

Sea Kayaking Equipment



The Mountaineers Sea Kayaking



Basic Sea Kayaking Equipment

Types of Kayaks

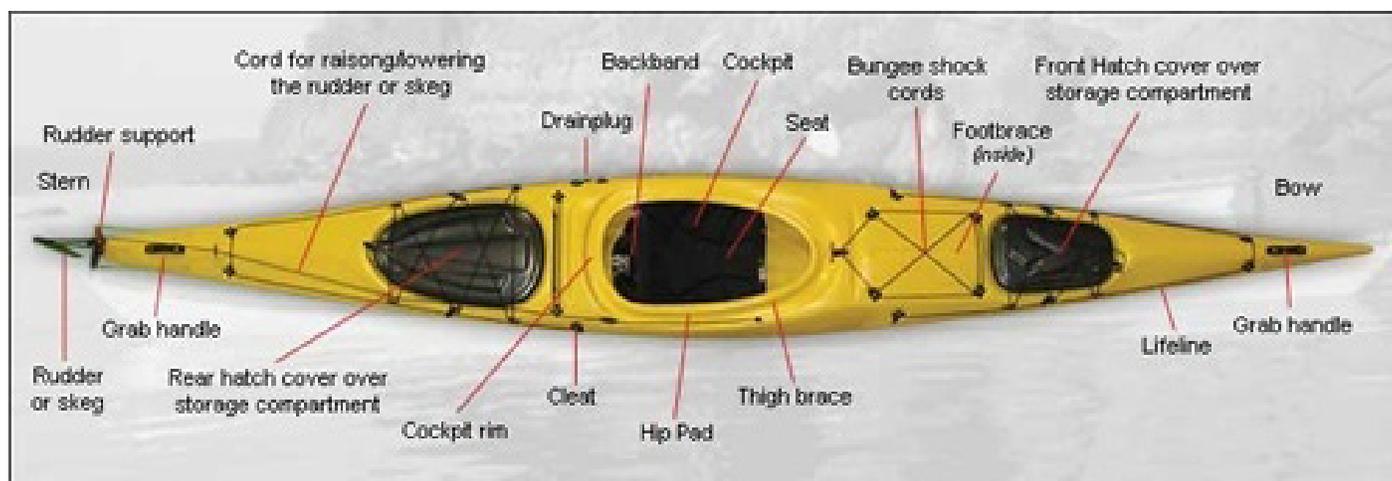
Sea kayak: length typically from 15' to 23', enclosed cockpit, floatation, uses a spray skirt to seal the enclosure; generally has some storage capacity. This is the only type of kayak suitable for Mountaineers sea kayak trips. Sea kayaks are made from a variety of materials: wood, plastic, fiberglass, skin-on-frame; each has distinct advantages and disadvantages.

River kayak: usually 6' to 10' in length, enclosed cockpit and characterized by a blunt bow and durable material for withstanding impacts on river rocks; little or no storage capacity.

Sit-on-top: As implied, no enclosure, paddler is on top of the kayak; sometimes called self-bailing; minimal storage, and higher center-of-gravity giving a "tippy" sensation.

Inflatable: Kayak whose hull is comprised of inflatable tubes for floatation, usually very sturdy, but with minimal speed capability.

Characteristics of a Kayak



Rudder: A flat blade that can be raised and lowered (at the stern) to provide paddlers the ability to control direction (steer) using their feet via cables attached to sliding or pivoting foot pedals. Used for improved tracking especially in windy conditions. Not found on all kayaks.

Retractable Skeg: (not shown) A skeg is a flat blade deployed below the hull that can be lowered down or raised up or stopped anywhere in between using a hand controlled lever, dial, or external deck cord. Used for improved tracking especially in windy conditions. Not found on all kayaks.

Rudder Support: A bracket on the stern deck, which the rudder sits in when not engaged. It provides the paddler with solid bracing as it prevents the foot pedals from moving when the rudder is not in use. A rudder support also provides a safe lock down position when transporting a kayak.

Rudder Cord: Enables the paddler to easily raise or lower the rudder system by hand as desired, using an internal or external cord.





Drain Plug: Some day-use & recreational kayaks provide a drain plug to conveniently relieve water.

Backband: Sea kayaks tend to have a multi-adjustable low-slung backband while recreational models tend to have a higher backed seat, which may or may not be adjustable.

Cockpit: The designated area the paddler sits in to best control the kayak. Sea kayaks tend to have a small opening allowing better bracing and control while, recreational kayaks have larger openings for easy entry & exit.

Seat: The seat should be firmly adjusted and fit snugly but not tight. Back support is essential for a comfortable trip. Make sure all seat adjustments are performed before launch.

Bungee Cords (bow): Perfect to store a map, water bottle or attach a low-slung deck bag to house small pack items in an easily accessible area.

Bungee Cords (stern): Used to store a spare paddle, odd shaped equipment, etc.

Foot braces: Foot braces are usually pegs upon which the paddler places his or her feet to provide bracing for forward strokes and paddle braces. Kayaks with rudders use a sliding or pivoting foot brace system, which controls the rudder. Sliding or pivoting foot pegs make bracing more challenging. Kayaks without rudders provide an adjustable, rigid system for solid bracing.

Hatches & Storage Compartments: Kayaks commonly use composite hatch covers with neoprene liners or rubber gaskets; or oval/round rubber hatch covers. Watertight hatches provide convenient, virtually watertight storage and safety through buoyant airtight chambers. While designed to keep the majority of water out of the storage area, some seepage may occur and gear may get damp so pack accordingly. Also, always double check your hatch covers before launch. Loose hatches have been responsible for partial sinking of kayaks during crossings.

Bulkheads: (not shown) A vertical wall(s) to separate the kayak's storage area(s) from the cockpit area. They prevent the flooding of the bow and stern when the cockpit has taken on water after a capsize, keeping the kayak buoyant.

Bow: Refers to the kayak's front end.

Stern: Refers to the kayak's back end.

Length & width: Lengths and widths vary; usually longer tracks better; shorter is more maneuverable, but much depends on hull design. Narrower is usually more tippy but speedier and maneuverable, while wider is more stable but less maneuverable. However these are generalities and each boat is different.

Rocker: When viewed from the side, rocker describes how much the bottom of the hull (keel) rises at each end of the boat (allowing it to "rock" on land). More rocker usually increases maneuverability and less rocker gives better tracking.

Hull shape: When viewed from the front or back of the boat the shape of the bottom of the kayak determines some of the boat's character. Very high performance (racing) boats have very round bottoms. This shape provides speed, but very little stability. A squarer bottom, with sharp corners, is said to have "hard chines". These boats will turn sharply when edged, but will feel more unstable in confused waves. "V-bottomed" boats have a sharper "V" shape at the keel and will track more strongly, but may feel a little tippy at first. Most sea kayaks have a "shallow arch" shape that provides a good balance between stability and performance.





Grab Handles: Secure handholds to move a kayak. These must be inspected periodically to assure they will support the weight of the kayak.

Toggles: Some kayaks have short bar handles on the ends of short ropes at each end of the boat. Their function is to offer something to hang on to in a capsize or rescue situation. Often used to carry boats, they should not be counted on to be strong enough to support a loaded boat.

Kayak Cockpit Coaming or Rim: Refers to the raised piece around the edge of the cockpit; to prevent water on deck from running below. The lip shape of the coaming provides a place to attach the spray skirt to keep the cockpit area dry.

Cleat: Most kayaks with rudders offer a starboard (right) side cleat to lock the rudder in a down position for safe transportation.

Hip Pads: Help eliminate sideways movement for paddlers which provides them with more refined kayak control.

Thigh Braces: Enable paddlers to lock the inside of their knees under the forward cockpit area which allows them to "become one" with their kayak for better boat control through body weight transfer.

Perimeter Lifelines: Enhance paddler safety as bow & stern lifelines. Enable paddlers the ability to grab the kayak from an "in water" position.





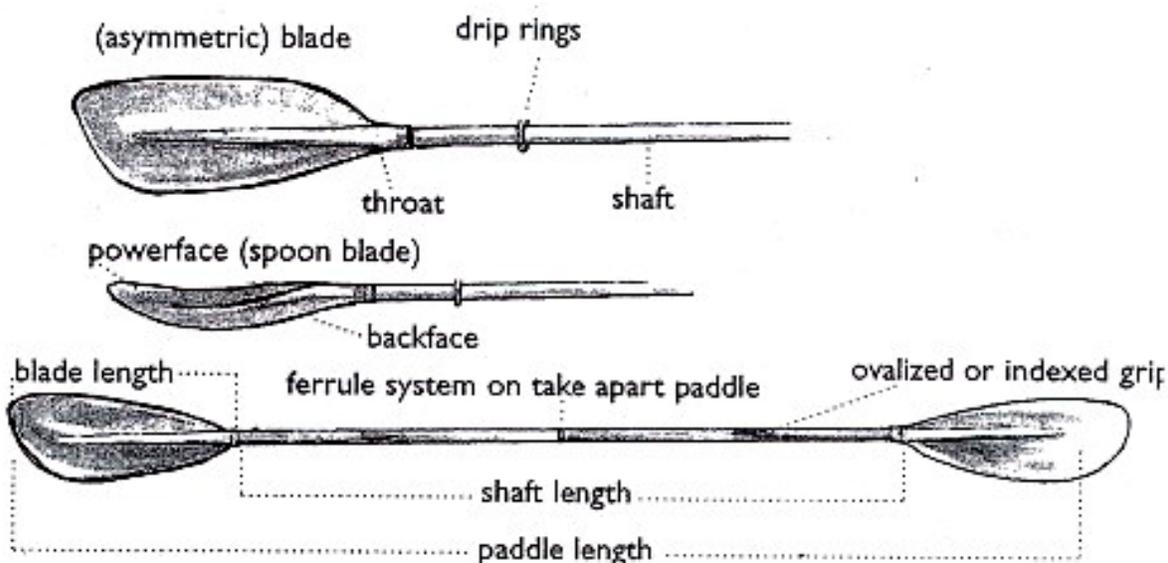
Characteristics of a Sea Kayak Paddle

Material: Paddles are typically made of fiberglass, carbon fiber, plastic or wood. Each material has advantages of strength, abuse resistance, weight, stiffness, cost or aesthetics.

Shape: As illustrated, the typical sea kayak paddle has a spoon-shaped asymmetric blade. When held so that the longer side of the blade is up, the blade enters the water cleanly, without twisting. Wider blades provide more power. Narrower blades have an easier feel for cruising. Specialized blade shapes include very narrow Greenland style paddles and airfoil shaped, "wing" racing paddles.

Length: Blade length depends on an individual's body dimensions, boat width, paddling style and personal preference. Paddles are sold by length in centimeters.

Types of Sea Kayak Paddles



A typical touring kayak paddle has asymmetric blades that are spoon-shaped. Most models can be taken apart for easy storage.

A Woman's Guide to Sea Kayaking, Shelley Johnson, © 1998



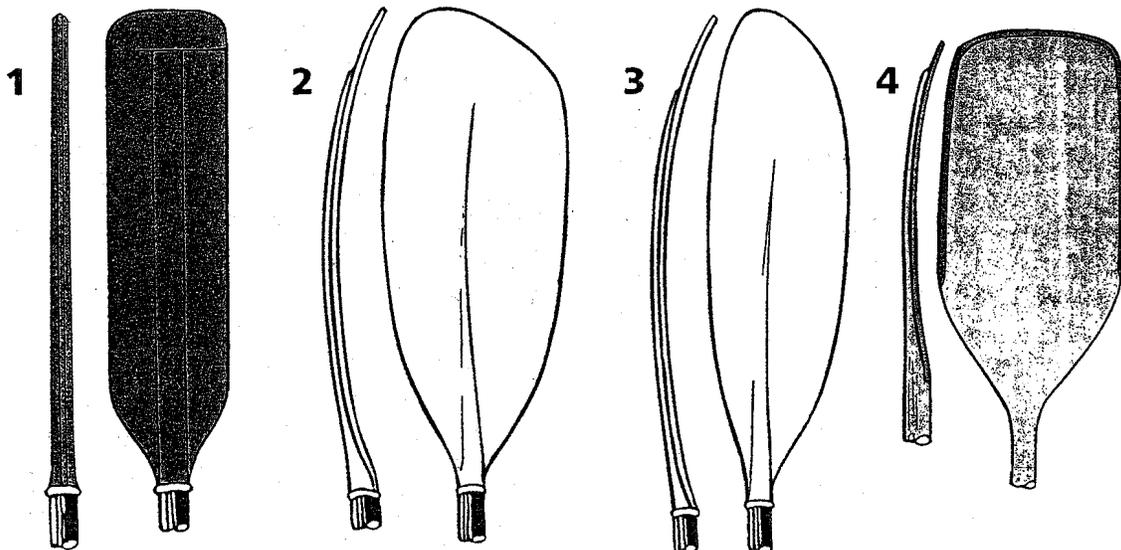


Figure 23 *Some assorted paddle shapes used by sea kayakers:*

(1) Seamaster. (2) Asymmetric spoon blade. (3) Narrow asymmetric spoon blade. (4) White-water curved blade. The most popular materials are: wood (hand carved or marine plywood; Fibreglass (hand lay-up or injection moulding); ABS (plastic and polypropylene injection); RIM (Reaction Injection Moulding – foam polyurethane injected under pressure).

The Complete Book of Sea Kayaking, Derek Hutchinson, © 1994





Spray Skirt Basics

Construction: Spray skirts are typically made of waterproof, coated nylon or neoprene. Nylon skirts fasten around the cockpit rim (coaming) with an elastic bungee cord sewn into the perimeter of the skirt. Often this cord is adjustable for tightness. The tunnel of the skirt, which encloses the paddler's waist, extends up to keep water out. It may be secured with Velcro, elastic, or suspenders. Skirts may also be constructed entirely or partially of neoprene, again with an elastic edge to fit over the coaming. Neoprene skirts may have a nylon tunnel. All spray skirts should have a grab loop at the front to permit them to be released, especially when capsized and upside down in the water. Nylon skirts are typically less expensive, cooler and less restrictive. Neoprene skirts provide a tight seal for big wave conditions and rolling. All skirts need to be carefully selected to fit the kayak coaming so as not to leak and be easily released. Neoprene skirts need to be selected with a tunnel that fits the paddler's waist.





PFD Basics

How Many PFDs Do I Need?

You must have at least one, U.S. Coast Guard approved, wearable PFD for each person onboard, and it must be the appropriate size.

What kind of PFD do I need?

PFDs are categorized by Type, i.e. Type I, II, III, IV or V. Types I, II and III are commonly worn by recreational boaters, while Type IVs are throwable devices such as life rings and buoyant cushions. Type Vs are for special uses.

Types I, II or III may be inherently buoyant, that is, they will float without action by the wearer, or they may be inflatable (oral and manual inflation at a minimum), or a combination of both (hybrid). Currently, all USCG approved inflatable PFDs are Type IIIs with manual inflation.

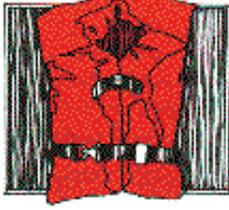
Type I and II will act to turn the wearer face up in the water. Type III provides wearable flotation, but will not turn an unconscious person upright in the water.

Type III PFD's are the only ones generally suitable for Mountaineer Sea Kayak activities. When designed for sea kayak use, they will be comfortable to wear, be adjustable for a snug fit and not ride up when used in the water.

Type	Style	Notes
Type I Offshore Life Jacket	<p>Off-shore Life Jacket</p> 	
Use	Advantages	Disadvantages
Best for open, rough or remote water, where rescue may be slow-coming.	Floats you the best Turns most unconscious wearers face-up in water Highly visible color	Bulky



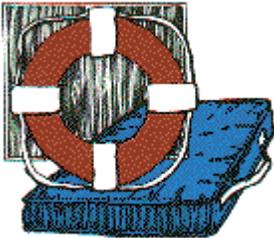


Type	Style	Notes
<p>Type II Near-shore Buoyant Vest</p>	<p>Near-shore Buoyant Vest</p> 	
Use	Advantages	Disadvantages
<p>Good for calm or inland water, or where there is a good chance of fast rescue</p>	<p>Turns some unconscious wearers face-up in the water Less bulky, more comfortable than Type I</p>	<p>Not for long hours in rough water Will not turn some unconscious wearers face-up</p>

Type	Style	Notes
<p>Type III Flotation Aid</p>	<p>Flotation Aid</p> 	
Use	Advantages	Disadvantages
<p>Good for conscious users in inland water and where there is good chance of fast rescue.</p>	<p>Generally the most comfortable type for continuous wear Designed for general boating or the activity that is marked on the device Available in many styles, including vests and flotation coats</p>	<p>Wearer may have to tilt head back to avoid going face down Not for extended survival in rough water; a wearer's face may often be covered by waves All wearers need to try it in water prior to going boating</p>





Type	Style	Notes
<p>Type IV Throwable Device</p>	<p>Throwable Device</p> 	<p>Kinds: Cushions, rings and horseshoe buoys. Hold to chest and put arms through opposite straps.</p>
Use	Advantages	Disadvantages
	<p>Can be thrown to someone. Are good backup to wearable PFDs.</p>	<p>Not for unconscious person, non-swimmers or children. Not for many hours in rough water.</p>

Type	Style	Notes
<p>Type V Special Use Device</p>	<p>Inflated Hybrid PFD</p> 	<p>Performance: Equal to either Type I, II or III performance as noted on the label.</p>
Use	Advantages	Disadvantages
	<p>More convenient or useful for specific activities. Continuous wear prevents being caught without protection. Most accidents happen suddenly and unexpectedly.</p>	<p>Less safe than other Types if not used according to label conditions. May be better suited to cool climates or seasons. Some Type Vs are approved only when worn. If marked this way, they are required to be worn to be counted as a regulation PFD.</p>

