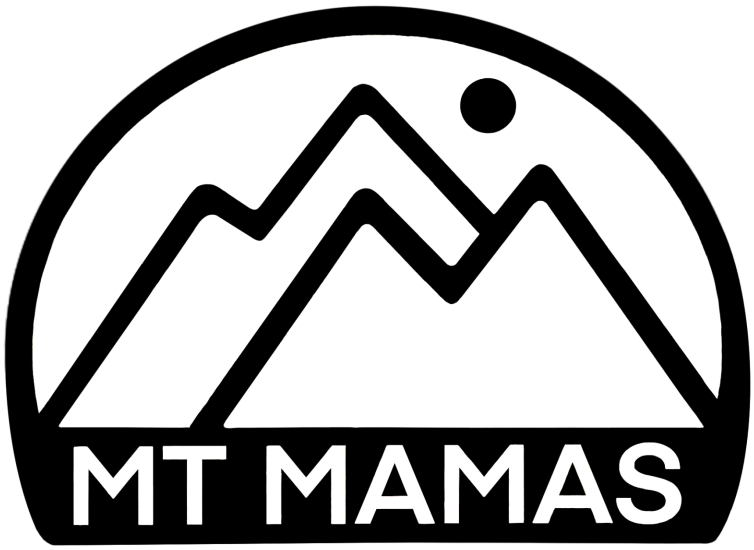


Trail Running Manual

Trail Running

TRIP LEADER REQUIREMENTS

- **Assistant Trip Leader** – Can run 5K on road; Knows trail etiquette (right of way); Knows signs and symptoms of altitude sickness; First Aid/CPR certified
  - Provides instruction for safety on gear, hydration, hyponatremia, altitude sickness
  - Monitors participants for signs and symptoms of signs and symptoms of hypo/hyperthermia, dehydration, and Acute Mountain Sickness (if above 8000 ft)
  - Assists in fitting and checking gear and participants for safety
  - Carries first aid kit and administers basic first aid if needed - can be designated Medic Guide
  - Carries 2-way radio for communication
  - Wears Trip Leader handkerchief to identify as a Trip Leader
  - Wears whistle to communicate in emergencies

- **Lead Trip Leader** – Serving as main Trip Leader of the group; Can run 5K on trail; Can treat athletic injuries on the trail; Knows basic trail-finding skills/use of topo maps; 20 hours experience leading activity; Wilderness First Responder Certified
  - Recons area for activity within 1-2 months of activity
  - Completes Trip Report prior to and after activity
  - Determines routes including emergency routes
  - Aware of signs and symptoms of hypo/hyperthermia, dehydration, and Acute Mountain Sickness (if above 8000 ft) and teaches participants as needed
  - Checks weather
  - Checks gear for safety prior to activity
  - Checks participants for safety and leads safety discussion
  - Carries first aid kit if not designated to Assistant Trip Leader
  - Carries 2-way radio for communication and Bear Spray (if needed)
  - Wears Trip Leader handkerchief to identify as a Trip Leader
  - Wears whistle to communicate in emergencies
  - Communicates with Base Commander at the beginning, middle and end of activity via phone or In Reach Beacon
  - Completes Incident Report and/or SOAP Note if any concerning situation occurs on activity
  - Reports any damaged gear or safety concerns from trip

Trail Running - Activity Plan

PRIOR TO ACTIVITY

GEAR

- **Provided by Mt Mamas:**
  - First Aid Kit per activity
  - Whistle per Guide
  - 2-way radios
  - Emergency Beacon (if needed)
  - Bear Spray (if in area with recent bear activity)
- **Provided by Participants:**
  - Running shoes/boots
  - Hiking pants/shorts (not cotton)
  - Short sleeve shirt (no cotton unless in the desert)
  - Long sleeve shirt (not cotton)
  - Fleece or down insulating layer (optional)
  - Waterproof jacket
  - Pack (handheld bottles, waist pack, or vest pack - see Appendix A)
  - 1-2+ L water in water bottles or water pouch
  - 1 snack per hour on activity
  - Hat
  - Sunglasses
  - Sunscreen
  - Camera
  - Personal first aid kit
- **Have participants watch:**
  - Trail Running for Beginners REI (6 min)
  - Trail Running Techniques REI (3 min)

POSSIBLE ACTIVITY LOCATIONS

- Bonneville Shoreline Trail (Intro Clinic)
- Three Falls, Alpine (Intro Clinic)
- Stewart Falls, Provo Cyn (Beginner)
- Donut Falls, Big Cottonwood Cyn (Beginner)
- Grove Creek Falls to Battlecreek Falls Loop (Intermediate)
- Blackridge, Herriman (Intermediate)

INDIVIDUAL DEFINITIONS

- **Participant** – Individual participating in activity
    - Notify Mt Mamas of any health concerns or injuries prior to activity
    - Report if activity appears too strenuous or difficult
- **Assistant Trip Leader** – Assists Lead Trip Leader with activity
- **Lead Trip Leader** – Leads activity with Assistant Trip Leader (if needed due to group size)
- **Sweeper Trip Leader** - Last Trip Leader in the group (usually the Assistant Trip Leader)
    - Makes sure all participants make it through activity safely
    - Carries 2-way radio for communication with Lead Trip Leader
- **Medic Trip Leader** – Trip Leader designated per activity with first aid/CPR certification
    - Main Trip Leader in charge of minor accidents or injuries
    - Designated Trip Leader to stay with injured individual if case of evacuation
    - Last in group and will assist any in the back of the group with any concerns
    - Carries 2-way radio for communication
- **Base Commander** – Individual not participating in activity that Trip Leader Guide is to report to prior to before, during and after activity of safe completion of activity.
    - Will notify emergency contacts and/or Search and Rescue if group is late or lost

BEGINNING ACTIVITY

SAFE GEAR (GEAR CHECK)

- Check Mt Mama gear for safety: first aid kit, 2-way radios, emergency Beacon (if needed), bear spray (if needed)
- Check Participants gear for safety - packs, shoes
    - Gear
        - Packs - adjust straps for comfort making sure water is easily accessible (handheld bottles, waist packs, vest packs)
        - Shoes - grippy tread (rigid midsole, toe cap)
    - Trip Leaders are NOT required or responsible to size or fix broken gear - participants should ensure gear is safe and sized correctly prior to activity
    - Trip Leaders can refuse participation of any Participant if gear is determined to be unsafe.

SAFE PARTICIPANTS

- Trip Leader to Participant Ratio 1:8
- Check Participants for safety: appropriate clothing, appropriate health, appropriate gear

NOTE: sizing should be determined by individual or rental shop - Trip Leaders are NOT required or responsible to size or fix gear

SAFETY TALK

- **Circle Up -** when participants arrive, gather them together in a circle and have them share 3 things:
    - Name
    - Experience in the activity
    - Goal for the activity
- **Safety talk:** describe the activity and safety items for participants to be aware of (5 items):
    - Environment – weather, mountain conditions, trail conditions, location, distance, routes/runs, time expected, bathrooms/cell phone service
        - Types of trails
            - Park/city trails - beginner
            - Forest service roads - beginner/intermediate
            - Hiking trails - intermediate/extreme
    - Gear – what gear we will be using and how to use it - packs
    - People – sunscreen/hat/sunglasses, food/water, appropriate clothing
        - Clothing - layers (thin synthetic base layer, insulating down or fleece layer, water proof shell - see Appendix A)
    - Dangers – describe any dangers that could occur:
        - Mountain Safety - Rapid weather changes, hazards along the route (rock slides, river crossings, snow field crossings, cliffs, wrong turns etc), poisonous plants, wildlife
        - Dehydration
        - Acute Mountain Sickness if over 8,000 ft (see Appendix B)
        - Hypothermia (see Appendix C)
        - Heat Exhaustion/Stroke (see Appendix D)
    - Safety – what you will be doing to mitigate those dangers

TRAIL RUNNING LESSON (PROGRESSION) - Trip Leaders can use their own discretion to determine which drills and skills would best meet the goals of the Participants. A progression is a series of steps that logically build on one another, increase in difficulty, and are focused specifically on participants. There are always several ways to teach a lesson. Every Participant needs different things, some will need to spend time on a skill and others can skip ones.

- Teaching Tips
    - Trip Leader Body Language
        - Posture - relaxed, stand and face them
        - Hand Gestures - waving, thumbs up, hand shakes or high fives
        - Facial Expressions and Eye Contact - make eye contact, smile
    - Teaching Theory
        - Understand the Teaching/Learning Cycle (see Appendix E)
        - Understand Different Learning Styles (see Appendix F)
- Choose which skills would be appropriate for your group in the selections below

ON THE TRAIL (choose which skills would be appropriate for your group)

- **Running Techniques**
    - Quicken your stride and shorten your steps so you can react quicker to changes in the trail (ie: roots, rocks); Dodging more than stomping
    - Focus gaze about 10-15 ft on the trail
    - Keep shoulders straight - less stress on your back and improves lung expansion; lean whole body slightly forward
    - Arm Swing - hands in relaxed fists; arms perpendicular to torso; fist should lightly graze the side of your running shorts on each swing; builds forward and upward momentum through torso
- **Downhill Tips**
    - Wing out your elbows - improves control and balance
    - Land on your midfoot - improves balance and decreases injury; staying over your center of gravity, rather than behind it, helps you maintain balance and control your speed on descents. If you're landing on your toes or heels, you're less likely to stay over your center of gravity.
- **Uphill Tips**
    - Shorten stride more - easier; less strain on tendons/muscles
    - Speed hike - more efficient

- **Hydrate and eat often** (more salty foods than sweet)
- **Weather**
    - Sites/Apps - National Weather Service, Mountain Weather, Avalanche.org
    - Temperature - be aware of ranges and make sure participants have appropriate clothing
    - Precipitation - be aware of predictions; have safe locations for bad weather if you have to wait it out
    - Thunder/lightning - get off ridges/summits/water immediately; wait it out for at least 30 min if possible
    - Wind - high in large plains, ridges, summits
- **Classes of Terrain** - avg hiker hikes 2 mph on avg terrain
    - Class I - flat trails, easy route finding
    - Class II - light scrambling - talus/boulder fields, low angle
    - Class III - moderate scrambling - boulder fields, moderate angle, requires handholds for stability, may need belay on short sections
    - Class IV - difficult and exposed scrambling, steep angle, rope advisable for high fall risk, exposure

        (referenced from Sierra Club: Definitions for Scrambling Ratings)

WRAP UP AND CLOSING

- **Stretching** - prevent injury, improve performance, and prevent soreness (hold each side for 30 sec)
    - Cross Hamstring stretch
    - Quads stretch
    - Figure four stretch
    - Toe reach
    - Hamstring stretch
    - Sitting quad stretch
    - Dynamic lunges
    - Lunge raising hands
    - Hurdler
    - Butterfly
    - Seated toe reach
    - Seated twist
    - Posterior chain stretch
    - Piriform stretch
    - Vert run
    - Sphinx
    - Spinal twist

        - Piriform stretch on back
        - Spinal twist

    Reference: “15 min stretching routine for trail and ultra runners” Vert Run (video 16 min)

- **Review**
    - Review Lesson - how the days went, clarify any questions
        - Have participants review their trip
        - Focus on positives
    - Review skills - ask questions on new skills acquired
    - Review Goals and Progress - successes and struggles
    - Make a plan for practice at home - discuss skills to work on or upcoming trainings
- **Preview** - what they could learn next
    - Build on new learning
    - Invite them back - look up upcoming trips online

(based on the Professional Ski Instructors Association/American Association of Snowboard Instructors (PSIA/AASI) certification courses "Delivering the Beginner Experience -Alpine" and "Alpine - Level 1")

Risk Management Plan

Trail Running has large inherent risks. Without good Risk Management it is impossible to create the “safe and joy-filled environment” that Mt Mamas seeks to offer every Participant. Managing risk involves using good judgment to make sound decisions in a dynamic environment. This section contains a general overview of common risk factors on Trail Running trips as well as an outline of expected practices for activities. Additionally, you will find the Emergency Action Plan detailed step by step on what to do if you are faced with some common injuries while during the activity and also for emergency situations.

Objective Risk Factors exist inherently in the activity itself

Subjective Risk Factors exist as a result of human engagement in the activity

RISK MANAGEMENT PRACTICES

- **Ratios:** Trip Leaders should maintain a **1:8 Lead Trip Leader to Participant ratio** for each trail running group and groups can be increased with additional Assistant Trip Leaders to maintain the Trip Leader to Participant ratio.
- **Training:** Mt Mamas requires all Lead and Assistant Trip Leaders to be able to demonstrate proper technique and skills listed at the beginning of this manual.
- **Gear Safety:** Running shoes, packs etc will be brought by participants and Trip Leaders will assess generally for safety.
- **Gear Inspection:** Trip Leaders will assess gear for safety prior to trip. Trip Leaders are NOT required or responsible to size or fix broken gear - Participants should ensure gear is safe and sized correctly prior to activity. Trip Leaders can refuse participation of any Participant if gear is determined to be unsafe.
- **Planning & Preparation:** Good risk management begins with good planning and preparation. Trip Leaders will select an appropriate activity site and route that takes into account (among other things) expected weather, terrain, timing, other users, group size, background, experience, physical condition, and goals for the day. Trip reports, waivers, and checklists will all be utilized online prior to the activity to ensure the group is prepared before each trip.
- **Participant Fitness Level:** Must be able to participate in athletic activity without difficulty. Individuals are responsible to notify Trip Leader PRIOR to the trip if they are not feeling their fitness level is adequate.

Emergency Action Plan
Trail Running

PREVENTION

- Trip Leader
    - Trained in First Aid/CPR (Assistant Trip Leaders) and Wilderness First Responder/CPR (Lead Trip Leaders)
    - Completes Trip Report prior to activity (office will update medical and emergency contact information on Participants)
    - Carry First Aid Kit at all times during activity
    - Carry bear spray (if in high risk bear country)
    - Use walkie talkies (one for each Trip Leader)
    - Carry In Reach Beacon (if needed)
    - Check for safe gear, safe participants and have safety chat prior to activity
    - Notify Base Commander of group status and the beginning, middle, and end of activity by phone or beacon
- Base Commander
    - Receive notifications from Trip Leader at the beginning, middle and end of activity
    - Be available during activity to notify emergency contacts of tardiness of group or assist in emergency evacuation or contacting emergency services if needed
- Office
    - Update Trip Report with medical and emergency contact information on participants
    - Email Trip Leader and Base Commander the Trip Report and Emergency Contact and Medical Information prior to activity

LOST OR LATE RETURNING GROUPS

- Prior to activity
    - The Trip Leader will fill out a preliminary **Trip Report** complete with proposed location of activity, possible evacuation routes, and expected times for leaving and returning.
    - Every trip will have a **designated "Late Time"** the the Base Commander will notify emergency contacts of delay.

    - Every trip will have a **designated "Emergency Time"** when the Base Commander will notify Search and Rescue if the Base Commander has not been notified of the safe exit of all participants from activity.
- The Trip Leader can **notify the Base Commander during an activity if the predicted times need to be adjusted**.

INJURIES

- **Minor Injuries:** (minor scrape, sprain, etc.)
    - The designated Medic Trip Leader (generally the rear Assistant Guide or Trip Leader with most medical experience) will administer first aid while the other Trip Leader manages the rest of the group. The affected participant should be kept calm and comfortable. A Trip Leader, or volunteer with medical experience, should remain with the injured participant until they are able to return to the rest of the group. An **Incident Report** should be completed on site if possible or after and signed by both patient and Trip Leader. Take clear **photos** of any wounds or injuries when it is convenient.
- **Major Injuries:**
    - The designated Medic Trip Leader will stay with the participant and assist while the Lead or Assistant Trip Leader manages the rest of the group. The Lead Trip Leader or designated Assistant Trip Leader will make phone calls to the appropriate emergency number below. **An Incident and SOAP Note** should be completed at the time of the event if possible. Take clear **photos** of any wounds or injuries when it is convenient.

COMMUNICATION

- In a Life/Limb Emergency or Property-threatening emergency
    - Try the National Park/State Park/Forest Service/BLM-specific emergency numbers
    - If no park-specific numbers exist, call 911
    - If 911 does not work, use emergency beacon to notify Search and Rescue
- In ALL Emergency Situations, after care has been secured, **notify Base Commander**. If Base Commander is not available, call Emergency Backup Personell (Emily Hacken 801-860-4591) or Marilyn Boucher (801-803-1398). Call each number three times in succession, if no one answers the three phone calls, wait 15 minutes, and move on to the next person.

EVACUATIONS

- If a participant is injured and requires evacuation, follow these procedures based

on the situation:
    - The participant can walk - Trip Leaders will assist the participant in walking/skiing/ hiking out.
    - The participant can't walk – Trip leaders will assess if the participants will need to be carried out (if this can be done safely).
    - The participant can't be carried – if due to a possible head/neck injury or other injury, then notify 911 and/or search and rescue.
- Trip Leaders will assess all locations in an activity to determine easy access to vehicles and alternate escape routes prior to activity. Trip Leaders will document this in the Trip Report and discuss this with Participants at the beginning of activity.

Updated:12/10/24

APPENDICES

APPENDIX A

Trail Running Packs
Bottles - shorter run, have small pouch with handle
Waist Packs - hands free, variety of sizes, small water bottles
Vests/Packs - longer runs, variety of pockets, can carry layers

APPENDIX B

Clothing

- Summer - cotton can pull heat away from the body if wet, but can still be dangerous if you get cold, thin, light-colored clothing, hats/sunglasses for protection against sun
- Winter - Layers is key, “cotton is rotten”
    - Base layer - (wicks away sweat) synthetic, thin long sleeve layer
    - Insulating layer - (insulating) fleece, down, wool
    - Shell layer - (weather protection) waterproof jacket - with pit zips for ventilation
    - Hat, gloves

APPENDIX C

Acute Mountain Sickness – Acute mountain sickness is an illness that can affect mountain climbers, hikers, skiers, or travelers at high altitudes, usually **above 8000 feet** (2400 meters)

- **Causes:** Acute mountain sickness is caused by reduced air pressure and lower oxygen levels at high altitudes. The faster you climb to a high altitude, the more likely you will get acute mountain sickness.
- **The best way to prevent altitude illness is to ascend gradually**. It is a good idea to spend a few days ascending to 9850 feet (3000). Above this

point ascend very slowly so that the elevation at which you sleep does not increase more than 990 feet to 1640 feet (300m to 500m) per night.

- **You are at higher risk for acute mountain sickness if:** You live at or near sea level and travel to a high altitude. You have had the illness before. You ascend quickly. You have not acclimatized to the altitude. Alcohol or other substances have interfered with acclimatization. You have medical problems involving the heart, nervous system, or lungs.
- **Mild Symptoms:** Difficulty sleepiness, Dizziness or light-headedness, Fatigue, Headache, Loss of appetite, Nausea or vomiting, Rapid pulse (heart rate), Shortness of breath with exertion,
- **Severe Symptoms:** Blue color to the skin (cyanosis), Chest tightness or congestion, Confusion, Cough, Coughing up blood, Decreased consciousness or withdrawal from social interaction, Gray or pale complexion, Inability to walk in a straight line, or walk at all, Shortness of breath at rest
- **Treatment:** for all forms of mountain sickness is to climb down (descend) to a lower altitude as rapidly and safely as possible. You should not continue climbing if you develop symptoms. People with severe mountain sickness may need to be admitted to a hospital. A medicine called acetazolamide (Diamox) may be given to help you breathe better. It can help reduce symptoms.
- **Outlook (Prognosis)**: Most cases are mild. Symptoms improve quickly when you climb down the mountain to a lower altitude. **Severe cases may result in death due to lung problems (pulmonary edema) or brain swelling (cerebral edema).**In remote locations, emergency evacuation may not be possible, or treatment may be delayed. This can have a negative effect on the outcome.The outlook **depends on the rate of descent once symptoms begin.** Some people are more prone to developing altitude-related sickness and may not respond as well.
- **When to Contact a Medical Professional:** Call your provider if you have or had symptoms of acute mountain sickness, even if you felt better when you returned to a lower altitude. Call 911 or your local emergency number if you or another hiker have any of the following symptoms:
    - Altered Level of Consciousness
    - Coughing up Blood
    - Severe Breathing Problems
- **Prevention -** Keys to preventing acute mountain sickness include:
    - Climb the mountain gradually. Gradual ascent is the most important factor in preventing acute mountain sickness.
    - Stop for a day or two of rest for every 2000 feet (600 meters) of climb above 8000 feet (2400 meters).
    - Sleep at a lower altitude when possible
    - Make sure that you have the ability to rapidly descend if needed.

        - Learn how to recognize early symptoms of mountain sickness
        - If you are traveling above 9840 feet (3000 meters), you should carry enough oxygen for several days If you plan on climbing quickly, or climbing to a high altitude, ask your provider about medicines that may help.
        - If you are at risk for a low red blood cell count (anemia), ask your provider if your planned trip is safe. Also ask if an iron supplement is right for you. Anemia lowers the amount of oxygen in your blood. This makes you more likely to have mountain sickness.
        - Do not drink alcohol
        - Drink plenty of fluids
        - Eat regular meals that are high in carbohydrates
        - You should avoid high altitudes if you have heart or lung disease.
    - If a participant has a **severe symptom** the participant will be taken off the mountain immediately by Medic Guide.
    - If the participant has a **persistent mild symptom** that does not resolve in 1 hour, the participant will be taken off the mountain to a lower elevation. (Adapted from: https://medlineplus.gov/ency/article/000133.htm)

APPENDIX D

Hypothermia – Occurs when the body temperature falls below 95 degrees F; When your body temperature drops, your heart, nervous system and other organs can't work normally. Left untreated, hypothermia can lead to complete failure of your heart and respiratory system and eventually to death.

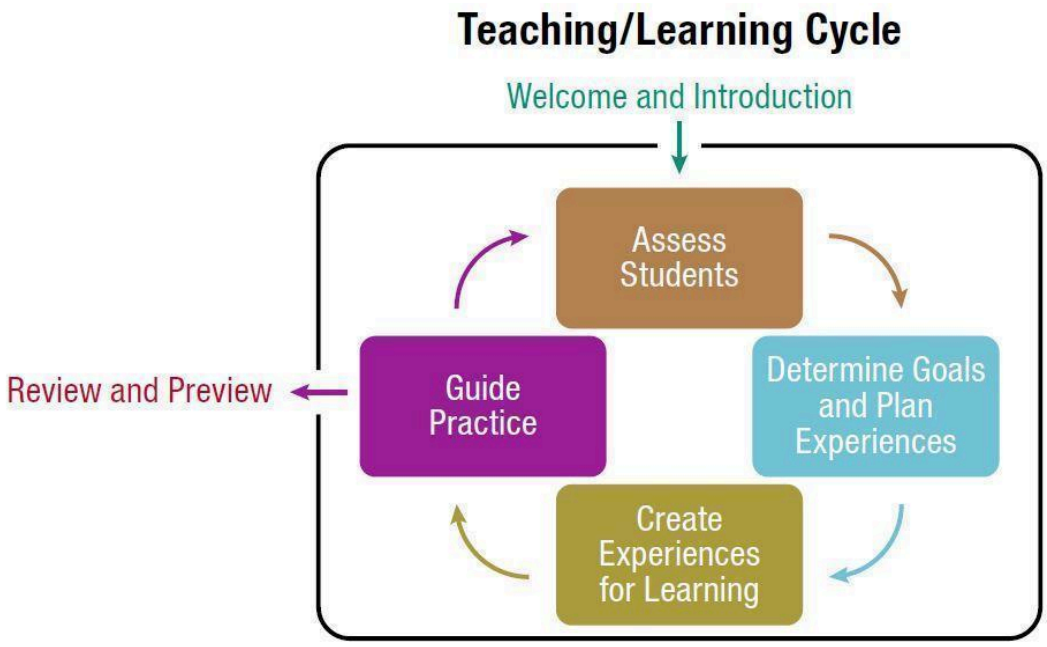
- **Symptoms:** shivering, exhaustion, confusion, fumbling hands, slurred speech, drowsiness, slowed shallow breathing, loss of consciousness
- **Treatment:** warm individual or area – put handwarmers or hot waterbottle on femoral/groin artery site, armpits; avoid briskly rubbing area in case of frostbite; drink hot drinks; remove wet clothing; wrap in blankets or sleeping bag if available
  (Adapted from: https://www.mayoclinic.org/diseases-conditions/hypothermia/symptoms-causes/syc-20352682)

APPENDIX E

Heat Related Illnesses

APPENDIX F

[Teaching/Learning Cycle]



- Assess the Student
    - Before you can build a lesson plan for the day, you need to assess your student's physical abilities and technical understanding. Warm-up activities will give you an opportunity to see how comfortable your guests are on snow, while building good group rapport. Observe their movements, stance, balance, and agility.
- Determine Goals and Plan Experiences
    - Ask questions about their goals and motivations for taking a lesson.
    - As the lesson progresses, remember to make sure the group goals align with what each student wants to learn and their motivations for taking a lesson.
- Create Experiences for Learning
    - Organize students and the lesson environment by choosing appropriate terrain based on ability and snow conditions. Interact with support, and encourage your students.
- Guide Practice
    - Create space to spend one-on-one time with each of your students while others practice or explore movements. Repetition of movements anchors the actual learning and sliding experience. Guided practice also lets you handle an ability split. Challenge your more advanced students with difficult tasks while you spend individualized time on guests who may be

struggling. This also gives students independence while allowing you individualize the lesson.

- Review and Preview
    - At the end of the lesson, make sure to review the experience, preview the next lesson, and invite your students back to your school and the sport. The debrief is an opportunity for your students to discuss their progress and the goals they accomplished. This content should come from the student. It is your job to facilitate the debrief and make a link to what another day on snow would do for them.

(Adapted from: “Delivering the Beginner Experience” Course, PSIA/AASI)

APPENDIX G

Different Learning Styles

VAK Model - Learning Preferences - create multisensory lessons (describe a skill, demonstrate a skill, then have them try the skill)

- V - Visual - pictures, images and demonstrations
- A - Auditory - descriptions, talking about experiences
- K - Kinesthetic - process through feelings and experiences

(Adapted from: “Delivering the Beginner Experience” Course, PSIA/AASI)

Updated 12/10/24