



American
Alpine Institute

The Spirit of Alpinism

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RAINIER CLIMB VIA THE KAUTZ GLACIER

Seattle, WA

EQUIPMENT CHECKLIST

The primary goal of any alpine climber should always be to carry as little as possible. What is left out of a backpack is often just as important as what is placed inside. Conditions in the mountains vary dramatically from season-to-season and sometimes even throughout the same day. This can make the process of preparing equipment for an alpine climb difficult. On the one hand, a climber wants to be light. But on the other, a climber wants to have everything he or she needs if there is a storm.

This list was designed for the “worst case scenario” trip with significant inclement weather. In serious conditions it’s not uncommon for a climber to need every piece of clothing and equipment on this list. However, if a program does not encounter significant weather, there may be items here that are not used. As you prepare for your trip, it’s important to plan for the worst and hope for the best.

On the first day of your program, an AAI guide will work with you to refine your mountain kit to ensure that you bring exactly what’s needed given the forecast. It is acceptable to bring too much clothing or equipment to your initial meeting. And it is acceptable to bring things that you have questions about. Extra equipment can always be left behind at the AAI shop.

The Cascade climbing season is defined as May 1st through October 1st. This list references Early, Mid, and Late-season conditions. These periods of the climbing season are roughly defined by the different types of weather and snow conditions you are likely to encounter:

- **Early-Season Conditions** (May 1st-July 1st): There is usually significant snow both on the ground as well as on the glaciers. Climbers should expect to encounter deep wet snow during the day and firm conditions at night. Overnight temperatures range from 15° to 40°F (-9-4°C). Daytime highs range from 35° to 70°F (1-21°C). Precipitation as snow or rain is likely in the early-season.
- **Mid-Season Conditions** (July 1st-September 1st): Temperatures range from 40 to 50°F (4-10°C) at night, with occasional dips down below freezing. Daytime temperatures often reach 70°F (21°C). Climbers should expect the possibility of freezing temperatures above 9000ft on summit days throughout the summer season. And though mid-season tends to be dryer in the Cascades, the possibility of rain is still always there.
- **Late-Season Conditions** (September 1st-October 1st): September is a varied month. Temperatures begin to drop both during the day and at night. Late in the month, it is possible that you will encounter an increase in snow or rain.

Please be sure to check the forecast several days prior to your course to ensure that you are properly prepared.

[NOAA Mt. Rainier National Park Weekly Forecast](#)

PROVIDED EQUIPMENT: Climbing rope, anchors, solid waste bags

RENTALS: Equipment that is available for rent through the AAI Equipment Shop is designated with a “ Rent” check box. These items may be rented on the first morning of your course during your rendezvous. It is possible to reserve rentals ahead of time but due to an extensive inventory it is not necessary. Please call the shop if you have unusual sizing issues (either large or small), as those items are limited.

If you need rental equipment, please call to let us know at least two to three weeks in advance so we have adequate time to bring all necessary equipment down to Seattle for the rendezvous.

Underlined items in this form are hyperlinked to examples available in our Equipment Shop. Don't forget that AAI climbers receive a 15% discount off full-price items purchased through our gear shop!

Call or E-mail the Equipment Shop for Advice on Gear

Please feel free to contact us and to let us help you get ready for your climbing trip. Your comfort and safety depend on being well equipped. Whether you get your gear from us or just get advice, we're here to help you prepare.

Call: (360) 671-1570 Email: shop@AlpineInstitute.com

Equipment Shop Website: www.Shop.AlpineInstitute.com

Clothing	Packing Checklist
<p>Beanie/Toque Wool or synthetic, must fit under helmet. Easily replaced with hooded layers after early-season.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sun Hat Preferred to fit under helmet.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Buff/Neck Gaiter Look for one that is UPF rated. Brighter colors work better for warmer conditions and darker colors for colder conditions.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Glacier Glasses These are mandatory. Look for a pair that fits well and has side shields. The lenses should be dark enough to not let more than 10% of visible light through. Photochromic (variable tint) lenses are more expensive but are usable in a wider range of activities.</p> <p>☆ NOTE: Those using contact lenses should also bring a pair of prescription glasses in the event that your contacts or solutions are lost or damaged by freezing. If you only use prescription glasses, we recommend “OTG” (over the glass) or “Frame-over” style sunglasses.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

<p>Goggles Optional for early and late-season. These are used in high winds or heavy rain and can serve as a backup to your glacier glasses. Look for UVA/UVB protection and a lighter lens is recommended for better visibility in flat light.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Headlamp Bring extra batteries or if it has a rechargeable battery make sure and bring a charger. 200-350 Lumens is an ideal range.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Liner Glove Thin, lightweight, wool or synthetic gloves. Size to fit snug but not too tight. Generally worn alone in temperatures above 25°F(-4°C) when precipitation is not present. UPF rated liner gloves are ideal for sun protection. Bring 1-2 pairs.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Work Glove These gloves are used for belaying, tying knots, rope management, etc. Dexterity and durability are key. These gloves provide slightly more insulation than a liner glove and are generally used in temps of 15°F to 30°F(-9°C to -1°C) while actively using your hands. Look for a comfortable snug fit favoring dexterity and a durable leather or synthetic palm. Water-resistant material is recommended because they dry out faster than waterproof gloves.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hard Shell Glove Waterproof and insulated gloves. If the glove lacks insulation then size it to fit a liner glove inside. Mainly worn in wet conditions, cold, or when not mobile.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sports Bra Wool or synthetic, comfortable, active wear.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Base Layer Wool or synthetic shirt, long sleeves preferred, ideally a “sun hoody” with UPF 30+ sun protection.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Active Insulation Layer Lightweight “gridded fleece” or lightweight synthetic insulated jacket. Hood preferred. ☆ Active insulation jacket weight at 40g/m2 and heavier Insulation jacket at 60g/m2 or 80g/m2 ☆ Example: Patagonia R1, Montbell UL Thermawrap Jacket, or similar.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Soft Shell Jacket or Windshirt A soft shell is a weather resistant, breathable, and stretchy freedom of movement piece. This piece is versatile in the sense of movement. It is often called an “action layer.” It is weather resistant, meaning it can put up with light showers and wind. Also if it gets wet it dries fairly quickly. This enables you to not have to stop and put on another piece when the wind picks up or a light shower happens. Because it is water resistant, and not waterproof, it also breathes fairly well. This enables you to move without overheating, so you don’t have to constantly stop to change out layers to regulate body temperature. They are also made of a stretchy material so there are no restrictions to your movement during activity. Put all those together and you have a pretty versatile layer, the Soft Shell. Hood preferred. ☆ Materials: Exolite, Matrix, Schoeller ☆ Example: Patagonia Houdini, Arc’teryx Squamish Hoody, Mountain Equipment Squall.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Insulation Jacket AKA the “puffy.” Down or Synthetic. This piece is worn in cold conditions or when not moving. Hood preferred. If choosing Down, water-resistant Down treatment is preferred to help prevent matting and loss of insulating ability if the jacket gets wet.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

<p>☆ Weight: 350g-450g ideal weight. ☆ Example: Arc'teryx Atom LT, Rab Xenon, or similar.</p>	
<p>Hard Shell Jacket Non-insulated jacket with a waterproof and breathable membrane. Three layer construction is recommended. It must have a hood, ideally a helmet compatible hood. When sizing make sure it can fit over other layers. ☆ Materials: Gore-Tex, eVent, Drillite, H2NO, Pertex Shield</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Undergarments Wool or synthetic.</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Base Layer Pant (aka “Long Johns”) Wool or synthetic. Bring one for early or late-season conditions, optional for mid-season conditions (depending on the weather).</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Soft Shell Pant Thin, weather-resistant, breathable, and stretchy. ☆ Materials: Exolite, Matrix, Schoeller ☆ Example: Mountain Equipment Ibex, Arc'teryx Sigma FL, or Mammut Courmayeur.</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Hard Shell Pant Non-insulated, waterproof and breathable membrane. Full side zips are recommended. When sizing make sure to it is able to fit over a base layer and soft shell pants. ☆ Materials: Gore-Tex, eVent, Drillite, H2NO, Pertex Shield</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Socks Wool or synthetic socks that are over the ankle height. Focus on getting insulation from the boot and using a lighter weight sock, instead of using a heavy weight sock for warmth. Wearing a “silk-weight” liner sock beneath your hiking sock can reduce friction on the skin directly and mitigate blister development. Bringing 2 pairs is recommended for this course. Two pairs mainly used that can be switched out if one gets wet.</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy</p>
<p>Mountaineering Boots Must be stiff, crampon compatible, mountaineering boots. Synthetic or plastic double boots recommended prior to July 1st. After July 1st, plastic or synthetic double boots are not recommended. ☆ NOTE: There are many makes and models out there and not all are created equal. Please consult with our Equipment Shop if you are uncertain about the acceptability of your chosen model.</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*</p>
<p>Gaiters Knee or calf height. Best used in early-season conditions. Optional for mid or late-season. Gaiters do help protect pants from crampon holes regardless of the season.</p>	<p><input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*</p>
<p>Climbing</p>	<p>Packing Checklist</p>

Ice Axe

A straight shaft ice axe like the Petzl Glacier or Black Diamond Raven Pro is recommended. Adze is required. Please contact our Equipment Shop if you have any questions.

- Own
 Buy
 Rent*

Use the following table as a rough guide on length. Ice axe leashes are not required and not recommended.

Straight Shaft Axe	
Personal Height	Recommended Length of Axe
5'8" or shorter	50-55cm
5'9"- 6'	55-60cm
6'1"-6'3"	60-65 cm
6'4" and up	65-68cm

Ice Tool

One is required. If you have two then bring two. If you are bringing only one then a hammer version is desired since your ice axe should have an adze. "Hybrid" ice tools (e.g., Black Diamond Venom, Petzl Sum'tec, Grivel Light Machine) are more favorable than highly technical tools.

- Own
 Buy
 Rent*

Harness

Make sure the harness has a belay loop and gear loops. When sizing make sure it can fit over your clothing layers when you have multiple layers on.

- Own
 Buy
 Rent*

Helmet

Must be UIAA rated for climbing.

- Own
 Buy
 Rent*

Crampons

Must be steel crampons with front points and compatible with your mountaineering boots.

- Own
 Buy
 Rent*

Slings

Bring one 48in.(120cm) and one 24in.(60cm) pre-sewn nylon sling. Slings must be UIAA rated for climbing.

- Own
 Buy

Belay Device

Bring an auto-blocking device that accepts two ropes like the Petzl Reverso or Black Diamond ATC Guide.

- Own
 Buy

Carabiners

Must be UIAA rated for climbing.

- Four large pear shaped munter-style locking carabiners.
- Five non-locking wire gate carabiners.

- Own
 Buy

<p>Trekking Poles One is required, but two are highly recommended. These increase balance while wearing a heavy pack and making stream crossings, while also decreasing pressure on the knees during steep descents. For the early-season, your poles should have a snow basket.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Prusiks 6mm nylon cord in three lengths; 13 ft, 6 ft, 5 ft. Available at AAI the morning of the course. We recommend getting three different colors for easy identification.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Internal Frame Pack 65L-75L is a recommended size range. Mountaineering specific packs instead of backpacking packs are a good way to shave weight. Should also have to ability to carry weight well (45 lbs+).</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Rappel Backup Sterling hollow block 13.5" or 4ft length of 6mm nylon accessory cord. Must be nylon, Dyneema has a lower melting point. This is used as a rappel backup, the Sterling hollow block is recommended for its heat resistant properties.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<h2 style="margin: 0;">Camping</h2>	
<p>Tent <u>-Mid-season:</u> 4 season or 3 season tent. 3 season tents can be used if the rain flies goes all the way to the ground on all sides. A "bathtub" floor for the inner tent is also recommended. This means that the inner tent isn't all mesh but has water resistant floor material that scoops up from the floor for 4-12" before changing to mesh, like a bathtub. If there are any questions please consult our Equipment Shop to see if your tent is okay to use.</p> <p>☆ NOTE: 4 season tents are available to rent at AAI. There is also the possibility to pair up with other climbers on your course and share a tent.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Sleeping Bag Synthetic or Down. If you bring a synthetic bag bring one on the lower end of the temperature range since synthetic bags tend not to be as warm as Down. If you sleep cold it is recommended that you bring a more insulated bag than required for the seasonal conditions. If choosing Down, water-resistant Down treatment is preferred to help prevent matting and loss of insulating ability if the sleeping bag gets wet. <u>Cold sleepers:</u> 0°F to 20°F (-18°C to -6°C) <u>Warm sleepers:</u> 10°F to 30°F (-12°C to -1°C)</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Compression Stuff Sack For your sleeping bag. If it is a Down bag, a waterproof compression sack is recommended.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Sleeping Pad Bring one inflatable pad. You may choose to also bring an additional foam pad to help insulate from the snow and serves as a backup to the inflatable pad. The foam pad is also a nice sit pad when at camp.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*

<p>Stove and Fuel Liquid fuel or canister stove.</p> <p>☆ NOTE: Many people choose to share stoves, fuel and tents to decrease weight. However, some people prefer to camp in their own tents and use their own stoves. This can be determined on the morning of the first day of your program.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy <input type="checkbox"/> Rent*
<p>Pots Bring one pot.</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Early-season:</u> Bring a bigger pot for melting snow; 1.5L to 2L <input type="checkbox"/> <u>Mid or late-season:</u> 0.5L to 1L <p>☆ NOTE: If you have a complete stove system like the Jetboil or MSR Reactor and plan on eating out of your integrated pot, then you do not need to bring a pot.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Utensils Don't forget the official "most forgotten item ever;" the spoon, or spork.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Bowl</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Early-season:</u> Bring a plastic bowl or mug, preferably with insulation. <input type="checkbox"/> <u>Mid or late-season:</u> Bring a plastic bowl, insulation is not necessary. <p>☆ NOTE: If you have a Jetboil or MSR Reactor type stove and plan on eating out of your integrated pot, then you don't need to bring a bowl. The same applies if you plan on only using commercially packaged dehydrated or freeze-dried meals.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Lighters Bring two.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Hydration 3L capacity is recommended, though some people need more and some people need less.</p> <p>Some people bring a bladder and a hard sided bottle. The bottle is an important backup to the bladder if it gets punctured. A hard-sided bottle may also double as a mug for hot water, though not every bottle is designed to hold boiling water.</p> <p>For Camelbak style hydration bladders, bring a drinking tube insulator, as the tube can freeze up. Drinking tubes must also have a lock on the bite valve. If you choose to use this system, be aware that they require constant vigilance in order to avoid freezing. Some people are not very good at this. Blow the water out of the tube after every use and place the bite valve in the neck of your shirt to keep from freezing.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Water Purification Water purification tablets are recommended, they are available at the shop the morning of the course. Pills that take an hour or less to purify are recommended. Steripens are an acceptable alternative to purification tablets.</p> <p>☆ NOTE: Pumps can be damaged by silt in the glacial water.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Food You are responsible to bring your own food for the duration of the course. Please consult our meal planning page.</p> <p>You should be prepared to have four days and three nights worth of food for when you leave Seattle on the first morning your trip starts, to the evening you get back on your final day.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy

When you arrive the day before your trip starts for the rendezvous, you will have easy access to restaurants and grocery stores in Seattle.

Other Essentials

Packing Checklist

Map and Compass

Maps can be purchased at our store the morning of. Compass must have declination adjustment.

- Own
 Buy

☆ NOTE: All three items are available together in a bundle, or all sold separately, at AAI the morning of your course.

Toothbrush and Toothpaste

Travel size recommended.

- Own
 Buy

Hand Sanitizer and/or Wet Wipes

Required. Used after going to the bathroom and before eating. Wet wipes can be used for the "mountain shower."

- Own
 Buy

Toilet Paper

The provided solid waste bags have a small amount of toilet paper with them, but most people do not find this to be adequate. Estimate how much you'll need for a program of this length and place that in a plastic zip lock bag. An extra zip lock bag can be helpful for pack-out of used paper.

- Own
 Buy

Sunscreen

SPF 30+, zinc based is preferred. Small travel size tubes are recommended so you can put them in a close by pocket for easy access.

- Own
 Buy

Lip Balm

Make sure it is SPF rated.

- Own
 Buy

Personal First Aid Kit

- Band aids
- Blister treatment
- Prescription drugs
- Ibuprofen etc.
- If you wear contacts make sure and have spares if you can't see without them.

- Own
 Buy

Repair Kit

- Inflatable sleeping pad patch kit
- Duct tape (Can be wrapped around trekking poles or water bottle. Gorilla Tape tends to be the best brand for the mountains.)
- Zip ties
- 6-10ft of 3mm accessory cord
- 2 Trash bags that are big enough to line the inside of your pack with.

- Own
 Buy

Other Optional Items

The items below are not required, although many are nice "luxury" items that can make your expedition more enjoyable. Remember that a few ounces here and there add up to extra pounds on your back and knees during your expedition.

Packing Checklist

<p>Day or Summit Pack 25L to 35L is an ideal size. This will be used on your summit day to cut down on bulk and weight.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Ice Climbing Rack If you have it then bring it. Make sure and mark your gear so it doesn't get mixed up.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Altimeter Watch If you have one then bring it, it is a great tool to have in the backcountry especially for navigation.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Gaia Navigation App Optional Smartphone App.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Map and Compass Map should be of Mt. Rainier area. Compass must have declination adjustment.</p> <p>☆ NOTE: All three items are available together in a bundle, or all sold separately, at AAI.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Pee Bottle Used at night or when the weather is poor so you don't have to get out of your tent.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Women's Specific Items</p> <p>Female Urination Device Pee funnel such as the GoGirl or Freshette. Many female guides prefer a rigid pee funnel.</p> <p>Click here for more info</p> <p>Menstruation Collection Cup There are many things to consider concerning backcountry menstruation.</p> <p>Click here for more info</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Entertainment Books, games, cards, music player, kindle, etc. For evenings or rainy days in the tent.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Portable Charging Device Phone charger, battery pack, or solar panel.</p> <p>☆ NOTE: Solar panels should only be used to charge battery packs. Battery packs should be used to charge devices. Inappropriate use of a solar panel could lead to the depletion of a device's power.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Ear Plugs For defense against snoring and high winds.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Insect Repellent Biting insects such as mosquitoes and blackflies can be prevalent during different times of the season depending upon conditions and location. This is a nice item to have just in case.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Camera</p>	<input type="checkbox"/> Own

<p>Phone cameras or small point-and-shoot cameras are preferred. SLR cameras are not recommended due to their size and bulk.</p>	<input type="checkbox"/> Buy
<p>Comfortable Clothing and Footwear Breathable footwear -- like flip-flops -- as well as some comfortable cotton clothing can be nice to change into after you get back to the van.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy
<p>Car Charger Consider bringing an extra battery pack as well, having a lot of people using car charger cables is difficult.</p>	<input type="checkbox"/> Own <input type="checkbox"/> Buy