

Guide to Outdoor Equipment

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INTRODUCTION

I am a scout parent and a scout leader, and that makes me a big consumer of outdoor equipment. There are plenty of people who have vastly more experience than I do, and plenty of people who know much more about equipment than I do. But I've learned as I've gone along, and I'd like to share with you what I've learned.

This document is aimed primarily at parents of new scouts, but perhaps some others will find some useful information as well.

Occasionally I will get commentary from other adults that I will add into this document.

SOURCES

I do almost all my outdoor shopping at REI. It is not always cheaper, in fact, it often is NOT cheaper. However, you can take anything back to REI for any reason at any time. Their policy is that they want you to be completely satisfied. I have taken great advantage of that. I have never returned anything that broke because of my own misuse, but I have returned stuff by the boatload for almost any other reason you can imagine. They just smile and give you your money back, or give you a new item, whichever you want. If you're a member you get a 10% rebate every year. Also, they keep all your purchases online and you don't even have to have the receipt, they'll look it up. You can also order stuff from rei.com and pick it up at a store, or return it to a store.

There are other good outdoor stores, but in my opinion none of them compare to REI.

I occasionally buy stuff at Target. In particular, "tech" (synthetic) t-shirts, and base-layer tops and bottoms. The C9 brand is made by Champion and is about half the price or less of the comparable name-brand item.

I've occasionally bought stuff online (mostly REI!). Some of the other adults buy lots of stuff online.

Some parents are great at finding great deals. Sadly, it seems like I am not generally one of them. Deals are out there, though. REI has an attic sale about once a quarter. Some leaders have gotten unbelievable deals at the attic sales.

GENERAL ADVICE

I've gathered some general advice from some of our other adult leaders. These guys have spent a lot of time in the woods.

Jim Bodurtha:

Ground cloth. Two pairs wool (hiking) socks (other cotton). Dress in layers - wicking (under) shirt, boy scout like shirt, light or medium polar fleece, breathable outer jacket (Best value seems to be \$99 or less NorthFace Vantage Hyvent, of course, GorTex is nicer and archetyx breaks the bank.) Gortex gloves with liner. Water resistant but breathable boot also.

Steve Mitchell:

Steve Mitchell adds: "Suggest that new scout parents don't over-buy. What I mean is that the Troop, collectively, probably has a lot of items older scouts have out grown. So they may want to use the e-mail list to see if anyone has items available in a size needed by new scouts. Hiking boots are most likely to be available as these kids seem to out grow everything before they get worn out. Michael and Joe have needed three pairs during one year because they won't stop growing. And when it comes to boots, scouts need the right size. You don't want to buy them one size larger to allow room for growth. Spend the little extra for water proof boots. It's worth it."

Keith Pierce:

I recommend frame packs for Scouts. Scouts are not organized and conscientious enough to properly pack an internal frame properly each and every day. Campmor sells these very cheaply - and my kids are still using the same Scout frame packs on Philmont and West Coast Trail high adventures, and many other scouts have borrowed these same back packs on many other treks.

Borrow expensive equipment like tents and bags for the first year. Learn from the variety of equipment before actually purchasing stuff. I did not buy stuff until my end of the 2nd year in Scouts - I borrowed extensively from Mr. Klein, Mr. Rose and Mr. Tillman - and learned a lot before I decided on these major investments.

DO NOT DO NOT buy cook kits. T255 camping does not use individual or high tech cook kits. These are Scouts who are going to lose stuff all the time. Keep it cheap.

Tom Rose:

You might want to look at these links from t255.com/lists

http://www.t255.com/041128_REI_%20How%20to%20Fit%20a%20Backpack.pdf How to fit a backpack – from REI

<http://www.t255.com/Dressing%20for%20Outdoor%20Activities.pdf> How to dress

I would certainly write it differently if I were to do it again. Most importantly, down is out of the dog house with me. It is just so good for the weight and bulk it is worth risking getting it wet.

Chris Thieme:

The REI website is loaded with tutorials (including videos) that give guidance on gear features, sizing, types, and how-to adjust. I've used it quite often even when I wasn't buying from REI.

REFERENCES

Online articles and reviews are occasionally useful. *Backpacker* magazine often has useful reviews.

There is a great book called *The Complete Walker*. I've read other backpacking books that I thought were not very useful. *The Complete Walker* is exhaustive in coverage and detail. The only flaw is that it is so big and so comprehensive that it is intimidating. MCPL has at least one copy.

As Chris Thieme mentioned, the REI website is a useful resource. Also, in the store REI has paper charts for different kinds of equipment that compares price and features that are really useful.

Another good reference is, occasionally, Boy's Life. Their backpack buying guide is very good, I think.

Backpack Buying Guide

<http://boyslife.org/outdoors/guygear/8296/backpack-buying-guide/>

MAJOR EQUIPMENT

Hiking Boots

Also, see Hiking Socks, below.

Boots are essential for backpacking, and for wet and cold weather. Scouts tend to wear sneakers for other activities, but usually I wear my hiking boots for pretty much everything.

There are many good brands of hiking boots. Will and I have both owned multiple pairs of Vasque Breezes. I have been completely happy with them. There are many other great boots. I tried on a bunch of different ones and liked the Breeze the best. Your average scout will probably not carefully evaluate multiple brands.

Make sure the boots fit. You might be tempted to size a little big. I won't say it can't be done, but it is risky and can lead to a poorly-fitting boot that causes blisters.

The Breeze is considered a 3-season boot. I have worn it in very cold weather with clean and dry double-layer socks and have been fine. It has a waterproof Gortex lining and I have stood in water in them and stayed dry, but more than a couple of inches of water and the water will get in over the top. They have no insulation, so more than a couple of inches of snow and they get cold fast.

As of February 2013 Vasque has replaced the Breeze with the Breeze 2.0. I have not tried the new Breeze.

There are after-market insoles. Will's first pair seemed to fit better with them; since then, I haven't used them.

A store like REI or another outdoor specialty store can be invaluable, because you can try on multiple pairs of boots, and the staff are usually knowledgeable.

A word on boot care. If boots get wet on the inside, they will start to smell. Here's what I do. After most trips, I pull out the insoles, wash off the insoles (sometimes with dish soap), and then run warm tap water IN the boot for a minute or so. Then I dry the boots in front of a fan until they're bone dry. I put anti-fungal powder in before I put the insoles in. I swear I got that from the Vasque site, but I can't find it now. Anyway, it works for me.

Hiking Socks

Socks are an essential part of the boot. The standard is to wear a thick outer sock and a thin inner sock. Experts say avoid cotton, and I agree. It doesn't work right with cotton socks. Will and I wear Smartwool Medium Crew hiking socks. They are the only brand I've personally ever tried. I am sure many other comparable brands are just as good.

I've tried many liners. Any synthetic or wool liner such as the REI CoolMax will work fine.

For first-year scout, if you buy 3 pair of each you are set for a couple of years. For a weekend trip that gives the scout one set to wear, one to change in to, and one spare set.

For a basic camping trip, just the outer sock will probably work. Most scouts will probably balk at the fussiness that the two layer approach may require.

I have never checked, but I suspect that many scouts wear regular cotton athletic socks with their hiking boots. Maybe that will work, but I don't recommend it. It would probably be fine for a basic camping trip.

It is important to change socks at least once on a hiking or camping trip. After a day wearing boots the socks are damp, even if they feel dry. Changing socks before bed, especially if it is cold, is important. Many scouts do not do this. Then they complain in the morning that they were cold.

Backpack

Also, see Backpack Rain Cover, below.

Backpacks have frames. There are internal frame packs and external frame packs. I prefer internal frame, but others like external.

It would be great if you could buy one pack and it would last for an entire scouting career, from age 11 to age 18. That is a challenge, since scouts grow so much between those ages.

There are basically two approaches:

1. try to buy one pack that will last the entire time
2. buy a smaller one for the early years, move up to a larger one later

It may be impossible to buy one pack that will last the entire time. This is what I tried. Will's pack is an "REI Passage 65". The Passage is specifically a youth model. It is top-rated, and mostly I've been happy with it. It claims it will adjust from 11 years to 17 years. We got it the summer before 6th grade. He has used it many times since then.

It is also really too much capacity for a small scout on an overnight trip. It doesn't work very well when it is half-full, because then the straps don't line up right. That's a solvable problem, but I find that it sometimes requires more adult help than might otherwise be the case.

For an alternate opinion, here is a scoutmaster who claims that the Outdoor Products "Dragonfly" from Campmor is the way to go: <http://www.scoutmastercg.com/2011/12/the-best-backpack-for-scouts/>.

There are many good smaller packs. Some great packs are probably the Osprey Ace 48 and the REI Passage 40. I am sure there are others. If you aren't trying to find one pack that will work for the next 8 years, for every occasion, then there should be lots of great choices. Many packs have adjustable torsos that can be adjusted to fit the growing scout. However, the 16-year-old going to Philmont for 12 days will need probably need a different pack.

A great idea is to go to REI (or similar store), hopefully when they aren't massively crowded, and find a knowledgeable salesperson. They can be very helpful. They will also help you adjust the pack in the store as part of the fitting process.

Adult leaders are often also watchful of the backpacks of new scouts. We will stop for an adjustment break if we see a need.

Backpack Rain Cover

Your scout needs a pack rain cover. REI and Sea-to-Summit are good brands. I'm sure there are others. Some packs are advertised as waterproof. I am skeptical. Some people will swear by trash bags. That might work in a pinch, but I don't recommend it.

Tent

Also, see Tent Footprint, below.

The standard for backpacking for scouts is two-person tents, two scouts per tent. Adults tend to use one- or two-person tents, one adult per tent. On occasion scouts share a tent with a parent. That is entirely the parent's and scout's choice.

For car camping trips, scouts often use bigger tents that various families own within the troop, sleeping four, five, or six, or even more, in a tent.

An excellent two-person tent is the REI Half Dome. It is a good balance of cost vs. weight vs. performance. There are many half domes in the troop. The model changes slightly every few years. There are many other choices. The REI Quarter Dome is slightly lighter and has a few less features. That is a great choice also.

There are tents which are arguably better, but you will definitely pay more to reduce weight or for more features.

There are many two-person tents which are cheaper, and plenty of people have them and are happy with them.

You may be able to put off a tent purchase. For many of our trips, the scouts use some of the large tents that are available in the troop. And even with the two-person tents, scouts can share. Also, there may be extras in the troop you can borrow for awhile.

Tents need to be aired out after a trip. I used to set mine up in the backyard after a trip. Now I just leave it in a big wad in the basement for a few days and fluff the wad every so often. It doesn't hurt to have a fan blowing in its general direction. Unless it was bone dry on the trip the tent needs to be aired out. That means about one out of twenty times. The rest of the time it needs to be aired out.

Tent Footprint

A tent footprint is a ground cloth that goes between the tent and the ground. It adds an extra layer of protection for the bottom of the tent. It also adds another water and cold barrier. They are generally specific to a brand and model of tent.

Keith Pierce recommends using 3ml plastic rather than the manufacturer's footprint. He says, "I have never purchased a tent footprint – I refuse to pay the price. I use instead 3mil plastic – cheap, replaceable, recyclable."

Sleeping Bag

Also, see Sleeping Pad, and Sleeping Bag Stuff Sack below.

Backpacking, especially in cold weather, requires a mummy-type sleeping bag.

There are several issues regarding sleeping bags. One is the temperature rating. Another is what material the fill is. Also really important is how much it weighs, and how much it compresses.

My bag is rated at 25 degrees. So is Will's. We've used them when the low was 8 degrees, and when it was 80 degrees.

The temperature rating can be stretched downward by wearing extra clothing. When it was 8 degrees I was pretty much fully dressed, with a thin jacket and a hat on, with an extra pair of sweat pants worn like a giant pair of socks, and with a couple of hand warmers thrown in. I was cozy. Getting out of bed into 8 degree weather was a bit of a shock, though.

The issue is that you have to trade weight and bulk for warming power. The lower the temp rating, the bigger and bulkier the sleeping bag.

Then there is the issue of insulating material. There are two basic choices: down or synthetic.

Down is superior in many ways. It provides better insulation for the same weight and compresses better. Unfortunately, all the experts say that if it gets wet, it loses its insulating power. I've never tested that. It is also more expensive. I have a down bag – REI Halo +25 and I have been very happy with it.

Will has a synthetic bag – an REI Zen +25. It has worked very well, although it does not compress very well compared to my down bag. He used the Zen +25 exclusively in all weather for many trips over something like three years, but I recently found a deal on a lighter-weight 40 degree synthetic bag for warmer trips.

Recently several companies have claimed to have succeeded in making down water resistant by treating the down with a water-repellant finish. Although sleeping bags with such treated down just came on the market in the summer of 2012, initial reviews seem pretty favorable. I would give this serious consideration to buy a sleeping bag for a scout today.

An internet search for something like “best synthetic sleeping bag” or “water resistant down” will yield some informative results.

Sleeping Pad

A sleeping pad to go under the sleeping bag is essential. In addition to providing extra cushioning, it provides critical insulation between the sleeper and the ground. Even moderately cold ground will suck the heat from a sleeper.

There are two basic types of pads – inflatable and non-inflatable. They are often referred to as open cell foam and closed cell foam. The inflatable ones typically self-inflate to some extent but usually need some additional inflating.

I recommend the non-inflatable, simply because the inflatables require a little extra work to set up and pack up, and because of the possibility of punctures.

I have both. I really like my inflatable – a Therm-a-Rest ProLite Plus. I also have a Therm-a-Rest Z-Lite, which folds, doesn't require inflating, and can't get punctured. (I sometimes carry a repair kit – I hope I never find out if it works.) The inflatable is a squick more comfortable and is a better insulator. The non-inflatable is cheaper, and 5 ounces lighter. I usually take the inflatable when weight doesn't matter and the non-inflatable when it does.

Will uses the same inflatable. He won't give it up for a non-inflatable.

I recommend any of the non-inflatables for scouts. I think the risk of puncture, however slight, isn't worth it.

One issue is that the non-inflatables don't generally insulate as well as the inflatables. If it's not going to be below 20 or 30 degrees, this shouldn't be a problem. In really cold weather, some cardboard under the pad might add some insulating capability.

Get full length. The weight and money saved by using a shorter one just isn't worth the heat lost through the feet when it is cold.

Sleeping Bag Stuff Sack

The sleeping bag will probably come with a storage bag and a stuff sack. The storage bag is very big, and the sleeping bag should be stored loosely in it for storage. The stuff sack is for stuffing the sleeping bag into for carrying. Often getting the bag into the stuff sack is a frustrating task for smaller scouts.

If the sleeping bag didn't come with a stuff sack, you'll probably have to buy one. It's generally impractical to store the bag loose in the backpack.

I went through several generations of stuff sacks. I've finally settled on the Sea-to-Summitt eVent Compression Dry Sack. In addition to the cost, it may be too fiddly for young scouts. This is definitely something you can put off for awhile, if you have a cheaper alternative.

Raingear

It will rain. It will some day be cold and raining and your scout will be stuck in it. I don't believe ponchos are satisfactory, although some use them and are happy with them.

I use a rain jacket. Will and I both started with Marmot Precips. They are (relatively) cheap and have performed quite well. As of this writing Will outgrew the Precip we got when he was eleven and I found a men's REI "Ultra Light" rain jacket on the clearance rack.

Rain jackets vary quite considerably in price. You need to watch out for the ultra cheap ones, because they are not actually waterproof.

I typically use mine not just as a rain jacket, but also in cold weather as an outer shell over an insulating layer, and I've been very happy with it for that. I've even worn it skiing. Unfortunately, rain jackets are a challenge when it is hot, because the wearer gets hot and sweats. I also think they're uncomfortable over bare arms.

This could be put off for awhile by using a poncho.

Hiking-Appropriate Clothing

Scouts often wear gym shorts, jeans, or sweatpants while backpacking. In warm weather it doesn't seem to make much difference to them. They seem happy enough. Some wear synthetic pants, like the scout pants, or something similar.

I wear synthetic pants all the time -- REI Sahara pants. I have them with both the regular leg and the zip-off leg. They are synthetic and dry quickly. I find they are cool in the summer and I'm fine with them

with a base layer in the winter. Some adults wear something similar to them. Some adults wear something heavier in the cold, like wool.

Most scouts wear cotton or blended t-shirts. A few wear synthetic "tech" shirts – like a t-shirt, only synthetic. I get mine at Target, usually.

The colder it gets, the more attention you have to pay to clothes. In cold weather, layers are the answer. The right layers, and headwear and handwear, and it is possible to be out in sub-freezing weather the entire weekend and really be perfectly comfortable.

An excellent guide is "Dressing for Outdoor Activities", at <http://www.t255.com/Dressing%20for%20Outdoor%20Activities.pdf>.

Tom Rose, the author, adds that he has revised his opinion of down since writing it. He says, "It is just so good for the weight and bulk it is worth risking getting it wet."

MINOR EQUIPMENT

Water Transport

Our usual standard is for each person to carry at least 2 liters of water, unless we're very sure of water. Sometimes we carry more. Water weighs 2 lbs per liter, so that's 4 pounds. But it has to be carried in something.

At one point I bought some hard-sided Nalgene 1-liter bottles. They are tough like iron. You can stand on them. They are also expensive and heavy.

There are many ways to carry water. Empty soda bottles work well. I use 1-liter and 2-liter bottles.

The trick is what to actually drink out of. Will carries a Nalgene bottle in a sling. Many scouts and adults carry a water bottle in an easily reachable pack pocket.

Some people really like Camelbaks. I tried one, it wasn't for me. Will has one that he uses sometimes. I find that they are labor-intensive to clean and store. Many backpacks have slots for the Camelbak reservoir, so it can be used with the backpack.

The important thing is to find a method that makes it easy to drink plenty of water.

Eating Utensils

The standard is a plastic bowl and a plastic spoon. You can buy them at REI or at the dollar store. It is a rare T255 meal that can't be eaten with a bowl and spoon.

A scout needs something to drink out of. That might be a water container. Sometimes they like to make hot chocolate or something else. I have yet to find a perfectly satisfactory camp cup. Will uses a fairly heavy plastic REI-brand mug. I've tried at least 5 different cups made specifically for camping and I

didn't like any of them. I've come to use a cheap plastic tumbler with a plastic lid on it. It is very light. In the winter I sometimes use an insulated cup or a flip-top thermos. They are heavy. If I've completely lost my mind I carry a big thermos, but that is WAY too heavy for backpacking. But when it is really cold, if you put boiling water in it at night and in the morning you can have coffee while you are making coffee.

Keith Pierce drinks his morning tea from his bowl. He doesn't even carry a cup. He only carries one teabag, too. Now, THAT is a minimalist! Tom Rose and Chris Stuart have used Sierra cups, and also the flip-top thermoses, among other things.

The bottom line is that a scout needs something to eat out of, something to eat with, and something to drink from. It doesn't need to be expensive or fancy. Lots of scouts get mess kits, but they rarely use much of it.

Headlamp (or Flashlight)

A light source is essential for backpacking, since it gets dark in the woods at night! Many people like headlamps, which allow you to have both hands free. A small flashlight will also work. Fresh batteries, or spares, or both are essential. Especially when backpacking, few people will be carrying spares and we won't have big lanterns.

This is a place to save a few dollars, if you want, by delaying a headlamp and using a flashlight, or getting an inexpensive one. I think Will's cost less than \$25. I have a Petzl Zipka Plus 2. I like it a lot. It wasn't cheap, especially with the optional carrying case. (Although, and here's the value of REI, after I'd had it about 2 years the pad was slipping off, and REI replaced it for free.)

Scouts lose headlamps and flashlights. Frequently. That is how I first tried one – a scout had lost it and I wore on a trip til we figured out who's it was. Good reason to put their name on it.

Pocket Knife

Scouts love pocket knives. Scouts also lose them. I carry a teeny Swiss Army Knife (SAK) and also a bigger folding knife. The SAK has a pair of scissors on it, which is surprisingly useful. A small to medium-sized knife works fine. An inexpensive knife also works fine. If a scout is unusually unlikely to lose things, a multitool might be good. As light as possible is a good idea. Extra ounces add up. I've always meant to get a multitool, but I can never pick one. I want one that's lightweight, and bright-colored, but still sturdy. Haven't found it yet.

Compass

My recommendation for a compass is the Silva Starter 1-2-3. It is inexpensive and is all the compass a scout needs. REI doesn't carry it, but the scout store does. One out of 20 scouts will care enough about maps and compasses to have the slightest use for a fancier one. A beginning scout can put off getting a compass. At some point before first class it would be nice if a scout had a compass, though.

A good idea is to carry a compass in a plastic bag when it isn't being used. Otherwise fine grit collects in the turning part and it is annoying. I am probably the only person in the world who carries their compass in a plastic bag.

Fire Starting

This is something that can easily be put off. Maybe forever.

I carry 3 or 4 small Bic lighters, all in bright colors. Scouts don't really need anything to light fires with, because they can always borrow one. It's a nice thing to have, IF they know where they are carrying it. For some reason scouts have real troubles using disposable lighters. Scouts also love various small torches. I do too, although I don't have one.

Scouts also like fire-starting supplies and gadgets. Nothing wrong with that. After a great deal of experimentation, I've come to really appreciate wax paper. Although pretty much nothing beats cotton balls soaked in Vaseline, or jute twine unraveled into a bird's nest.

In the old days we carried strike-anywhere matches in a waterproof container. That's still a good way to go.

Axes, Hatchets, and Saws

This is something that can be put off. They are actually rarely needed when backpacking. Most wood can be sized by breaking it.

First Aid Kit

This can be put off, at least until some time between Tenderfoot and Second Class. One of the requirements for Second Class is to assemble a personal first aid kit. Also, when we're on a trip, we generally have several big first aid kits.