

## Overview of Training

Welcome to Part 1 of the training you need to get on the trail with the Backpacking Interest Group (BIG). What you'll learn tonight, followed by three pack inspections and in-field training (Part 2), will get you confident in taking care of yourself during this athletic activity.

Part 1 is a 1.5 hour classroom training that teaches you what you need to know to pack and prepare for a trip. We'll follow the Packing List (Appendix C) during the training, and you'll use that list again and again with each trip.

Here's what happens after Part 1.

- You'll sign up for our Yahoo Group, [girlscoutbackpacking](#), if you're not already getting our emails
- You'll RSVP for a Beginner trip (as listed on [www.girlscoutbackpacking.net](http://www.girlscoutbackpacking.net)). Rain or shine!
- You use your PACKING LIST to find what equipment you need to rent, borrow or buy.
- You'll come to the Planning Meeting before the trip with your pack fully packed. At that time, you'll work with an experienced backpacker to check everything in your pack, making notes of what you need to add or replace.
- You'll get your pack inspected at a Planning Meeting for 3 trips. After you've had 3 pack inspections (and have been on 3 trips), you won't need to bring your loaded backpack to a Planning Meeting unless a trip leader tells you to.
- Your Part 2 training will be done during a backpacking trip in the field. You'll learn and practice various skills such as setting up shelters and lighting stoves.

## Planning Meetings and Trips

The Planning Meetings for a trip are generally held the Wednesday before the weekend trip. The main purpose of the meeting is to bring together the group that will be hiking, eating, and sleeping together. At the meeting, the group will:

- turn in payment and permission slips for the trip, plus any needed health forms
- learn about the locale for the trip, including any special considerations (such as weather)
- divide into sleeping and cooking groups
- in each cooking group, plan menus and assign who will bring what
  - o Each person brings their own lunches
  - o Dinners and breakfasts are done as group meals
- as a whole group, review each group's menus for the weekend and get input from others
- gather, and then divide up, the equipment that BIG provides: shelters, cooking kits, fuel, etc.

On the morning of the trip, you'll arrive at the meeting place all packed and ready to go, with water bottles filled with water. (Typically, there are no bathrooms available at the meeting site.) Because our time to hike out of a campsite can vary, on the way home from the trip, we'll call families to tell them what time to arrive at the meeting site (typically mid-afternoon) for pickup.

## Equipment Summary

These notes provide guidance to parents and girls unfamiliar with backpacking equipment. Details on equipment are given in Appendix B. Our backpacking group provides shelters and all cooking equipment.

## ***Backpack***

Backpacks come in two varieties. External frame backpacks have a visible metal frame on the outside, while internal frame backpacks have an internal frame that frames a large pouch.

Our backpacking group recommends external frame backpacks. These packs have several advantages: low cost, multiple compartments for organizing equipment, ease of adjustment, and reasonable load balancing for the types of trips we do.

When buying or renting, make sure the pack fits and that you hike in it around the store. Trip leaders can make adjustments to the hip belt and shoulder straps at the Planning Meetings or on the trail.

## ***Sleeping Bag and Pad***

A mummy style, lightweight bag is needed. The mummy shape, vs. rectangular, has the best warmth to weight ratio. We backpack in rain also, so down fill is not recommended because when it gets wet, it loses its ability to keep you warm.

A closed-cell foam sleeping pad is needed. The closed-cell construction, also called Ensolite, will not absorb water. These pads either roll or fold for carrying. Pads used for workouts are not suitable. A three-quarter-length pad is fine and weighs less.

## ***Boots***

Hiking boots are not required unless you are attending a long summer trip. Until then, sturdy sneakers or other athletic shoes with good support and a non-slip grip will be adequate for our Bay Area trips. Hiking boots will keep your feet drier in the rain, however.

## ***Warm Shirt & Socks***

**Shirt/Jacket.** Our group has traditionally used wool shirts as an outer layer for keeping warm. Nothing can take the place of wool for keeping a person warm, even when wet, and wool is wind-resistant. You may have noticed the resurgence of interest in wool with the company SmartWool®, but their prices are pretty steep. LL Bean sells wool jacket/shirts as do some of the surplus stores described below.

Some synthetics, such as Polartec® fleece, are approaching wool for their ability to keep a person warm even in wet conditions. Fleece does not provide much resistance to wind, so it must be combined with a nylon shell or windbreaker. One disadvantage of synthetics is that they will melt and adhere to skin when burnt, making burns more severe.

**Socks.** If and when you wear boots on an outing, pair them with hiking socks. Wool socks are recommended with either silk or acrylic wicking liners to prevent blisters. However, acrylic hiking socks are also acceptable. If you are not wearing hiking boots for the local trips, be sure you are not wearing 100% cotton socks.



## Shelters

You don't need to purchase a shelter or a tent. Our group has tarps with ropes, stakes, and poles that serve as shelters on most outings, and we borrow tents for use in really rainy weather.

We'll teach you the knots you need to know to keep yourself warm and dry: bowline, tautline and clove hitch.

## Ground Covers

For ground covers underneath the shelters, we use emergency space blankets, as shown to the right. The only place we have found to get these is at REI (around \$14 in October 2009) or SportsBasement. We have some to lend.

### MPI SPACE ALL-WEATHER BLANKET

- Specifically designed to reflect and retain over 80% of radiated body heat
- The 4-ply laminated structure helps to form a "Perfect Barrier" capturing radiated body heat
- Prevents wind and moisture penetration through the material
- Has the capability to be used as a medical blanket, emergency shelter, windbreak, radar reflector or a large signal mirror or sunshade
- Full edge binding and reinforced grommetted corners
- Measures 60" x 84" and weighs 12 oz.



## Stoves, Fuel, Cooking Gear, Water Bottles

Our group provides stoves and cooking pots and pans. We use "Camping Gaz" compressed fuel, which is a mixture of butane and propane. We'll provide each cooking group with a can of fuel and a "billie kit" which consists of two pots, a shallow pan, the stove, a lighter, soap, and a sponge. We also have cooking spoons, spatulas, and non-stick frying pans if your planned menu requires them. You will need to bring your own utensils, cup, and plate. You also need two unbreakable 32 ounce/1 quart water bottles. Unbreakable, non-BPA ones, as shown to the right, can be had for as little as \$6.50 (price as of October 2009).

**Sources of Equipment (Santa Clara County and environs)**

Campmor, a catalog store located in New Jersey, has quite a good selection of equipment at competitive prices. You can order online from their website at [www.campmor.com](http://www.campmor.com).

Mel Cotton's, located on San Carlos near Lincoln (in San Jose), has a good selection, but it is advisable to do some price comparisons before buying there. They occasionally have competitive sale prices. The main attraction of this store is that they rent backpacks and sleeping bags. This is a very good approach to use while you are deciding on what equipment to purchase.

REI is a membership store, which is open to the public but pays back year-end dividends to members. Lifetime membership costs \$20 and the annual dividend averages 10%. This store has quality equipment, often at prices that are competitive even before the discount. They will take anything back if something is wrong with it, even after substantial use. They have monthly (members-only) "Scratch and Dent" sales of returned equipment at which great bargains can often be found. This is another good place to rent equipment. Locally REI can be found near Westgate Mall in Saratoga, on Charleston in Mountain View, and on Industrial Rd. San Carlos.

Any Mountain (in Fremont, Redwood City, Corte Madera, Concord, Berkeley, Dublin, Roseville, and Westgate Mall on Saratoga Ave in San Jose) is another good place to look for a somewhat different brand selection from REI.

Sports Authority, located on El Camino Real in Sunnyvale near Saratoga-Sunnyvale Road is good for clothing. Big 5 Sporting Goods is another source for clothing and camping gear.

Sports Basement in Sunnyvale, off Lawrence Expressway, is a warehouse-style store that has exceptionally good prices.

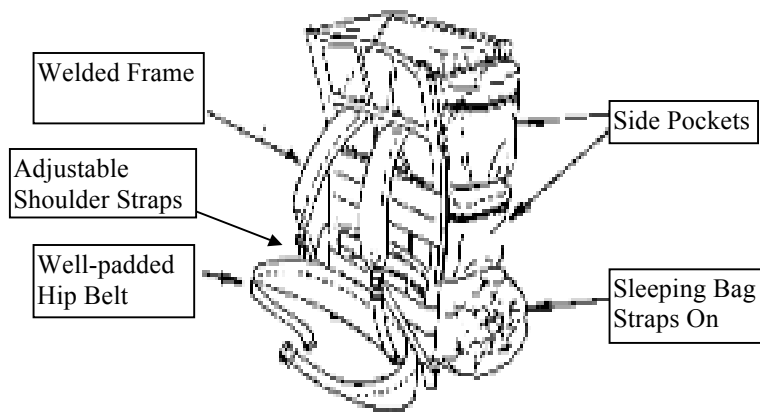
Mountain View Surplus, at 1299 W. El Camino, Mt. View, and also at 2045 S. Bascom, Campbell, are claustrophobic little stores packed with a variety of military surplus and regular retail channel camping items. If they have what you want, it is likely their price will be competitive. This is a good place to shop for long underwear. The store in Mt. View gives a 10% scout discount if you pay cash.

Stevens Creek Surplus, on Stevens Creek Boulevard between San Tomas and Winchester (in San Jose), is a somewhat larger surplus store that carries quite a bit of clothing and some camping gear.

## Appendix A: Details on Equipment

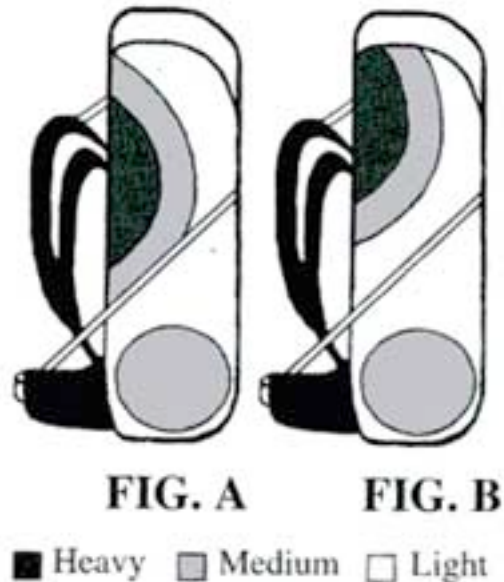
### External Backpack Desired Features

- Nylon pack with external frame
- Well-padded shoulder straps
- Well-padded hip belt
- Sufficient space on the frame to strap a sleeping bag
- Two or more outside pockets
- Main body of the pack divided into upper and lower compartments, with zippered access to the lower
- Waterproof nylon (look for a plastic coating on the inside surfaces)
- Welded joints in the frame otherwise you must supply spare nuts/bolts.



## Packing an Internal Frame Backpack

A properly packed backpack can feel lighter than it actually is. For trail hiking and gentle terrain, pack heavy gear high and close to your back (Fig. B). Next, layer in medium weight gear, then light gear farthest from your body. This will keep the pack in line with your center of gravity without having to lean forward excessively. For more extreme terrain, or when climbing or skiing with a heavy pack, drop the heavy items down to the middle of your back (Fig. A) and layer out the lighter gear. You will have to lean forward more to keep the weight in line with your center of gravity, but the balance is better as your pack will not be as top-heavy.



### General Pointers:

Always start by packing your sleeping bag into the bottom of your pack (do not hang it on the outside). This serves as a good base for the rest of your load, and all of your other gear will help compress the bag. Packing heavy gear is easier if you lay the pack horizontally and fill around it with lighter gear. Keep a pile of clothing and other soft gear to fill any vacant spaces created by hardware. Jandd stuff and stash bags can be purchased to color-code gear and make organization easier; this is especially useful in larger packs. Bulky items like ropes, tent poles, and foam pads can be attached to the exterior lash points of the pack, but remember to keep your center of gravity and balance in mind. For exterior gear, the best place is under the side compression straps. The top of the pack is good for light items, such as foam pads. Only as a last resort do we recommend putting gear on the bottom of an internal frame pack, for it can interfere with walking and will feel like more weight than it actually is (it pulls the load out of line with your center of gravity).

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## Sleeping Bag Recommendations

Next to footwear, no other piece of equipment is so important to comfort and health on a backpacking trip. For warmth vs. weight, down bags are the best, but they lose their loft and insulating ability when they are wet. A bag with 3 pounds or more of Dacron Holofil II or other synthetic fill is the best bet for backpacking in the Bay Area. If soaked, it can be wrung out and used that night. It is durable and non-allergenic. Both inside and outside surfaces should be nylon for light weight and durability. A mummy bag construction is important, with a cord tie at the top of the bag to close it up around your face on cold nights.

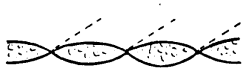
Most bags have a temperature rating on the packaging that represents the minimum temperature at which one can be comfortable in the bag. Even a bag rated for zero degrees Fahrenheit is quite comfortable on warm spring evenings. Make sure that the bag weighs less than 4 pounds.

Check construction very carefully. Construction can have as much effect upon the warmth of the bag as the insulation used. Avoid bags where the inside and outside covers are sewn together through the insulation. This type of construction, called "sewn through," produces a bag with cold lines where the insulation is thin.

Store the sleeping bag outside of its stuff sack: storing it compressed will cause it to lose loft.

**In summary, look for:**

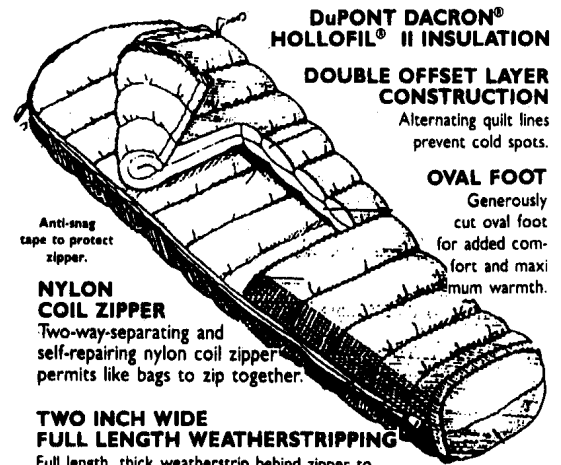
- Mummy style bag
- 3 pounds or more of Dacron HoloFil II or other synthetic insulation (check temperature rating on the packaging)
- Nylon covers inside and out
- Non-sewn through construction



Sewn through Construction



Overlapped Construction



**DuPONT DACRON®  
HOLLOFIL® II INSULATION**

**DOUBLE OFFSET LAYER  
CONSTRUCTION**

Alternating quilt lines prevent cold spots.

**OVAL FOOT**

Generously cut oval foot for added comfort and maximum warmth.

Anti-sag tape to protect zipper.

**NYLON COIL ZIPPER**

Two-way-separating and self-repairing nylon coil zipper permits like bags to zip together.

**TWO INCH WIDE FULL LENGTH WEATHERSTRIPPING**

Full length, thick weatherstrip behind zipper to retard airflow and prevent heat loss.

## Footgear

Nothing can spoil a weekend campout for a girl (or for her leaders and fellow scouts) so much as sore, blistered feet. Sturdy, well-made sneakers are acceptable for Bay Area outings, but not for longer hikes in the Sierras.

We recommend sturdy, but soft and flexible, boots which fit your feet well, especially in the heel. Most good boots feature some degree of ankle support. Recently, boots have become available with a nylon or Gore-Tex fabric top (rather than leather), or a composite of nylon and leather, and lug soles. Although a nylon composite is not waterproof, it has the advantages of lower cost, much quicker break-in, and excellent flexibility. Waterproof boots are not a requirement. Try on boots with hiking socks (and liners if you prefer them) and walk around in the store a lot before you buy. Take them home and walk around at home before taking them outdoors.

Break in your boots before you hit the trail (see Appendix C).



Example of a composite construction boot



## How to Choose a Sleeping Pad<sup>1</sup>

Sleeping pads provide 2 vital benefits: cushioning and insulation. Cushioning might seem like a pad's most useful function, but often more important is its ability to insulate your body from cold surfaces.

### How Do Sleeping Pads Work?

Sleeping pads insulate the same way that sleeping bags and clothing layers do. They trap and hold a layer of dead (non-circulating) air between your body and the cold (in this case, the cold ground). Your body gradually warms this layer of dead air and it becomes an insulating barrier.

Beneath you, though, a sleeping bag's heat-trapping loft gets compressed to almost nothing due to the weight of your body. As a result, you need a pad to buffer you from heat-depleting contact with the cold ground (this is known as "conductive" heat loss). The insulative performance of a pad depends upon how much air it holds inside and how free that air is to circulate.

### Self-inflating Pads



Popular with backpackers, these are open-cell foam pads wrapped in air-tight, waterproof nylon shells. A few of the thickest models are better suited for car camping.

**Pros:** Comfortable; excellent insulation; firmness is adjustable; very compact when rolled up.

**Cons:** Heavier than simple foam pads and more expensive. Can be punctured or ripped, though field repairs are not difficult.

### Backpacking Air Pads



These pads use air for comfort and must be manually inflated. Some models integrate foam or fill insulation to increase warmth.

**Pros:** Comfortable and lightweight. Fine for backpacking or camping in warm conditions; insulated models can be used year-round.

**Cons:** Can puncture, though field repairs are not difficult. Noninsulated models offer poor insulation due to free circulation of air inside.

### Foam Pads



These basic backpacking pads feature dense foam filled with tiny closed air cells.

**Pros:** Lightweight, inexpensive and durable; excellent insulators; won't absorb water.

**Cons:** Less comfortable. Relatively stiff and firm, so they tend to be bulky.

### Choosing a Pad

For the lightest possible pad, pick a basic foam pad or a "short" or "3/4 length" of a self-inflating or air-pad model. Low weight and a small packed size override all other concerns. For adults who prefer a bit more comfort, compare pads with greater thicknesses and durability. The tradeoff, of course, is a moderate increase in weight.

<sup>1</sup> Adapted from <http://www.rei.com/expertadvice/articles/right+sleeping+pad.html>

**Appendix C: REI Advice: Selecting Socks, Breaking in Boots, and Packing Your Pack**

<http://www.rei.com/expertadvice/articles/backpacking+socks.html>

<http://www.rei.com/expertadvice/articles/breaking+in+hiking+boots.html>

<http://www.rei.com/expertadvice/articles/pack+backpack.html>

REI Vides: How To Pack Your Backpack

<http://youtu.be/uh7wQT22lxs>

REI Video: How to Adjust Your Pack Each Time You Put It On

<http://youtu.be/DSs38h1U1T8>

## Backpacking Interest Group Packing List

(bring this list with you to the pack inspection)

- Backpack with hip belt
- Sleeping bag stuffed in 13-gallon plastic bag (for waterproofing) then in stuff sack
- Sleeping pad (ensolite/closed cell foam)
- Suitable hiking shoes
- 1 large (30 gallon, leaf size) trash bag (for rain protection to cover pack) or pack cover

### Clothing: includes WHAT YOU WEAR

- 2 pair wool socks or 2 pair acrylic socks
- 2 pair liner socks (if needed)
- Warm hat
- Sun hat with visor
- 1 pair long zip off pants
- 1 pair lightweight rain pants
- Synthetic thermals, top and bottom, for sleeping and layering
- Change of underwear (undies and sports bra)
- teeshirt, synthetic or 50% cotton
- Wool shirt (or fleece)
- Windbreaker (nylon - light!)
- Rain poncho
- Aqua sox (closed-toe water shoes) or camp shoes
- Gloves (if you tend to be cold)

### Cooking Gear

- 2 water bottles - 1 quart each (must be leak proof and smash proof)
- Spoon & 2 cups (or bowl, cup, spoon)
- Pocket knife
- Waterproof matches or lighter
- Nylon stuff sack for hanging food
- One 13-gallon bag for carrying out garbage
- Two 1-gallon zip bag for carrying out wet food garbage

### Other Personal Gear

- Comb or brush; hair ties
- Toothbrush; toothpaste
- Small pack towel
- Toilet paper: 2 medium rolls in Ziploc bags
- T.P. disposal kit (1 gallon zip, 2 quart zip, 6-8 small zip)
- Feminine hygiene supplies (2 days worth)
- Glasses/case, retainers/case, spare contacts/solution
- First aid kit (Moleskin, bandaids, lip balm with sunscreen, antiseptic wipes)
- Whistle
- Sunglasses, sunscreen
- 50 ft. lightweight nylon rope

- 3 bandannas (different colors)
- Small flashlight
- Extra batteries and bulb
- Emergency Repair Kit (large safety pins, 6 inches duct tape around small stick or pencil, backpack pins, nail clippers)

### Optional Personal Items

- Fishing tackle & bait (depends on trip)
- Swim suit (or wear sports bra and shorts)
- Binoculars
- Camera & film
- Compass
- Map (if provided)
- Personal medicine (in pharmacy container; notify leader if you are bringing any)

### Patrol Equipment

- Shelter with poles and stakes\*\*
- Ground cloth (red/silver emergency blanket)
- Billie kit (stove, pot grabber, towel, scraper, soap, cooking oil, lighter, scouring pad)\*\*
- Spatula, Serving Spoon (per outing)\*\*
- Frying pan (one per outing)\*\*
- Fuel\*\*
- Buckets (1-2 per trip); scoop cup; soap\*\*
- Shovels for biffy\*\*

\*\*These items will be provided by BIG.

ITEMS to Add or Exchange (notes from pack inspection)
FOOD TO BRING