

# 101 Things All Campers & Backpackers Should Know

1. ***"Take nothing but memories. Leave nothing but footprints. Kill nothing but time."***  
This should be the motto of every camper and backpacker.
2. **Pack fit is one of the most important parts of a hike. The objective of fitting a pack is to get most of the weight of the pack riding on your hips, not your shoulders.** A good ratio is 20% shoulders, 80% hips, as the hips have the weight bearing bones of the body, not the shoulders.

## To determine the correct fit of an external frame backpack:

- **Fill it up.** Fill up your pack with as much stuff as you normally carry. This will fill it out and give you a better idea of how it will fit.
  - **Hip belt.** The hip belt should rest on your hipbone, not on your waist. If it is too high, you will carry too much weight on your shoulders, making them sore. If it is too low, it can interfere with your walking. The padded section of the hip belt should wrap around the front of your hipbones, but not meet in the middle. The belt should lay flat against your hips without gaps. If you tighten the straps and the hip belt bunches, it may be too small.
  - **Shoulder straps.** The shoulder straps should be anchored to the pack even with your shoulders on an external pack. When clinched tight, the bottom of the straps should extend to a point about a hand's width below your armpit. If they straps are too wide, they might chafe against either your neck, or armpits.
  - **Load lifter straps.** These straps attach to the top of the pack somewhere above your shoulders, about ear-level. These straps pull the load closer to your body, allowing more of the weight to ride on your hips. They should rise at roughly a 45 degree angle from your shoulders to the pack.
  - **Sternum straps.** Should be just a few inches below your collar bone.
  - **Stabilizer straps.** These straps extend from the hip belt to the base of the back.
  - **Head room.** Make sure that you can look up and side to side without hitting the back of your head on your pack.
  - **Loading.** Put your heaviest gear on top and/or close to your back. Put the lightest gear, like sleeping bags or pads at the lowest points. Be careful not to put hard, pointy items where they can poke you in the back for hours of excruciating annoyance.
3. **If your back and shoulders are hurting from your pack** you probably don't have your waist belt on tight enough. Try tightening it up a bit, it will relieve pressure from your shoulders.
  4. **Pack no more than one-third of your ideal body weight for your height.** Much less, if you are not in top condition.

5. **Take at least 2 pairs of everything to camp.** One drying out while you're wearing the other.
6. **DON'T LET YOUR PARENTS DO YOUR PACKING!** Lots of times they just want to help out but often times they are actually hurting you more than they are helping you. Their help usually causes you do not know where stuff is. Packing is a very personal thing. No one person will pack the same way as you. You have to find out what way of packing and organization is right for you. Don't worry, after a few backpacks you should develop some idea of what works and what doesn't. Also, they may pack extra things that add weight and are relatively useless. Make sure you pack it all yourself.
7. **Pack the things that you need the most last,** so you can get to them first.
8. **Take the batteries out of any electrical equipment during transportation.** Especially true of your flashlight because if they turn on the batteries will be dead before you get there and you'll be left in the dark.
9. **Know where your flashlight is at all times.** Check that it works, \*before\* it gets dark and keep it handy for those 'night time' visits Tie a length of cord or string to the end so you can find it easier in the dark.
10. **Take two flashlights.** This avoids spending ages looking for tiny batteries in a big bag! A small "key-ring light" tied to the pocket of your pack will be easy to find and useful for searching your stuff.
11. **Have spare batteries for your flashlight.** Learn how to change them in the pitch dark. Keep batteries in a small Ziploc bag to stop them from shorting out.
12. **Many hikers swear their most versatile article of clothing is a bandana.** These brightly colored squares of cloth can serve as a handkerchief, towel, washcloth, headband, loincloth, bandage, sweatband ...well, the list is limited only by your imagination .... and you can even wear it on your head!
13. **Wear 2 pairs of socks when hiking.** Wear a thin cotton/polyester pair next to the skin, and thick woolen pair on the outside. The thin socks will stick to your feet, and the thick ones to your boots, any friction will be between the two pairs of socks and not to your feet so the heat can't build up and blisters won't form. Make sure that they are not too tight or it will restrict blood circulation and you could get frost bite in cold weather.
14. **Think layers:** Two thin layers are always better than one thicker one. In colder conditions, think four layers:
  - A primary layer (thermal underwear perhaps) to wick moisture from the skin.
  - A slightly heavier second layer that also continues wicking moisture away from the body.
  - An insulation layer with some air space designed to retain body heat.
  - The outer layer that shields against the outside elements.

15. **Don't wear Jeans or Denim.** Denim holds water and takes ages to dry, if the weather is bad you will stay wet, get colder and colder and eventually you could die from hypothermia
16. **Put your raingear on as soon as it starts to rain.** Putting raingear over damp clothes will keep the damp in long after it stops raining.
17. **Wear fleece.** Fleece allows your sweat to pass out but will keep you dry and warm.
18. **Hat: A very important item around Arizona.**
  - During a hot day a good breathable straw hat will reflect away the hot sunlight and still allow air to circulate and cool you off.
  - A broad brimmed hat is recommended for most occasions to help prevent sun dazzled eyes, sunburned ears, nose, neck, etc.
  - Baseball hats tend to trap heat.
  - During cold weather up to 20 percent of body heat is lost from the head. If you are cold simply putting on a warm, insulated hat can make a large difference.
  - Pack 2 hats--one for keeping the sun off and one for staying warm.
19. **Sunglasses** Bright sunny days necessitate sunglasses. Make sure they protect against ultraviolet light. If they don't, you run the immediate risk of sunburned eyes and the long-term risk of cataracts. Not all sunglasses are created equal. Buy a high quality pair of sunglasses with guaranteed UV protection from a recognized manufacturer, or take your sunglasses to an optometrist or optical shop to be tested for UV protection. The testing service is often free. Dusty road conditions on various locations are very testy for contact lens wearers, sunglasses will help keep the dust out as well as the glare.
20. **"A hiker is only as good as his feet "** *Scout Field Book*. Make sure you have the proper footwear. Buy boots in the afternoon, when your feet tend to swell, and look for these signs of a proper fit:
  - When you try them on your heel should not slip up and down as you walk and your toes should be able to wiggle a bit.
  - The heel has enough room that if you push your foot toward the front of your boot, you can squeeze a finger down the back of the boot.
  - Boots should come up past ankle and lace up to that point.
  - They should offer good ankle support and good support for the sole of the foot.
  - When you go to buy your boots, bring extra socks to try them on with, because you will be wearing them with extra socks for padding and insulation when hiking.
  - They should be waterproofed (either rubber topped or sealed).
  - They should have good traction soles that won't wear out easily.

- Leather is the best for high impact hiking.
  - Always "break in" boots first, even if it's just wearing them around home.
21. **Break-in Your Footwear Properly. "Soak them wet and walk them dry."** This is a time-honored way to break in boots to the shape of your feet. First apply moleskin to blister-prone areas of your feet. Then put on dry socks. Soak boots in lukewarm water; then start walking. After the boots dry, treat them with a leather conditioner.
  22. **Clean and waterproof your boots every time you use them.** Just walking down the road will wear off the waterproofing. If they are leather then polish them, or for man-made fibers check the manufacturer's instructions or use scotchguard.
  23. **Do not EVER dry leather boots near a fire or hot stove.** If you do the leather will harden, warp and maybe crack which will make them uncomfortable and leak.
  24. **Stuff wet boots/shoes with newspaper overnight to dry them out.** In an emergency you can use toilet paper or dirty clothes.
  25. **Put talc on your feet before you hike.** This will absorb some of the sweat and stop your feet from softening up or getting too hot, reducing the chances of a blister.
  26. **Rub Denatured Alcohol on your feet before you hike.** Some people swear that rubbing a little denatured alcohol or surgical spirit into your feet for several days before a hike will harden the skin, making it more difficult for blisters to form.
  27. **Camp Shoes:** Bring a pair of moccasins or sneakers to wear after you make camp, your feet will love you for it.
  28. **Always stretch before beginning a hike.** Going from long confinement in a car to sudden strenuous exercise without a warm-up is no way to treat your body.
  29. **Use the Buddy System.** Always hike with a friend, never alone.
  30. **Sunscreen and Chap Stick or other lip balm.** It's necessary to protect your skin and lips from the sun's ultraviolet rays. Pack plenty of sunscreen. Apply sunscreen to your ears. Those flaps are two of the most often overlooked body parts – along with the lips and behind the ears – where skin problems may develop in later years. Many dermatologists recommend SPF 30 for safer protection. Shade from a wide-brimmed hat will protect your ears, too. The brim should be at least four inches wide all the way around the hat.
  31. **Check your first-aid kit before every trip.** Medications expire; water, heat or freezing cold temperatures may have damaged items; you may have used items and forgotten to replace them. Some environments, say a desert, may require a few first-aid kit changes from your last trip to the mountains. Pack for first-aid as thoughtfully as you pack your food and other gear.

32. **Co-ordinate compasses.** Sounds silly, but make sure they all point in the same direction.
33. **Let someone know where you are and when you get there.** Always leave a route plan and a trip map with someone staying back home, and tell them when you arrive and when you are expected back.

34. **If you do get lost, stay calm. Do not panic.**

- S.T.O.P. (stop, think, observe and plan).
- Try to return to a familiar location if within a reasonable distance. Do not go too far off your original route.
- If still lost, stay put. Rescuer will most likely find you within 24 hours.
- Blow your whistle to signal that you are in trouble and you need assistance.
- Stay warm and dry. Put on extra clothing to avoid hypothermia.
- Build a fire to keep warm and to help with your rescue.
- Drink plenty of water. Do not let yourself get dehydrated. Purify the water from natural resources.
- Seek some sort of shelter for protection and comfort.
- Eat foods to keep your energy. Some berries, plants and insects can be eaten safely. Learn which ones by making this part of your trip planning and preparation.
- If injured, first aid should be administered as necessary.

35. **Be Prepared for the Weather.**

- Drink before you get thirsty.
- Eat before you get hungry.
- Rest before you get tired.
- Add clothing layers before you get cold.
- Don rain gear before you get wet.
- Apply sunscreen before you burn.

36. **Preserving energy while walking**

- When walking, aim to keep your breathing and heart rate regular. If you start to puff, walk slower or take smaller steps. Try to keep the same rhythm of walking whether walking uphill, on the flat or downhill.
- Choose the pace that's best for you. Set a steady pace, one you can keep up all day.

- Walking around or stepping over obstacles (such as logs and rocks) can often prove more energy efficient than stepping on to them—you will avoid slips and awkward steps.
  - Save energy when scrub bashing by moving slowly and deliberately, rather than fighting your way through.
  - To keep your momentum and to avoid stiffness, several shorter rest periods are better than one long one. Short rests mean that your muscles won't cool down and it will be easier to start walking again.
  - Where possible, place your foot flat on the ground to spread your weight over your whole foot. Walking uphill largely on your toes can place additional strain your calf muscles.
37. **Wear a watch**, not because you have an appointment with a waterfall and you have to be punctual, but because a watch gives you some idea of pace and helps you get back to the trailhead before dark.
38. **Use a hiking staff to increase your hiking efficiency and prevent injuries.** The ideal stick length for ascending and descending rugged terrain is between chest and chin high.

#### **Your Hiking Staff will:**

- Reduce the stress on your back and knees by 25% when you're going downhill.
  - Give you that little boost you need going uphill & at the end of a long day on the trail.
  - Distract from physical & mental fatigue on the trail by setting a walking rhythm, which can increase your overall hiking efficiency by 33%. (**example: "poke, 2, 3, 4 ... poke, 2, 3, 4).**
  - Give you increased stability when crossing water, logs, rocks and other obstacles, **"like a third leg."**
  - Help you clear your path against brush and low branches.
  - Protect you from snakes, rodents and other things that you may encounter on the trail.
  - Provide other meaningful uses such as, a pointer, a fishing pole, a tent or fly pole, a lashing pole, a stretcher pole or even a clothespole.
39. **Plant your heels first when going down hill**, and when on the level remember to pick up your feet. Dragging them creates too much dust and dirt.
40. **Hike around or step over ... not on ...** rocks, roots, and logs to reduce your chance of injury. And, as a bonus, stepping over something requires less energy than stepping up onto something.
41. **Bend your knees and not your back when lifting heavy loads.** Protect your back.
42. **Know how to safely get the load of a pack on and off your back.** Most nagging wilderness back injuries occur while shouldering or dropping a heavy backpack.
- Lift the pack onto one knee, slip into one shoulder strap, and shrug the pack around onto your back.

- Or, lift the pack onto a log or rock, sit in front of it, slip into the straps, and settle the pack on your back before standing. You may want to have a companion lift the pack while you snuggle into the straps.
43. **You may see lightning before you hear the thunder.** If your hair stands on end in an afternoon thunderstorm, move immediately to crouch down in a safer spot such as a clump of shrubs or trees of similar height. Cover your ears!
44. **Learn to treat blisters.**
- If you feel a hot spot while traveling, stop and adjust your socks and footwear.
  - If the pain persists, you can apply a solid piece of Moleskin over the tender area (*or "Hot Spot"*). Round the edges before applying to help prevent the moleskin from peeling and worsening the problem.
  - As soon as you get a foot blister, sterilize a needle or knife blade and poke a tiny hole in the **side** of the blister to drain the fluid. If you don't, the blister will rub open on its own and hurt like crazy.
  - After the "operation," put on antiseptic and cut a piece of the moleskin 2-3 times bigger than the blister. Then cut a hole in the middle of the moleskin the size of the blister. Then apply the moleskin over the blister with the blister in the cut out portion. This will decrease the friction over the blistered area. You can double the thickness if needed.
45. **Remember that Scouts are reluctant to be the first to complain.** A blister can start to form in five minutes. Stop about ten minutes into your trek and take off your own boots and check. This will motivate others to do so. Call this a "hot spot check" and if any show up, take appropriate action.
46. **Another helpful hint for any hiker may sound funny, but don't forget to TRIM YOUR TOENAILS !** On the downhill part of the hike you will be VERY glad you did. If you don't, your big toe will be pushed into the front of your boots, and it will cause much MISERY !
47. **Do not use any perfumes, smelly soaps, shampoos or deodorants.** Most insects are drawn to "nice smelling" soaps and perfumes and will make your life miserable.
48. **Ticks:** They're 1/4 to 1/2 inch long and about the same color as the ground, so they're hard to see. Ticks are usually picked up by brushing against low vegetation. When hiking in a tick area it's best to sit on rocks rather than fallen logs.
49. **Do a tick check twice a day during tick season,** and immediately remove any ticks found on your body in order to prevent tickborne diseases. Ticks must bury their heads in skin and feed for hours-days in order to pass the germs that can make you sick. If you find one roaming free, simply pick it off. If the head is buried, gently grip the tick at skin line with a pair of tweezers, and pull it out with steady traction. After removing an imbedded tick, wash the site with soap and water to further prevent the chance of illness.
50. **Another method to remove ticks** without tweezers is to cover them in Vaseline and a waterproof dressing and leave for one day. Then the ticks will suffocate and fall off without causing scarring.

51. **In Arizona bringing plenty of water along with you is the most important thing to remember.** On average a hiker will consume approximately two gallons of water per person per day when the temperature is around 100 degrees Fahrenheit; and even more as the temperature goes higher.
- Drink between 1 to 2 cups of water an hour when walking to avoid dehydration. Drinking a lot of water at the end of a trek is not as helpful as spreading it out over the trek. Also, drinking a lot of water at once after being exhausted, thirsty, or weak makes some people nauseous. So drink a little a lot of times.
  - One method to determine if you are drinking enough water: if your urine is *any color other than clear*, you need to **drink more water**. If your urine becomes a dark yellow or yellowish-brown you are not drinking enough water and are risking dehydration.
  - You can be slightly dehydrated and not feel thirsty. The signs and symptoms of dehydration may include fatigue, chest pain, irritability, malaise, dizziness, indigestion, grumpiness, feeling tired, and cramps. These symptoms make it tough to determine if there is another serious problem. If you know people have been taking frequent water breaks it gives you better chance of determining the real problem.
52. **Freeze your bottles of water** the night before you pack your pack, it will stay cold a lot longer. It will keep your food cool and will thaw by the time you need it.
53. **Frequent munching is more important on the trail than big meals in camp.** A snack about every two hours, especially a high carbohydrate snack, keeps your muscle glycogen high. Glycogen is converted into sugar in order to fuel muscular work and to liberate heat for inner body warmth on a cold day.
54. **GORP (Good Old Raisins & Peanuts)** has evolved into varieties of trail mix that range from the simple to the very exotic. Dried tropical fruits, yogurt-covered cherries, coconut, cashews and sunflower seeds are just a few of the ingredients hikers like in their favorite trail mixes. Some adults like trail mix because it gives them the excuse to eat M&Ms.
55. **The various high-energy bars can also really perk you up.** Remember that these bars are most effective when eaten before exercising and consumed with an adequate amount of water.
56. **If you properly maintain and pitch your tent, it should resist most weather conditions.**
- Select an area which is as flat as possible. Avoid low lying or marshy ground which could flood in heavy rain.
  - Clear the site of anything which could damage the groundsheet, stones or sticks for example.
  - Do not peg the groundsheet out too tightly.
  - It is better not to pitch under trees. It drips long after the rain has stopped, some trees drop sticky sap and birds don't care where they drop....
  - Make use of any natural windbreaks, such as hedges and try to face the tent door away from prevailing wind.
57. **As a general rule**, a tent that faces southeast is well positioned for getting the morning sun and the afternoon shade. It is also protected from strong winds. In hot weather,

locate it so that it will catch the breeze yet be in the shade most of all of the time. In cold weather, face it away from prevailing winds; the best positioning is with its rear to a hill or protective woods.

58. **As a safety precaution**, always keep a bucket or two of water next to every tent in the campsite.
59. **No lit lanterns in tents. No flames of any kind.** It takes about 30secs for a tent to burn... and even if it is ""Flame retardant"" it will go up in seconds. What's worse is that the burning nylon will drape a layer of burning plastic over everything in the tent, including anyone who happens to be inside.
60. **Practice tent pitching at night.** Before leaving make sure you can set up your tent in the dark. The unexpected can happen. You might run into a 96 mile detour and arrive at your campsite much later than planned.
61. **Unless its raining open up your tent every day.** During the night you will breath out carbon dioxide and water vapor and air born germs. Opening up the tent makes sure that this is blown out and will make you tent a far more pleasant place to be.
62. **Check that you have all the poles, pegs and fittings BEFORE you take a tent out.** There may be some missing and you could be miles from home and no way of holding your tent up.
63. **Don't keep food in your tent.** Cooking and food odors attract wild animals. A hungry animal searching for food will chew or claw through the fabric, damaging the tent beyond repair. To avoid unwanted visits from animals, keep food stored away or **hang above ground level.**
64. **Don't touch the side of your tent.** This will allow water to pass through and it will drip on you. If someone does touch the side and it drips then run your finger down the tent from the drip to the edge and the water will flow away.
65. **Zip up your tent when you go out.** This will dissuade thieves and keep animals out.
66. **Always use ground sheets with your tent, both inside and out.**
  - An exterior gound sheet will cut down on the wear and tear of your tent floor. Rocks are sharper than you think and over time will push right through that nylon. If you do not buy a ground sheet made specifically for your tent, buy a plastic sheet ot tarp and cut it slightly smaller than the dimensions of your floor. This will keep water from accumulating between the sheet and the tent floor.
  - The real value of an interior ground sheet is fully realized when you use it in a "bathtub" configuration. Simply put, purchase a ground sheet that is about two feet larger than the width and length of the interior dimensions of your tent. When placing this sheet inside of your tent, the extra margin is pushed up the walls, forming a waterproof bathtub. Even if water floods past your tent, your sleeping pad, bags, gear, and body is surrounded by this waterproof wrap.
67. **Don't take your ground sheet right up to the door.** Leave a gap to store your muddy boots by the door so your sleeping bag wont get dirty and you will be able to find them

easily.

68. **Respect other people's camp area.** While you are at camp your tent is your home and the area around it should be treated the same so don't go in unless invited. If you do someone will think that you are stealing.
69. **Don't run around tents.** You will trip over a guy rope and crack your head open on a tent peg, not to mention damaging the tent.
70. **Don't walk on tents.** This will force dirt into the pores and ruin the water proofing.
71. **Always store your tent DRY.**
  - If it gets wet on your trip, don't worry. Set it up when you get home and it will dry in about 30 minutes. If you store it wet, mildew will accumulate in the nylon and destroy the material. There is no way to stop mildew after it is there.
  - Always store your tent DRY and in a relatively cool place. If you leave it in a hot room or car the sealed seams will delaminate causing the tent to lose its waterproofness.
72. **Air sleeping bags once a day.** Even the best sleeping bags trap your sweat at night and after a few days they start to stink and go moldy
73. **To keep your sleeping bag smelling fresh,** put a sheet of fabric softener inside. This should have an added benefit of repelling insects.
74. **Before turning in for the night, nibble on something with high calories.** The fuel your body now has to burn will help it stay warmer during the night. Old-timers used to mix a teaspoon or two of butter or fat with a cup of cocoa before hitting the hay. Same purpose, different method--the choice is yours.
75. **NEVER EVER wear that days clothes to bed.** Clothes damp from the days sweat, rain or evening dew will make for a cold and miserable night. Either keep a separate set of clothes for night time or put on tomorrows dry clothes.
76. **Wear a hat in bed if its cold.** A wool (or fleece) hat will make ALL the difference in keeping you warm at night, and reduce the body area outside your bag by 50%
77. **Put clothes in a stuff sack as a pillow.** Don't take a normal pillow they get damp at night and are a pain to carry. Keep your clothes, not including your uniform, in a stuff sack or the sleeping pack sack and it will be just as good.
78. **Keep tomorrow's clothes inside your sleeping bag at night.** It makes getting dressed in the morning a lot less chilly.
79. **Fluff your sleeping bag before crawling inside.** That act of fluffing creates more air space between the fibers or feathers--air space easily warmed by your body.

80. **On Cold Weather Campouts, Sleep with Layers.** Have more layers below you than on top of you.
81. **Sleeping on a thick and comfortable sleeping pad will also add warmth.** Your body will lose more heat to the ground than to the air -- try lying on an unheated waterbed to get the idea. Closed cell foam or foam-filled inflatable is much better than an air mattress.
82. **Keep your clean clothes in plastic bags.** Even the best bags and tents can leak, but a plastic bag won't.
83. **Keep your dirty clothes in a net bag.** That will stop them rotting or going moldy if they are wet.

#### 84. **Five Rules for Firebuilding**

- Put your fireplace in a spot where it won't spread. Clear combustible materials from an area 6 to 8 feet away from the hot spot. Check above your fireplace for overhanging branches that might catch fire.
  - Have all materials for your fire within reach before lighting up. This means tinder, kindling, and fuel.
  - Put your tinder in place, and stack kindling around it to form a teepee. Leave a small opening near the bottom to start the fire with your match. Put the fuel, also teepee style, on top of the kindling.
  - Strike a match. Let it burn into a real flame while you cup your hands around it for protection from the wind. When burning well, light your tinder. If the wind is strong, protect your infant fire from it until the flame spreads.
  - Feed the fire – gently at first, then nourish it's growing appetite as needed. Don't try to force things; you'll have to start over again if the first effort is smothered.
85. **For safety,** always keep a bucket or two of water nearby when cooking outside.
  86. **Collect twice as much wood as you think you need.** That way you will have enough for the next meal too and will be able to get it started earlier. Collect more wood while the food is cooking.
  87. **To make it less likely smoke will follow you around your fire.** Build a short wall of rocks behind one part of the fire ring and sit on the opposite side of the fire. The smoke will rise towards your wall and leave you alone.
  88. **Keep a small bag which you fill with tinder as you walk about during the day** and keep it in your tent at night. Fresh kindling will always be damp in the morning, you will have your fire alight much quicker if you have dried some out overnight, and can even use it to start a fire with wet wood.
  89. **Put a plastic sheet over the woodpile at night.** This will keep the wood dry.

90. **Don't run around with burning sticks.** It's dangerous and will hurt someone, probably you, when it slips down through your hand.
91. **Put out a fire by sprinkling it with plenty of water,** stirring the embers to moisten them thoroughly. Don't stop until the remains of your fire pass the cold-out test, which means you can safely run your hand through the extinguished coals and ashes.
92. **Learn to cook at home before you go to camp.** Also understand a little bit about nutrition, that way you won't go hungry at camp and on activities.
93. **Rub liquid soap on the OUTSIDE bottom of pots before using them on an open fire.** This will help with the cleaning of the pot and keep it from becoming charred.
94. **The Hand Thermometer enables you to try on your campfire, recipes which specify a cooking temperature.** The secret of any campfire cooking is to try and maintain steadily glowing coals, but once you have your fire in this state, you can gauge its approximate temperature by using your hand. Hold your bare hand over the coals and count off seconds ("1 and 2 and 3..."). Your temperature guide is the number of seconds you can stand to hold your hand over the fire.
  - If you must remove your hand between four & five seconds, you have low heat (about 150 degrees C.).
  - If you remove your hand between three & four seconds, you have medium heat (about 175 degrees C.).
  - If you remove your hand before you can count to three seconds, you have high heat (200 degrees C.).
  - To find the temperature you want, raise or lower your hand and you will know where to set your cooking utensil. No matter what you are cooking, the results will be more consistent if you maintain an even or near-even heat. And, by using your hand thermometer, you will assure that your meal cooks at the rate which will produce the tastiest results every time.
95. **Take baby wipes to give your hands and face a quick clean.** Or better still get a hand full of wipes from KFC and keep them in the pocket of your bag.
96. **Waxed dental floss works extremely well for whipping the ends of rope.** It comes in a small plastic container that is perfect for throwing into your pack. After you whip the ends of the rope, heat the dental floss to melt the wax. Works great.
97. **How much time left before sundown?** Hold out your hands in front of you at arms' length and, with the edge of a palm lined up at the horizon, see how many fingers you can fit between the horizon and the position of the sun in the sky. Each finger width represents about 15 minutes.
98. **The best time to take photographs** are at dawn and before dusk, when the sun lies oblique to the ground and your subjects are bathed in a diffused golden or bluish light.
99. **One of the ways to enjoy the beauty of a plant and leave it for others to enjoy is to "click it not pick it".** A photo is an environmentally friendly way to enjoy nature and it

lasts long after you have left the wilderness.

100. **Pack It In, Pack It Out.** Trash and litter have no place in the backcountry. It is a simple commitment to pack out all that we pack in, and to encourage others to do the same. In addition, we can show good stewardship by carrying an extra trash bag to help carry out litter others have left. This is not much of a burden, and you can be proud of your efforts.

101. **The following seven principles of outdoor ethics form the framework of the Leave No Trace message:**

- Plan ahead and prepare.
- Travel and camp on durable surfaces.
- Dispose of waste properly.
- Leave what you find.
- Minimize campfire impacts.
- Respect wildlife.
- Be considerate of other visitors.