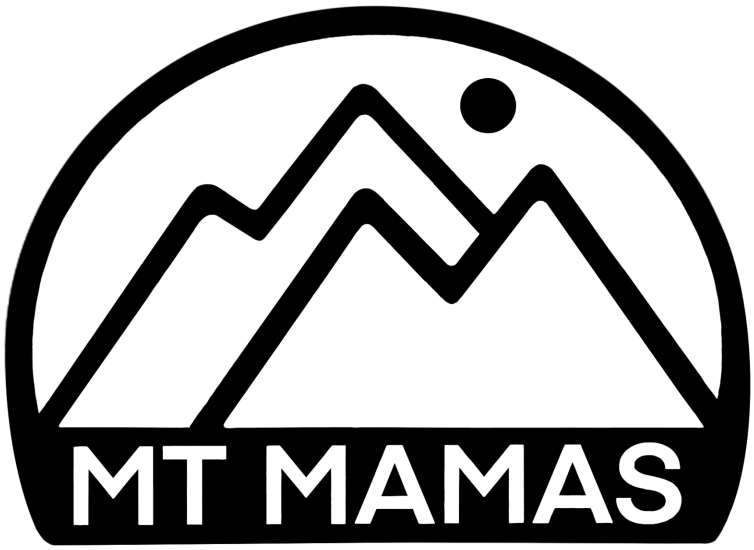


Downhill Skiing Manual

Downhill Skiing

TRIP LEADER REQUIREMENTS

- **Assistant Trip Leader** – Current Intermediate to Advanced Skiier; Demonstrate downhill ski techniques - sliding on snow, snowplow, snowplow turn, getting up after a crash, Christy turn, parallel ski; Avalanche Awareness training annually; First Aid/CPR certified
    - Provides instruction for safety on down hill skiing including gear fitting, stopping, basic turns
    - Monitors participants for signs and symptoms of hypothermia, 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 Guide handkerchief to identify as a Guide
    - Wears whistle to communicate in emergencies
- **Lead Trip Leader** – Serving as main Trip Leader of the group; Experience teaching basic ski techniques - including the Wedge/Christy/Parallel; Avalanche Awareness training annually; Wilderness First Responder Certified
    - Recons area for activity within 1-2 months prior to activity
    - Completes Trip Report prior to and after activity
    - Determines runs including where the ski patrol is located (save Ski Patrol number in phone)
    - Aware of signs and symptoms of hypothermia, dehydration, and Acute Mountain Sickness (if above 8000 ft) and teaches participants as needed
    - Checks weather and Avalanche conditions
    - 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
    - Carries shovel (unless delegated to Assistant Trip Leader) 1 for every 6 participants
    - 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

Downhill Skiing - 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)
  - Avalanche Shovel (1 for every 6 participants)
- **Provided by Participants:**
  - Downhill Skis (may rent or bring own)
  - Ski Poles (may rent or bring own)
  - Ski boots (may rent or bring own)
  - Helmet (may rent or bring own)
  - Liner pants (not cotton)
  - Ski pants
  - Long sleeve shirt (not cotton)
  - Fleece or down insulating layer
  - Waterproof jacket
  - Gloves
  - Hand-warmers
  - Neck or Face Gaiter
  - Goggles
  - Sunscreen
  - Camera
  - Personal first aid kit
  - 2 snacks in your coat, packed lunch,
  - Water bottles (in car)
  - Backpack (if you want to carry stuff on the mountain)
- **Have participants watch:**
  - Getting Started and Equipment
  - Sliding on Snow
  - How to Snowplow
  - Snowplow Turns
  - Getting up after a Fall

POSSIBLE ACTIVITY LOCATIONS

- Snowpine lift (free), Alta (Intro Clinic)
- Sundance Resort, Provo Cyn (Intro Clinic, Beginner, Intermediate, Extreme)
- Brighton Resort, Big Cottonwood Cyn (Intro Clinic, Beginner, Intermediate, Extreme)
- Powder Mt Resort, Eden (Intro Clinic, Beginner, Intermediate, Extreme)
- Snowbird Resort, Little Cottonwood Cyn (Intro Clinic, Beginner, Intermediate, Extreme)
- Brianhead Resort, Brianhead (Intro Clinic, Beginner, Intermediate, Extreme)

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), shovel

- Check participants gear for safety - boots fit into snowboard bindings (Guides 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 demonstrate how to adjust gear
    - Boots
    - Skis - between the armpit and the shoulder
    - Poles - poles upside down, arm bent around 90-120 degrees
    - Helmets - snug but not tight, snug chin strap, fine tune with helmet adjusters

SAFE PARTICIPANTS

- Trip Leader to Participant Ratio 1:5
- Check Participants for safety: appropriate clothing, appropriate health, appropriate gear
- NOTE: sizing should be determined by individual or rental shop - Guides 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, routes/runs, run conditions, time expected, Bathrooms/Cell phone service
    - Gear – what gear we will be using and how to use it - downhill skis
    - People – sunscreen/hat/sunglasses, food/water, appropriate clothing
        - Clothing - layers (thin synthetic base layer, insulating down or fleece layer, water proof shell)
    - Dangers – describe any dangers that could occur:
        - Mountain Safety - Rapid weather changes, hazards along the runs (avalanche danger, cliffs, wrong turns, etc)
        - Acute Mountain Sickness if over 8,000 ft (see Appendix A)
        - Avalanche Risk (see Appendix B)
        - Frostbite (see Appendix C)
        - Hypothermia (see Appendix D)
    - Safety – what you will be doing to mitigate those dangers
        - **Responsibility Code**

- This Skiier's Responsibility Code was developed by the National Ski Areas Association, which sets forth the responsibility of each participant for safe conduct on the slopes and lifts. It is our job as instructors to educate all our students of the risks in the mountain environment. The code comprises of seven points:
- Always stay in control, and be able to stop or avoid other people or objects.
- People ahead of you have the right of way. It is your responsibility to avoid them.
- You must not stop where you obstruct a trail, or are not visible from above.
- Whenever starting downhill or merging into a trail, look uphill and yield to others.
- Always use devices to help prevent runaway equipment.
- Observe all posted signs and warnings. Keep off closed trails and out of closed areas.
- Prior to using any lift, you must have the knowledge and ability to load, ride and unload safely.

- **Park SMART**

- Freestyle Terrain - terrain parks, jumps, boxes, rails, half pipes, combos
- Start Small - Know size of features and start small

- Make a plan - check weather, be prepared for conditions to change, any feature can ride different through out the day or season, take an inspection lap, determine speed by asking others, take off lean forward, go fast enough to make it to the landing zone
- Always Look - Inspect each feature before you go, check out gap, other features coming up, blind spots, landing clear, spotter - crosses arm - closed, circle arms - go
- Respect - call your drop, clear landing if you fall, be nice,
- Take it Easy - no drinking/drugs/fatigue, know your limits, stay in control of your body in the air

    - Emergency info: review resort map for beginner/intermediate areas and runs; possible safety concerns

- **Putting on Gear**
    - Carrying skis - interlock brakes and carry upright or interlock brakes and carry over the shoulder in front of the bindings
    - Putting on skis - flat, heel binding down (push “shark fin down so you can see the shark tooth”), stand on one leg, scrape off snow on binding, line up toe and then heel and step in
    - Taking off skis - use pole or boot to push down heel of binding, kids - hand while sitting or back of other ski

DOWNHILL SKIING 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 the 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)
        - Cross Country Teaching Model (see Appendix G)

- Choose which skills would be appropriate for your group in the selections below

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

BEGINNER

- **Downhill Skiing Progression (Lesson)**
    - **Flatland Movements**
        - Athletic Stance (legs hip length apart and bent slightly at hips, hands up, looking ahead - straighten up and down by bending knees/hips while keeping boots flat - jumping/step side to side/balance on one foot) Walking in Boots (heel to toe) - make up games to practice skill
        - Turning upper and lower body separately - Rotational Control
            - Bow Ties - turn heel and toe to make a bowtie in the snow
            - Boot Arcs - make an arc in the snow; C around the other foot, can use poles for support
        - Putting on skis - flat, heel binding down (push “shark fin down so you can see the shark tooth”), stand on one leg, scrape off snow on binding, line up toe and then heel and step in
        - Taking off skis - use pole or boot to push down heel of binding; kids - use hand while sitting; back of other ski
    - Getting up after a fall
        - Put skis parallel and across the hill beneath you, seated position, use hands to push against upslope and walk hands around to the front of you
        - Roll onto belly, lift skis behind you, set skis down on snow like a V on both sides of you, pushup onto knees and onto feet, step so your skis are parallel and across the hill
        - Click one ski off
    - **Riding Lifts**
        - Magic Carpet - athletic stance, stand on entire foot, will feel jerk but stay in stance, no walking or leaning over, keep poles up, let conveyor push you off, step away
        - Paddle Tow - slowly walk to side of tow, point skis uphill, look back, grab it, stand up and lean forward, keep skis parallel, let go and step out of the way
        - Chairlift

            - Getting on - ski up to line, once chair passes, follow to next line to Load, poles in hand, backpack off, look back, sit down, put down bar
            - Getting off - lift bar, ski tips up, parallel skis, stand up and slide straight
    - **Intro to Sliding - Find flat area**
        - One Ski Drills - Athletic stance, poles out in front
            - Step and slide, figure 8s, circles, how long can they slide, use poles to push and slide,
        - Two Ski Drills
            - Wagon Wheel (feeling comfortable walking around with skis)
                - Step in a circle with yourself as the hub
                - Put pole in center as hub and they wedge around it with toe or heel of skis
        - Maneuvering on a Slope
            - Side step up a hill - tipping knees up the hill on edges, baby steps up the hill (kick snow up the hill)
            - Facing downhill
                - Use Wagon Wheel wedge to step and face downhill
                - Bullfighter Turn - put poles downhill, use wagon wheel wedge to face downhill
            - Straight Run - find slightly sloped area, turn downhill, athletic stance, slide slowly skis parallel, bounce up and down
        - Gliding Wedge - braking to control speed
            - Practice on flat, step with back, “spread the peanut butter”, pick terrain that is mellow, practice parallel to wedge to stop
    - **Turning - Slow slope, facing fall line**
        - Push on outside ski, turn uphill until they stop
        - Step while skiing to make turn, turn uphill until they stop
        - Linking Wedge Turns - Slow slope
            - Push out outside of ski, turn uphill until speed is controlled, then continue next turn
            - Kids - while turning, “dribble ball” on outside foot to put pressure on outside ski, shoot ball in between on the flat
    - **Parallel Turns (see Appendix H - Phases of Turning)**
        - Use same techniques as before, just increase speed or steepness of slope
        - Thumper turn - make turn and lift up inside ski and step several times

        - How to make uphill ski flat so it can slide in - while stopped, roll knee out and slide ski in

LEVEL OUTCOMES

- Level 1 Outcomes
    - Introduction to Equipment
    - Introduction to Athletic Stance and Movement- Without Skis
    - Stepping, Turning and Tipping the Legs
    - Movement on Skis
    - Walking, Shuffling, Sliding on Two Skis, Stepping in a Circle
    - Sidestepping
    - Sliding in a Straight Run
    - Stepping and Hopping
    - Gliding Wedge
    - Braking Wedge
    - First Turns
- Level 2 Outcomes
    - Linked Wedge Turns
- Level 3 Outcomes
    - Linked Wedge Turns with Speed Control
    - Traverse
- Level 4 Outcomes
    - Sideslip
    - Forward Sideslip
    - Linked Basic Wedge Christies

WRAP UP AND CLOSING

- **Review**
    - Review Lesson - how the days went, clarify any questions
        - Have participants review their trip
        - Focus on positives
    - Review Skills
        - “How do you stop”
        - “How do you turn?”
    - 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" and "Cross Country - Level 1")

Risk Management Plan

Downhill Skiing 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 Downhill Skiing 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 **1:5 Lead Trip Leader to Participant ratio** for each downhill skiing 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:** Downhill skis, poles, boots, 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
Downhill Skiing

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 shovel (for avalanche safety)
    - 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, including SKI PATROL. **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
    - Call SKI PATROL (put specific number in your phone before activity - see Appendix I)
    - If you can't get ahold of Ski Patrol, 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:10/19/24

APPENDICES

APPENDIX A

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 B

Avalanche Danger (Avalanche.org)

- **Be observant** - Keep your eyes peeled. Is there evidence of prior slides, like bent trees or blown-out gullies? If an avalanche was to occur, what does the runout below look like? Would it wash you off a cliff, into a terrain trap, or out into a broad meadow?
- **Risky area** - If it feels sketchy, send one person down at a time. Watch one another from a safe location, out of trigger and runout zones.
- **Changing conditions** - Keep an eye on shifting conditions, like weather, elevation, sunlight, and wind. And listen for (un)settling snow, known as "whumphing." Remember to communicate regularly with your partners to maximize safety.
- **Caught in an avalanche? Avalanche.ca has a few suggestions.**
    - **Grab onto anything stable**. This may work at the trigger point, but it won't likely help you if you are hit by a moving flow. The idea is to get off the descending slab.
    - **Try to ditch your gear**. Skis, poles, and boards can be dangerous in the fall, causing blunt-force trauma.
    - **Try to "swim" to stay on the surface** and off to the side of the avalanche. Inflatable backpacks, or avalanche balloon systems, can float you to the surface, stacking the odds of survival in your favor instead of getting churned under the debris.
    - **Roll onto your back and descend feet first**. Like whitewater rafting, this position puts your face up and leverages your legs as potential shock absorbers and brakes.
    - **Keep your teeth clenched and mouth closed** to prevent snow from packing down your airway.
    - **Arm up.** When the avalanche slows, try to wriggle yourself to the top. The snow will quickly cement around you, preventing any movement. Try to get an arm to the surface to indicate your location to others.
    - **Asphyxia is the number one cause of death in an avalanche.** If you're caught under the snow, try to create an air pocket around your face with your arms. Anything you can do to give you more air can add precious minutes to your rescue.
    - **After the avalanche stops**, try to dig yourself out if possible. Stay calm and shout only when a rescuer is near. If completely buried, stay as calm as possible. It's up to your buddies to dig you out.
    - **Get out of harm's way.** Stay out of potential avalanche paths and runout zones, and don't wander onto suspect slopes. Instead, stay to the side of potential flows.
      (Adapted from: https://gearjunkie.com/avalanche-safety-tips)

APPENDIX C

Frostbite - Frostbite is an injury caused by freezing of the skin and underlying tissues. First your skin becomes very cold and red, then numb, hard and pale. Frostbite is most common on the fingers, toes, nose, ears, cheeks and chin. Exposed skin in cold, windy weather is most vulnerable to frostbite. But frostbite can occur on skin covered by gloves or other clothing.

- **Symptoms:** cold skin, prickling feeling, numbness, red/white/bluish-white or grayish-yellow skin, hard or waxy-looking skin, clumsiness due to joint and muscle stiffness, blistering after rewarming in severe cases Most common on the fingers, toes, nose, ears, cheeks and chin. Because of skin numbness, you may not realize you have frostbite until someone else points it out.
- **Treatment:** rewarming skin, oral pain medication, protect the injury (Adapted from: https://www.mayoclinic.org/diseases-conditions/frostbite/diagnosis-treatment/drc-20372661)

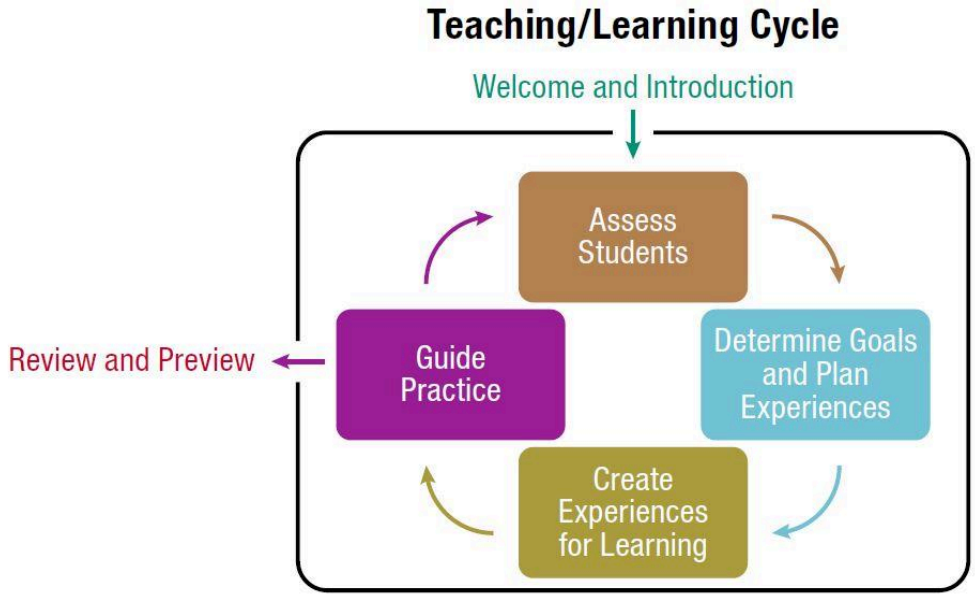
APPENDIX D

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

[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 F

Different Learning Styles

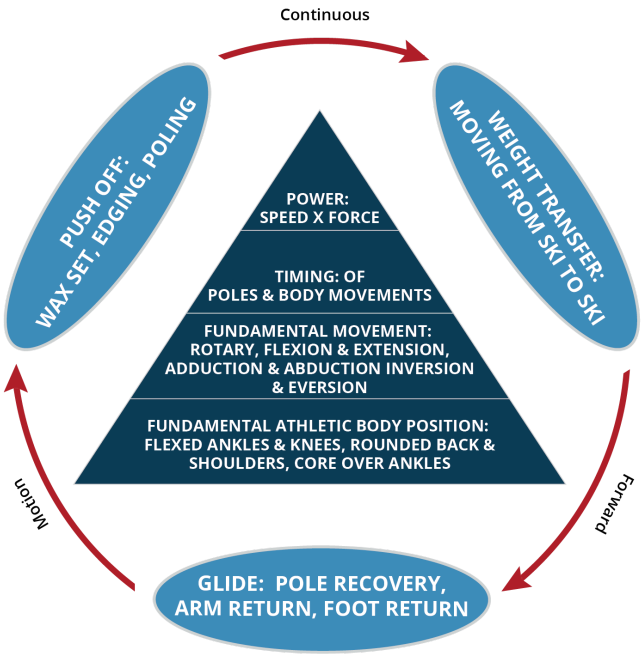
VAK Model - Learning Preferences - create multisensory lessons (describe a skill, demonstrate a skill, then have them try the skill)

- 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)

APPENDIX G

Cross Country Skiing Technical Teaching Model



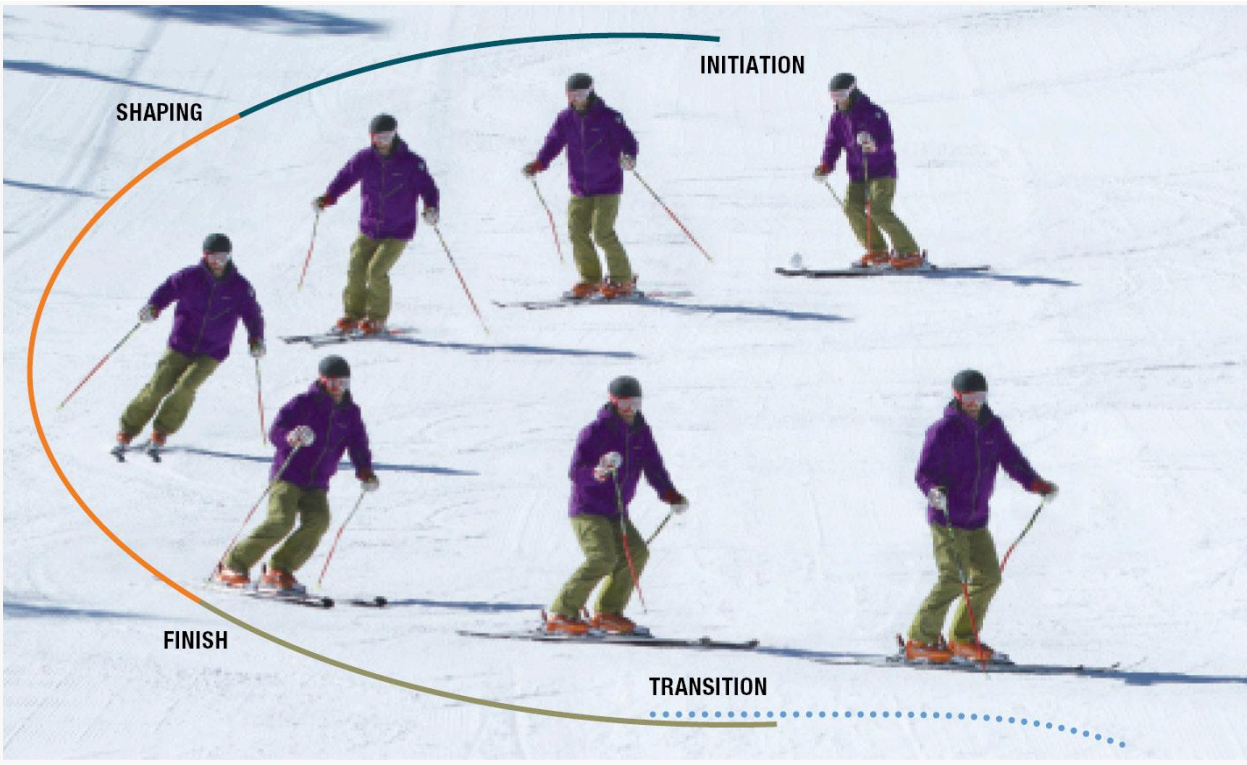
- Sports Performance Pyramid (dark blue pyramid)
    - Fundamental Body Position
        - Athletic Stance - jump up and down and land softly in the athletic stance, ankles/knees/hips flexed, pressure on the balls of their feet, looking forward not at feet, core over ankles
        - One-Leg Balance - lined up over their ski - ankle/knee/hip/head stacked, have students balance and bounce on one leg
        - Stacked and stable
    - Fundamental Body Movement - flexion and extension
    - Timing
    - Power
- Phases (light blue ovals on the outside)
    - Push Off
    - Weight Transfer
    - Glide

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

APPENDIX H

Turning

- **Turn Phases** - Initiation, Shaping, Finish, Transition



- Fore/Aft Pressure Control
    - Initiation Phase - To **redistribute pressure from the tails to the center of the skis,** the skier will need to flex her ankles and hips. Ideally, her spine and shins will be slanted forward and roughly parallel to each other. The whole ski will engage in the snow to assist with making a round turn shape in the initiation phase and setting up the arc of the entire turn.
    - Continue through the Shaping and Finish Phase
- Foot/Foot Pressure Control
    - Initiation Phase - To **direct pressure to the outside ski**, the skier will need to lean her upper body slightly so that her pelvis and shoulders remain parallel to the slope. As she adjusts the alignment of her upper body to the outside ski, she should start flexing the inside knee and hip as she slightly extends the outside knee and hip.
    - Continue through the Shaping and Finish Phase

- Rotational Control
    - Initiation Phase - For the skier to be able to **turn both skis in the same direction at the same time,** she will need to turn her legs underneath a more stable upper body that is already facing towards the apex of the turn. This will assist with making a rounder turn shape and setting up the arc of the entire turn.
    - Shaping Phase - For the skier to be able to make a rounder turn shape, she will need to continue turning both legs in the direction of the turn separate from the upper body, and continue through Finish Phase
- Edge Control
    - Initiation Phase - To create a **rounder turn shape,** the skier will need to tip the legs in the direction of the turn while adjusting her pelvis and shoulders so that they are parallel to the slope. This will allow the inside ski to release its grip from the previous turn and the outside ski can start the new turn.
    - Continue through the Shaping and Finish Phase

    (Adapted from: “Alpine Level 1” Course, PSIA/AASI)

APPENDIX I

Ski Patrol Numbers

- **Alta** - 385-449-8633
- **Brianhead** - 435-691-0844
- **Brighton** - contact using their app
- **Powder Mountain** - 801-745-3772 ext 3
- **Sundance** - 801-223-4150

Updated 10/19/24