



SECTION 4 – CAMPING

Cookware

Outdoor World carries a variety of cookware. Backpacking cookware must be lightweight and compact. Pots and pans which nest together are a good choice. Without the size and weight limitations associates with backpacking, one can choose from a wide variety of products designed for home and trail use. Some questions to help discover customers' needs are:

- How many people will there be eating together?
- Will the cooking be done over a stove or campfire?
- What kind of stove?
- How large are the burner tops?
- Will the cookware selected fit on the stove top?
- What kinds of food will be prepared?

Knowing the characteristics of different types of material used in cookware will help a customer decide what products to choose. As an associate, your knowledge of these areas is important, also.

	<u>Advantages</u>	<u>Disadvantages</u>
<u>Aluminum</u> 	Very lightweight. Inexpensive. Heats quickly.	Easily burns food at high heat. Pots are easily scratched and/or dented.
<u>Stainless Steel</u> 	Cleans up well. Stronger than aluminum. Resists corrosion	Does not conduct heat evenly. Heavier than aluminum.

Cast Iron

Heats and cooks food evenly.
Durable

Heavy



Enamel Cookware

Cleans up well.
Attractive finish.

Conducts heat unevenly.



Cast Iron

Cast iron is well suited for campfire cooking. The heavy material conducts and holds heat well for preparing large quantities of food over low heat. Cast iron is well suited for home use. Cast iron cookware must be seasoned by wiping on a light coat of oil all over the item and placing it into a preheated oven at 350 degrees for an hour. Then remove the item, allow to cool down and wipe clean. If properly seasoned, the cookware can be cleaned up after each use by simply wiping clean without the use of soap or a dishwasher.



Stoves

When selecting a stove or lantern, one of the first things to consider is what kind of fuel will be used. Selecting a single fuel system for both can simplify one's camping experience. Reviewing the characteristics of different fuels will help determine which stove or lantern will best suit the customer's needs.

Advantages

Disadvantages

White gas – Coleman Fuel

Easy lighting
Clean burning
High heat output.
Functions well at cold temperatures

Appliances require priming.
Highly volatile.

Propane – Butane

No-spill containers
No priming required.
Very clean burning.
Immediate maximum heat.
Greatest adjustability.
Bulk tanks operate well in cold temperatures.
Economical.

Disposable canisters generate environmental challenge and are expensive.
Disposable canisters must be kept above freezing.

Kerosene

Burns hot. Widely available throughout the world.
Inexpensive.

Difficult to light. May require another fuel to start appliance.
Does not burn as cleanly.
Requires frequent cleaning.

Alcohol

Clean. Safe.
Easy lighting

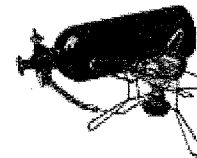
Very low heat output.



Coleman



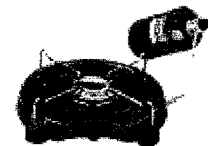
Propane



Kerosene

Single burner stoves are ideal for backpacking and cycling as they offer lightweight, compact designs. When comparing single burner stoves, you must consider the following:

- Altitude and temperature where it will be used.
- Weight and compactness.
- Fuel availability.
- Ease of operation in windy conditions.
- Ease of maintenance and repairs in the field



Stoves with two or more burners are ideal for group and family camping situations where more heat output is required. Be sure to compare the size of cookware to be used with the size of the burners and the distance between each burner.

Lanterns

The most popular lanterns burn either white gas or propane. Lanterns usually have one or two burners. Each burner is fitted with a mantle, which facilitates the fuel being burned for maximum light output.

Candle lanterns are a good lightweight and compact choice for backpacking. They are inexpensive, easy to operate and economical.

Battery powered lanterns offer an alternative lighting source, which avoids some of the safety issues associated with open flames and liquid fuels. One should always carry extra batteries and bulbs. See the section on flashlights, headlamps and batteries for more battery powered light sources.



Candle Lantern

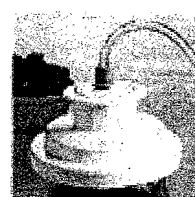
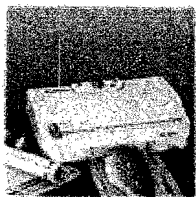


Battery Operated Lantern

FOODSAVERS

Keeping Air Out Prolongs Freshness

Air is the enemy of food freshness. The oxygen and moisture in air cause foods to degrade over time and lose flavor, texture and nutritional value. Conventional food storage methods such as plastic wrap and containers actually trap air inside with food. But the FoodSaver patented vacuum packaging process removes air from specially – designed bags and canisters and even your own cans, jars and bottles, then seals them airtight. It's proven technology that extends food freshness up the five times longer.



How Does It Work?

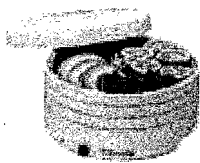
FoodSaver appliances have a unique, patented design used in millions of households. Vacuum packaging is a two-step process of vacuuming and sealing. The powerful piston pump removes air quickly and creates a commercial-quality vacuum. The patented Vacuum Channel is designed with an extra-deep trough to catch overflow liquids and protect your appliance. The Sealing Strip has an easy-clean Teflon coating to seal the bag with a strong, airtight seal.

FoodSaver Bags have a design so unique it's been patented. Special channels enable the efficient and complete removal of air so none is left trapped in "pockets" around the food. Their 5-ply construction makes them an especially effective barrier to oxygen and moisture. FoodSaver Bags are proven to prevent freezer burn better than leading freezer bags. Plus they are boilable, microwavable and resealable.

FoodSaver Canisters are designed for vacuum packaging dry goods, liquids and crushable items. A vacuum valve enables air removal. The special lid gasket keeps the canister sealed airtight and an Accessory Hose easily connects the canister to the FoodSaver Appliance.

FoodSaver Accessories such as Bottle Stoppers, Universal Lids and Jar Sealers are great for storing all kinds of food, including wine, in their original containers and keeping it fresh up to five times longer.

Food Dehydration Basics - *Store the flavor of the summer by drying some of your harvest.*



Dehydrated food can be fun (as in "fruit leather"), chic (sun-dried tomatoes) and handy (herbs). It is also easy to make and store.

When you're drying food, you're removing a good part of its moisture through evaporation. Air movement is the key. But the drier and, up to a point, warmer the air is, the faster and more complete the evaporation of the water.

How to dry food?

An electric food dehydrator is the easiest and most reliable way to dry food. It is designed to provide just the right amount of heat and maximum air movement. Many food dehydrators have stackable trays, a small warming device and fan. You can also build your own.

Patio

Bass Pro Shops sells a variety of patio cooking appliances. These can be divided into three general categories: **Grills, Smokers and Fish Cookers**

Grilling:

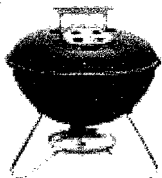
Grilling is familiar to most as cooking items placed directly on a grate over an open heat source. Grills can be powered by charcoal, gas or electricity or in some cases a combination of power sources. The smallest grills can be easily folded up and transported, while the largest models rival complete kitchens with a variety of cooking accessories for grilling, smoking and roasting.

Smokers:

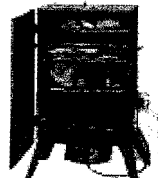
Smokers are designed with the capability to cook foods more like an oven. The upright cylinder shape of smokers helps circulate heat evenly inside the closed unit. Water may be placed inside the smoker in a pan to preserve moisture in the food while cooking. Wood chips which have been soaked in water to keep them from burning too quickly are placed inside the smoker to provide a smoked flavoring to the food. Smokers are capable of cooking foods at a slower rate, due to their efficient shape and closed top operation. Smokers constructed using a heavier metal or ceramic coatings will preserve heat more evenly inside the smoker.

Fish Cookers:

Fish cookers are designed to deep fry foods. Powered by propane or electricity, they must be able to sustain a large amount of cooking oil at the correct temperature. British Thermal Units (BTU's) indicate the amount of heat output available from the appliance. A higher number of BTU's rating means the cooking oil can be heated more quickly. With too little heating capacity, the cooking oil can easily be cooled below the proper temperature when each new batch of food is added.



Grill



Smoker



Fish Cookers

Flashlights

For backpacking, a small lightweight flashlight makes sense. Larger, more powerful lights can be used when weight is not a great consideration and more light is desired. For home use, rechargeable batteries and a re-charger make good long-term economic sense. Floating, waterproof models are available for marine and foul weather use. Adjustable focus is a good feature available on some lights. This feature offers the versatility of having a floodlight for close work and a spot light for seeing objects far away. For foreign treks, be sure to choose a flashlight that uses commonly found batteries.

Headlamps

Headlamps offer hands-free lighting. Small models are sufficient for reading or searching through a pack, while others are designed for caving or mountaineering and provide enough light for hiking, climbing or caving with no other light source.

Lithium Batteries

Lithium batteries are needed for cold weather use (below 20 degrees). Alkaline cells lose power when cooled, but generally recover when warmed again. Lithium batteries have a longer shelf life and burn close to full power throughout their life. Alkaline batteries tend to dim more quickly as their charge wears down.

Light bulbs determine the brightness of the light. Vacuum bulbs provide the least amount of light. Other bulbs filled with halogen, krypton or xenon gas burn brighter though they deplete batteries more quickly. Extra bulbs should always be carried along with extra batteries. Some people even carry one gas filled bulb and one vacuum bulb for different used during an outing.

Backpacks

Backpacks are designed to help carry a load by distributing weight appropriately between a hiker's different muscle groups. The pack must also function to balance the load for ease of movement. The collection of straps, belts and other components along with the frame itself can be referred to as the suspension system.

The simplest suspension system is found with the frameless packs. These packs are usually small packs like book bags and rock sacks which depend on the shoulder straps to carry all the weight of the pack. The exceptions to this are canoe packs and dry packs for rafting, both of which have no frame structure. The shoulder straps allow a means for carrying the load for short distances. The lack of any rigid frame makes packs easily stowable in the canoe or raft. The suspension systems employed in the modern internal and external frame packs demand that the pack be carefully fitted to the individual. Getting a well-fitting pack is the key to getting the most from a pack's suspension system.

<u>Internal</u>	<u>External</u>
Fits close to the body.	Ventilation between pack and back.
Lower center of gravity	Easy to moderate trails. Large capacity.
Climbing. Skiing. Offtrail.	More pockets and compartments.
Fewer pockets. More expensive.	Higher center of gravity. Less expensive.

Choosing the size of a pack is important for arriving at a good fit. Choosing volume (capacity) of a pack depends on the typical length of trips taken and how much gear one chooses to take.

Sleeping Bags

Sleeping bags provide warmth by trapping dead air spaces in the bags fill material. There are many different insulating fill materials used in sleeping bags. They are all usually categorized as synthetic or down filled.

Characteristics of synthetic or down bags:

Synthetic Fill

Less expensive
Moisture not easily a problem
Easier to care for
Heavier, bulkier
Non-allergenic

Down Fill

Expensive
Lightweight
Compact
Must be kept dry
Slow to dry

Recent advances in types of synthetic fills have made many of these bags very lightweight and compact. In some cases the weight and size advantage of a down bag is not significant.

Temperature Ratings:

One of the first things to determine is what will be the coldest temperature likely to be encountered in the sleeping bag. Most people need a bag with a comfort rating 10-20 degrees below the lowest temperature they expect to encounter. Manufacturers test their bags and arrive at comfort ratings in a variety of ways. Comparing temperature ratings from one manufacturer to the next can be difficult. There are many variables that will determine whether a bag is warm enough for an individual. Is the bag being used in a tent or RV? What clothing is being worn? What kind of pad/insulation will be used under the bag? Has the person had plenty to eat and drink? What will be the level of fatigue?

Remember: The sleeping bag's rating is an estimate regarding the comfort zone of some fictitious individual under ideal conditions. Most people need to add a few degrees to any temperature rating to find the right bag for them.

Shape:

Sleeping bags are often divided into two categories by shape: **Mummy and rectangular.**

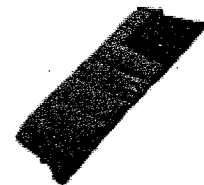
Mummy Bags:

Mummy bags offer the warmest, lightest, most compact design. There is no extra space in the bag to be warmed. Mummy bags usually are designed with a hood to prevent heat loss at the top of the bag.



Rectangular Bags:

Rectangular Bags have plenty of room and often can be zipped all the way open to be used comforter-style. Due to their extra weight and bulk. Rectangular bags are rarely used for backpacking. Rectangular bags are best suited for warm weather use due to their tendency to lose body heat out of the top of the bag.



All other shapes of sleeping bags are modifications of the two basic shapes.

Sleeping Pads

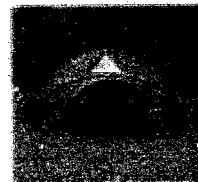
Sleeping pads are an essential component of one's sleeping bag's system. Because one's body weight presses most of the air out of the underside of a sleeping bag, an insulated sleeping pad is needed to prevent heat loss through the underside of the bag. A thin closed cell foam is a good choice for protection from the cold. Open cell pads allow the air to escape under body weight and therefore must be much thicker to provide warmth and padding. The open cell pad is much bulkier and must be protected against absorbing water. Air mattresses may provide comfortable cushioning but will actually carry away body heat as the air inside the mattress circulates freely.

Tents

Tents can be grouped into three basic categories:

Winter and Mountaineering Tents

These tents are designed to withstand high winds and heavy snowfall. They have a more expensive pole structure for strength and wind resistance. Often, they have two doorways. A built-in vestibule is a good feature to allow storage of extra gear outside and to allow cooking under the shelter of a vestibule, thus avoiding the dangerous practice of cooking inside the tent.



General Backpacking Tents

This group of tents includes a wide variety of shelters. Some are for summer star gazing built with plenty of bug proof screen material. Some are sturdier designs capable of shedding moderate amounts of snow below the tree line.



Family and Group Camping Tents

These tents feature lots of headroom and plenty of space for gear, cots and privacy. This group includes cabin, umbrella and large dome style tents. Because of their size and weight, these tents are used where there is only a short distance to transport the tent from vehicle to campsite.



When choosing a tent for mountaineering or backpacking, the most important questions need to be addressed will center around the trade-off between weight and interior space. How much extra weight are you willing to carry in your pack to gain more space inside the tent? Choosing between a freestanding design and a tent that must be staked down to be set up can determine the weight of your tent, also. Freestanding tents require more pole structure and weight more than other designs.

When choosing a larger tent, there is a different set of questions to consider:

- How easy is the tent to set up?
- How much headroom, floor space?
- Does the rainfly cover only the top portion of the tent or does it extend down the sides for greater protection?
- How many windows and doors for ventilation?
- How will the tent perform in high winds or heavy rain?

Some tents are designed for fair weather camping, while others will perform well as a solid base camp tent in severe weather conditions.

Materials and Frames:

In selecting your tent, you'll want to consider the different types of fabrics and determine which is best for your needs.

Permeable nylon is water repellent, yet allows moisture trapped inside the tent to escape. This material is often used in tent roofs.

Taffeta nylon is used for top flies, walls, rod pockets and floors of lightweight tents. It is tough, lightweight, mildew and tear resistant and easy to repair.

Oxford nylon is used for tent floors. It has one-half the weight of vinyl, with excellent tear and abrasion resistance.

Poplin fabric is often the choice for family tents and screen houses. It resists tears, abrasions and damage from ultra-violet light. This material is water repellent and permeable to dissipate trapped moisture.

Polyester, a synthetic fabric, is more economical than poplin, yet offers excellent tear and abrasion resistance. It doesn't resist ultraviolet light damage as well as poplin, but is usually lighter in weight. Mesh and netting are usually used for window screens and roof vents in tents and for sidewalls in screen houses. It provides ventilation, visibility and bug control. Nylon mesh used in rod pockets allows for increased air flow, for moisture dissipation and mildew resistance.

Generally, tent frames are made of either fiberglass or aluminum:

Fiberglass offers advantages of economy, strength, stability and east setup. Fiberglass frames are a good choice for three-season camping. Drawn seamless aluminum or aircraft quality aluminum has good strength-to-weight ratio and stability.

Aluminum tent frames are easy to assemble and are good for either three or four season camping. Tent frames requiring extra rigidity are usually made of aircraft quality aluminum.

Water Filters

There are many different types of filters available and each manufacturer provides plenty of instructions and recommendations to go along with their product. It is important to read through manufacturer's materials before offering and detailed recommendations regarding filter use. Some general information regarding filters contained herein will provide a good starting point for learning about the filtering systems Outdoor World carries.

Filtering: Refers to a system of straining water through micro pores small enough to filter out harmful waterborne pests.

Purifying: Refers to killing waterborne pests either by boiling or through the use of a chemical treatment like iodine or chlorine. Some systems filter out larger pests and kill others small enough to pass through the filtering system.

Protozoans: These are the most common pests in North America. They are relatively large. Giardia is the most common. Protozoans can be strained out of water by filters with pores of 1.0 microns or smaller.

Bacteria: These are common in water sources. They are smaller than protozoans. Bacteria can be filtered out by filters with pores between 0.1 and 0.4 microns or smaller.

Viruses: The smallest pests. Viruses are too small to be removed by most filtering systems. Even the smallest filters available cannot be counted on to totally remove all viruses. Only a purifying treatment of boiling or application of a chemical can totally remove the threat of viruses.

Boiling water will kill any pests after 1 minute of a rolling boil at sea level. For higher altitudes, a longer boiling time is required. Five minutes at 10,000 ft. is a good guideline for judging how much longer to boil water at altitude for purifying purposes.

For trips in the wilderness in North America, a filter which removes protozoans and bacteria down to 1.0 micro will protect against Giardia and other pests. When traveling abroad in more populated or tropical areas, some type of purifying system should be considered to get rid of viruses too small to filter.

Canoes



Canoes may be grouped according to how each canoe is expected to be used and what design features support that type of canoeing. Learning what type of paddling your customer will be doing and what design features support that use will help determine which boats to choose. Below is an excellent guide to canoe design features.

The canoe is a Native American craft. Its basic shape has remained unchanged since the time of its creation. Canoes are still lightweight, slender boats with points at both ends and propelled by paddles. However, even the basic birchbark canoes of the past had specific design elements built-in for different water conditions or uses.

With today's modern materials and molding processes, designs of canoes have changed dramatically and have led to a wide variety of models. With so many models and designs to choose from, we hope this general guide to basic design elements will be helpful in deciding which canoe will best fit your needs.

Length: Longer canoes will have great hull speed, will track better and will have greater potential for carrying capacity. Shorter canoes will be more maneuverable and lighter in weight.

Width: Widths or beams as they are called are given in two measurements: the beam at the gunwale and the beam at the 4" waterline. The 4" waterline beam has the greatest influence on performance. Wide beamed canoes offer great stability but may be somewhat slow. Narrow canoes may be less stable but afford better efficiency and hull speed.

Depth: Greater depth allows for increased carrying capacity and better water shedding ability. However, deep canoes can be harder to handle in windy conditions and will be heavier.

Cross Section

The shape of the bottom of the canoe and how it blends with the sides will influence its performance. Stability of a canoe is affected greatly by its cross section.

Flat bottom: Flat bottom canoes offer great initial stability. That is, they feel very secure on calm water. Flat bottom canoes are great for the sportsmen and general recreationalists looking for steadiness.

Shallow arch bottom: Shallow arch bottom canoes have less initial stability, but good secondary stability. As the canoe is leaned, it will balance on its side and resist further tipping. Shallow arch canoes work well in waves and whitewater. Shallow arch bottom canoes offer the best all-around performance.

Round Bottom: Round bottom canoes have great secondary stability but very little initial stability. They are designed for speed and efficiency. Round bottom canoes are usually fast, specialized canoes.

Flare/Tumblehome/Straight-sided: The sides of the canoe can have flare, tumblehome or can be straight-sided. Flare will shed water well and increase stability. Tumblehome gives a narrower beam at the gunwales and allows for easier paddling; however, stability will be decreased. Straight-sided canoes are a compromise of the two. Keep in mind that many canoes will incorporate one, two or three of these in different areas of the hull.

Keels: A keel will help tracking in short canoes and will help the canoe's resistance to crosswinds. Keels also work well on canoes used with outboard or electric motors as they decrease sideslipping.

Entry Lines

The shape of the bow where it cuts the water will have an effect on the canoe's performance. A very sharp, knife-like entry will cut through the water easily and provide efficiency. A blunt bow will add fullness and give buoyancy in waves, thus a drier ride.

Symmetry

Symmetrical canoes have identical ends, bow and stern. Symmetrical canoes offer a more versatile design and convert more readily from tandem to solo. Asymmetrical canoes are usually designed for a particular specialty.

Rocker

The curve of the keel line from bow to stern is called rocker. A straight keel line has no rocker, which allows for exceptional tracking ability but lacks maneuverability. An extremely rockered keel line offers exceptional maneuverability but will not track well. Moderately rockered canoes are usually straight with a rise toward the ends. Most general recreation canoes have a moderate rocker.

Materials

Before World War II, wood and canvas canoes were the only type available. In the years since, many other canoe materials have been developed, but some people still prefer these quiet, responsive canoes over any other wood.

Wood/Canvas canoes are fragile compared to modern materials and require proper maintenance and storage to prevent moisture absorption and deterioration. Most owners of these canoes treat them with great care and only allow their use on calm water. Wood strip canoes, also called “strippers” are constructed by bending strips of wood and gluing the strips together. After gluing, the surface is covered with fiberglass. Damage to wood strip canoes may be difficult to repair, as well as expensive.

Aluminum canoes require virtually no maintenance and are quite durable. Large dents can be a problem, but smaller ones can often be smoothed out easily. The lighter gauge aluminum canoes are more easily damaged but the heavier gauges display amazing damage resistance. Because of limitations in the manufacturing process of aluminum canoes, designs are restricted to wide, flat bottom styles.

The hand-laminated materials, fiberglass and Kevlar are often classified together because of their similar components and manufacturing processes:

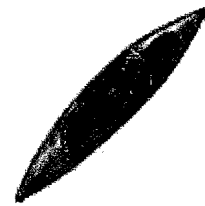
Fiberglass canoes are easily repaired and require little maintenance. The lower cost sprayed-in “chopper-gun” fiberglass canoes are usually heavy and not as strong as hand-laid canoes.

Kevlar is an extremely durable fabric and has a very high strength-to-weight ratio. The material is widely used in aerospace applications and bullet-proof vests. Kevlar canoes are generally favored for racing and extended flat-water trips because of their lightweight and portability.

The best **polyethylene** canoes are manufactured by machine molding crosslinkable polyethylene into the desired hull shape, producing a three layer laminated canoe that is strong and abrasion resistant. These canoes slide easily over rocks and are quiet, stable and durable. Even in cases where damage has been severe, they “bounce back” to the original shape due to the material’s “memory”. Because of their damage resistance, crosslinked polyethylene canoes are a good choice for situations involving rough handling or whitewater. A favorite of canoe rental operators, many first time canoe buyers find that the crosslined polyethylene canoes are a good choice for novices or families wanting a low-maintenance durable canoe.

Canoes made of **ABS laminate** or “**Royalex**” offer exceptional durability with some weight savings and compare favorably with polyethylene canoes in “memory” and abrasion resistance. These canoes can even be bent in half without major damage to the hull. When released, the canoe pops back into shape with very little distortion. Canoes made of ABS laminates are a good choice for situations involving hard use, such as extended wilderness trips and whitewater, or circumstances that might include rough handling over difficult portage trails. These canoes are usually lighter in weight than polyethylene canoes and come in a variety of hull designs.

Kayaks



Kayaks may be divided into these three categories: **Recreational, Touring and Whitewater**

Recreational kayaks are designed for casual paddling. They are often used with or without a spray skirt on lakes, ponds and gently flowing rivers. Sit-on-top kayaks are included in this category. These kayaks are stable and moderately priced.

Touring kayaks are designed for tripping and have ample cargo space. These include ocean kayaks, which often feature rudders for improved tracking. These kayaks are longer and are designed for paddling efficiency over greater distances.

Whitewater kayaks are short, lightweight, maneuverable and durable. They come in a variety of designs aimed at beginning to extreme whitewater conditions.

Compasses

Basic compass features needed for accurate navigation include:

A freely rotating needle suspended in a fluid which dampens the vibrations of the rotating needle.

A circular rotating housing for the needle

A graduated dial around the housing giving degree markings from 0 to 360

Orientating arrow beneath the needle

Index line for reading bearings

Transparent base plate so one can view the map beneath the compass

Other features which may be recommended are:

Sighting mirror for improving accuracy.

Adjustable declination arrow which makes declination adjustments automatically after the initial setting.

Ruler calibrated in inches or millimeters or both.

Clinometer for measuring the angle of a slope

Magnifying lenses for more easily reading the small print or contour lines of a topographical map.

The small, round cheap compasses without a base plate are not precise enough for navigation. **Caring for the compass:** Don't store the compass near electronic devices or the car ignition, as this can ruin the magnetic needle. Compass readings can also be distorted if taken near large metal objects.



Climbing

Ropes

Ropes are divided into two basic types: **Dynamic and Static**

Dynamic ropes will stretch under the load of a fall when the climber comes to the end of a fall and is stopped by the rope. If the rope did not stretch or “give”, the climber could be injured by the severe jerk and sudden stop at the end of the fall. Dynamic ropes are always multicolored and are measured by diameter and length using metric standards. The most popular ropes are 10.5-11 millimeters in diameter and 50 or 60 meters in length. 50 meters in length is approximately 165 feet. This length of rope will coincide with the length of most climbing routes found indoors and outdoors.

Static line has very little stretch and is a good choice for top rope climbing and rappelling. Static line is one color, sometimes with a second color accent. Static ropes are typically 7/16” in diameter and often are sold in lengths of 150 to 200 feet and 300. For situations that may involve falls with slack in the rope, as in lead climbing, a dynamic rope is mandatory.

Other considerations when choosing a dynamic rope include:

Fall rating: Most manufacturers provide a fall rating for each model of rope sold. A fall rating is a standard rating given to indicate the approximate number of falls a rope can hold before retiring the rope is recommended.

Elongation: % of stretch, this rating will indicate the amount of stretch a rope will experience during an average fall, stated as a percentage of overall rope length.

Wet or dry: Wet ropes become heavy and difficult to handle. They lose some of their strength and become dirty more easily. Rope manufacturers treat some of their ropes to be more water resistant by using various coatings on the ropes. This treatment not only helps keep the rope dry, but it improves abrasion resistance and reduces friction, thereby increasing the life of the rope.

Single or double ropes: 9.8 mm – 11 mm ropes are used as single ropes for climbing straight routes. A single rope is used for indoor and outdoor sport climbing where routes are usually a single pitch and straight forward. Ropes smaller than 9.8 mm are most often used in pairs. Climbing with double ropes offers advantages for climbing zigzagged routes. A pair of ropes offers a longer rappel possibility. Two ropes means less chance of both being hit by rockfall or cut on abrasive rock edges. Single ropes have a “1” circled on the marking labels at both ends. Double ropes or half ropes have a circled “1/2” on the marking labels on both ends.

When selling double ropes, don't mix up sizes and brands of ropes. Rope characteristics may not be suitably matched if ropes from different sizes and manufacturers are mixed.

Rock Protection

Chocks and camming devices are used to provide an anchor or point of secure attachment to the rock. Chocks are sometimes called chockstones or nuts. These are simply wedges placed in the rock to hold a fall by wedging against a constriction in a crack.

Camming devices can be divided between active camming devices and passive camming devices. Passive camming devices are similar to chocks or nuts and hold a fall by rotating slightly within a crack. This creates a camming action that jams the piece against the rock. Active camming devices have moving parts which allow retraction of camming parts, so they can be fit into a spot where they are allowed to open into position against the rock. The devices are designed so a force pulled on the device increases the pressure against the rock by the camming parts.

Passive camming devices and chocks are relatively inexpensive and lightweight. Active camming devices are expensive, comparatively heavy and fit a wider range of placements than passive camming devices. All of them come in a wide range of sizes, so one can purchase a collection of items which will outfit the climber for placing protection in any variety of terrain encountered on a climb.