications and Red Flags Required Knowledge for Exams](#) (These are the disabilities, medications and red flags that may be included on the L1 exam)

You are encouraged to seek out other materials in other PSIA divisions, and knowledge from outside the PSIA realm which will be beneficial for your education. Here is a list of materials that will be critical to your success at all levels of certification.

- Bold Tracks, Skiing for the Disabled
- Other Divisions' Materials
  - [PSIA-AASI-E Adaptive Study Guide](#)
  - [PSIA-AASI-RM Adaptive Exam Materials](#)
  - [PSIA-AASI-W Adaptive Exam Materials](#)
  - [PSIA-RM Adaptive Encyclopedia](#) (There are more disabilities here than on the exam, however it contains good information)

## Professional and Teaching Knowledge

Gain practical experience in physical and cognitive assessment procedures of students within the desired adaptive discipline. Define the following terms as outlined in the CAP model, and list 2 items you would look for in each during the assessment.

### 1. 3 points

#### Cognitive

Definition: \_\_\_\_\_

\_\_\_\_\_

Assessment: \_\_\_\_\_

\_\_\_\_\_

Assessment: \_\_\_\_\_

\_\_\_\_\_

### 2. 3 points

#### Affective

Definition: \_\_\_\_\_

\_\_\_\_\_

Assessment: \_\_\_\_\_

\_\_\_\_\_

Assessment: \_\_\_\_\_

\_\_\_\_\_

### 3. 3 points

#### Physical

Definition: \_\_\_\_\_

\_\_\_\_\_

Assessment: \_\_\_\_\_  
\_\_\_\_\_

Assessment: \_\_\_\_\_  
\_\_\_\_\_

**4. 1 point**

When do you perform an assessment?

\_\_\_\_\_  
\_\_\_\_\_

**5. 1 point**

List three items that are assessed by watching the student enter your sports school:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**6. 1 point**

When instructing individuals with disabilities your goal should be:

- A. Insist on perfection out of your student prior to advancing skills
- B. Follow the parent's or guardian's goals and instructions
- C. Focus on your personal skiing skills
- D. Focus on the goals and needs of your student

**7. 1 point**

There are the three main skills (Skills Concept) that are essential for maintaining balance while skiing. List the three types of rotation that we can perform with our bodies as it relates to skiing:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**8. 1 point**

There are the three main skills (Skills Concept) that are essential for maintaining balance while skiing. We can achieve edging through banking and creating angles (angulation). What can we articulate (think parts of the body) to create angulation that affect skiing?

1. \_\_\_\_\_

2. \_\_\_\_\_

**9. 1 point**

If we create higher edge angles during a turn, are we more likely to make a skidded turn or carved turn?

\_\_\_\_\_

**10. 1 point**

What is the fundamental difference between a skidded turn and a carved turn?

\_\_\_\_\_

**11. 3 points**

There are the three main skills (Skills Concept) that are essential for maintaining balance while skiing. We control pressure in three planes, what are those three planes?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**12. 1 point**

What are different ways that we can control the pressure against the skis?

\_\_\_\_\_

\_\_\_\_\_

**13. 1 point**

What is a fall line?

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**14. 1 point**

Why does a fall line matter?

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**15. 6 points**

There are three phases of a turn, followed by a transition period to begin the next turn. What are the three phases and write a quick note regarding how you know you are in that phase:

Phase	Indicator you are in that phase – event that occurs

**16. 1 point**

You have been working with a student for 3 weeks in good 20° sunny and calm days, and making good progress exploring nearly all of the green terrain and the student is ready to get into introductory blue terrain, all things constant. On the fourth week, it has snowed recently, the wind is blowing, and the snow is now chopped up from other skiers. What are you going to change about your lesson plan?

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**17. 1 point**

Students may come from home with their own gear (or their buddy's gear), rental equipment, or you may be providing equipment. How will this influence the lesson?

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**18. 1 point**

What do ski poles actually do for us?

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**19. 2 points**

Based on the environment, when is there more friction, and when is there less friction?

More: \_\_\_\_\_

Less: \_\_\_\_\_

**20. 1 point**

What path does your center of mass travel in relation to your skis during your normal, everyday skiing?

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**21. 1 point**

What ski design feature will largely influence the turn radius size? \_\_\_\_\_

**22. 8 points**

Notate the Stages of Development as outlined by Jean Piaget, which are common characteristics and things you might hear them say match with each stage.

Age	Stage of Development	Characteristics and Things you might hear
0-2		

2-6		
6-10		
10+		

**23. 7 points**

List the 7 original categories of intelligence as outlined by Howard Gardener. Circle which you think you predominately are and write why below. Draw a single line through the one which you think you possess least and write why below.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Why yes?

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Why no?

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**24. 1 point**

As it relates to effective skiing, where should rotary and edging movements ideally initiate?

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**25. 1 point**

Give an example of when you might not initiate rotary from the body part listed in #24:

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**26. 1 point**

What are less effective ways to accomplish edging than angulation?

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**27. 1 point**

Define movement analysis:

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**28. 1 point**

Describe the Observation Phase of MA:

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**29. 1 point**

Describe the Evaluation Phase of MA:

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**30. 1 point**

What is the best vantage point for performing MA?

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**31. 1 point**

When prioritizing during the MA Evaluation phase, how do you decide what to address 1<sup>st</sup>?

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*Using the form at the end of this workbook, either go out on your mountain and perform a movement analysis on a few folks, or go to the web (YouTube is great) and do the same. The more movement patterns you watch, the better your eye will be.*

**32. 4 points**

What does the Acronym DIRT stand for?

D \_\_\_\_\_

I \_\_\_\_\_

R \_\_\_\_\_

T \_\_\_\_\_

**33. 8 points**

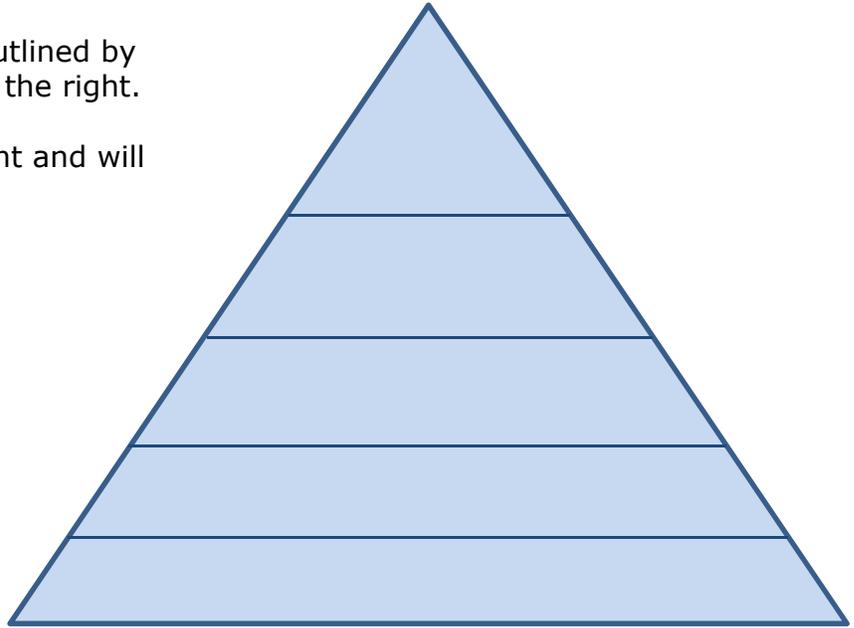
Define each of the terms as it relates to an exercise line, and number them from 1-4 in the order that you would introduce them.

#	Step	Description
	<b>Simple</b>	
	<b>Whole</b>	
	<b>Complex</b>	
	<b>Stationary</b>	

**34. 6 point**

Write in the levels of needs as outlined by Abraham Maslow in the chart on the right.

Circle which is the most important and will certainly affect your lesson?



**35. 3 points**

Understand and be able to utilize a teaching model and a movement analysis model in an adaptive ski lesson for students through the Novice Zone in each adaptive discipline. Simply put, what is the teaching Model?

\_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

**36. 7 points**

What are the 7 defined steps of a typical Teaching Cycle (aka Instructor Behavior)?

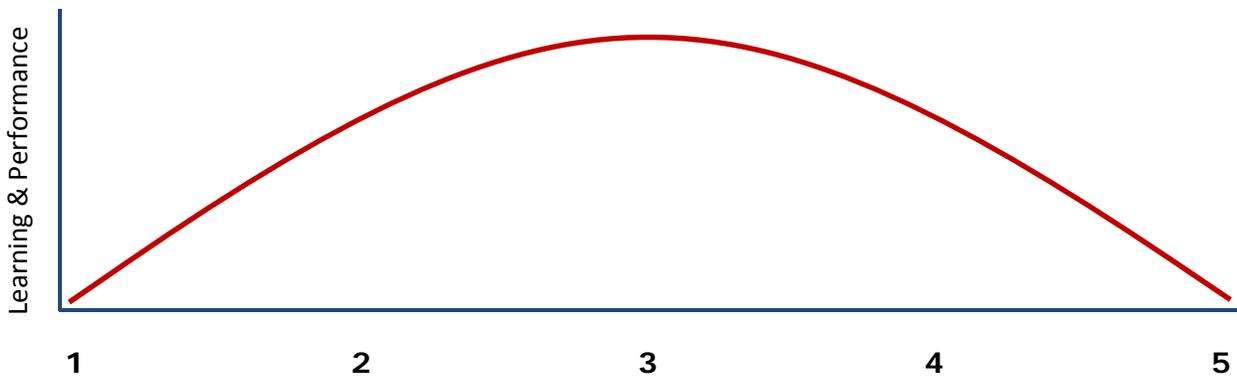
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

**37. 4 points**

List four different steps or items you would typically teach a never-ever student in a lesson progression.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**38. 5 points**



Looking at the graph above, where the left (vertical) axis represents Learning and Performance, and the bottom (horizontal) axis represents a student's state of mind, fill in the states of mind as outlined in Core Concepts.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**39. 4 points**

Even the easiest terrain can be challenging under some conditions. List out 2 environmental conditions (weather, snow, etc.) and 2 instructor controlled condition.

**Environmental**

**Instructor Controlled**

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**40. 3 points**

List 3 reasons your student may show a decreased level of performance towards the end of a lesson.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**41. 3 points**

There are three sensory inputs to which we can receive information, known as the VAK model. What do each of the letters in the Acronym signify?

- V \_\_\_\_\_
- A \_\_\_\_\_
- K \_\_\_\_\_

**42. 1 point**

Which of the following is NOT a characteristic of kinesthetic learners?

- A. They have a heightened awareness of their bodies and how things “feel”
- B. Directions make sense if given step-by-step
- C. They learn best by doing
- D. They may need to experience the sensation associated with a type of movement to understand the concept

**43. 4 points**

After you have taken in information, you still have to process it – this is generally referred to as Learning Styles. There are four learning styles, what are they and circle which you think you primarily are?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**44. 1 point**

What does the Skill/Drill/Hill Formula mean?

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**45. 1 point**

Teaching for Transfer is when you draw upon a student's previous learning in another subject to help with present learning. List 3 other activities could you relate to skiing:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**46. 4 points**

There are many ways to know if your student understands what you have asked or what they have done. List 4 of these ways:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**47. 7 points**

What are the 7 points of Your Responsibility Code?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

**48. 1 point**

When is the responsibility code a concern? \_\_\_\_\_

**49. 3 points**

List three symptoms of Acute Mountain Sickness:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**50. 3 point**

List 3 places where can you learn about medications you do not know?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Medications**

When it comes to pharmacology, it is expected you understand the basic medicinal categories, a few examples of medicines in each category, their primary use, common side effects, and safety related concerns. Refer to the PSIA Adaptive Snowsports Instruction pages 16-17, Bold Tracks, any current Physician’s Desk Reference (PDR), and

herein.

See the [PSIA-AASI NRM Disabilities, Medications and Red Flags document](#) for required knowledge on medications.

### **Evacuations**

Be able to explain and demonstrate the proper procedure and equipment involved in a chairlift evacuation as it applies to each adaptive discipline. Refer to the [PSIA Adaptive Snowsports Instruction](#) page 65 for descriptions of the evacuation systems for sit-down equipment. Discuss with your trainer additional area specific procedures for stand-up and sit-down students.

## **Teaching Skills**

Review the manuals and work with your trainer on the following teaching skills. At the Evaluated Clinic, you will be teaching a scenario to show your competency in instruction and use of teaching models.

### **Assessments**

Perform assessments having a trainer watch and give guidance. This is critical to successful lessons.

### **Goals**

After you perform an assessment, write out short-term (today) goals, mid-term (this season) goals, and long-term (2-? Years) goals. Take into consideration the student's goals, their parents'/caregivers' goals (if applicable), and what their abilities are. Be realistic, not over-zealous and not degrading.

### **Lesson Organization**

Finding the right balance of how much to include, not too little and not too much is difficult. The more games and exercises you know, the easier it is to speed up a lesson or slow down a lesson. Make it work for your student, not just for you! Easy to understand, at their level of understanding, relate using teaching for transfer, and make it make sense.

### **Lesson Content**

While you can go out and play all day, it's important for you to have good content, and a progression in there. You might get through 1 skill by way of 6 different drills, or 6 skills by way of 6 different drills. Either way, the content should match the goals, plans, and student.

### **Learning Environment**

The learning environment should be a safe, fun, creative, learning environment (where possible – but safe all the time). Interactivity (questions and comments) are a good sign, as well as smiles and laughter.

Know different terrain that you would seek out for each different exercise you might prescribe. At times you may need to correct/demonstrate a skill in a non-ideal spot, but most of the time you have the luxury of planning ahead and moving to an appropriate location on the hill.

Best practice is to move down in terrain to teach new skills, or correct skills.

### **Demonstrations and Explanations**

Whenever you demonstrate a skill or task, you really want it to match what you want them to do, and what you said you were going to do. This is why we spend so much time working on demos and tasks as a part of our skiing. Really hone in, and be flexible with over-emphasizing and under-

emphasizing movements as you might have to go get them to move as much or as little as is necessary to perform the skill/task correctly. Remember, fun and games goes a long way to get them to perform movements.

### **Accurate and Appropriate Feedback**

Giving accurate feedback ties directly into movement analysis. If you are able to diagnose properly and fully what is occurring in their skiing and ski/snow interaction, then you are over half way done. Work on giving objective feedback, and don't forget to include positive aspects! The feedback should be appropriate for the time it is given (i.e. don't talk about their edging when you were working on pressuring fore/aft) and to what it relates.

## **Movement Analysis**

Ski instructors use the movement analysis system to:

- Evaluate and prioritize a student's skiing ability and goals.
- Identify movement patterns and cause/effect relationships.
- To better understand ski performance and turn mechanics.
- To develop progressions that are logical and based on a solid understanding of turn mechanics and biomechanics.

The following movement analysis sheet is one example of how to learn more about your students. Using the list on the sheet you can break down skier's movements to better understand how they move about, and then come up with a plan that blends your understanding of turn mechanics, biomechanics, and the skier's goals to formulate a progression.

To learn more about the movement analysis system you can read the Alpine Technical Manual. Working with your trainer and spending time in clinics is another great opportunity to practice the movement analysis system.

## **OBSERVE**

### **Profile:**

Briefly describe the skier

- Male/Female
- Adult/Child
- Skiing on what type of terrain, snow conditions
- Comfort level on terrain
- Athletic/non-athletic

### **Focus:**

What is the student attempting to accomplish? Use the skills concept to identify the skier's movements.

- Straight run, Gliding Wedge, Braking Wedge, Wedge Turn, Beg. Wedge Christie, etc.
- Turn Shape (round, open, closed)
- Turn Type (skidded or carved)

### **Turn Type:**

What type of turn is the skier actually making? Use the skills concept to identify the skier's movements.

- Straight run, Gliding Wedge, Braking Wedge, Wedge Turn, Beg. Wedge Christie, etc.
- Turn Shape (round, z, asymmetrical, open, closed, etc.)
- Turn Type (skidded or carved)

## Balance movements:

Describe the skier's position throughout the maneuver

- Athletic stance: similar flex at ankle, knee, and hip
- Leaning on back of boot for support
- Laterally (side-to-side)
- Fore/aft

## Rotary movements:

Where does the rotary or twisting force originate from to turn the skis?

- Legs & feet (lower body), hip & shoulders (upper body), whole body

## Edging movements:

How does the skier roll or tilt the skis onto the edges?

- Active edging movements from: ankles, knees, and/or hips (Angulation)
- Passive edging movements from: slope of hill, shape of wedge, other
- Banking

## Pressure control movements:

How does the skier manage pressure changes while skiing?

How and when does the skier transfer weight from ski to ski?

- Active flexion and extension movements
- Active foot to foot movements / Equal weight on both feet
- Static
- Fore/aft leverage against front or back of boot

## Summarize the Skills Assessment:

Describe how the skier uses the skills during the initiation, shaping, and finishing phases of the turn.

## Equipment Factors:

- Skis: traditional, modern, length appropriate
- Boots: rear entry, 4 buckle, buckled, unbuckled
- Pole use

## EVALUATE

Typically, you would share your findings with the student. In the instance of practice, you might share your evaluation with your trainer or a training partner using non-judgmental language, being objective, and stating what you saw.

## PRESCRIBE

Using the skills assessment evaluate, prioritize, and develop a lesson plan to meet the goals of your student.

- Identify a Primary & Secondary Skill Focus
- What would you work on first with this skier?
- What progression & exercises would you use to develop their skills?
- What terrain would you use for the progression & alternative exercises?
- How do you address different learning styles in your progression?