NZ ICE CLIMBING COURSE EQUIPMENT NOTES

Please see the equipment list for full details of what you will personally need to bring along for your course or climb. We hold a quantity of good quality rental equipment for your convenience in addition to a retail purchase service.

Due to the nature of the mountain environment equipment and clothing must be suitable for its intended purpose. It must be light, remain effective when wet or iced and dry easily. It is important that the product will not become redundant before it wears out. These notes will help you make informed choices so you save time and money.

Bring your own clothing and wet weather gear, and if you already have your own equipment that is on the list then we suggest you bring it along as well to learn how to use it best.

As you know, Adventure Consultants is able to offer clients good prices on equipment packages and up to date information regarding the range of products available. If you need assistance with making a purchase or making your selection, then please feel free to contact us.

BODY WEAR

There are numerous fabrics, which are both water resistant and breathable such as Gore-Tex, Reflex, Membrane, Entrant etc. These fabrics are expensive but can last for years if well looked after. Shell clothing should be seam sealed during the manufacturing process (tape sealed on the seams) or it will leak through the stitching. It also should be easy to move in and easy to put on and take off when wearing gloves or mitts. Shell clothing made of PVC, or similar totally waterproof but non breathable material, is not suitable as moisture cannot escape when you are exerting energy and you become damp from the inside out! Therefore fabric breathability is very important when you are active in the mountains.

JACKET / WATERPROOF SHELL:
Gore-Tex or similar waterproof breathable material. Look for a model with a full front zipper, a good attached hood with draw cord etc for good adjustability so it will fit over a helmet. Preferably, the jacket should be long enough to allow a generous overlap with your overpants when you bend over. Obviously a technical mountaineering jacket is ideal but many general purpose jackets are sufficient.

We recommend: Marmot Spire Jacket or Mountain Hardwear Typhoon

OVERPANTS
Gore-Tex or similar waterproof breathable material. These must have full length zips down the legs so they can be put on and taken off when you are wearing boots and crampons. The bib/salopette types are warmer as they extend above the lower back / kidney area giving a good overlap with your jacket. Make sure they have sufficient movement to enable you to lift your legs high and enough room to wear light fleece pants underneath.

We recommend: Marmot Oracle or Precip Pants or Patagonia Rain Shadow Pants

DOWN JACKET
During the colder winter months a good quality down jacket can be a lifesaver! A mid-weight down jacket with a hood is recommended. Although some down jackets have a waterproof and breathable outer fabric, these fabrics are not totally waterproof unless they are seam sealed.
We recommend: Mountain Hardwear Sub Zero Jacket or Marmot Ama Dablam Jacket

MIDWEIGHT INSULATED JACKET
This can be a thick fleece (Polartec 200 – 300), insulated soft-shell or Primaloft jacket with a full front zip for ventilation. Zip up pockets help avoid losing items which are stored there. A hood is also a bonus.
We recommend Marmot Sharp Point Soft-shell, Marmot Power Stretch Full-Zip Fleece, Mountain Hardwear Compressor Insulated Jacket or Patagonia Micro Puff Jacket

LIGHTWEIGHT FLEECE TOP
A micro weight (100 weight) fleece top is a good addition layer to keep your thermoregulation perfected. Wear it as your top layer when warm then put your midweight jacket over it when it gets colder. It can be a light fleece pullover, or have a short - or full zip. A zip chest pocket is useful for keeping sun cream and snack bars accessible.
We recommend: Marmot Reactor Half Zip or similar

WARM CLIMBING / FLEECE PANTS
Preferably not too heavy a fabric as they can cause overheating. These can be loose or tight fitting. There are a variety of insulated soft-shell pants available that have water and wind resistant qualities and can be used independently of your Gore-Tex pants in fine weather but do not replace Gore-Tex overpants.
We recommend: Marmot Reactor Pants or Patagonia Alpine Guide Pant

LONG SLEEVE TOP
Long sleeve thermal tops made of polypropylene, merino, silkweight Driclime or polyester are excellent. A high neck with a zip gives good temperature control. Bring at least two tops (one for climbing in and one for wearing in the evenings or to double up if you are really cold).
We recommend: Marmot Baselayer or Smartwool NTS Long-sleeved tops

LONG-JOHNS
Thermal long-johns made of the same materials as thermal tops are lightweight and provide a change if your fleece pants are wet or too warm. They also provide lots of additional warmth if worn under your fleece pants.
We recommend: Marmot Baselayer or Smartwool NTS Bottoms


Mountain Hardwear Sub Zero


Patagonia Micro Puff


Marmot Reactor Half Zip


Smartwool NTS Zip-T

UNDERWEAR
Bring sufficient changes of your regular underwear. It is possible to buy polypropylene, silk or merino briefs and singlets, which are warmer and dry faster if you get wet however, most people use their normal, most comfortable underwear.

SOCKS
Have at least two complete sets with you for a trip. Wool or a mix of fibres with good thermal properties is a good choice. Often people wear combinations of thick (wool socks) and thin socks (polypropylene or ski liner socks) rather than just one thick pair. Try your socks out with your boots if possible beforehand.
We recommend: Bridgedale, Smartwool or Icebreaker socks.

GAITERS
Full calf- length gaiters keep the snow out and need a good tie down system under the in-step to stop them creeping up at the heel and allowing snow in. A Velcro or zip closure at the front is best for putting them on and removing them easily.
We recommend: Sea to Summit Alpine, Black Diamond Apex or Mountain Hardwear Pinnacle Stretch Gaiters

HEADWEAR

SUN HAT
Wide brim soft hat or baseball cap with bandana to protect you from the sun.

HAT
Made of wool, windstopper or fleece, it must extend over the ears and should not have a tendency to fly off in a strong wind.

BALACLAVA
A polypropylene, fleece or silk balaclava is necessary.

SUN GLASSES
Preferably the glacier glasses style with side protection, though there are some excellent 'wrap around' styles available now. Light reflecting in from the side can cause lots of damage with the high levels of sunlight in the mountains. The lens should be dark enough to withstand the intense reflection from the snow, and must filter 100% of UV light.
We recommend: Bolle, Julbo and Smith.

SNOW GOGGLES
Otherwise known as ski goggles these are required for stormy conditions. If you wear prescription glasses ensure they fit under your goggles.
We recommend Oakley, Bollé and Smith goggles

SCARF, BANDANA OR BUFF
A fleece or silk neck gaiter, neck warmer or Buff is also a good idea for added warmth or sun protection.

HANDWEAR

MOUNTAINEERING GLOVES
A warm pair with a wind and water proof shell is essential for times of limited movement, like when belaying. Ice climbing is notoriously cold so you will appreciate a good pair of gloves. We generally use Gore-Tex (or a similar waterproof fabric) gloves with removable fleece liners so the liners can be removed to make drying easier. A good model will also have abrasion resistant palms, shaped fingers.
We recommend: Black Diamond Element or Marmot Randonee Gloves

FLEECE FINGER GLOVES
Bring an additional pair of fleece or windstopper gloves that can be used as spares for your removable liner gloves or doubled up if it is really cold.
We recommend: Black Diamond Heavyweight Gloves or Marmot Powerstretch Gloves

FINGER / LINER GLOVES
A couple of pairs of polypropylene, silk or Driclime base layer gloves.
We recommend: Marmot Midweight Baselayer Glove

BOOTS

Plastic or new-generation synthetic rigid soled boots with removable liners are ideal. They are produced by several manufacturers and are warm and stable. The fit should be snug with room to either tighten or loosen the laces to adjust for different circumstances. They need to be comfortable to walk and climb in for many hours. Some hard shells can be heat moulded by ski shops to ease out any minor pressure points.
An insulated leather mountaineering boot can also be suitable but make sure they are warm enough, waterproof and supportive for winter mountaineering. The right fit is more important than for plastics, and they need to be worn in.
The boots must have a reasonable sized welt at the back and front to accept `clip on' crampons. There are many different models designed for different kinds of use from glacier walking to steep ice climbing. As they don't wear out that quickly its worth thinking about what your end use is going to be before buying a pair.

We recommend: Asolo 8000 or Evoluzione, Scarpa Vega or La Sportiva Baruntse, Spantik or Nepal EVO Boots

TECHNICAL EQUIPMENT

All of the following hardware items are available for hire from Adventure Consultants if necessary.

HARNESS

The sit harness type is used for most mountaineering situations. These should be lightweight and adjustable around the waist and legs. A specially designed alpine harness is easier to get in and out of (which is important when nature calls) and they can be put on when you have boots and crampons on. Many rock-climbing harnesses have fixed leg loops and hence cannot be adjusted for different clothing layers. Wear your mountaineering layers when trying on a harness to ensure it fits over the clothing layers. Comfort is essential as you may be sitting in it for quite a length of time whilst belaying your climbing partner.
We recommend: Petzl Corax or Black Diamond Momentum Harnesses

CARABINERS AND QUICKDRAWS

Bring 3 screw gate carabiners (including one pear shaped), 4 non-locking carabiners and, if you have them, some quick draws.
We recommend: Petzl, Faders and Black Diamond Carabiners

BELAY DEVICES

You'll need one belay device. We use tubular style units which have two holes for the rope to pass through. They are lightweight, easy to use and are compatible with single or double ropes.
We recommend: Black Diamond ATC-XP or Petzl Verso

PRUSSIC LOOPS

Generally 6mm kermantel cord. You will need 3 of these. They should be tied from a 3.2m length, and two 1.6m lengths. A double or triple fisherman's knot is generally used to join the ends and create the loop. Your Guide can help tie these during the course.
We have prussic cord available for purchase.

SLINGS

At least 4 regular climbing tape slings at a variety of lengths; two 60cm and two 120cm sewn or tied lengths are ideal. These can be either sewn slings or buy it by the metre and tie your own knots (also taught during the course if needed).
We have sewn and unsewn sling available for purchase.

PRUSSIC CORD

An additional 3 metres of 6mm kermantel cord to be used for V-thread anchors.
We have prussic cord available for purchase.

HELMET

The plastic helmets designed for climbing are lightweight and designed to deflect falling ice and rocks. They also protect the head in the case or a fall. Plastic becomes brittle as it ages so if you are borrowing a plastic helmet then it should not be more than 4 years old. Composite (fibreglass/carbon fibre) helmets are also available but are generally quite heavy and can be expensive. Check the size and make sure that it will adjust for when you are wearing your hat underneath.
We recommend: Petzl Charlet Elios Helmet or Black Diamond Half Dome Helmet

ICE TOOLS: A wide range of good ice tools are available so it pays to know what you will be using it for when purchasing one. Some tools are brilliant for vertical ice and useless for climbing snow and vice versa. Some tools are acceptable for both.

ICE AXE: For technical ice-climbing you need a short axe between 45cm – 60cm long. A reverse curve pick is ideal. The steep picks and reverse curves hold better on steep ice, though they are more difficult to self-arrest with.
Many tools come with replaceable picks so check that the bolts are tight before each climb. The adze is still used a lot for clearing away rotten or old ice and must be of a good angle to do so.
Shafts are usually either metal or carbon fibre and some have rubber hand grips. A rubber grip at the base of the shaft makes it easier to hold when climbing steeper ground. Bent shafts are useful for protecting your knuckles and for climbing over ice bulges and straight shafts are good if needed as an anchor placement. If you wish to be able to use one tool as an anchor then the ice axe would be the preferable tool and the shaft

must be smooth enough to be forced into the snow and should not have protrusions which can get caught up on a crusty snow surface.
The spike at the bottom of the tool should be sharp, yet not razor sharp (ouch).
Wrist leashes are needed for support when climbing on steeper ground. The correct length allows you to hold the bottom of the shaft with the sling tight.

ICE HAMMER: This can be a shorter than the axe (45 cm to 55 cm). Some people find it easier to have axe and hammer the same length when climbing on steep ice and others prefer a combination. Only experimentation can identify your own preference. The head of a hammer receives quite a lot of abuse on a climb and must be very secure with a good striking surface. The pick is generally a reverse curve sometimes of a steeper angle than the axe pick but this depends on personal preference.
We recommend: Petzl Charlet Aztar or Black Diamond Venom for general mountaineering and ice climbing and Petzl Charlet Quark or Black Diamond Viper for ice climbing only

Petzl Aztar Hammer and Axe
Suitable for ice climbing and general mountaineering

Petzl Quark Hammer and Axe
Suitable for ice climbing only

CRAMPONS
The rigid clip-on type is highly recommended for ice-climbing but you can also use a clip-on crampon with toe harness. The front points of your crampons should stick out from the front of the boot about 2.5cm. Be sure to check the heel-piece of the clip on crampon is compatible with your boots and stays in place when in the up position. Being familiar with your equipment before your trip is advantageous.
We recommend: Petzl Sarken (pictured) or Grivel G12 Crampons for ice climbing and *general mountaineering, or Petzl Dartwin or Grivel G14 Crampons for* ice climbing only.

ICE-SCREWS
These range in quality and price. Avoid cheap or titanium screws; the rest are good quality strong ice screws. Ice-screws are available in a range of different sizes from 12cm to 22cm in length. Make sure you have at least two long screws 22cms in length; these will be use for anchors. Some ice screws have winders for fast placement, which are fantastic for quick placement but be aware some winders can take up room on your harness.
We recommend: Black Diamond Turbo Express Ice Screws (22cm)

AVALANCHE TRANSCEIVER, SHOVEL AND PROBE
Winter conditions necessitate these avalanche safety items which we will supply free of charge. Transceivers are used to locate a buried victim in the least amount of time possible. If purchasing a transceiver, look for a digital model that is easy to use. All avalanche transceivers transmit on the same 457kHz frequency and are compatible with all other analogue or digital models.
Avalanche probes are made up of multiple aluminium sections, tensioned by a cable, and extend to form a 2-3m pole for probing avalanche debris.
Your shovel should be a lightweight, avalanche-specific model. Plastic shovels are not recommended. A telescopic handle and a large, metal blade will allow you to move more snow quickly.
We recommend: BCA DTS Tracker transceivers and Black Diamond Shovels and Probes

BACKPACK
There are many models available which are suitable. The pack volume should be between 50 and 65 litres. Remember you need to attach your ice axe, hammer and crampons.
We recommend: Osprey Variant 52 or Black Diamond Quantum

SNOWSHOES
Snowshoes will be needed on the approach to the climbing areas and for getting out of the Wye Creak basin and we will supply these free of charge. If you want your own, the latest models are lightweight with ice-claws for firmer snow conditions.
We recommend: MSR Denali Evo Ascent (pictured) or MSR Denali Ascent

TREKKING POLES
A collapsible model with snow baskets for use with your snow shoes.
We recommend: Black Diamond and Leki Poles

CAMPING GEAR AND ACCESSORIES

SLEEPING BAG
A down filled sleeping bag is preferable as they are extremely warm, light and compact. It is a good ideal to store your sleeping bag in a plastic bag inside a stuff sac in your pack to avoid it getting wet as down loses its insulting qualities when wet Bring a bag rated as 4 season or 700g+ down fill (approx. -5 to -10 degrees Celsius).
We recommend: Marmot Pinnacle or Mountain Hardwear Phantom 15

SLEEPING PAD
You will need a sleeping mat when camping at our ice climbing base camp. A full-length closed-cell foam mat and/or `thermarest', or a combination of both is best.
We recommend: Thermarest Prolite 4 and Thermarest Z-Rest Long

WATER BOTTLE
The wide mouth plastic bottles are good. Camelbak style water bladders are good in theory but can often freeze and are easily punctured. It pays to have sufficient capacity to carry two litres as you dehydrate easily in the dry mountain air. If you like add an insulated flask for hot drinks.
We recommend Nalgene Bottles

HEADLAMP
You will need a good headlamp and don't forget spare batteries.
We recommend: Petzl MYOXP Headlamp

SUN BLOCK
A small bottle or tube of maximum protection sun block. Lip balm (with SPF 15 or higher) is worth carrying in your pocket for application during the day.
We recommend: Piz Buin

TOILET BAG
Bring a small toilet kit - flannel, small towel, some soap, toothpaste, toothbrush and a towel.

FIRST AID KIT
A basic personal first aid kit is necessary. Blister tape, 2nd skin (optional), gauze pads, crepe bandage and painkillers. Also any personal medication required (Please remember to inform your guide if you are on any medication). Store the first aid kit in a waterproof container, a plastic bag inside a stuff sack is often adequate.

DOWN BOOTIES / COMFORTABLE BOOTS FOR BASE CAMP
Down booties or other warm and comfortable footwear for wearing around camp.
We recommend: Sea to Summit Down Booties

NOTEBOOK & PENCIL
Preferably waterproof paper notebook or wrapped in plastic bags.

POCKET KNIFE
The Swiss Army style, Leatherman, or other equivalent.

STUFF SACKS AND PLASTIC BAGS
For keeping your gear organised and dry
We recommend: Sea to Summit Stuff Sacks and Dry Bags

OPTIONAL EXTRAS

MAP
Topo50 map sheet CC11 Queenstown is the relevant map.

COMPASS
Any compass which is suitable for orienteering will do. Remember that the magnetic declination is different in the Southern Hemisphere so compasses designed for the Northern Hemisphere will stick if you try to use them here.
We recommend: Silva Ranger 3

EARPLUGS
Can be a good idea if sharing a tent with a snorer!

CHEMICAL HAND AND TOE WARMERS
To give your extremities some added warmth
We recommend: The Grabber brand

PERSONAL ENTERTAINMENT
Consider taking an iPod and/or a good book.

PLEASE CHECK YOUR EQUIPMENT LIST. THERE MAY BE OTHER REQUIREMENTS NOT LISTED HERE.