

EQUIPMENT & SHELTER

2



- ✓ Personal Equipment and Clothing
- ✓ Group Equipment
- ✓ Making an Envelope Sleeping Bag
- ✓ Selecting a Sleeping Bag
- ✓ Tents
- ✓ Pitching a Tent
- ✓ Tent Camping in the Winter
- ✓ Caring for a Tent
- ✓ Other Types of Shelters
- ✓ Backpacks
- ✓ Using a Pack
- ✓ Canoe Equipment
- ✓ Tips on Equipment and Shelter

Personal Equipment and Clothing

All hikers and campers have their reasons for liking particular items of equipment or clothing. A piece of equipment one person thinks is necessary, another person might leave at home. Each person, depending upon the time of year and type of outdoor activity, may require or want different equipment and gear.

Instead of making another expert list of clothing and equipment, a list of generally needed and used items is given. The following grouping is a convenient way to organize the items you would carry on a two-night or longer trip.

Experienced campers often use ditty bags and plastic zip closure bags to keep items dry, separated, and organized in their pack.



Remember: You pack it in and you pack it out! The weight of your final pack is important.

Personal Equipment

What piece of equipment could be used to describe an attribute of God's character?

- Bible and study materials
- Pencil and paper
- Personal First Aid Kit
- Matches and/or butane lighter
- Pocketknife
- 50-foot ¼ inch nylon rope
- Map and compass
- GPS (optional)
- Flashlight and spare batteries
- Toilet paper
- Trowel (plastic garden trowel)
- Gloves (leather)
- Bandanas
- Whistle and signal mirror
- Hiking boots
- One pair of comfortable shoes to wear around camp
- Sleeping bag, pad and ground cloth
- Tent



"Your word is a lamp for my feet and a light on my path." (Psalm 119:105)



Personal Hygiene

- Biodegradable soap
- Toothpaste
- Toothbrush
- Lip balm
- Insect repellent
- Comb
- Metal mirror
- Wet wipes (alcohol free)
- Essential personal medications
- Small bottle of powder

Repair Essentials

- Extra shoelaces
- 50 ft. of 1/8 nylon rope
- Large safety pins
- Needle, thread and buttons
- Matches and/or lighter
- Small roll of duct tape
- Flashlight bulb and batteries
- Extra zip closure bags



"But seek first the kingdom of God and His righteousness, and all these things will be provided for you. Therefore, don't worry about tomorrow, because tomorrow will worry about itself. Each day has enough trouble of its own." (Matthew 6:33-34)



Personal Kitchen Items

- Spoon, fork and knife
- Plastic or metal cup (sierra type)
- Plastic or metal plate or bowl
- Mess kit (1 and 2 qt. pots, skillet and pot gripper)
- Canteen or water bottle(s) (2 qt. minimum)

Gear is like the things God has given us: our talents, health, wealth, love, eyes, heart, hands and feet. We should be good stewards of the things God has given to us and offer them back to God in service.

Optional Items

- Watch
- Sunglasses
- Camera and film
- Binoculars
- Nature books
- Campcraft manual
- Swimsuit
- Air pillow



- Notes -

*"I greatly rejoice in the LORD, I exult in my God; for He has clothed me with the garments of salvation and wrapped me in a robe of righteousness."
(Isaiah 61:10)*

Clothing

Select clothing based upon the type of activity and the weather you expect. Always be prepared for the worst conditions. The conditions of the terrain might determine the type of pants and shoes or boots. Cotton is very comfortable when dry, but is heavy and will not provide warmth when wet. Clothing made of wool or synthetics will provide warmth when wet and dries much quicker than cotton.

Warm weather conditions. Wear a hat and light clothing that covers as much of your skin as possible to prevent sunburn and heat exhaustion .

Cold weather conditions. Clothing should be worn in layers to offer better insulation. As the weather warms up, you can shed a layer at a time to stay comfortable. Layers should include the following:

- A vapor transmission layer worn next to the body to wick moisture away from the skin while providing warmth.
- An insulating layer that is heavier or bulkier to hold warm air next to your body.
- A protective layer to protect the inner layers from water and wind.

Summer Clothing

- Full brim soft hat or ball cap
- Tee shirts
- Lightweight long sleeve shirt
- Long pants (jeans or slacks)
- Hiking shorts
- Underwear
- Socks (cotton or wool)
- Hiking boots or shoes
- Camp shoes (tennis shoes)
- Windbreaker jacket with hood
- Rain gear (poncho or rain suit)



Winter Clothing

- Head cover (toboggan, balaclava)
- Insulated windbreaker jacket with hood
- Tee shirts
- Long sleeve shirts (wool or flannel)
- Long pants (jeans or wool pants)
- Long johns (polypropylene, wool or silk)
- Liner socks (polypropylene, nylon or silk)
- Outer socks (heavy wool)
- Hiking boots (high top)
- Gaiters (to keep snow out of boots)
- Camp shoes (tennis shoes)
- Gloves
- Rain gear (poncho or rain suit)



Group Equipment (For 12 people)

- Notes -

For a Drive-To Base Camp

One cooking set containing:

- 1 - 8 qt. pot
- 1 - 4 qt. pot
- 1 - 2 qt. pot
- 1 - 2 qt. coffee pot
- 1 - 12 inch fry pan w/cover
- 12 plates
- 12 cups
- 1 - 12 inch Dutch oven



Cleanup kit containing:

- 3 - 2 gal. pails
- 2 scouring pads
- 2 heavy duty 30 gal. trash bags
- Bio-degradable detergent

Fire building equipment including:

- 2 - 20 inch bow saws
- 2 - shovels
- 1 - single bit axe (optional)
- 1 - heavy duty wire grill (optional)
- 1 - griddle (optional)



Cooking tool kit containing:

- 1 butcher knife
- 1 large fork and spoon
- 1 ladle
- 1 pancake turner
- 1 potato peeler
- 1 can opener
- 1 measuring cup set
- 1 sugar canister
- 1 set of salt and pepper shakers
- 1 box matches (strike anywhere and weather proof)
- 2 sets of pot holders and/or heavy duty leather gloves
- 1 roll of heavy duty aluminum foil
- 2 rolls of paper towels
- 2 - 5 gal. water cans
- 1 group first aid kit (mandatory)



Is there gear or equipment items your family might have that you could give to someone so that they could enjoy an outdoor experience?

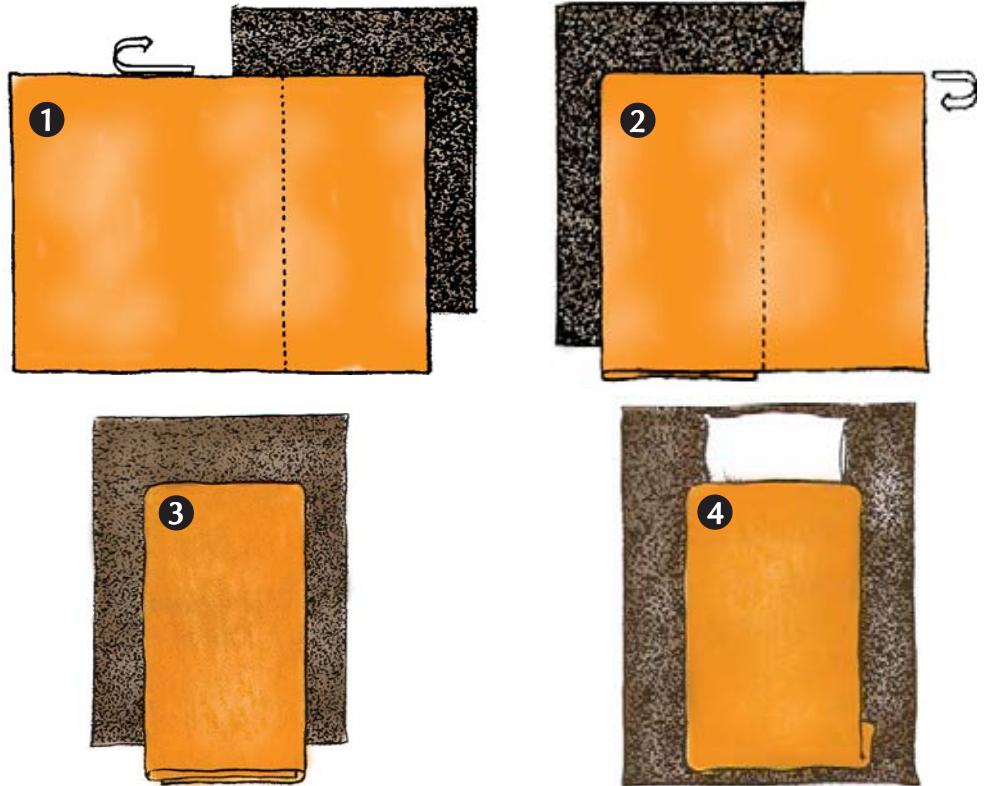
- Notes -

"The LORD is my shepherd; there is nothing I lack. He lets me lie down in green pastures; He leads me beside quiet waters. He renews my life; He leads me along the right paths for His name's sake. Even when I go through the darkest valley, I fear no danger, for You are with me; Your rod and Your staff — they comfort me. You prepare a table before me in the presence of my enemies; You anoint my head with oil; my cup overflows. Only goodness and faithful love will pursue me all the days of my life, and I will dwell in the house of the LORD as long as I live."
(Psalm 23)

Making an Envelope Sleeping Bag

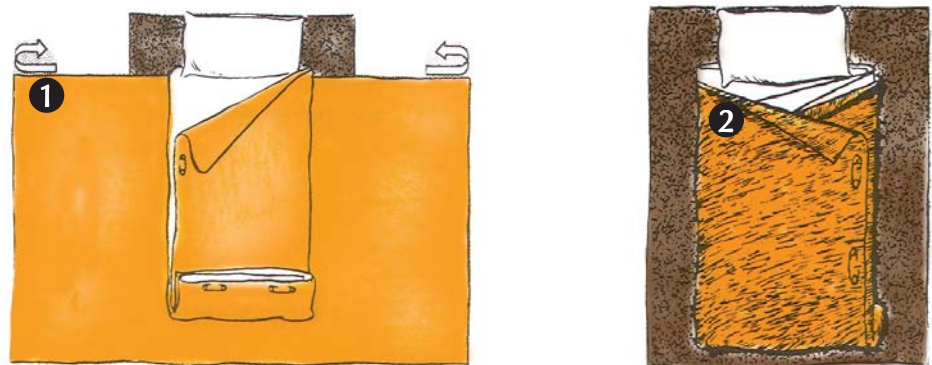
Using One Blanket

Place your ground cloth down first. **1** Spread your blanket and fold two-thirds of it over as shown. **2** Now fold the other third under as shown. **3** Now fold the ends under. **4** Pin it in place with large blanket pins and you have a snug, comfortable bed.



Using Two Blankets

Follow the same procedure as with one blanket. **1** Place the second blanket in the middle of the first blanket. **2** Fold the left and right sides over and pin.



For added comfort. Bring an extra bed sack and fill it with grass, leaves and/or pine needles. *Remember*, when you break camp, spread the grass and leaves to make it appear as if an elk had slept there.

Selecting A Sleeping Bag

A sleeping bag may be one of the most important pieces of equipment in which you will invest. You will need to try to determine the time(s) of the year and location(s) where you will be camping to determine what weight of bag you will purchase. Light, efficient sleeping bags can be moderately priced but may not provide enough warmth for the temperatures you will encounter. If you are planning to camp in extreme cold, the proper bag could be considerably more expensive. With these thoughts in mind, purchase a sleeping bag only after careful study and consideration.

Shape

Mummy or contoured bags conserve heat and reduce weight, but some people do not care for the space restriction and thus prefer the more common rectangular bags.



Filling

The best fillings are either a synthetic material or down. Try to stay away from the cheaper, cotton filled bags because they tend to lump up, giving you little warmth in very cold weather.

Outer Covering

A water repellent outer cover (not waterproof) is recommended.

Closure

A full-length heavy-duty double zipper will allow you to close or open your bag as temperatures dictate. In extreme cold, a mummy bag with a drawstring allows you to draw in the hood and enclose all of your body except your face. With any type of bag, you can cover your head with a cap, hat, toboggan, balaclava, etc. and help control the loss of body heat.

Weight

The lighter weight bag will lighten your load. A down filled bag is the lightest, but when wet, is heavy and slow to dry. Synthetic filled is a bit heavier but dries much faster.

Ground Cloth

A recommended item. A heavy plastic sheet will serve well and serves two purposes:

- To keep the bottom of your sleeping bag dry and clean.
- To add another layer of insulation between you and the ground.

- Notes -

God provides resources when you do God's work, God's way, and give God the glory.

- Notes -

*"I would hurry to my shelter from the raging wind and the storm."
(Psalm 55:8)*

God's love provides a shelter for our lives. It covers us like nothing else can; it shields us, upholds us, blesses us, teaches and nourishes us. This is more than a sufficient shelter.

Tents

Every tent has its purpose and value. There is really no such thing as an "all-purpose" tent, even though certain models are more popular, and each person, camp, group or family will choose a favorite.

The Fabric

Cotton is a good material for tents because it breathes or allows air to circulate while turning away the wildest winds and rains. It comes in duck, drill, twill, poplin and canvas. Duck costs more, weighs more and is recommended only for wall tents and tarps.



Nylon is lighter than cotton in weight. When used in conjunction with the rain fly, campers will stay drier due to air being allowed to circulate through the tent. This is known as a double wall tent. The tent walls are made of breathable nylon and the floor is made of waterproof nylon or reinforced plastic, extending up the walls 4–6 inches from the floor. The rain fly (the outer cover), made of waterproof nylon, covers the tent. The open space between the two layers allows air to circulate between them. The tent should be vented at the top to allow for the reduction of the moisture buildup inside the tent.



Types of Tents

Solo Tents come in 1 and 2 person sizes and are usually referred to as “A” frame tents (“pup” tents) or free standing tents.



“A” frame



Free Standing Tent

Dome Tents come in a variety of sizes and shapes, from 2-4 person up to large family sizes. Many use freestanding frames while others require that the rain fly be tied to stakes.



Wall Tents are usually made of heavy canvas. These tents are 3-4 person and larger in size. Often used for base camps that can be reached by vehicles. They allow extra room for the use of cots and other bulky items.



- Notes -

“For we know that if our earthly house, a tent, is destroyed, we have a building from God, a house not made with hands, eternal in the heavens.”

(2 Corinthians 5:1)

- Notes -

"Why do you call Me 'Lord, Lord,' and don't do the things I say? I will show you what someone is like who comes to Me, hears My words, and acts on them: He is like a man building a house, who dug deep and laid the foundation on the rock. When the flood came, the river crashed against that house and couldn't shake it, because it was well built. But the one who hears and does not act is like a man who built a house on the ground without a foundation. The river crashed against it, and immediately it collapsed. And the destruction of that house was great!" (Luke 6:46-49)

Where we pitch our tent is important if it is going to stand the storms of this world. Just as important is where we choose to pitch our life. The foundation you chose will make all the difference when the storms of life come. The right place to pitch your tent for life is on Jesus Christ our solid foundation.

Pitching A Tent

Choose a site as flat and clean as possible, not in a drainage area and away from trails and water supply. Pitch the tent where water will drain away from the tent. Look for standing dead trees and trees with dead limbs that might fall in a heavy wind. Set your tent out of the range of these trees and limbs.



Tent Camping in the Winter

Winter camping can be fun and adventurous. Preparation for the camping experience and protection from the cold are the primary considerations. While you can use the same tents in the winter as in other seasons, tents on snow may require a different set up. Pick a spot clear of snow and ice covered tree branches. Pitch your tent with the door facing away from the prevailing winds to protect the door from drifting snow.



Start by preparing a good base for your tent. Pack down the snow by stomping with your feet in an area larger than your tent. Some campers prefer to clear out the snow down to the bare ground, but this can be extremely difficult and time consuming in deep snow. Anchoring your tent may be a problem because you cannot use regular tent pegs that work in other seasons of the year. You can use “deadman” anchors, as illustrated.

Anything you can use to bury in the snow may serve as an anchor.

Aluminum or plastic pegs with “T” cross sections can be used. Whatever you use, do not tie tent ropes directly to the deadman anchor

because a hard freeze may prevent you from releasing the rope. A loop made of metal, old rope or rag can serve as a connector between the tent rope and the deadman anchor.



Caring for a Tent

A good tent, properly cared for, can last for many years of service. Caring for a tent includes living in it, storing it, repairing it and waterproofing it.

Living in a Tent

Observe the following to prevent leaks or damage to a tent:

- Do not have fires, lighted candles, or stoves inside or near the tent.
- Do not store or use sharp items inside the tent.
- Do not pin things to the top or sides.
- Do not touch the insides when wet.
- Do not spray insect repellent inside the tent.
- Keep the tent's vents open as much as possible to minimize condensation.

Repairing a Tent

Repair kits, grommet kits, sewing awl and threads are readily available. Always make repairs as soon as possible after a rip or tear.

Storing a Tent

70 to 95 percent of a tent's life is spent in storage. The most important factor for storage is the tent being completely dry. A wet tent stored will mildew and possibly rot. A tent should be thoroughly cleaned, repaired and stored in a cool, dry, well-ventilated place.

A tent can be compared to a church; it shelters its occupants, keeping them dry, warm and shaded providing a secluded place for worship. The tent cords are like the outreach programs of the church. The tent stakes are like the church workers who faithfully serve and anchor the church. The tent poles are like those who with their prayers, gifts and offerings, witnessing and visitation help to provide support for the church.

- Notes -

"For You have been a stronghold for the poor, a stronghold for the humble person in his distress, a refuge from the rain, a shade from the heat. When the breath of the violent is like rain against a wall."
(Isaiah 25:4)

Other Types of Shelters

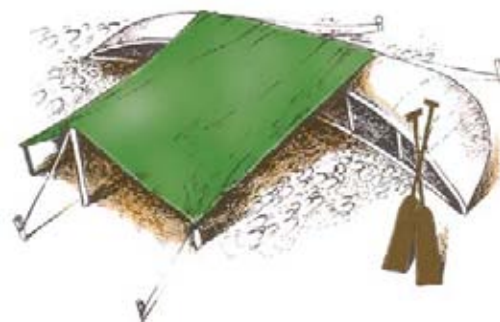
Rain Fly or Tarps. A rain fly made of waterproof nylon or a tarp made of waterproof plastic material can make a good shelter. A popular size of 10 ft. x 12 ft. is large enough to cover 2-3 campers. Tie a rope between 2 trees for support as a ridge. Fold the fly or tarp over the rope in a "tent" shape or tie it to the rope and stretch tarp out as a "lean-to".



Sides can be attached by rope or twine to stakes, logs, or rocks. If the weather is fair, pitch the ridge and sides high or if rain is expected, pitch them low.



Poncho. A poncho can likewise be used in several different ways for a quick emergency shelter.



Canoe Shelters. Turn a canoe on its side as the shelter ridge. Stretch a rain fly or tarp out from the canoe and stake down.

Lean-To. A lean-to type shelter can be made using natural materials. Lash a shelter frame on one side using tree limbs. Cover the frame with leafy tree branches or brush to make a roof for the lean-to.



Backpacks

A hiker or backpacker must carry the essential equipment, yet he soon learns to lighten the load every way possible. Factors to consider when selecting a pack include the cost, the frequency of use, the appropriate load and the specific person. A good rule of thumb to use is to pack no more than 1/3 your body weight for pack weight.

Day Packs

A day pack is a small pack or rucksack for carrying essentials for a day hike where you are not planning to stay overnight. These packs do not have a frame but may have a padded back panel, padded shoulder straps, outside pocket(s) and may have a light waist belt. The capacity of these packs ranges from 1000 to 2500 cubic inches.



Frame Packs

A frame pack may be needed for extended backpack trips or for carrying heavier loads. A backpack may have a flexible internal frame or an external adjustable frame. The size and fit of the pack, frame and load must be appropriate for the person. The selection of a pack will be determined not only by the person using it, but also by the weight and bulk of items carried.

- **Youth Frame Pack.** A frame pack designed for a youth whose body will be changing up and out with time. It carries a smaller load (2000 - 4000 cubic inch capacity) and has an adjustable frame, outside pockets, and padded shoulder straps and hip belt.
- **Expedition Frame Pack.** An internal or external frame pack is used for expeditions or camping for several days and would need to be larger (4500 - 6000 cubic inch capacity) and offer more features.



Youth Frame Pack



Expedition Frame Pack

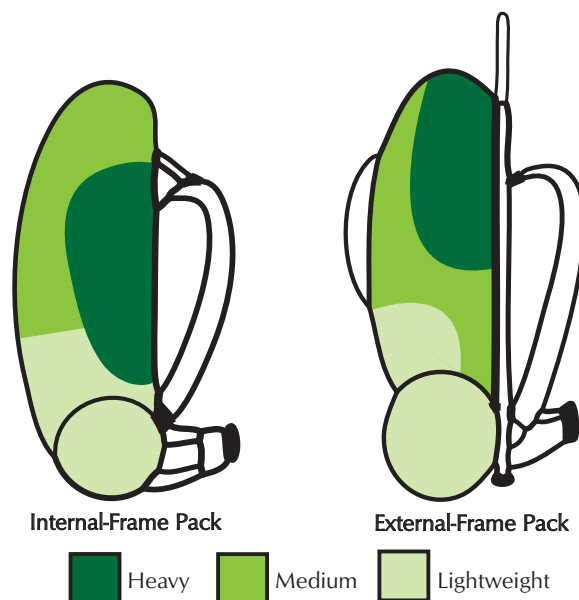
- Notes -

"And my God will supply all your needs according to His riches in Christ Jesus." (Philippians 4:19)

*"Humble yourself therefore under the mighty hand of God, so that He may exalt you in due time, casting all your care upon Him, because He cares for you."
(1 Peter 5:6-7)*

How to Pack Your Pack

Whether you are using an external or internal frame pack, always distribute your loaded weight evenly horizontally and vertically. When hiking on trails, keep heaviest items packed close to the back of the pack (closest to your back and centered between your shoulders), and packed from the middle to the top portion of the pack. Medium weight items should be packed in the mid portion of the pack (away from the pack back) with the lightweight items packed in the lower portion of the pack.



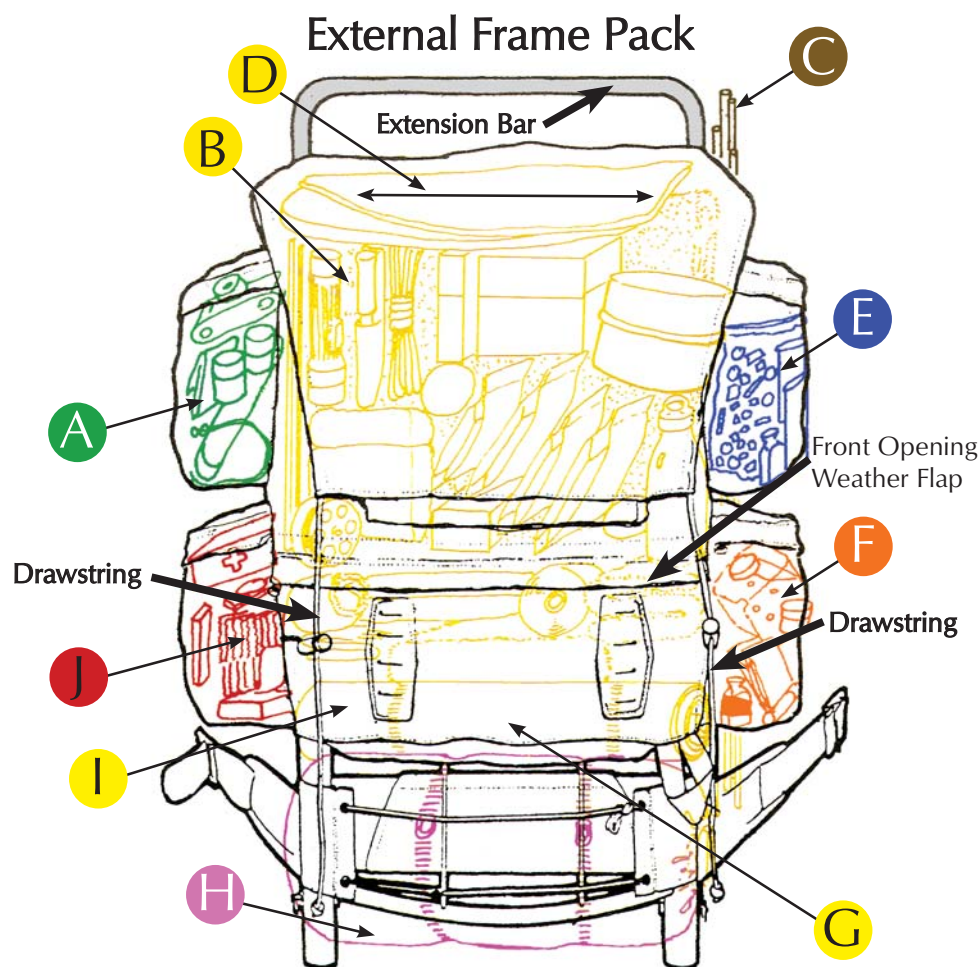
This layout helps focus more of the pack weight over your hips and legs, the area of the body best equipped to carry a heavy load. Some hikers reverse this procedure when hiking difficult terrain to lower the center of gravity and allowing for greater control of the load.

Should you find the center of gravity too high or too low, simply stop and readjust the load. Time and experience will help determine what is comfortable for hiking up hill or down hill, on a trail or bushwhacking across country. If the pack is packed correctly, the weight will be carried on the hips with the thigh muscles doing the work.

Separate and arrange packed items using individual ditty bags or plastic zipper bags. Place these bags back in the pack in the same place and order after each use. This practice will aid you in locating the item you need quickly without disturbing the entire pack.

- **Clothes.** Pants, shorts, shirts, socks, underwear, long johns, toboggan, gloves, windbreaker, wind pants and rain suit, etc. Warm layer items and rain gear should be placed in easy reach in the event of weather changes (top area of pack).
- **Technical Items.** Bible, note pad, pencil, maps, compass, etc.
- **Sleeping Bag.** Strapped on the bottom of the external frame pack (stored in a water proof bag or plastic trash bag) or stuffed in the bottom of the internal frame pack.
- **Cooking Gear.** Pack the stove in the lower section of either type pack. Pack fuel cells in the lower portion of the internal frame pack or in one of the lower outside pockets of the external frame pack. Make sure the caps on the stove and fuel cells are tight to prevent leaking. (Consider packing the fuel cells in heavy, plastic zipper bags.) These locations will minimize the contamination of fuel with food and gear in the event of a leak.

- **Food Bag.** Pack in top portion of the internal frame pack and on top of external frame pack. Use a 30 gal. trash bag as a liner inside the food bag to contain any leaks. Consider separating foodstuffs by meal types: breakfast, lunch (munchies) and dinner.
- **Quick Access Items.** Rain gear, camera, compass, map, layer clothing, etc. For the internal frame pack, put these items close to the top of the pack and for the external frame pack, put these items in the map or side pockets.



A Camera, film, mini tripod, cable release, close up attachments, sun glasses, fire permit, notebook

B **Upper Pack Body**
Camp shoes, poncho, set heavy clothing (cold weather), food, plastic bags, nylon cord, sheath knife, clothing (socks, underwear, shirts, shorts)

C Tent poles

D Nylon food bag (strapped on top to extension bar), tent, ground sheet

E Trail snacks, energy bars, jerky

F Small water bottle, fruit drink mix, water purification treatment, suntan lotion, foot powder, insect repellent, lip balm

G **Lower Pack Body**
Clothing, toiletry articles

H Sleeping Bag (strapped on outside)

I Mattress/pad (strapped on outside)

J Extra batteries, first aid kit, map and compass, matches, spare pack fittings, odds-and-ends can, trowel, toilet paper

- Notes -

"Come to Me, all of you who are weary and burdened, and I will give you rest. All of you, take up My yoke and learn from Me, because I am gentle and humble in heart, and you will find rest for yourselves. For My yoke is easy and My burden is light."
(Matthew 11:28-30)

How to Put on a Pack

The following instructions are for a right handed person. A left handed person can reverse sides.

Stand your pack in front of you on the ground. Be sure that the belt ends are spread out and the shoulder straps are extended. Stand with your right foot ahead of the other, bend the right knee slightly forming a platform with the knee. Lift the pack to the platform with the straps facing you.

Run your left arm through the left shoulder strap fully, swing the pack onto your back, bend forward slightly, and slip the right arm through the right shoulder strap. While still leaning forward, lift the pack high on your back and tighten the shoulder straps until snug. Stand upright, snap the hip belt ends and tighten the belt on your hips. Loosen the shoulder straps allowing the weight of the pack to rest on the hips and then snug the shoulder straps to keep the top of the pack close to the shoulders. The weight of the pack should rest on the hips, not on the shoulders. Adjust your straps until you have your pack in a comfortable carrying position.

When you are ready to remove your pack, step off the trail and reverse the previous steps. Lower the pack gently to the ground to keep from damaging your pack or equipment. Try not to stand your pack in the sun, if possible.



Using A Pack

- Take care of your pack.
- Don't strain yourself by lifting with your back. Lift with your legs. Lift an internal frame pack with the lifting loop at the top and use the top frame to lift the external frame pack.
- Stay relaxed. Walk with a natural, steady, easy stride.
- Lean forward from the hips (5 to 30 degrees depending upon the grade of the trail) keeping the weight over the hips.
- In mountain backpacking, take many short rest stops.
- In situations of unsure footing, be ready to release and drop the pack.
- Never wear a pack in a boat or canoe.
- Keep the pack as dry as possible.
- Use a pack rain cover when it is left outside or bring the pack into your tent.
- Suspend the food bag where animals can't get to the bag.
- Don't pack or take anything you don't really need.



- Notes -

"Then Jesus came near and said to them, 'All authority has been given to Me in heaven and earth. Go, therefore, and make disciples of all nations, baptizing them in the name of the Father and of the Son and of the Holy Spirit, teaching them to observe everything that I have commanded you. And remember I am with you always, to the end of the age.'"

(Matthew 28:18-20)

Canoe Equipment

The equipment needed will depend on trip conditions, number of persons, where you are going and length of trip. Take only essential equipment and use watertight bags or containers. Life jackets are mandatory.

- Canoes (1 per 2 people)
- Paddles (1 per person and 1 spare per 2-3 canoes)
- Life jacket (1 per person and 1 spare per group)
- Bailing buckets
- Food and drinking water
- Cooking equipment (stove, utensils, pots etc.)
- Shelter (tent or rain fly)
- Extra rope (100' per canoe)
- Group first aid kit
- Fire permit (if required)
- Canoe repair kit (Duct tape)
- Shovel
- Trash bags
- Map and compass
- Lantern and flashlights
- Fuel and spare batteries
- Clothing
- Wet shoes (water shoes)
- Personal hygiene items



- Notes -

"He said to him, 'Love the Lord your God with all your heart, with all your soul, and with all your mind. This is the greatest and most important commandment. The second is like it: Love your neighbor as yourself. All the Law and the Prophets depend on these two commandments.'"
(Matthew 22:37-40)

Tips on Equipment and Shelter

- Equipment is easier to repair prior to leaving on your trip. Check all equipment before your trip.
- Set up your tent before leaving to inspect and inventory all components (poles, stakes, ropes, etc.). Be sure you are familiar with the setup process in case you have to set up in a hurry or after dark.
- Compare prices with several suppliers prior to purchasing equipment. Consider renting equipment to check it out.
- Cover your firewood at night.
- A bow saw and pocket knife will do most cutting that an axe will do and do it safer.
- Lock your billfold, licenses, credit cards, money etc. in a safe place.
- Take spare batteries, bulbs, lantern mantles and fuel.
- Check your film supply prior to leaving.
- A disposable, adjustable flame lighter is a good supplement to matches.
- Sneakers work well as canoe shoes and will not leave marks or scratches.
- Use waterproof bags to store equipment and supplies.

"Be prepared and get yourself ready, you and all your company..."
(Ezekiel 38:7)

