



**SHASTA MOUNTAINEERING SCHOOL
OVERNIGHT EQUIPMENT GUIDELINES
FOR SKI MOUNTAINEERING TRIPS**

These are guidelines for your personal climbing equipment and clothing for your summit climb and ski descent of Mt Shasta with Shasta Mountaineering School. You should invest a considerable amount of time and research in developing a system that will work for you and the anticipated range of environmental conditions that are typical on Mt Shasta for your trip dates. If you have questions, please don't hesitate to email info@climbshasta.com with questions regarding your equipment and clothing selection.

SKI SPECIFIC EQUIPMENT –

1. Alpine Touring Skis or Splitboard.

95 to 105mm is the ideal waist size of the size of the ski. Snowboarders renting without prior splitboard experience should spend several days practicing with their equipment prior to participating in a guided trip due to the unique intricacies of each different splitboard setup.

DINN setting, binding screws, etc.

2. Alpine Touring Boots.

All ski boots must be alpine touring orientated boots. A lightweight 2 or 3 buckle alpine touring ski boot is ideal. Resort ski boots are not acceptable. The fit compatibility with your crampons is very important. If in doubt, please call us to confirm crampon compatibility with your ski boots.

3. Alpine Touring bindings.

Modern Dynafit-style pin bindings are now the standard. Older frame bindings and tele bindings are acceptable, but heavy and disadvantageous.

4. Adjustable Ski Poles (We can provide).

Backcountry-focused adjustable ski poles are required. Trekking poles will also work, but they must have wide ski basket installed.

5. Climbing Skins.

The metal edge of the ski should be showing. However, the base of the ski should not be exposed. The skin should cover approximately 85% the length of the ski. The skin length coverage at the tip and tail is not as important for traction as the horizontal skin coverage closer to the binding. The bodyweight underneath the ski boot engages

the climbing skin onto the snow surface.

6. Ski Crampons.

Ski crampons are a critical piece of equipment for Mt Shasta and it is required. Alpine touring ski binding manufacturers all make their own proprietary ski crampon system to fit their bindings.

7. Ski Strap.

Such as the Voile brand. This is to strap our skis together when carrying them on our backpacks.

8. Ski goggles.

Ski goggles are optional. We recommend descending in sunglasses, but ski goggles can help block wind and give a wide field of view. Ski goggles are usually only used for the descent and are not intended to be used for the climbing portion of the trip.

9. 2 pairs of ski socks.

Two very thin pairs of lightweight ski socks that rise above the calf. The ski boot provides the remaining insulation. Thick insulated socks will be the source of heat, friction, and blisters.

10. Avalanche transceiver, shovel, and probe.

Required for all ski trips. The shovel must be an aluminum avalanche rescue-designed shovel. All of this equipment can be rented from the 5th Season in Mt Shasta. Treat your avalanche transceiver with care as it contains sensitive electronics and fragile ceramic antennas.

MOUNTAINEERING EQUIPMENT —

1. Crampons (We can provide).

12-point steel mountaineering crampons are required. The fit compatibility with your ski boots is very important.

2. Climbing helmet (We can provide).

The helmet must be designed for mountaineering or rock climbing. Ski or bike helmets are not acceptable.

3. Ice axe (We can provide).

60-75cm in length, the length of the axe depends on your height and the type of climbing.

4. Backpack (We can provide).

An internal frame backpack between 60-80 liters in volume and designed for overnight backpacking or mountaineering.

5. Sleeping bag (We can provide).

Down or synthetic insulation. Rated down to at least 15°F is required.

6. Sleeping pad (We can provide).

Either a closed cell foam or inflatable pad is required for a good night's sleep.

7. Climbing harness (We can provide).

An alpine climbing harness that is easily packable is best. A rock climbing harness will also work.

8. Headlamp (We can provide).

Fresh batteries.

9. Sunglasses.

Dark and polarized lenses with some side wrap is required. Inexpensive and universal side shields can be purchased from Amazon.com to add extra side wrap to sunglasses of the "wayfarer" style design without side wrap.

10. Two 1-liter wide mouth water bottles (We can provide).

Some summer trips may require three 1-liter water bottles. However, we try to limit the amount of water weight we carry due to the density of the water. CamelBak and other hydration bladders are strongly discouraged due to a number of factors that are inconvenient while mountaineering, including hoses freezing and packability.

11. Insulated mug (We can provide).

12. Lightweight bowl and eating utensils (We can provide).

CLOTHING –

LOWER BODY

1. 2 pairs of mid-weight insulated wool socks.

Wool or synthetic, such as the Icebreaker brand. The requirement will vary depending on the date and anticipated weather conditions of your trip. The amount of insulation in the socks should also be considered with the overall thickness of the mountaineering boot that it is paired with.

For spring and early summer trips, two pairs of mid-weight wool socks would be the requirement. One lightweight wool and one midweight wool could be a good consideration for when air temperatures on the lower mountain are warmer. For warm summer trips in July, two pairs of lightweight wool socks might be ideal.

2. Underwear.

Anything will work but our preference is lightweight wool because it helps reduce the likelihood of chaffing. Typically, we bring 2 pairs of underwear for a 3-day trip.

3. Base layer bottoms.

Personally, we almost never use them while climbing on the summit day because of the immense amount of body heat you will be generating while climbing. For

spring and early summer trips, these might be consideration for trips with colder air temperatures. If you are going to use base layer bottoms, lightweight and wool or synthetic is the requirement.

Be aware that shedding your long underwear may not be a request that is easily accommodated on the summit morning by your guide. Boots, crampons, harness, pants, etc. all must be removed.

Typically we recommend against bringing base layer bottoms on most trips. Some climbers may choose to carry base layer bottoms to sleep in. If base layer bottoms will improve the quality of your sleep, then definitely bring them as sleep is important. If in doubt, please bring base layer bottoms to the gear check and your guide will determine if they appropriate based on the weather forecast for your trip.

4. Breathable soft shell pants. -

We recommend a lightweight breathable and water-resistant soft-shell pant with a relaxed fit, designed specifically for ski mountaineering. This is one of the most important layers and frequently overlooked items by skiers climbing big mountains. You will spend almost the entirety of your trip in your water-resistant soft-shell pants.

Backcountry skiing pants like the Outdoor Research Trail Breaker Pants are great pants for ski mountaineering on Mt Shasta, Rab also makes a good selection of soft shell pants

Extremely loose fitting and heavily insulated resort skiing pants are highly discouraged and in most cases are not acceptable. The Outdoor Research Trail Breaker Pants strike a great balance of being relaxed around the waist and upper thigh, yet constricting around the ankle to limit the potentially for catching a crampon spike. These pants also have a zipper at the ankle cuff which makes getting the ankle of the pants down over the top of the ski boot easy.

UPPER BODY

5. Base layer top.

Lightweight and wool or synthetic.

A lightweight wool and athletic fitting long sleeve is our preference. Typically we just use this layer during cold weather, like on the morning of our summit attempt.

6. Mid layer top.

Midweight fleece, or some other wool/synthetic insulating layer.

7. Heavy weight down insulated jacket.

This is another critical piece of equipment that is often overlooked. A heavy fill down jacket is a critical item any time of the year when climbing Mt Shasta, and you will not regret a thicker down jacket.

It should be lightweight, packable and designed for mountaineering. A lightweight down sweater like the Patagonia Nanopuff is not sufficient. If you're looking to save money and seek greater utility for future use, you may consider pairing two medium fill down jackets together.

The purpose of the heavy weight down jacket is to immediately trap and retain body heat while we are taking breaks during the early morning hours of our summit attempt.

8. Hooded Sun Shirt

For nearly all trips and especially summer trips, a hooded sun shirt could nearly be considered a required piece of clothing.

It is common for beginner climbers to underestimate the intense heat and radiation reflected by the sun and increased effect due to the thinner atmosphere at altitude. The hood helps keep the sun from directly burning your neck and ears, and the tops of your arms and hands. If you don't want to purchase a hooded sun shirt, it is very important that you have a system in place to keep the sun directly off your skin. However, we would highly recommend to purchase a hooded sun shirt.

Our favorite is the Outdoor Research Echo Sun Hoodie because it is thinner than most hooded sun shirts so it will breathe well for climbers with core body temperatures that run on the warmer side.

9. Short sleeve shirt.

Lightweight, and wool or synthetic. The air temperatures on the lower mountain can be very warm. A lightweight running shirt is useful if you don't bring a hooded sun shirt. Often times, I'll just bring one or the other.

10. Face buff or balaclava.

To keep the head and ears warm. The face buff also helps keep the wind off your face. Typically, we don't wear thick wool beanies while climbing due to the fact they don't interface very well underneath the climbing helmet. This is where a thin balaclava or neck buff works well. Typically, we prefer a thinner material rather than thicker due to the amount of body heat we'll be generating while climbing to the summit.

11. Lightweight liner gloves.

Useful around camp or when hiking without an ice axe in your hand. Liner gloves can also be used to add extra insulation when paired inside of a leather mountaineering glove.

12. Two pairs of mid-weight insulated leather mountaineering gloves. Depending on the date of your trip, one lightweight pair and one mediumweight may be ideal.

This is another critical piece of equipment that is often overlooked. Correct gloves are very important. Rather than purchasing a single expensive heavyweight pair of gloves that lack dexterity when holding the ice axe and are your only reliable pair of gloves, we recommend having at least two pairs of leather gloves. If one pair of gloves get wet, you have a backup pair stored in your backpack. If you lose a glove, you also have another backup set.

For spring and early summer trips, you might consider purchasing two pairs of mid-weight leather mountaineering gloves. For summer trips in July with warmer air temperatures, one lightweight leather glove specific to alpine climbing and one midweight leather glove may be the best approach.

The Orotvox Mountain Guides gloves, the Outdoor Research Aksel Work Gloves and the Black Diamond Dirtbag gloves are all great examples of gloves lightweight gloves that work well on Mt Shasta. The Black Diamond Spark gloves are good examples of mediumweight gloves that suit most people well on Mt Shasta. The Black Diamond Guide Gloves are likely to be too thick, bulky, and too much insulation for most people while climbing Mt Shasta, especially when being physically active.

13. Warm hat.

A thicker wool beanie is ideal for sitting around camp, but it won't fit under your helmet. If you're concerned about a cold head or cold ears, consider a thin skull cap style beanie that will interface well under the climbing helmet. A neck gaiter also pairs well underneath mountaineering helmet straps.

14. Sun hat or ball cap.

The sun and heat on Mt Shasta can be just as intense as the cold. A sun hat is a required piece of equipment for all climbs. Consider synthetic material so it dries quickly.

PERSONAL ITEMS

1. Toilet paper.

We will pack out all our human waste. We will provide human waste pack out bags. Rather than bringing an entire fresh roll of toilet paper, which is well in excess of what you will use on your trip, consider waiting to the roll in use in your home bathroom gets to the 25-50% level and bringing that. Toilet paper can also be useful for cleaning dirty dishes after meals. We will pack out all used toilet paper.

2. Garbage bag.

Can be used for helping with packing out human waste, as a pack liner, or emergency poncho. At least one plastic garbage bag can be a good multipurpose item to have. Be careful not to let it accidentally blow away on the mountain.

3. **Personal kit.**
Tooth brush, blister kit, medications, and very small first aid kit. Duct tape is our favorite personal solution for blisters.
4. **Sunscreen with greater than 30SPF.**
We prefer a zinc-based cream. Aerosol spray bottles are bulky and not appropriate.
5. **Lip balm with an SPF rating.**
Very important and underestimated.
6. **Earplugs.**
Optional, but we will be sharing tents as a climbing team. They are useful if someone is snoring. Ear plugs are also useful if the wind is shaking the tent walls and creating noise at night while trying to sleep.
7. **Zip lock bags.**
For packing out trash, and many other useful functions.
8. **Backup USB Battery Bank**
Very useful for recharging your phone for photos. Highly recommended. Don't forget any associated charging cords.