



One of the most important parts of your preparation is acquiring and becoming familiar with the various clothing and equipment that you'll use on your expedition. You'll discover which clothing works well for you and which clothing you need to reconsider, or enhance with longer zipper pulls, additional pockets, etc. **With almost ALL polar kit you want a loose fit. This is especially true with your outermost layers including your anorak, parka, pants and mitts.** Avoid items that are trim fitting for the South Pole. This often means purchasing an item that's one size larger than what you may normally wear. For Vinson you'll want to stick with items that are more trim fitting to fit under your climbing harness.

PolarExplorers will provide all of the group kit (tents, cooking equipment, etc) as well as skis, bindings, sleds, and sled harnesses for the South Pole. Below you will find a list of each item that you need to bring. This is followed by a comprehensive description of most items. Don't hesitate to contact us with any questions.

*Can't find these items? Don't want to spend time looking for them? We offer these items as a part of our optional Polar Pack Gear Store. Check our [Polar Pack and Rental Items online form](#) for details.

Base Layer / Inner Layer

- ☐ 1 wool or synthetic light weight layer top and bottom
- ☐ 1 wool or synthetic mid weight layer top and bottom

Mid Layers

- ☐ 1 insulated puffer-style jacket. We recommend the Mountain Hardwear Compressor Jacket.
- ☐ 1 insulated puffer-style pants. We recommend the Mountain Hardwear Compressor Pants*
- ☐ 1 pair soft shell pants

Outer Layers

- ☐ 1 wind anorak with hood and fur ruff (for South Pole)
- ☐ 1 windproof jacket with hood (for Vinson) softshell preferred
- ☐ 1 puffer-style vest. Large enough to fit OVER your windproof/waterproof jacket.
- ☐ 1 insulated parka with hood. This parka is your warmest layer and must fit OVER your wind layer. Consider sizing up.
- ☐ 1 pr breathable wind pants with side zippers

Feet

- ☐ 1 pair snow pack ski boots (e.g. Baffin 3 Pin Guide Pro or Alfa Boots)
- ☐ 1 pair high altitude double boots with integrated gaiter (e.g. La Sportiva Olympus Mons)
- ☐ 1 pair camp booties with sole (optional)
- ☐ 3 pair thick wool or synthetic blend socks
- ☐ 2 pair thin wool or synthetic blend socks
- ☐ 1 pair vapor barrier liners - Optional



Hands

- ☐ 2 pr. wool, fleece, or soft-shell style gloves that will comfortably fit INSIDE your overmitt system.
- ☐ 1 pr. expedition overmitts with removeable inner mittens for insulation. We recommend the Wintergreen Northernwear Plunge Mitt. A mitt leash system can be very helpful.
- ☐ 1 pr warm insulated gloves with removeable liners (e.g. RAB 2 Guide Gortex Glove)
- ☐ 10 2-packs of chemical hand warmers

Head and Face

- ☐ 1 warm hat that covers your ears *
- ☐ 1 thin hat or cap and 1 balaclava
- ☐ 2 buffs or neck gaiters
- ☐ 1 face mask with full coverage *
- ☐ 1 pair sunglasses with full UV protection and side protection
- ☐ 2 pr. anti-fog goggles with full UV protection

Sleeping

- ☐ 1 sleeping bag rated to at least -30°F / -35°C
- ☐ 1 inflatable Thermarest style sleeping pad
- ☐ 1 closed-cell foam sleeping pad

Personal Kit

- ☐ 3-5 stuff sacks of varying sizes and colors
- ☐ 2 wide-mouthed Nalgene bottles (one for P bottle) *
- ☐ 1 insulated cover for Nalgene bottle *

Personal Kit cont'd

- ☐ 1 insulated flask or Thermos (1 liter) *
- ☐ 1 bowl with lid *
- ☐ 1 insulated mug *
- ☐ 1 spoon or spork *
- ☐ Personal first aid kit with frequently used items (blister care, ibuprofen, etc.)
- ☐ 4-5 high energy snacks for each day of skiing - 16 days total - see additional information on page 16.
- ☐ Personal toiletries
- ☐ 1 stick-style sunscreen with high SPF protection *
- ☐ 4 carabiners for use on South Pole Last Degree only*
- ☐ 1 personal stash of toilet paper (paper towel also works well)
- ☐ 2-3 lighters
- ☐ 10 2-packs of chemical hand warmers *
- ☐ Multi-tool or pocket knife

Optional Items

- ☐ Vapor barrier socks or sturdy plastic baggies that fit over your feet
- ☐ Camera with extra batteries
- ☐ Journal with pencil
- ☐ Sturdy small backpack (waist belt and sternum strap are a plus)
- ☐ Camp chair *
- ☐ Camp booties with sole (these can be VERY nice at the end of the day!)
- ☐ GPS
- ☐ Other electronics (ipod, tablet, battery packs, phones, etc. - see ELECTRONICS at the end of this document.

Mountaineering Kit

- ☐ 1 ice axe with leash
- ☐ 5 oval carabiners
- ☐ 2 pear shaped locking carabiners
- ☐ 1 jumar / ascender
- ☐ 1 daisy chain
- ☐ 1 alpine climbing harness
- ☐ 40 feet of 6 mm rope
- ☐ 1 pair crampons
- ☐ 1 expedition backpack (at least 100 liters, internal frame)
- ☐ 1 pair collapsable trekking poles with snow baskets
- ☐ 1 climbing helmet sized to be worn over thin hat
- ☐ 1 duffle bag (to store mountaineering kit while your at South Pole)



Base Layers

As the clothing that lies directly against your skin, your base layers are responsible for keeping you warm AND wicking your perspiration away from your skin. To do this, it is essential that your base layers are made either of wool (preferred) or a synthetic, wicking material. Absolutely NO COTTON!!! These layers should fit snug, but not tight. They should allow for easy movement and they should fit comfortably under all your other layers. Ideally you should be able to wear your lightweight base layer and midweight base layer together without feeling constricted. You will wear your base layers all the time. You will wear them all day long and when it comes time to go to bed you will sleep in them too!

Mid Layers

Your mid layers offer additional insulation. You will mostly wear them in camp and not while skiing during the day. Puffer-style jackets and pants are ideal mid layers. Puffer-style gear is lightweight and warm (usually made of Primaloft or another synthetic material). Make sure that both your jacket and pants are roomy enough to wear over your outer layers if necessary. Recommendation: Mountain Hardwear Compressor Pants and Compressor Jacket



Outer Layers

Anorak - –The wind on the polar ice can be relentless, which makes having the right wind layers absolutely critical. Your wind jacket is one of the most important items on your entire list. The purpose of your wind layer (this includes your anorak and pants) is to prevent the wind from robbing you of your hard-earned body heat. Its dual purpose is to vent heat away as necessary to maintain the ideal body temperature. To this end, your wind anorak needs to have good coverage (it should cover your butt) and an attached hood. It should also be breathable and relatively lightweight with plenty of ways to vent your body heat (easy-to-use zippers, pit-zippers, etc). Your wind anorak should not have any permanent insulation. Ski jackets are not acceptable wind layers. Nor are wind jackets that are not breathable, like those made of coated nylon. An ideal wind jacket is extremely breathable, allowing your perspiration to easily wick from your clothing to the outside air. Recommendation: Wintergreen Northernwear Expedition Shell Anorak

Wind pants - Like your anorak your wind pants should be fairly lightweight and breathable. Your wind pants should be comfortable for full motion. They should have pockets where you like them and easy access for going to the bathroom. Many people like bib-style pants, but if you get hot easily or sweat a lot you may find them too hot. Conversely, if you get cold easily you might like bibs. Look for pants with full side-zippers for easy on/off with boots and easy venting. Your wind pants should NOT have any insulation. Ski pants are NOT acceptable. You will wear these every day, so make sure they are roomy and comfortable!

Wind Jacket for Vinson - Softshell style jacket with pockets where you want them for warm days when your puffball style jacket is too much.



Parka - A good expedition parka is essential to keep you warm whenever you aren't being active. Importantly, your parka will usually be worn OVER YOUR ANORAK which means you should consider purchasing a size larger than you might normally wear. Look for a parka with plenty of insulation or "loft". Loft is the dead air space that is created between the fibers of the insulation. Loft can either be created by down insulation or synthetic insulation. Down is lightweight and compressible and the choice of many of our team members. Down requires more maintenance than a synthetic insulation (like Primaloft). Synthetic insulation is heavier, but it can insulate even when wet. Some good down parkas are the Marmot 8,000 meter parka, and the Mountain Hardwear Absolute Zero Parka. The best synthetic parka we have found is the Patagonia DAS (Dead Air Space) parka. The DAS parka is not as warm as the down parkas but it requires less care. Whichever parka you choose, ensure that it has an attached hood and extends lower than the waist. Having a fur ruff on your insulated parka is not necessary.

Puffer-style vest - This layer is like an insurance policy against a cold wind that suddenly develops. It is worn OVER your anorak and is perfect for times when you need just a little extra insulation. It should be easy to put on / take off quickly.

Feet

South Pole Boots - Your South Pole boots should be "pack boots" that are designed to keep feet warm in temperatures as cold as -90°F or colder. Our bindings are 3-pin bindings which means your boots should have a three-pin (also called 75mm) toe. People with feet smaller than men's 8 USA or Euro 40.5 can use pack boots without a three pin toe. Make sure to purchase your boots early so you can break them in, and wear them while training. Recommendation: Baffin 3-Pin Guide Pro. Recommendation for feet smaller than men's 8 (usa) or 41.5 (euro): Baffin Impact.

Vinson Boots - 1 pair high altitude double boots with integrated gaiter - These boots are often called "all-in-one boot system" or "triple boots". Break these in well before the expedition. Like your pack boots the inner liners will pack down. Fitting is key. A tight fit will reduce circulation. A loose fit could lead to blisters.

Socks - The right sock combination is a fairly personal choice. Most people wear one or two pairs of socks. Choose a sock that is wool or synthetic and quick drying. It's not a bad idea to bring a combination of socks (1 pr. sock liners, 2 pr thin socks, 3 pr. thick socks) to see what combination you like. Some people opt to wear compression socks to help reduce swelling in their feet. One pair of extra comfortable and roomy socks should be designated as night-time only socks to help keep your feet dry and happy.

Vapor barriers - This is an optional item. The purpose of a vapor barrier is to trap moisture against your skin so it does not get your insulating socks or boot liners wet. Dry socks and boot liners are key to avoiding cold feet. If you tend to sweat a lot, especially with your feet, you should consider using vapor barriers. Commercial vapor barriers are available but sturdy plastic bags also work well (worn in between a sock liner and a thicker sock). Vapor barriers tend to add some warmth to your foot system. Give them a try during your training!

Hands

Gloves - Your gloves are an indispensable component in your mitt system. They rank among the most important items simply because you cannot survive without them. Because you work in them all the time we refer to them as your “working gloves”. The best working glove is all about personal fit. Look for mid-weight soft shell-style or fleece gloves that are quick-drying but not bulky. Gloves with a windstopper membrane can be nice. If your hands get cold easily or if you sweat a lot bring at least one pair of very thin gloves without a windproof membrane (this will promote crossfinger warmth in your overmitt and also dry faster). Consider going up a size from what you might normally wear to ensure the fit is not too tight. When you find working gloves that you like (and it's all about personal fit) buy two pair. Your second pair will be used as emergency back-ups, not as an alternate pair for when the original pair gets wet! If your gloves get wet you should continue to wear them until they dry out assuming your fingers are warm. If you leave them wet, or take them off while they are wet they will freeze - and then you will never wear them again!

Expedition overmitts - Your expedition overmitts will be worn OVER your working gloves. They must be roomy to accommodate your working gloves and allow for plenty of space for your fingers to move. The overmitts should be made with a water-resistant outer shell and they should be easy to put on/take off, with wide cuffs that can be tightened on your lower arm. They should have removeable inner mittens that can easily be taken out to dry. The key to a successful mitt system is that each piece of the system (working gloves, inner mittens, overmitt shell) should be able to work on its own. This means that you should be able to work in just the working gloves (as you will often do around camp) or in the working gloves and overmitt shell (as you may do while skiing) or in working gloves, inner mittens and overmitt shells. Being able to remove the inner mittens from the overmitt shells is also an important feature that allows you to dry the inner mittens if they get wet. We highly recommend using a leash system to attach your overmitts to your jacket so that when you quickly take them off (as you will frequently do) they don't disappear in the wind (many models come with this). Recommendation: Wintergreen Northernwear Plunge Mitt.

Vinson gloves - These insulated gloves with a removeable liner provide the warmth of a heavier mitt with the dexterity of gloves. Look for prima-loft or high pile insulation on the back of the hand, designed for mountaineering.

Head and face

Hats - You'll want at least one warm hat that's comfortable and one lightweight hat that's comfortable, both should cover the ears. If you get hot easily you may want to bring a head band / ear band that just covers your ears. A balaclava (covering head and neck) can be very helpful at night because they don't fall off while you sleep (hats often do).

Neck gaiter / buffs - Neck gaiters are like socks for your neck. They easily slide over your head to cover your neck from the biting wind. Wool or fleece are good materials. Buffs are also great at this important job. Bring two.





Face mask- When the wind is blowing a face mask can make the difference between having frost-nipped cheeks and nose or staying comfortable. Remember that your face mask should be easy to wear over everything else that you are already wearing (hat, neck gaiter, etc.) Also remember that you should be able to put it on without taking off your mitt system. An alternative to a face mask is a fleece skirt that is sewn or taped to the bottom of your goggles. One of each is ideal.

Goggles and sun glasses - On cold windy days there is nothing better than goggles to protect your eyes. The soft foam is exponentially better than the cold frame of sunglasses and blocking out the wind means that your eyes won't tear up. They also offer better coverage and protection. Look for anti-fog goggles that offer full spectrum protection against U.V. rays. You'll need two pairs of goggles. An amber lens pair can be handy on days with low visibility. If you wear glasses consider getting OTG goggles (Over The Glasses). Sunglasses are important to have on Vinson. Sunglasses should have plastic frames, not metal. Good side coverage is important!

Sleeping

Sleeping bag - Knowing that you will sleep comfortably can be a real relief after a long day of travel. You'll want a sleeping bag rated to at least -30 F (-40 F/C if you tend to sleep cold). Down sleeping bags are lighter than synthetic bags and work great in the arid Antarctic environment.

Sleeping pads - You'll need two pads. The pad against the ground should be a closed-cell foam pad, like a Ridgerest. For the second pad most people, including most of our guides, prefer inflatable mattresses such as those made by Thermarest, Nemo and Big Agnes. Look for a 4-season pad that is full length.

Personal kit

Stuff sacks - There's nothing special about stuff sacks as long as you get a variety of sizes. A variety of colors can be very helpful too. Avoid dry bags (they get stiff in the cold and they are heavy). They should be easy to open and well made.

Nalgene bottles - Nalgene is a popular brand of water bottle. You want their "wide mouth" style bottle (as opposed to the "narrow mouth" bottle). Each bottle should be a different color (to distinguish the P bottle from the drinking bottle). Other water bottle brands may work, but Nalgene is tried and trusted and will not break in the cold.

Insulated Nalgene cover - Without an insulating cover your fluids will freeze solid. Your insulated cover needs to protect the whole bottle (top and bottom too). It should fit loosely over the bottle and it should be thick enough that it can be pinched and compressed with your fingertips. Being able to pinch it means there is sufficient air in the insulation. Neoprene covers don't work well and should be avoided.



Personal kit cont'd

Insulated flask - A vacuum sealed flask (i.e. Thermos) that will keep liquid warm in cold temperatures for at least 12 hours. 1 liter or more. Lids with a push-open style don't work well, they have a tendency to leak. Twist on caps work much better. The insulated flask can be replaced by an additional Nalgene wide-mouth water bottle with an insulated cover.

Bowl with lid - A sturdy plastic bowl with a lid that screws on is best. A snap on lid is OK too. The lid is helpful while you let soups and dinners hydrate. If it tips over, will the lid stay on? Cleaning up a soupy mess in the tent is no fun.

Insulated mug with lid - Like the bowl, the lid is important. Will it stay on and not leak if the mug tips over? Many commuter mugs have a "lock" position that keeps the lid closed. This can be a helpful feature. Will it keep your hot chocolate warm if you set it aside for an hour? That's the goal. Keep an eye on the weight. Some insulated mugs are really heavy!

1 spoon or spork - Any spoon or spork will work. Plastic is much lighter and won't get cold, but they do sometimes break. Pack a second as an insurance policy. Forks and knives aren't necessary.

4-5 high energy snacks - See more details on page 16.

Personal toiletries - The usual toiletries: toothbrush, toothpaste, floss, etc. Try to clip your toenails and fingernails in advance.

Stick style sunscreen - Stick style sunscreen is much better than lotion which has a tendency to freeze. Look for a high SPF. It will be used mostly on your lips, nose and cheeks.

South Pole carabiners - For clipping things on to your sled. Bring four. They don't need to be climbing carabiners. It's OK if they are "accessory" carabiners. These are different from your Vinson carabiners.

Stash of toilet paper - Toilet paper works OK but paper towel is more sturdy. A sheet per day is a decent amount (or more if you go more than once a day). Also bring a plastic bag for packing out your used toilet paper. We practice Leave No Trace when we are in the wilderness!

Lighters - 2 or 3 standard lighters are helpful when it comes time to light the stoves. Keep them in your jacket pockets.

Chemical hand warmers - Though you should be able to keep your hands warm without the use of chemical hand warmers we recommend bringing a small stash until you have your skills honed. If you *know* you get cold fingers easily or if you *know* you have poor circulation in your fingers consider bringing more.

Multi-tool or Pocket Knife - It can be handy to have a multi tool or knife for simple tasks. Nothing fancy. Look for a simple tool that's easy to use while wearing gloves.

Optional items

Vapor barrier socks - see above under "Feet"

Camera - You'll want to document this awesome adventure! Every year more people are using their smart phones as cameras but the battery life is a serious issue. They die REALLY quick, unless you make sure to keep it warm between uses, and even then they die quick. If you bring an actual camera you still have to conserve battery power and bring extra batteries. A point and shoot camera with a view finder can be nice because LCD screens can be hard to see in the bright light. If you're an SLR person plan to spend some extra energy getting shots and bring more batteries than you think you'll need. A 24-70 length lens is good.

Journal - Keeping a journal is a little extra work but if you can muster 5+ minutes of time for reflection every night the payoff is well worth it. Bring a light weight journal with pencils (pens freeze) and a pencil sharpener. Tip - If you don't have the energy to write a narrative about the day just jot down one or two highlights and one or two challenges. A few words is all you need!

Daypack / rucksack - It can be helpful to have a small backpack for toting things around Punta Arenas and for the flights to/from Antarctica. Some people like to use the daypack as a way to store handy items (water, extra goggles, snacks) on top of their sleds (though it can make the sled top heavy). Any small daypack / rucksack will work. 20 liters is fine.

Personal first aid kit - Personal maintenance is important. It can be helpful to have your own stash of the items you use frequently such as blister care or over-the-counter pain medicine or an over-the-counter anti-inflammatory. We carry a comprehensive first aid kit that is available to everyone, but a personal stash of commonly used "everyday" supplies is very convenient.

Camp chair - A camp chair is really nice for down-time. It makes sitting in a tent or around a fire much more comfortable and can be used as a part of your sleeping system at night.

Camp booties - At the end of the day it feels GREAT to get out of your ski boots and put on lighter booties. They should have a sturdy sole for trips out of the tent. You may be in deep snow, so the taller the better.

GPS - It can be really fun to track your route and keep tabs on your speed, distance, etc. Any modern handheld GPS should be fine. Look for a device that is easy to use while wearing gloves (bigger buttons) and an interface that's intuitive. We like Garmin GPS's. Larger screens are nice but they eat up batteries. Speaking of batteries, bring extra!



Mountaineering Kit

Ice axe with leash - If you are under 5'7" use 60 cm; 5'7"-6'2" use 65 cm; over 6'2" use 70 cm. Ensure that you also have a "glacier" leash for your ice axe (ice climbing leashes are too short). Avoid ice axes with a rubber grip as they do not slide easily into the snow.

Carabiners - You'll need 5 oval carabiners and 2 pear-shaped locking carabiners for Vinson. These should not be confused with the 4 additional carabiners you'll need for South Pole.

1 jumar / ascender - A jumar is a mechanical ascender that you will use on the fixed rope from low camp to high camp.

1 daisy chain - A piece of nylon with variable length sewn links that can be clipped in to gear, anchors, etc.

1 alpine climbing harness - Your harness should fit comfortably over all your layers. It must be a step-in harness with adjustable leg loops and gear loops.

40 feet of 6 mm rope - This rope is for making prussiks. Perlon cord works well.

1 pair crampons - Your crampons should be quick release and we recommend an anti-ball plate. Make sure to fit these to your boots before you arrive.

1 expedition backpack - This should be an internal frame pack in the range of 6,000 cubic inches or 100 liters.

1 duffle bag - A simple duffle bag with luggage tag to leave at Union Glacier. You will use it to store your mountaineering gear while you are skiing to the South Pole.





Lunch snacks

Each person provides his/her own lunch snacks. This helps to ensure that you end up with food that energizes you and that is palatable to you (even after many days!) We each have different metabolisms and different energy needs. What one person brings will be way too much for another person or way too little. As a rule of thumb, try to bring at least 1000 calories of high energy snack foods each day. If that sounds like too little bring more. You'll be stopping to snack every hour, with four or five stops each day. Try to bring a mix of quick burning and slow burning calories, for instance nuts (slower burning) mixed with dried fruit or chocolate (quicker burning). During your Shakedown is a great time to experiment with various options. Energy bars, nut mixes, dried fruit, dried meat, cheese, candy bars, potato chips, crackers, hot soups... can all work. Importantly, they must be chewable in the cold. If they will freeze solid you'll need to plan ahead and wear the snack in an inner pocket prior to the break. Otherwise you may crack a tooth! We find that most people bring too much snack food (and usually snack food is heavy). Try to keep your daily snacks under 16 oz or 450 gr per day. Also consider bringing powdered energy drinks or flavored drink mixes. Additional information about your lunch snacks can be found in your confirmation letter.

Electronics

Some people love bringing technology on their expeditions, other people prefer to leave it behind. In the end what you decide to bring is up to you! The most common electronics are smart phones, ipods, wireless earbuds, InReach devices (for communication) and/or satellite phones. The more you bring, the heavier your sled; AND the more electronics, the more battery power you need. Battery packs are a great way to power devices. We recommend battery packs with at least 20,000 mAH (milliamp hour). That should charge a phone 5-6 times in the cold or a small tablet 2 times. A solar charger can also work but it requires some additional effort. Some people prefer a combination solar charger / battery pack. The battery pack is typically smaller (one charge) but it can be refreshed daily assuming consistent sunlight.

Questions about your kit?

Call us! Or emails us! We love to talk about kit :) We'll give you recommendations or send you links. We can also check your gear by Skype or Google Video.



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