

Choosing the Right Kayak

Terms of Use

All content on this site is the property of [RoguePaddler](#). Do not reproduce or distribute our materials without our [editor's](#) written permission.

<http://www.roguepaddler.com/choose.htm>

by Wes Kisting

Okay, so you think kayaking is cool, healthy, or adventurous, and you just can't wait to join the growing number of [aquaphiles](#) who know it's the best activity in the world. Right? Well, obviously you're going to need a kayak. But in order to choose the right kayak for your needs, you're going to have to learn a little about how design affects performance.

Purpose and Paddler Type

Before you shop for a kayak, you need to decide what type of paddler you are. The best way to figure this out is to borrow as many different kayaks as you can, head out to the water, and find out what exactly you enjoy doing most when the paddle is in your hands and a whole repertoire of kayaks is at your command. Unfortunately, most of us simply don't have access to all the kayaks we wish we could try. But don't worry. There is still a good way to determine your paddler type. All it takes is some honest self-reflection and a few predictions about your paddling future. So, with that in mind, try to answer the following questions as thoughtfully and accurately as possible:

1. Where do you intend to paddle your kayak most of the time? Creeks and shallow rivers? Small lakes? Large bodies of water? Oceans? Anywhere and everywhere?
2. How much time do you expect to spend kayaking on average? An hour? Five hours? All day? Weeks at a time?
3. How far do you expect to travel in your kayak on average? A mile or two? Five miles? As many miles as possible before the sun goes down? Across whole hemispheres?

Of the thousands of questions you could ask yourself to help narrow down your paddler type (without actually borrowing, renting, or buying a kayak), these three questions are potentially the most useful. Why? Because your answers will have a direct bearing on what type of kayak will best suit your needs. Essentially, these questions force you to focus on the purpose your kayak needs to fulfill. Keep your answers to these questions in mind as we examine some of the basic principles of kayak design. If you do, you should be in a good position to make smart decisions about which type of kayak will best fit your needs.

Length and Width: Efficiency vs. Stability

Here's a simple rule to keep in mind when buying a kayak:

As a kayak gets *longer* and *narrower*, it becomes *faster*, *more efficient*, and *easier to keep in a straight line*. As a kayak gets *shorter* and *wider*, it becomes *slower*, *more stable*, and *easier to turn*.

This statement is a bit oversimplified, but for now it serves our purposes nicely. How exactly does this bear upon your decision when buying a kayak? Simple. If you plan to spend most of your time paddling creeks, shallow rivers, and small lakes, you should consider investing in a shorter kayak—something approximately 9 to 12 feet long. Kayaks in this size range are typically called "recreational kayaks," and are designed for casual paddling and playing on the water. Recreational kayaks can navigate tight passageways and small coves with ease, and they cover short distances reasonably well. The short-coming of such boats, however, is that they are not intended for paddling farther than a mile or two at a time, and would be extremely unsafe to use on rough, open water.

At the opposite end of the performance scale is the elite class of kayaks known as "touring," "expedition," or "sea" kayaks. If your heart yearns to paddle on big rivers, wide open lakes, enormous bays, or ocean surf, a sea kayak (approximately 15 to 18 feet long) is probably the choice for you. With their long, narrow, sleek design, sea kayaks traverse great distances with speed, require minimal effort to keep in motion, and handle large waves with ease. Most touring kayaks are equipped with [bulkheads](#), a

rudder or [skeg](#), and plenty of cargo room for overnight or extended trips. If extended expeditions are in your blood, a touring kayak is the right kayak for you.

Somewhere in the middle of the performance scale is a class of kayaks known as "cross-over" or "advanced recreational" kayaks. Exactly as their name implies, "cross-over" kayaks strike a compromise between the smaller, stabler recreational kayaks and the longer, more efficient touring kayaks. Generally, these kayaks range from 12 to 14 feet in length, and may be equipped with skegs to help them track in a straight line like longer touring kayaks. If you're new to kayaking, don't know how likely you are to "commit" to the sport, or crave a good blend of efficiency and stability in a boat that will offer you at least a small taste of the adventures which dedicated sea kayakers thrive upon, a cross-over kayak is probably the smart choice. Generally, a cross-over kayak will perform much better and provide greater enjoyment than a recreational kayak. Its ability to tackle moderately more aggressive conditions than a recreational kayak not only makes it a potentially safer choice, but also offers greater potential for your paddling skills to grow. Great examples of "cross-over" kayaks include the Dagger Blackwater 12.5 or the Necky Manitou.

Obviously, length and width are not the only factors which affect kayak performance, but they do make the biggest impact. Here is another guiding rule to keep in mind:

Generally speaking, a kayak must gain a foot or two in length, and shrink an inch or two in width before there will be a noticeable difference in efficiency, speed, and stability.

As a sea kayaker, I like to recommend that people buy the longest, narrowest kayak they can comfortably imagine themselves paddling. That's because I think there's no better, more versatile, or more thoroughly-enjoyable boat than a sea kayak 16 to 18 feet long, and 21 to 24 inches wide. Of course, that's assuming an average paddler size of 6'0" tall, 175 lbs, and a reasonably athletic physique. Larger paddlers may need to try a slightly wider boat to achieve adequate comfort, stability, and ease of entry. Regardless, if you're taking up kayaking to get out and explore, it will be a lot easier and more efficient to cross the water in the long, slender hull of a touring kayak. If you're not sure your wallet or skills are up to it, the next best option is to buy a "cross-over" kayak approximately 12 to 14 feet long, 24 to 26 inches wide, equipped with a skeg. A kayak of these dimensions will usually be a good all-around performer in a variety of conditions, and with the skeg, will still be able to cross moderate distances without driving you crazy with the need to constantly correct your course. Of course, there are obvious exceptions to these recommendations, such as if you paddle in tiny creeks too narrow or swift for longer kayaks to navigate, if you plan to use your kayak only as a means to serve some other end (such as fishing or hunting), or if age or disability prevents you from paddling a narrow kayak safely. In these cases the extra stability, shorter length, and quick turning of some recreational kayaks will be much more desirable and perhaps necessary.

Special-Application Kayaks: Beyond the Hardshell

So far, I've been talking about **hardshell kayaks** (also called "sit-in" or "SINK" kayaks): kayaks with a hard exterior shell (plastic or composite) that you sit inside (in the cockpit). For performance, efficiency, durability, and variable water conditions, a hardshell sea kayak is almost always the best choice. But other kinds of kayaks may appeal to paddlers with more specific requirements for application, storage, or portability.

Sit-on-top kayaks (also called "SOT" kayaks) may appeal to paddlers who intend to use their kayaks for more specialized applications such as fishing or diving, and who intend to paddle primarily in warm climates with warm water temperatures. They can also be great fun for playing in ocean surf, with no risk of swamping after a capsize. But despite their growing popularity, the design of sit-on-top kayaks is not conducive to many of the advanced techniques which are possible in a true, hardshell sea kayak. Their higher center of gravity and wider bream makes them far less efficient for touring, with few exceptions. They are also not ideal for cold-water applications (paddling in the Arctic Circle, on Lake Superior, or even in the Midwest in late Fall) unless your idea of adventure is catching hypothermia. In short, if you plan to tackle serious long-distance expeditions in all seasons, a sit-on-top kayak is probably not the kayak for you. Recent marketing appeals to the superior "safety" of sit-on-top kayaks or the potential to become "trapped" inside a hardshell kayak stem from unfounded fears, not fact. Neither type of kayak, hardshell or sit-on-top, is inherently "safer" if the paddler is armed with proper knowledge.

Folding kayaks are another alternative to a hardshell kayak. As the name implies, a folding kayak usually consists of a foldable skin made out of some kind of flexible material that can be zipped, snapped, stretched, or otherwise attached over a collapsible metal, wooden, plastic, or inflatable frame. This allows you to take them apart, fold them up, and store them inside a large bag or case that fits easily in the trunk of your car. The downside of folding kayaks is that they need to be assembled before you can paddle them (on average, most folding kayaks take anywhere from 25 to 60 minutes to set up), and their shape will never be as stiff, fair, fast, or efficient as a well-molded hardshell kayak of the same size. On the other hand, their collapsible nature makes them far cheaper and easier to transport than any other kind of sea kayak: just fold your kayak down into its storage bag and check it through as luggage on your next plane trip to paradise. That's right: you *can* take it with you! How cool is that? For

globetrotters who want to take their kayak along on all of their international adventures, the portability benefits of a folding kayak will probably far outweigh the performance shortcomings. If you travel often, prefer to take your annual kayaking trips somewhere outside the country, or live in an apartment with no space to store a full-size kayak, give serious consideration to a folding kayak. Otherwise, a hardshell sea kayak is still the way to go.

So Many Choices, So Many Questions...

If you find yourself already having trouble deciding which class of kayak is right for you, here is my general recommendation: If you're not ready or willing to commit to a true touring kayak in the 15 to 18 foot range, buy a cross-over kayak in the 12 to 14 foot range. These boats offer noticeably better performance than the shorter, wider, barge-like recreational kayaks—and they tend to come better outfitted too (with deck rigging, a watertight bulkhead and hatch, a more comfortable seat, etc.).

Once you've narrowed your options down to an appropriate size range (general length and width), you'll soon find dozens of kayaks on the market which seem to fit the bill. Now the decisions get a little harder, and you need to look a little deeper into kayak design to determine which kayak is best for you. Relevant factors to consider include: stability, symmetry, hull shape, rocker, waterline, and construction. Each of these factors is defined and discussed at length below.

Initial Stability vs. Secondary Stability

Let's examine the stability issue a little closer because it's an important part of choosing the right kayak for you. Going back to our rule about efficiency versus stability, wide kayaks should always be more stable than narrow kayaks, right? Well, no, not always. It depends on what kind of stability we're referring to. When we say that a wide kayak is more stable than a narrow one, what we are really talking about is "initial stability": the steadiness of a kayak while it is sitting on a flat, level surface or calm water. Kayaks that are 28 to 32 inches wide should have tremendous initial stability—so much so that, with a little care and good balance, you could probably stand up in them. This is precisely why so many novice kayakers feel safer in wide kayaks. But it is not true that a wide kayak is always safer or more stable than a narrow kayak. Under certain conditions, initial stability can actually become a hindrance. In fact, in steep waves or ocean surf, a wider kayak is much more likely to capsize—or much more difficult to keep upright—than a narrower one, all other factors being equal. Why? Because the same characteristics which give a kayak excellent initial stability—specifically, its wider stance—also detract from its performance on tossing waves. Imagine a wide table, for example. With four legs and a wide stance, a table has excellent initial stability and is easy to stand on. But what happens if, while standing on that table, you try rocking it to one side or the other? Both you and the table come crashing down, right? It's roughly the same principal with kayaks. Wide kayaks with good initial stability will feel rock-solid up to a point, but once you lean them beyond that point, they flip suddenly. That's because they lack "secondary stability."

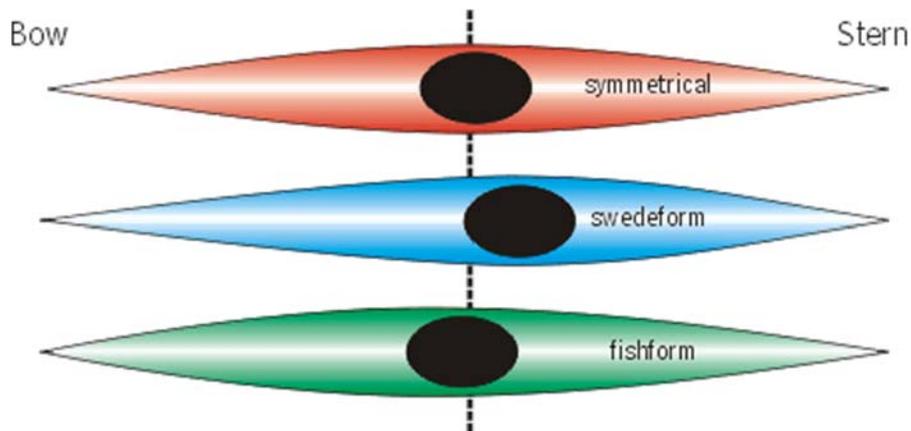
"Secondary stability" refers to the steadiness of the kayak when it is put on a lean, or when it encounters an angled plane from the side (like steep waves or surf). Generally, a narrower kayak has better secondary stability, even if its initial stability feels "tippy." Why? Because if you keep your hips loose and your torso upright, a narrow kayak can tilt to match the slope of a wave coming from the side, then roll right up and over it. With a narrow width, the kayak offers less leverage to the waves, and therefore becomes less likely to tip. Returning to our example of the table, now imagine you're standing on a rocking chair, rocking it left to right. Initially, it feels tippier than standing on the table, but with a little practice, you can easily lean the rocking chair much further to one side before it tips than you could with the table. This is because instead of a wide flat stance (like the wide flat hull of an entry-level recreational boat), the rocking chair has a narrower stance and rounded, rocker-shaped legs (like the narrower, rounded hull of a sea kayak). It may feel tippier initially, but it offers much better performance in terms of leaning or recovering from an unexpected tilt. The same basic principle holds true on the water. This, of course, is why true "sea kayaks" tend to be somewhere around 22 inches wide—give or take a few inches. These kayaks offer much greater performance and versatility because, being narrow, they can be successfully rolled, braced, or leaned sharply to "carve" tighter turns. They also cover ground much more quickly and efficiently than other types of kayaks. If you plan to tackle rough water or ocean surf, a narrower kayak is virtually a necessity for your safety. But even if you plan to stick to lakes and rivers, there is still good reason—aside from the dramatic increase in efficiency—to consider buying a narrower kayak. A kayak that is approximately 23 to 26 inches wide, for example, will offer very good initial stability, but also have sufficient secondary stability to handle unexpected patches of rough water, like the wakes of passing boats or the choppy waves kicked up in moderate to heavy winds. This, of course, is why so many "cross-over" kayaks tend to run in precisely this range of widths.

Symmetry: Sym, Fish, or Swede?

"Symmetry" describes the shape of the kayak from bow to stern, looking down from overhead. Imagine yourself looking straight down on the kayak, and pretend that the kayak has been cut in two equal halves: the front half (bow) and the rear half (stern). If the shape of the front half matches the shape of the rear half, the kayak is **symmetrical**. If the two halves differ in shape, the kayak is **asymmetrical**. Generally speaking, symmetrical kayaks are more maneuverable than their asymmetrical counterparts

because, on a symmetrical kayak, the cockpit is very closely aligned with the true middle of the kayak (equally spaced from both ends). This means that you (and your paddle) are positioned as close to the true pivot point as possible, making it easier to turn and maneuver the kayak.

Asymmetrical kayakers are divided into two categories: Fish-form and Swede-form. These terms describe the location of the kayak's widest point in relation to its true middle. If the kayak is widest forward of true middle (closer to the bow), it is a **Fish-form** kayak. If the kayak is widest to the rear of true middle (closer to the stern), it is a **Swede-form** kayak. Fish-form kayakers have roomier cockpits and greater directional stability, meaning that they tend to hold a straight course better. Swede-form kayakers will tend to ride drier, cruise at slightly faster speeds, and feel as though they have slightly better stability, but they will require more effort to turn. Having said that, applying a slight lean to "carve" a turn in a Swede-form kayak can compensate for its turning disadvantages. If a wave alters your course in a Fish-form kayak, you may actually find it harder to correct back to the correct course than you would if you applied some corrective lean in a Swede-form kayak. Of the two asymmetrical types, I consider Swede-form to be the more desirable performer.



Fish-Form Facts and Fictions

Interestingly, the appeal of Fish-form kayakers stems from the fact that a Fish-form shape generates less resistance in the water *or* in the air. This has led some designers to conclude (incorrectly) that a Fish-form kayak will paddle faster and more efficiently than other shapes. But since a kayak actually occupies the space between two elements (the air *and* the water), the advantages of the Fish-form shape are lost to the unique surface effects of wave action and drag. For a submarine (fully under the water) or an airplane (fully in the air), the Fish-form shape offers real hydrodynamic and aerodynamic advantages, but for a kayak traveling on the *surface* of the water, a symmetrical or Swede-form design offers superior advantages. This is not to say that you can't be happy with a Fish-form kayak, or that every Fish-form kayak will paddle less enjoyably than its symmetrical or Swede-form counterparts. In the end, the real deciding factor is your own personal preference and subjective experience. Try before you buy, and buy the kayak that feels best to you.

Hull Shape and Performance

Hull shape has some bearing on stability as well. A kayak with a deep **V-shaped hull** will generally feel very tippy in terms of its initial stability, but will actually seem to get more stable as it begins to lean. A kayak with a rounded, **U-shaped hull** (called "rounded chines") will generally possess a mixture of good initial and good secondary stability, but it will take some practice to get a good feel for how far the kayak can be leaned before it capsizes. A **Greenland-style hull**, which consists of a series of flat surfaces joined by hard, distinct angles (called "hard chines"), can offer superb initial stability and surprisingly comfortable secondary stability. As you lean to one side, the flat surfaces are laid into the water and feel as though they are "locking in" to become more stable at specific angles of lean.



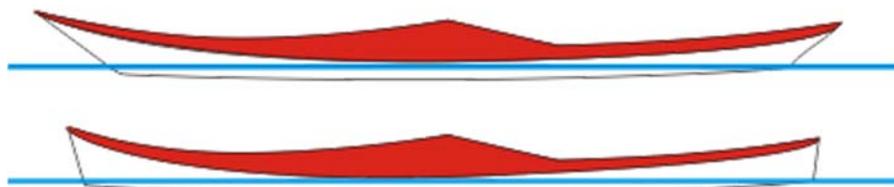
Opinions vary widely, but there is probably no "single best design" for a hull shape. Every hull shape has its specific advantages. In extremely general terms, V-shaped hulls tend to slice waves more efficiently, resulting in a slightly higher cruising speed and better tracking in choppy conditions; they also tend to have superb secondary stability, even though they will feel the most tippy initially. U-shaped hulls offer smoother transition from initial to secondary stability, turn relatively easily, and are more forgiving when waves or surf break against the sides (a hard-chined boat gives a beam-breaking wave a flatter surface to strike, thereby generating a bit more "tipping" force compared to rounded chines, which allow the wave to slip under more smoothly). Hard-chined, "Greenland" hulls track slightly better and offer a clearer, more stable feel for leaning and carving tighter turns, but their hard edges generate slightly more friction, theoretically resulting in a slightly slower cruising speed than kayaks with rounded chines. In each of these cases, we're talking extremely small, if not negligible differences. The issues of initial stability versus secondary stability, and tracking versus maneuverability, are what really set these hull designs apart. As with most things, these factors always involve some sort of trade-off. Decide what's best for you and stick with it. Whatever you choose, I'm confident you will end up with a wonderful kayak. Stressing too much over the hull-shape decision will ultimately do you little good. It's an issue you will develop your own preferences about over time.

Rocker and Waterline: Turning vs. Tracking

Two other terms you should be acquainted with are "rocker" and "waterline." "Rocker" refers to the curve of the hull from front to rear. In other words, as you look at the profile (side view) of the kayak, is the hull curved from bow to stern like a banana (lots of rocker), or is it fairly flat and straight (little or no rocker)? The more rocker a kayak possesses, the easier it will be to turn, but the harder it will be to keep going in a straight line. In other words, as rocker increases, turning-ability increases, but tracking decreases. Since good tracking is so crucial to a kayak's performance, most kayaks on the market (with the exception of white-water kayaks) have very little rocker built into them. Even in a kayak with *no* rocker, the benefits of rocker can still be exploited by simply leaning the kayak to one side as you turn. This places the curvature of the sides into the water and creates the effect of rocker to assist in turning the kayak (called "carving" a turn). For this reason, little to no rocker is desirable in most cases. The dramatic improvement in tracking is well-worth the minimal extra effort required to turn an unrockered kayak, and the benefits of rocker will become available to you (even in an "unrockered" kayak) when you learn to "carve" turns properly. Regardless, it's rare to find a kayak with much rocker in the first place, so this is a minor issue. Just be aware of it as you shop around, and avoid any oddball kayaks that look as curvy as a banana.

"Waterline" refers to the length of the hull *at the waterline* (where the hull touches the water). The longer the waterline, the better a kayak will track and (theoretically, at least) the faster it will cruise. Since waterline can be radically affected by design, I need to qualify the earlier rule that longer kayaks track better. Consider this: A kayak that is 16'5" long may only have a waterline of 14 feet. Why? Because kayaks usually taper and flare dramatically at the ends. Consequently, although the kayak may indeed measure 16'5" long from tip to tip *on deck*, the taper of the nose and tail may reduce the hull to a noticeably shorter distance (say, 14 feet) where it actually touches the water. Why is this important? Because when comparing two different kayaks to decide which one will track better and cruise more efficiently (assuming you don't have an opportunity to actually test each one out), it is not necessarily true that the longer kayak will track better (at least not if their lengths are within a foot or so of each other). What you need to compare is the waterline of each kayak. Depending on how it is designed, a 16'5" kayak could have a waterline of approximately 14 to 16 feet, and a 15'5" kayak could have a waterline of approximately 13 to 15 feet. It is possible, then, that the longer kayak could actually have a shorter waterline. Of course, in most cases, the difference will be negligible if the lengths do not differ by at least a foot or more. As I said earlier, it takes about one full foot (possibly two feet) of added length to make a noticeable difference in a kayak's tracking ability.

In this example, the top kayak is longer overall, but the bottom kayak has the longer waterline due to the difference in taper at the stems.



Construction: Plastic, Airalite, or Composite?

One final factor to consider when choosing a kayak is its construction. For beginning paddlers, the decision is simple: Buy plastic. Airalite and composite kayaks cost at least twice as much, so until you're certain you're going to love paddling and make it a priority in your life, there's no compelling reason to buy airalite or composite from the get-go. Of course, any construction material has its advantages and disadvantages. Let's consider plastic first: cheap, durable, low-maintenance, and sufficiently stiff

and smooth to achieve good performance. If you're paddling creeks and shallow rivers in particular, a plastic kayak is probably ideal. It can take most of the punishment you will ever throw at it, and it bounces off rocks and logs like unbreakable tupperware. If you bottom out or drag a plastic kayak across sharp rocks, you don't have to worry about scratches, cracks, chips, and gouges in your gelcoat, or cringe at the sound of grating fiberglass. In fact, the technology behind most rotomolded plastic boats on the market is so good these days that many plastic kayaks offer performance to rival top-of-the-line composites.

Limitations to Rotomolded Plastic

Now let's consider some of the disadvantages of plastic boats. First, plastic boats have a more limited life than their airalite or composite counterparts, but the exact duration of their life depends (heavily) on how you store them and how much time they spend, say, baking on your roof-rack in the sun. If you store a plastic kayak properly, out of the sun and heat, it's not unreasonable to expect to get at least five years of excellent service out of a plastic kayak. But the longer that a plastic kayak is exposed to the damaging effects of heat and UV rays, the more quickly it degrades. If you were to leave a plastic kayak sitting out in your driveway all summer, it would probably end up resembling an awkward-shaped banana by Fall. Why? Because the plastic softens and distorts over time. On the other hand, with proper care, you can expect it to maintain its shape and performance for a long time.

Second, no matter how smooth plastic seems, it will always create more friction in the water than the smooth, high-gloss shell of an airalite boat, or the slick gelcoat on a composite boat. The difference may seem incredibly small and virtually unnoticeable to most people, but theoretically, over time, it takes slightly more effort to paddle a plastic kayak versus a composite kayak if all other factors are equal. Maybe I'm just imagining it, but after paddling a gelcoated kevlar kayak for so long, I *swear* that most plastic kayaks feel noticeably slower to me—and I know many others who feel the same. Of course, in reality, we're probably talking about a tenth-of-a-knot difference in speed, if any. Far more relevant is the stiffness of these materials. Plastic kayaks have a much more noticeable amount of flex to their deck and hull than airalite or composite kayaks, and while this makes them more resilient to bumps and bangs against rocks, it also makes them feel a bit cruder than the "luxury" feel of an airalite or composite kayak. Again, the effect of this on performance is negligible. The flexibility of plastic boats rarely degrades performance unless, combined with the warping effects of the sun's heat, their shape actually distorts. Otherwise, the "feel factor" that makes a plastic kayak feel "cruder" than its stiffer, higher-priced alternatives is mostly subjective. On a related note, although plastic kayaks come in a variety of colors, their sheen simply cannot match the astonishing beauty of a slick, glossy-colored airalite or composite boat. Obviously, aesthetics have little or no bearing on performance except where safety is concerned (see the *Color Matters* sidebar) but many people still consider these factors immensely important when buying a boat they plan to spend a good deal of time in.

The Airalite Appeal

Now let's look at what airalite and composite kayaks have to offer. "Airalite" is a proprietary name for an advanced plastic material. It produces a surprisingly strong, hard, stiff shell that looks and performs much like the glossy skin of a composite kayak. A composite kayak, if you're not familiar with the term, refers to a kayak made of fiberglass or its lighter, more-expensive alternative: aramid-fiber (more commonly known by the proprietary name "kevlar"). Some composite kayak manufacturers also use more expensive materials, like carbon fiber, for specific applications, but fiberglass and aramid/kevlar remain the most common. Since the emergence of airalite, an increasing number of kayak manufacturers have begun to replace their fiberglass offerings with airalite construction. If the trend continues, the major choices for construction will be between plastic (low-end), airalite (middle-end), and kevlar (high-end), whereas fiberglass was formerly considered the "middle-end" option. As you might expect, the price tags often reflect this hierarchy, with an average 16 or 17-foot sea kayak costing around \$1000 in plastic, \$2000 in airalite, and \$3000 in aramid/kevlar.

The great thing about airalite is that it offers some of the best advantages of plastic—low maintenance, plus excellent abrasion and impact resistance—with none of its weaknesses. Unlike plastic, airalite is almost impervious to distortion by heat, and far more resistant to the degrading effects of UV. It also produces a harder, stiffer, slicker surface than normal rotomolded plastic, so its "feel" and performance are comparable to that of a composite kayak. The downside, in my opinion, is that it comes with the price tag of a typical fiberglass kayak, and given a choice between the two, I would much prefer fiberglass. Why? Because although airalite is resistant to damage, if you ever do manage to damage it severely, you can't just fix it yourself the way you might do with a fiberglass boat. For a lot of paddlers, this won't be an issue because they may not be able to imagine themselves fixing a fiberglass boat either. But I've worked with fiberglass, and I like the stuff, so for the same cost, I would prefer to paddle a kayak I know I can fix should the need ever arise. Having said that, if airalite comes down in cost (and I think it might in the next few years, as more manufacturers dip their hands into the technology), it does provide an outstanding alternative to basic plastic.

Composite Pros and Cons

Composite kayaks (fiberglass or aramid/kevlar) are instantly recognizable by their smooth, gelcoated hulls and beautiful, high-gloss decks. Like all kayaks, composite kayaks are susceptible to degradation from UV rays, but they can be more thoroughly protected with UV-inhibitive waxes and sprays (which don't usually like to cling to plastic), such as 303 Protectant. As with airalite kayaks, heat is not really a serious danger to composite kayaks unless they are [tied down too tightly](#) to a roof-rack for long periods of time, in which case the combination of heat and pressure may eventually cause mild distortions to their shape or produce stress cracks in the gelcoat. As long as intelligent thought is put into the proper storage and transportation of a composite kayak, however, its life expectancy can easily be two, three, or four times longer than that of a plastic kayak. Does this mean if you buy a composite kayak there is nothing that can go wrong with it? Unfortunately, no.

What you gain in life expectancy with a composite kayak, you lose in impact resistance—at least in the gelcoat. While most plastic kayaks can spend a whole day bouncing off rocks without a scar, and most airalite boats can skim over rocks with barely a scratch, the gelcoated hull of a composite kayak will almost certainly scratch, chip, or crack anytime it touches a sharp rock (or other hard surface). That said, even if you gouge the gelcoat badly, you won't sink—not as long as the fiberglass or aramid/kevlar hull remains intact. You'll just squirm uneasily while something under the water rakes through your nice, smooth gelcoat with sound more terrible than fingers on a chalkboard. On the other hand, if you do hit something hard enough to actually crack through the hull of a composite kayak, then things get much more expensive. Fiberglass and gelcoat are relatively easy to repair, as long as you have the know-how or can pay someone to fix them for you. Aramid/kevlar is a little trickier, but it, too, can be repaired. So why in the world would anyone want to bother with these risks when (aside from minor aesthetic and life-expectancy issues) plastic and airalite kayaks offer comparable performance at a cheaper price? Well, actually, there are a few good reasons.

First of all, composite kayaks are not so brittle as I have probably made them seem. Only the gelcoat is fragile, but aside from the slight (probably unnoticeable) degradation in performance that results as scratches in the hull generate friction in the water, there is no reason to believe composite kayaks are weak or not worth the hassle. They require more maintenance, yes. But as I said, gelcoat can be repaired easily with the right know-how. As for structural damage, if you're an experienced paddler at all, you're extremely unlikely to crack through a composite hull unless you're drunk, blindfolded, or simply not paying attention. Don't be misled by my earlier praise of plastics: Composites are tough! This is particularly true with kevlar, which is also used to make bulletproof vests. Clearly, it's very, very strong. Unless you're crashing rock gardens in ocean surf, it's reasonably unlikely that you will ever do significant structural damage to a composite kayak (excepting freakish accidents, of course, such as roof-rack detachments on the interstate). If you do manage to put a hole all the way through your composite kayak, odds are the same impact would have punctured a plastic or airalite kayak as well. But unlike plastic kayaks, with a little TLC and some occasional wax, you won't have to worry about your composite kayak gradually losing its performance and shape in the heat. Nor will you have to put up with what some paddlers describe as the annoying "bathtub feel" of the flexier plastic kayaks.

Of course, the most glaring practical advantage of composite kayaks is their substantially lighter weight compared to plastic or (less so) to airalite kayaks. Plastic is relatively heavy. An average-sized sea kayak (let's say 17 feet long and 22 inches wide) will weigh approximately 68 lbs. in rotomolded plastic. But the same boat will weigh about 56 lbs. in fiberglass or airalite, and roughly 47 lbs. in aramid/kevlar. Carry each of these boats up and down a long beach a few times and it's easy to see why those top-of-the-line aramid/kevlar kayaks are so appealing to seasoned paddlers. Aside from the additional weight savings, there is another distinct advantage to aramid/kevlar in particular: As a virtually uncuttable woven material which is usually combined with a thin layer of fiberglass, it operates much the same way as that invisible sticky stuff on the back of your car's windshield, meaning that if an aramid/kevlar hull does crack, it won't shatter like fiberglass or airalite hulls might. The aramid/kevlar weave should hold the hull together, meaning that you could potentially kick the hull back into shape, duct-tape over the cracks, and paddle safely back to shore. However unlikely this scenario, as a hard-core expeditioner I value this extra measure of potential security.

The Verdict on Construction

As you can probably tell, the issue of construction can be debated *ad nauseum*. Ultimately, *any* of the common materials used to build a kayak—plastic, airalite, fiberglass, aramid/kevlar, or even more exotic blends—can yield an enjoyable, capable kayak. Choosing between them requires some careful consideration about when, how, and where you intend to use your kayak, as well as how much your pocket book can afford. If you're new to kayaking, go plastic. If you like paddling in ultra-shallow water or crashing through debris and obstructions, go plastic or airalite. If you love long-distance touring and you don't mind devoting a little extra care and maintenance to your kayak, go airalite or composite. If you want to shave every last ounce off your kayak, or you want your kayak to incite envy in other paddlers wherever you go, spend the cash for aramid/kevlar. In the end, the choice of construction is entirely up to you, and will probably have comparatively little impact on your ability to enjoy paddling.

End of Article

The Right Choice

What is the "right" kayak? It's the kayak that fits your budget, your skill level, and your paddling goals. It's comfortable and fun to paddle. It responds well to your control. And it leaves a little room for your paddling skills to grow.

Size Matters

Many people shop around for the shortest, widest kayak they can find because they want something cheap and easy to transport. The truth is that while recreational kayakers do cost less, they're not necessarily more user friendly. Often their weight is very close to that of a much longer, narrower kayak, but with much poorer performance. Remember, the most "convenient" kayak is not the one that stows easily on your car. It's the one that feels like a joy to paddle, and makes you want to stay on the water all day, every day.

Bang for the Buck

You may be tempted to save money on your first kayak by buying the cheapest model you find "just until you know whether or not you're going to like kayaking." Resist the temptation. If you're not sure whether you enjoy kayaking, borrow or rent a few kayaks first. But when you buy, treat yourself to the kayak that's really right for your needs. Spending a little extra cash on a higher performance kayak will repay you many times over with enhanced enjoyment, greater versatility, and better skill-building potential. If you buy the cheapest kayak on the shelf, you'll almost certainly be disappointed. Remember, the "right" kayak will be the right fit for *you*, not just for your wallet.

Color Matters

When buying a kayak, don't overlook the importance of color. Many people simply choose the "prettiest" or "coolest" color they see, but be sure to consider safety and visibility too. Even if you've never imagined yourself paddling a sunny yellow or fiery red kayak, you'll appreciate its superior visibility the first time you find yourself near powerboats, barges, or freighters. This isn't to say that you can't buy a light gray or pale blue kayak, but be aware that these colors will be harder to see than their brightly-colored counterparts—especially on overcast or foggy days. Think about it carefully. Buying a bright kayak could end up saving your life.

Smart Investment

Ultraviolet rays can take a serious toll on plastic and composite kayaks. Over the years, UV exposure will cause your kayak to age and deteriorate faster, resulting in warpage, cracked gelcoat, broken fittings, frayed rigging, and faded colors. Protect your investment by coating your kayak with 303 Protectant every 3 to 5 weeks. It's like sunblock for your boat.

Shape Matters

Did you know that kayaks come in different shapes? It's true! The shape of a kayak is classified as "symmetrical," "Fish-form," or "Swede-form." Read the section entitled *Symmetry: Sym, Fish, or Swede?* for more information about these shapes and their effect on performance.

Safe Transporting

Ready to take your new kayak home from the store? Before you do, read [Transporting Your Kayak](#) to learn how to transport your kayak safely.

Kayak Construction

One reader voices his strong concerns about this article in [a letter to the editor](#). Read the full exchange to decide for yourself whether kayak construction is a matter of safety or a question of informed decision-making.