

## Background

### Kayaks

Kayaks derive from the hunting craft of the Arctic. The paddler is seated, and uses a double blade paddle. The low seating position in a kayak gives stability, and decks fore and aft shed water, so that kayaks, properly handled, can withstand wind and wave.

Modern boats are specialised, and some of the types available are shown on the next page. For SSABSA Year 12 courses the usual choices are the older style of whitewater play boat or one of the newer, small, touring kayaks. The whitewater boats are slower over a distance, but their responsiveness means that you can develop some of the skills more quickly.

Essential parts of the boat include adequate buoyancy to support the boat even when it is flooded, and secure handholds at bow and stern. There will also be some type of adjustable footrest, usually a pedal on a rail. There is a variety of adjusting and locking systems.

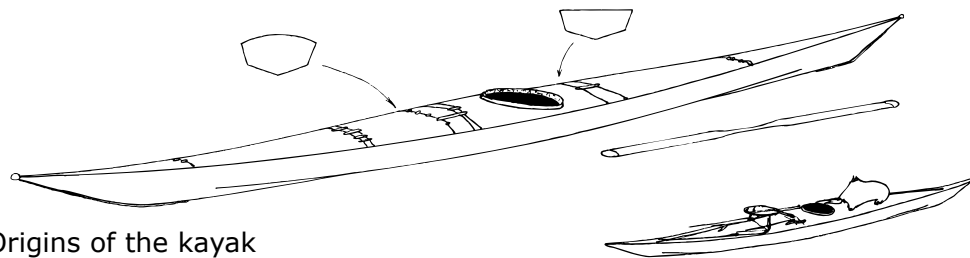
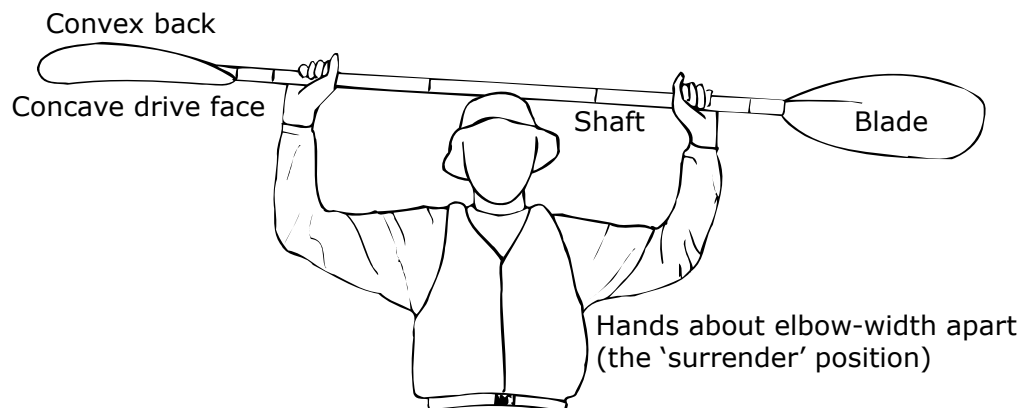
Touring boats may have rudders. They are not there for steering, but to control the boat's directional stability downwind. You will be paddling with the rudder up, so that you learn to control the boat without it. Whitewater boats may have detachable fins to help them go straighter for the first hour or so.

### Other equipment

#### Paddle

Like boats, paddles come in various shapes and sizes, and are of various materials. Kayak paddles have two blades, usually feathered between  $65^\circ$  and  $90^\circ$ .

The type of boat and paddling determines the kayak paddle length. Slow boats, like the freestyle kayaks, are paddled with short paddles, while sea kayak paddles may be quite long, 230 cm or so. The reason is to maintain a comfortable cadence (rate of paddling) in the slower or faster boat.



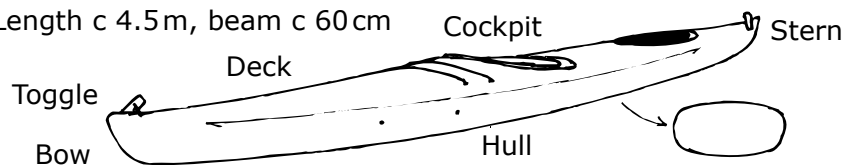
Origins of the kayak

A kayak from Nuuk, Greenland, the 'classic' shape for a kayak. Built of driftwood and covered with sealskin, it was the hunter's craft. The smaller view shows hunting equipment on deck: harpoon, harpoon line stand, and inflated sealskin float

# SSABSA Year 12 kayaking

General purpose/touring kayak

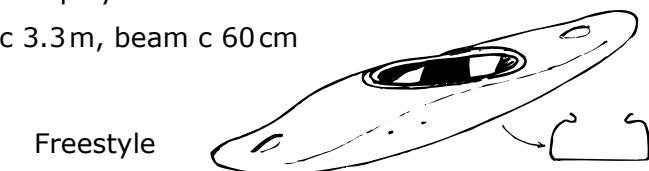
Length c 4.5m, beam c 60cm



End loop

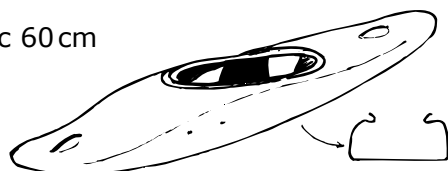
Whitewater play boat

Length c 3.3m, beam c 60cm



Freestyle

Length c 2.5m

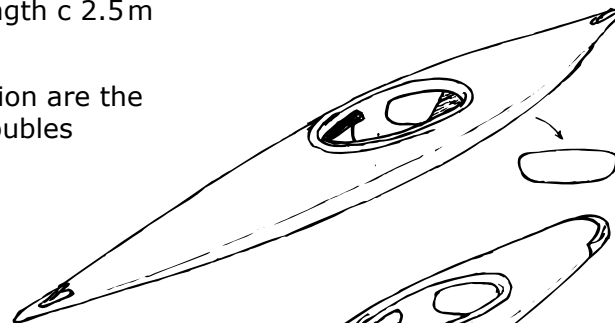


## Kayaks

Missing from this collection are the Marathon TK1 and all doubles

Slalom

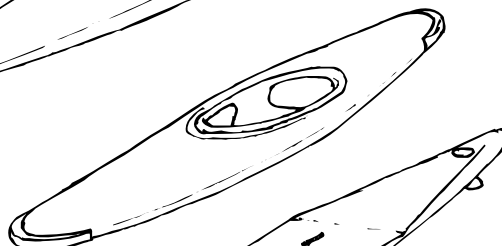
Length 4m, beam 60cm



Polo BAT

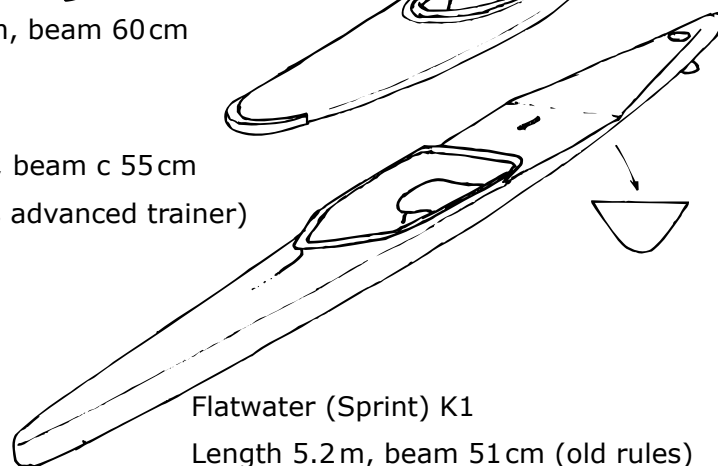
Length c 3m, beam c 55cm

(BAT = baths advanced trainer)



Flatwater (Sprint) K1

Length 5.2m, beam 51cm (old rules)



Blade shapes may vary, but the asymmetric shape, which reduces twisting, is now common in kayak paddles: the longer edge is the upper one. There will either be an oval section or a formed hand grip to help give instinctive location in the hands. The right hand is the controlling hand, 'fixed' to the shaft, the left hand allows the shaft to rotate between right and left hand strokes.

## Personal Flotation Device

You will be wearing an approved Type 2 or 3 PFD. (The differences relate to safety colours, etc.) It must fit properly and be comfortable. Make sure all zips and buckles are secure, and stay that way.

The PFD will not save your life: it is not a 'lifejacket'. It will give you some extra support in the water.

## Spray deck

The two main materials are neoprene and proofed nylon or other synthetic fabric. There will be a release strap at the forward end.

Wear the deck as a skirt, with the top pulled well up, under any windproof jacket and the PFD.

To attach it to the boat, put the back part under the cockpit rim first, then the front, and finally the sides, making sure the release strap is visible. To release the deck, grab the strap and pull it forwards and outwards. The rest will follow as you exit the boat.

## Clothing

As in all outdoor activities, you will need to dress for the conditions, and this normally means some kind of layer system. There is a wide range of clothing available, both in design and fabric, and you will need to choose according to the need for sun protection (e.g. Lycra® rash top) or insulation. Modern synthetics give some insulation when wet, and wick moisture away from the skin. Avoid cotton.

In cool weather you will need a windproof jacket, preferably with good seals at neck and wrists. In cold weather a wetsuit may be called for, one without sleeves to prevent chafing. The 'long john' style is the usual.

## SSABSA Year 12 kayaking

If you are in doubt, take the pessimistic view and add a layer. On the water, it is usually easier to take off a layer than add one. If you are going any distance, carry spare clothing in the boat for when you arrive, or to cover contingencies.

### Footwear

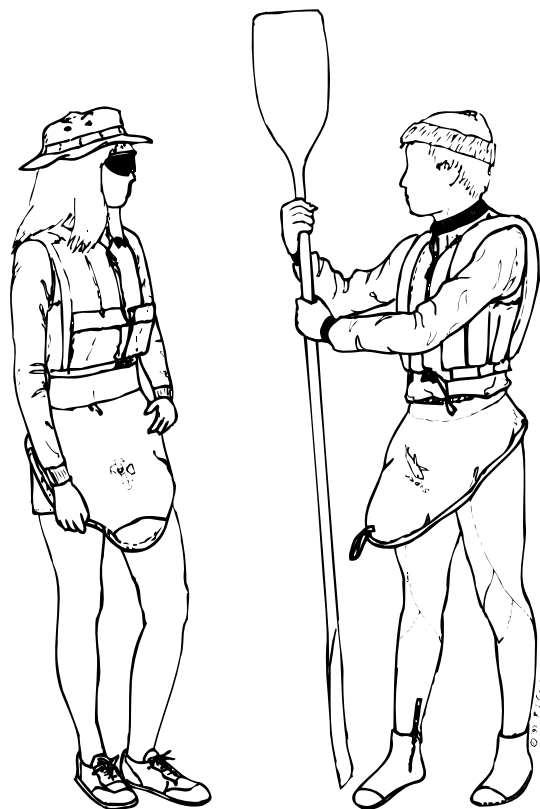
You may find yourself walking on sharp rocks, broken shells (or glass) and other uncomfortable surfaces. A wide range of wetsuit boots, aquatic sports shoes and sandals is available. Old sneakers are often worn, although they tend to be bulky, and some boats do not have a lot of room for feet.

Choose something that is comfortable both on the ground (and does not pull off in mud) and in the boat, remembering that straps and laces must not tangle in footrests.

### Sun protection

As a paddler, you are very much out in the open, exposed not only to direct radiation but also what is reflected from the water surface. Long sleeves and either a hat with full brim, legionnaire-style cap, or keffiyeh-style headwear, tied on, at the very least.

Sunscreen on all exposed skin, including the lips, reapplied regularly as required. To cover the backs of the hands, fingerless and

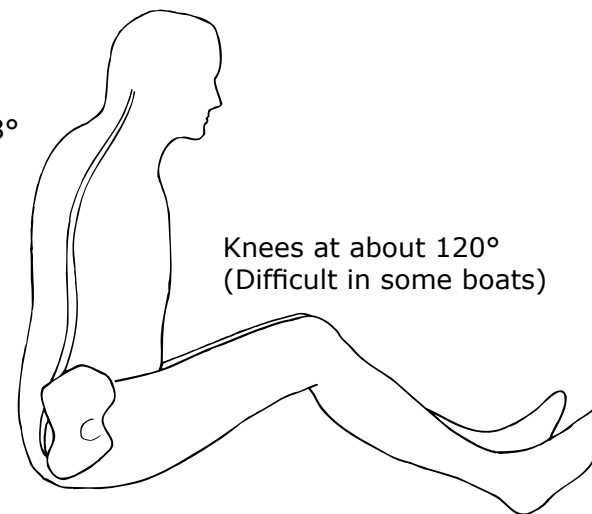


Well-dressed paddlers. She is dressed for summer in light fabrics with good sun protection, he for winter in wetsuit and windproof jacket.

Back straight  
Forward lean 5–8°

Pelvis tilted forward  
(never back)

Knees at about 120°  
(Difficult in some boats)



palmless gloves give protection without affecting paddle feel. Sunglasses to protect the eyes from the UV, and they, and prescription lenses, must be secured so they are not lost in capsizes.

### Boat setup

You will need to set up the footrest, back strap (if present) and thigh braces so that you can sit comfortably relaxed, with room to wriggle, yet can brace when necessary in rough water. Whitewater and surf paddlers think of 'wearing' the boat.

The footrest should be set so that the knees are slightly bent, with the thighs against the thigh braces without pressure, and the ankles relaxed. The backstrap, if there is one, should be against the lower back, but again without pressure. To brace, extend the feet to tighten everything all round.

You want to be firm, but not tight.

### Stowing gear

Any items that you want with you on the water, such as a water bottle, are best stowed behind the seat. Anything affected by water will be in a waterproof bag or other secure container. There must be nothing where it may be able to trap you in a capsize.

## Inspection and maintenance

Before you launch, check that everything is in working order.

After the paddle, wash and clean everything, and make sure that sand and grit have been removed from any moving parts: rudder and pedals, sliding footrests, and so on. Check that toggle cords and other ropes and cords are not frayed, and moving parts are not excessively worn. Check the paddle, PFD, spraydeck, and all other gear.

If anything didn't work properly on the water or needs attention, tell your instructor so that it can be fixed.

## Paddling

You can be on the water for hours on end: for comfort and safety it pays to have an efficient, relaxed style that maximises power and minimises fatigue, strain and injury. Our understanding of the mechanics and biomechanics of paddling has greatly increased in recent years, thanks to the work of coaches in the competitive disciplines, particularly in flatwater racing. What follows for forward paddling, therefore, is a condensation of the instruction given to sprint and marathon paddlers.

Correct setup of the boat has already been discussed. Correct ergonomics and posture are essential for paddling, and the diagram shows how you should look: slight forward lean ( $5-8^\circ$ ) from the pelvis, back straight without being forced, shoulders ahead of hips, head, neck and shoulders relaxed. The legs are slightly bent, enough that you can't quite push them straight without moving on the seat.

Lean too far forward and you restrict movement and lung capacity, lean back and again you will restrict movement (and perhaps cause injury).

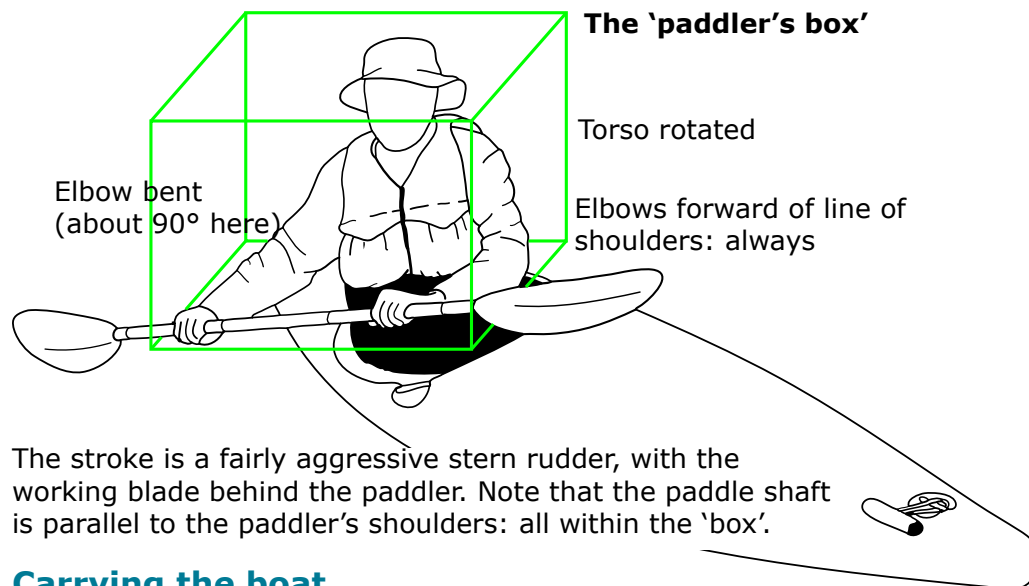
Where are your most powerful muscles? No, not the arms. In paddling, your arms are little more than the linkage between the power source, the muscles of the body, and the paddle. Your arms are there to put the paddle into the water and take it out again: power comes from body rotation, right from the toes. It's body rotation that shares the load between the muscles, and smoothly produces more power and length of stroke. That's true of all strokes.

## The 'paddler's box'

The shoulder is the joint in the body with the greatest range of movement. It is also the most susceptible to dislocation and other injury. To reduce the likelihood of injury, and also to develop the most power, the elbows should always be in front of the line of the shoulders, and for some strokes held low. The roughly rectangular volume in which the hands work is called the 'paddler's box', and that space rotates with the shoulders. If you want the paddle blade behind you, as in reverse strokes, it means that you rotate the body so that your elbows remain in front of the line of the shoulders.

Elbows are strongest with a slight bend: never lock them straight.

The box is drawn in this diagram: see if you can work out where it would be in the others.



The stroke is a fairly aggressive stern rudder, with the working blade behind the paddler. Note that the paddle shaft is parallel to the paddler's shoulders: all within the 'box'.

## Carrying the boat

The safest way is to have a person at each end. (Remember that end loops and toggles are really there to give you a safe handhold when you and the boat are in the water together.)

Over a short distance a kayak can be carried like a suitcase, and a **light** boat can be carried on one shoulder. Use two hands for the lift. To pick up the paddle, hook a toe under the middle of the shaft and lift.

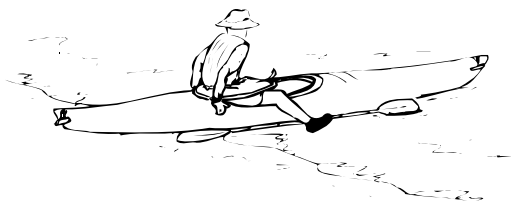
## Launching

The easiest way to launch a kayak (the only way at sea) is to place it, facing the water, at the top of the swash zone on the beach. Park the paddle either on deck or alongside, being careful it isn't washed away. Sit astride the boat, wash the sand off your feet, and put them into the cockpit. Then with knees straight and weight supported on your hands, slide in. Fit the spraycover, aft end first.

When you're ready, and with the waves, 'walk' the boat on your hands until you're afloat. Paddle away.

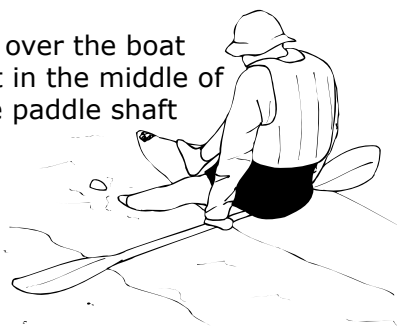
On a beach with surf you will have to time things carefully.

The other way is to have the boat afloat, parallel to the shore. Put the paddle across the deck behind the cockpit, with the blade on the ground facing upwards, to act as an outrigger. Sit over the aft end of the cockpit, wash off any sand or mud, and put your feet in, then with weight on hands, slide in. Fit the spray deck, pick up the paddle and paddle away. Reverse the procedure to disembark.



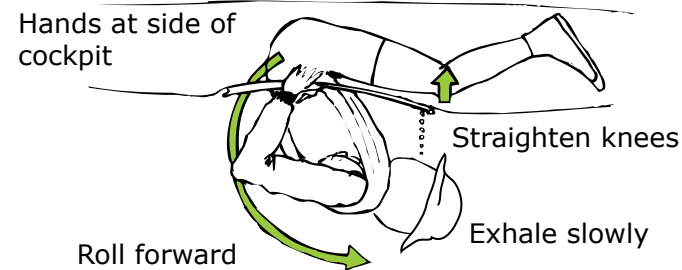
Drive face **up**

Sit over the boat not in the middle of the paddle shaft



## Capsize

Capsizing is part of kayaking, and the sooner you experience a controlled capsize the better. Your instructor will supervise, and will probably have some exercises. If the water is cold, you may want to prepare yourself with a few splashes, and swimming goggles or masks may make things more comfortable. Your first capsizes may be without a spraycover.



Keep hold of your paddle and lean to one side or the other until the boat capsizes. When it has stabilised inverted, tuck the paddle under one arm. Lean forward, grab the spraycover strap and release the spraycover. Put your two hands on the deck behind you, straighten your knees, and, rolling forward, push the boat away from you. While this is going on, hum a tune to help keep most water out of your nose. Come up alongside the boat, paddle still under one arm, and take hold of the boat. Work your way along the deckline if there is one to the bow. Let go of anything and it will drift faster than you can swim. Either swim the boat ashore, keeping to seaward of it, or await rescue. **Leave the boat upside-down until you reach shore.**

Some instructors will want you to put your hands in the air and bang on the hull while you are upside down: a good confidence exercise. When you capsize unexpectedly remember to tuck forward and not lean back. Tucking forward is a much safer position when you are being churned around, especially in shallow water. Don't be afraid of being trapped in the boat. Capsized in rough water the challenge may be to stay in: get it wrong and you can be thrown out.

## Emptying out

The easiest and safest method is to have a person at each end, raising and lowering alternately. Hold the boat about half a metre in from the end so that it does not roll upright.

On a steep bank you may be able to empty the boat by raising and lowering the end nearer the water. A **light** kayak can be rocked on one thigh.

## Forward paddling

You want to go places, so forward paddling is the important stroke, and is usually described in three phases.

### Catch

The catch is the start of the stroke, the entry of the blade into the water. The key points are:

- clean entry, as far ahead of the feet as possible, with the blade as vertical as possible
- full rotation of the torso, bottom hand shoulder forward
- quick development of power

Think about:

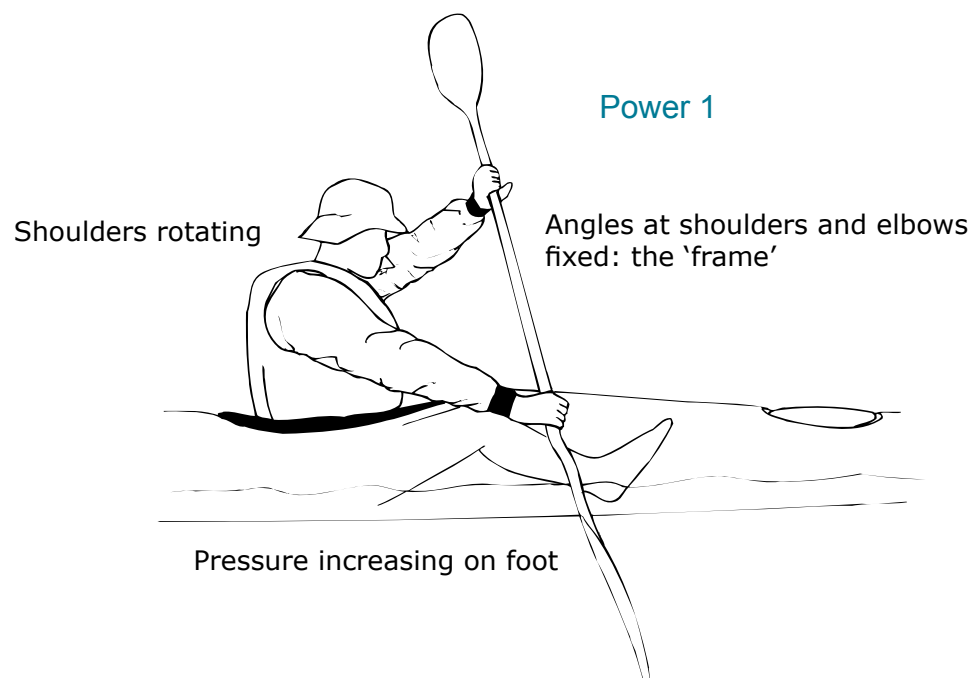
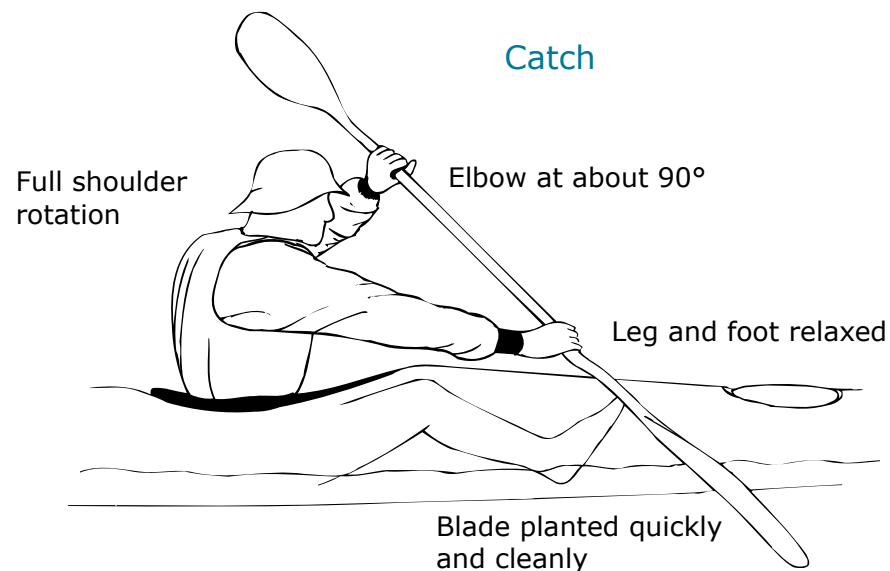
- taking the blade to the water: the bottom hand takes the blade to the water in a spearing motion, with the top hand following the shaft movement, but not pushing the blade in
- squaring the blade: the blade must be at right angles to the direction of travel – if the angle is wrong the blade will slide sideways
- burying the blade: completely immerse the blade as quickly as possible, keeping the bottom hand several centimetres clear of the water throughout the stroke

### Power

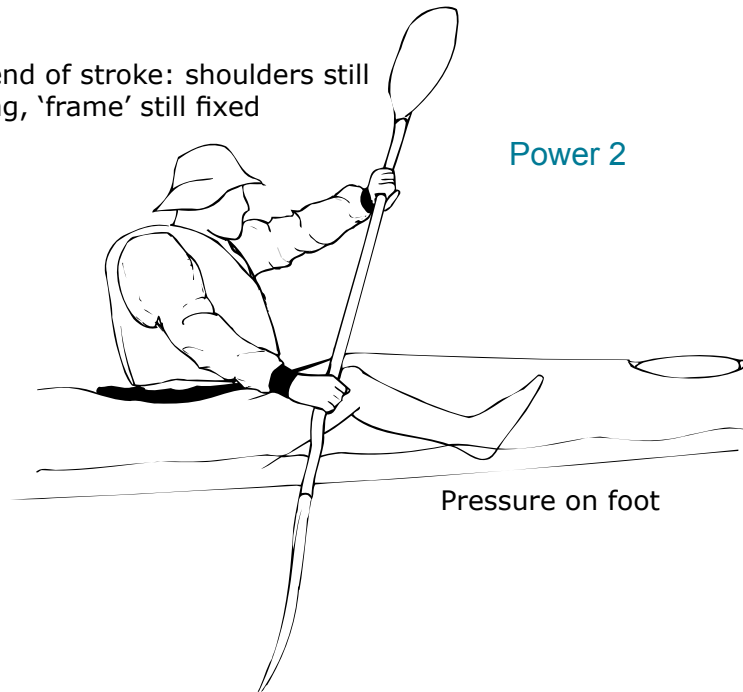
Think of the blade as being fixed in the water: you pull the boat past it. From the catch, the stroke is 'taken' by the whole 'pulling' side of the body – toes, leg, hip, torso, and shoulder – all working smoothly together.

The bottom arm remains in a fairly extended extended position throughout this phase, with the top arm, elbow bent, and hand at around eye height and 30 – 40 cm in front of the head, following the rotation of the shoulders.

Racing paddlers talk of the 'frame', the arms and shoulders, remaining fixed through this phase: in other words the elbows are not bending or straightening but remaining at the same angles. The top hand does not push, it follows the shoulders.



Near end of stroke: shoulders still rotating, 'frame' still fixed

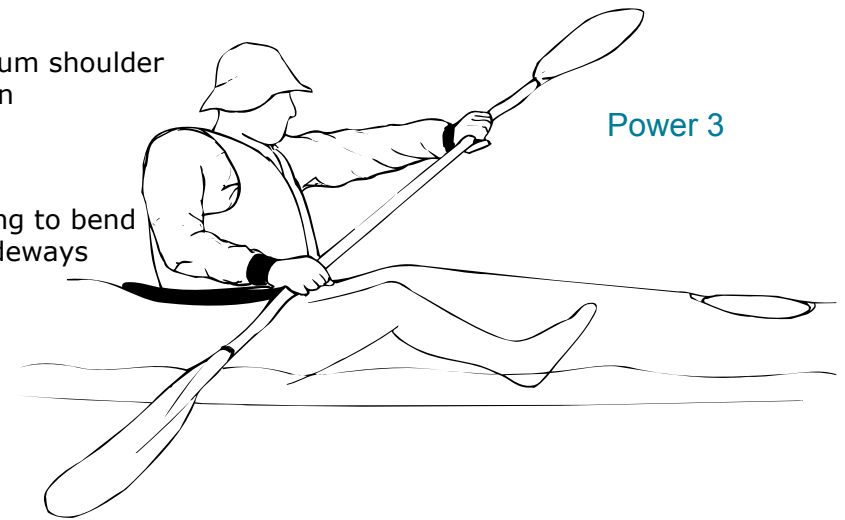


Power 2

Pressure on foot

Maximum shoulder rotation

Elbow beginning to bend to lift blade sideways



Power 3

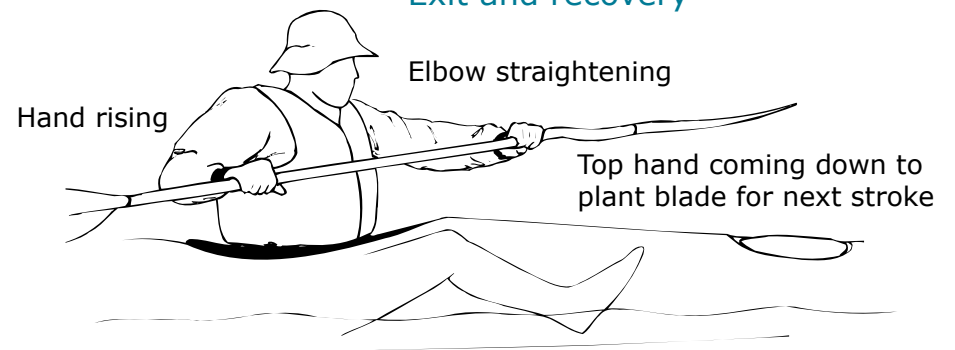
The blade will tend to follow the bow wave of the kayak, moving about 5 cm away from the boat, during the stroke. A blade that moves straight back, relative to the boat, may be a sign of insufficient body rotation.

## Exit and recovery

The stroke is finished when body rotation is complete. Taking the stroke too far is simply wasted effort. At exit, the blade moves out of the water to the side, with the top hand still high and the bottom elbow bending to lift the blade. That elbow should stay low and relaxed. At this stage the paddle is parallel to the centreline of the boat, but over the side.

You are now in position to set up for the catch on the other side, where the stroke is a mirror image.

## Exit and recovery



Elbow straightening

Hand rising

Top hand coming down to plant blade for next stroke

## Key points

To revise:

- plant the blade by or ahead of the feet, bottom arm extended but not straight
- rotate the torso to pull back the shoulder and drive the stroke
- the top arm holds its position relative to the shoulders, crossing the boat with the shoulder rotation
- the power phase ends with the blade in line with the hips
- lift the blade out sideways
- keep the top hand high — you should see each hand in turn cross in front of you
- rotation continues, to set the shoulders and paddle for the next stroke

Things to avoid:

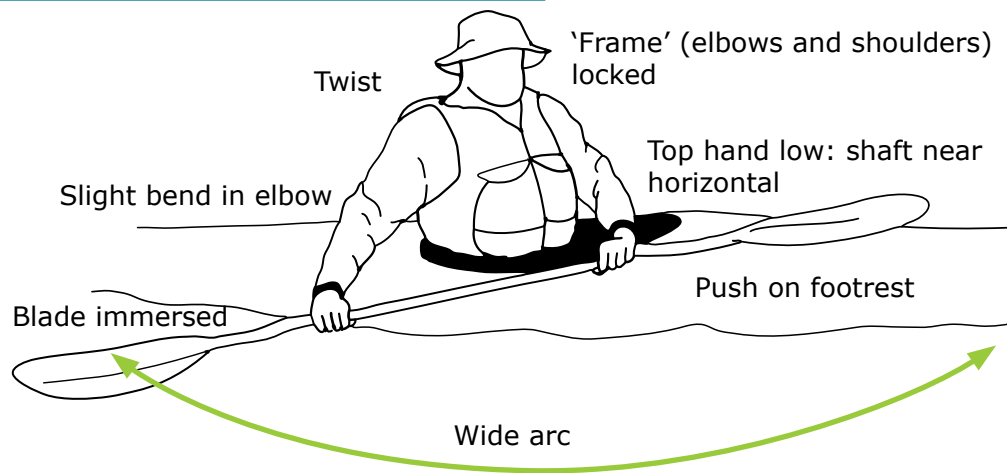
- excessively long strokes
- punching or dropping the top hand

## Sweep strokes

Sweep strokes are the main strokes for turning the boat at low speed, either to manoeuvre into position or to keep the boat running straight. Many instructors prefer to start with the forward sweep so that students can have some confidence that they can control the direction of the boat before they concentrate on forward paddling.

As with other strokes, power comes from the torso muscles, but here the stroke will be a long wide arc, the longer and wider the better. For a forward sweep, twist to reach forward and put the blade in as close to the bow as possible. The lower arm is slightly flexed, the top hand low, just high enough to clear the deck. The blade should be completely immersed, just beneath the surface.

Apply power by twisting the body in the opposite direction, keeping shoulder and elbow angles fixed, so that the blade moves (relative to the boat) in a wide arc all the way to the stern. While you are learning, watch the blade all the way around so that you develop the full twist necessary.



The reverse sweep works the same way, but in the opposite direction. Begin by twisting so that the whole paddle is over the side and put the blade in close to the stern. (No, don't change your grip on the paddle: all reverse strokes are with the back of the blade.) Now twist the other way to move the blade in a wide arc all the way to the bow.

In many cases a series of forward or reverse sweep strokes can be used to control the boat. When you want to turn on the spot, alternate forward sweep on one side with reverse on the other.

As you develop confidence, look where you are going rather than watching the blade through its arc. Later you will also want to put a sea or touring kayak on edge as you sweep to increase its rate of turn, and in waves you will sweep on wave crests when bow and stern are out of the water.

## Edging

Putting a kayak on edge changes its underwater shape, helping it turn more easily. In the case of sea kayaks, the deep V sections at bow and stern are lifted and rocker increases.

To edge a kayak, use the muscles of hip, torso and legs to roll the kayak slightly while you keep your upper body upright. This is often called 'J lean' because of the shape of the spine.

Lift your left knee to lower the the right side of the boat for sweep strokes on the right. This means that the boat is leaned outwards from the turn: the opposite to the way a bicycle is leaned.



## Paddling straight

Kayaks, particularly the whitewater types, appear to have minds of their own, wandering all over the place. Paddle behind an experienced paddler and you'll see that the boat does not travel in a straight line but yaws from side to side with each stroke, and that each stroke is a little different, perhaps a little wider, perhaps a little closer to the boat, so that the end result is a smooth movement across the water. You may see some edging used.

That comes with practice. At first you will tend to overcorrect too late. Be patient, make sure you are paddling evenly on each side, and be prepared to make a forward stroke into something of a sweep stroke when the bow wanders a bit too far. Don't watch the bow, but focus on a spot well ahead. Don't rush, but pause between strokes to see what the boat is doing, and perhaps give it time to come back into line. Anticipate.

Into wind, you shouldn't have too much trouble keeping straight.

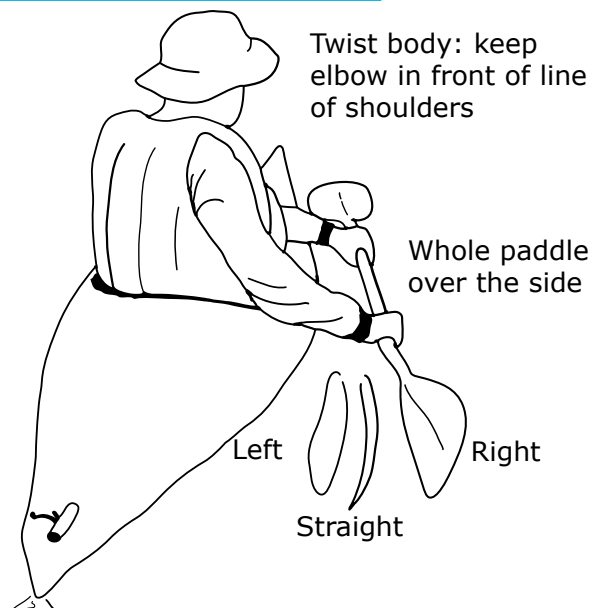
Downwind, and it can be a different story. This is why sea boats have rudders or retractable fins. Use sweep strokes wherever possible. The alternative is the stern rudder stroke.

## Stern rudder

In this stroke the blade is used as a control surface rather than to apply power. It therefore slows the boat.

The position is similar to the starting position for a reverse sweep, with the body twisted towards the paddle side. Often the blade will be trailed into that position at the end of a forward stroke. The blade is trailed in the water, with slight outwards pressure so that the boat turns towards the paddle side. (By changing the angles, the boat can also be made to turn the other way.)

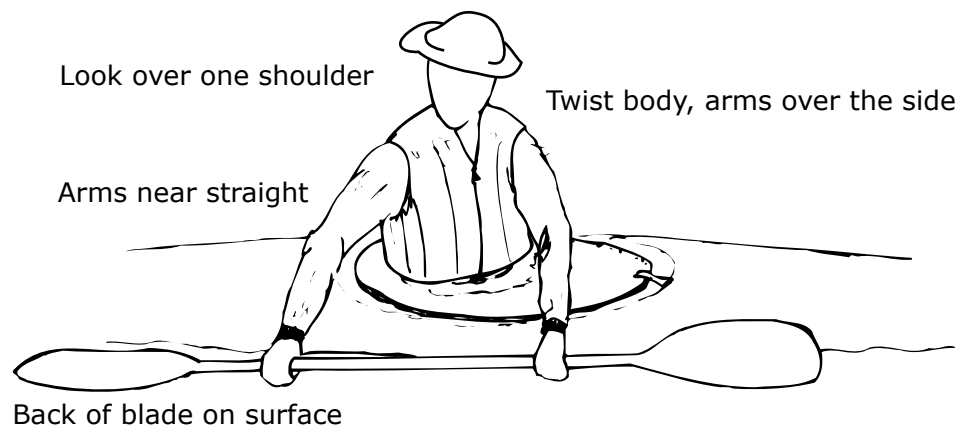
When the boat is facing the desired direction, return to forward paddling.



## Reverse paddling

There will be times when you will want to back into or out of some situation. The reverse stroke begins in much the same position as a reverse sweep, but instead of sweeping wide is kept closer to the boat for more power. As you twist to put the blade in on one side look over that shoulder so that you know what's behind you. Don't look over both shoulders: you'll drive yourself giddy.

Remember: power from torso twist—your arms are just the linkage.



## Emergency stop

Short, sharp reverse strokes will stop a forwards moving kayak. Put the blade in close to the hips rather than well behind. The number of strokes doesn't matter: the important thing is to stop the boat quickly without it turning one way or the other, under control the whole time.

In reverse, a couple of short, sharp forward strokes will stop the boat.

## Draw stroke

You may want to go sideways towards or away from a jetty or raft of kayaks. The draw stroke is the method.

Begin by twisting the way you want to move. Reach out at right angles with the blade, with the top hand high, and over the side of the boat: the more vertical the paddle the more effective the stroke. Draw the blade towards the boat, but before it reaches the hull lift the wrists to rotate the blade 90°. Slice the blade outwards again for the next stroke. The work is done with the lower arm, with the upper remaining steady.

Control the direction with blade position: towards the bow will turn the boat one way, towards the stern the other. Just right and the boat will go straight.

For the present, keep the boat flat. Sea boats go sideways more easily if edged slightly towards the direction of travel. Low volume whitewater boats are edged the other way, to avoid being pulled under.

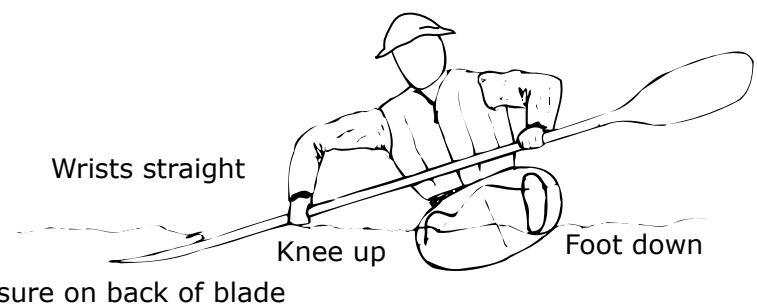
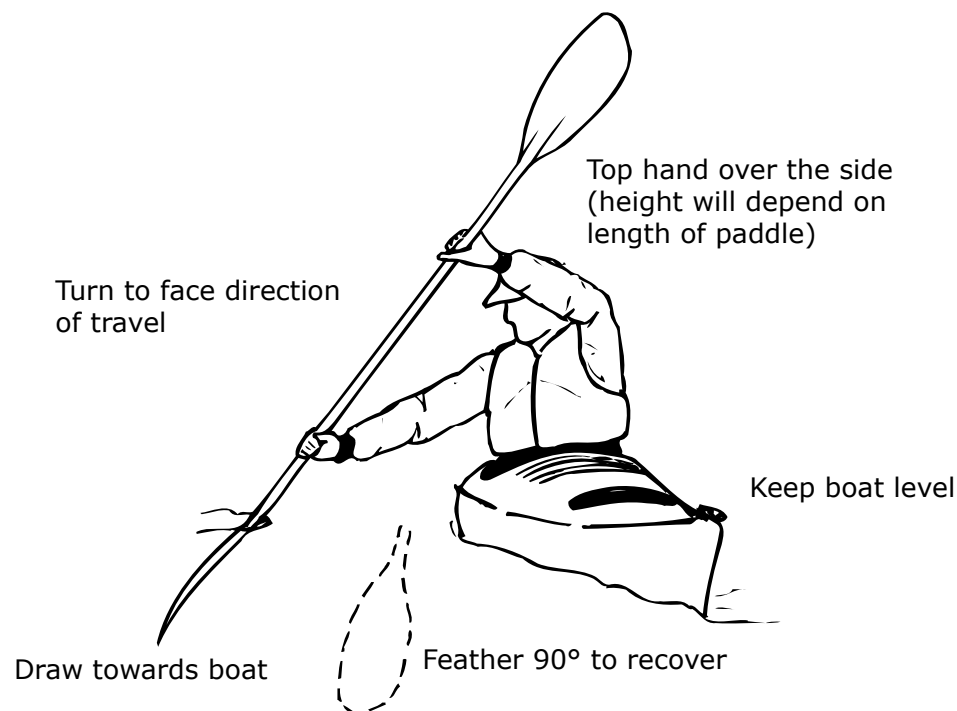
## Support stroke

This is for those situations when you are about to go in. As with the other strokes, the key is body movement, and certainly not brute force.

The back of the blade is placed on the water, with the shaft low and near horizontal, wrist straight and elbows above the shaft. The boat is righted with hip movement (the 'hip flick'), with the blade on the water simply being something to react against.

Don't try to lift your head – the natural reaction – but bring it up last: boat first, head last. Drop your wrists to slice the blade up again.

To practise this, sit comfortably, then lean until the boat becomes un-



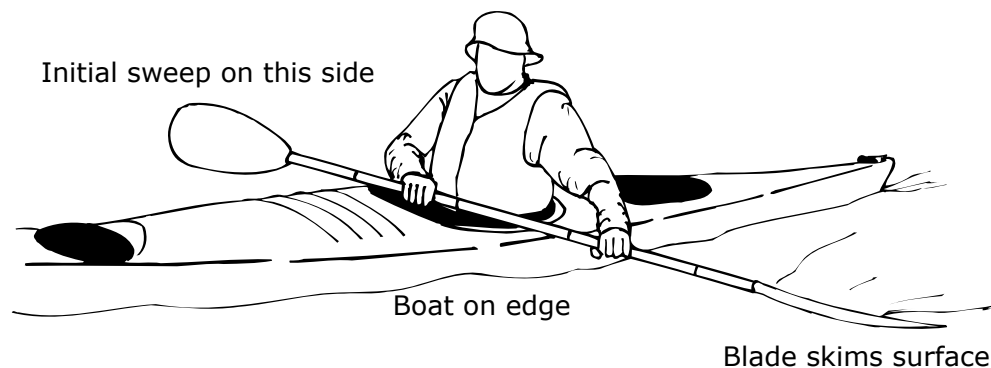
stable. Recover. Try it on the opposite side. Another way to practise is in pairs, with your partner standing in hip-deep water and holding the aft end of your boat. Your task is to remain upright while your partner tries to tip you in.

Another good exercise is the low brace turn. Begin by paddling forward, then make a forward sweep to begin the turn. Now put the boat on edge, on the side away from the initial sweep, and support yourself with

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a low brace. As the boat slows, right it with hip movement and resume forward paddling.

The low support is also the stroke you will use as you are pushed sideways in small surf. Lean the boat **into** the waves, and support yourself on the blade. (Lean away from the wave and the capsize will be instant.)



### Rescues

By 'rescue' we mean the emptying of a kayak or canoe and the return of the paddler(s) to the cockpit after a capsize. Capsizes happen when paddlers are in conditions beyond what they can normally handle, either because they are trying something new, or because wind and waves have risen. The rescue must be achieved in the conditions that caused the capsize and the rescue will also put the paddler back into the conditions that led to the problem in the first place.

The more buoyancy in the boat, the easier it will be to rescue: add more buoyancy if you can. All boats must have secure handholds at bow and stern, and those used on open water will be easier to handle with decklines as well. Toggles are the safest handholds, but many recent boats have simple handles that are difficult to reach and potentially injurious when capsized.

Keeping track of the paddle has always been a problem, and sea paddlers have long used some form of paddle leash or park. Without one, you can have the swimmer hold both paddles, taking them before the swimmer reboards. You will not lose paddles.

The first priority in all rescues is the capsized person. Make sure the swimmer is calm and relaxed and ignore any floating gear until later.

### Reboarding

All rescue methods eventually have the swimmer reboarding, so it is worth considering first. There are alternative methods, depending on preferences and conditions, with all methods requiring a stable raft. That is achieved by having the boats facing in opposite directions and the rescuer putting as much weight as possible on to the swimmer's boat.

Reboarding is possible over the rescuer's or the swimmer's boat, with the choice often based on individual preference. By staying low and spreading weight across both boats the raft will be stable, and the swimmer less likely to slide off.

The rescue is not complete until the spray deck is in place and the rescuer satisfied that the rescued paddler is ready to continue.

## Key points

### Stabilise

- Lean hard on the swimmer's boat, with the peak of the deck in your armpit. That hand can hold the swimmer's paddle
- Hold the cockpit rim with your other hand, ready to assist the swimmer if necessary

### Reboard

- Move around the raft to the cockpit
- Put one hand each side of the cockpit rim
- Kick the feet to the surface
- Make a breaststroke kick and pull with the arms to come across the deck
- Keep moving, face down, until the feet are in the cockpit
- Roll face up, and wriggle forward until over the seat
- Sit up
- Fix spraydeck.

## The X rescue

This rescue is a versatile rescue used for general purpose and white water kayaks. The victim of the capsize leaves the kayak inverted and holds the bow (preferably) or stern handhold. On approach the rescuer takes the bow from the swimmer who then grasps the bow handhold of the rescuer's kayak. The swimmer can take care of paddles. The rescuer then hauls the inverted kayak across their foredeck keeping both kayaks at right angles. It is best to keep the inverted kayak off your spray deck as it can cause damage. The water is emptied from the kayak by seesawing it.

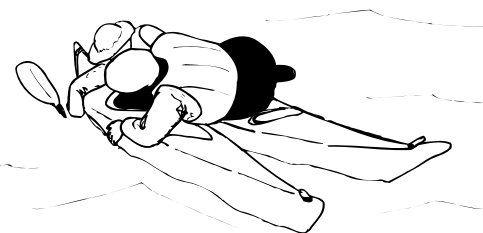
When the kayak is empty it is righted, then slid off the rescuer's boat and placed alongside the rescuer's kayak, facing the opposite direction, for the swimmer to reboard.

Although the swimmer can assist in hauling their kayak across the rescuer's boat, which may be necessary if the boat has insufficient buoyancy, the rescuer normally does the entire rescue.

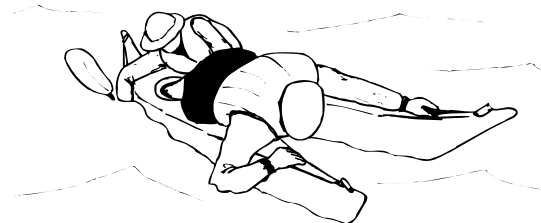
Reboarding over rescuer's kayak



Either twist around, keeping low, or use face-down method below



Reboarding over swimmer's kayak



Lie face down, put feet into cockpit. Roll face up, wriggle forward, sit up when over seat

# SSABSA Year 12 kayaking

When you are practising this, start with boats at least 10 – 15 metres apart: that gives both of you time and room to get into position. In real situations you may be 50 m or so apart.

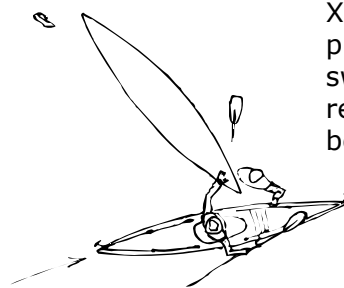
## Key points

### Swimmer:

- Leave the boat inverted
- Hold it by the bow (preferably) in one hand, with the paddle in the other
- Ignore anything floating away: let go of your boat and it can drift faster than you can swim. (This can be entertaining for anyone watching, but is potentially dangerous)
- Watch for your rescuer: if necessary swap sides so that your boat is between you and the rescuer's boat when it arrives.

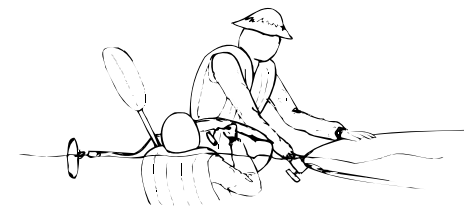
### Rescuer

- Put your paddle into its leash if you have one
- Talk to the swimmer, giving clear, concise instructions
- Plan your approach to pick up the swimmer and boat in one move
- Have the swimmer transfer to your bow
- Place your nearer hand on the upturned hull
- With the other, grab the toggle or end loop
- Lean on the boat, and then push away to give some impetus for the lift
- Use the deck lines (if present) to haul the boat across: be quick at this stage to avoid the stern filling
- Grab the cockpit rim as soon as you can reach it, then drag the boat to and fro to drain it
- Have the nearer side slightly higher so that it clears your own cockpit rim
- Do not try to remove every last drop: you will not be able to, and will waste time if you try
- Do not try gripping the upturned hull unless you have hands like octopus tentacles



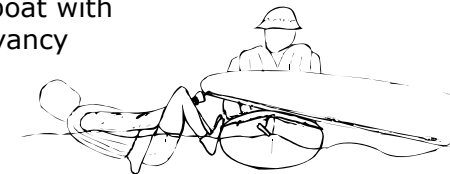
X rescue: contact The rescuer is putting leashed paddle aside, the swimmer is transferring to the rescuer's boat. The floating hat is being ignored

The initial lift: nearer hand on on the hull, other hand gripping the toggle



Seasawing the boat, both hands holding cockpit rim, nearer edge higher

Dealing with a boat with insufficient buoyancy



- If the boat is waterlogged (because of insufficient buoyancy), you may find it difficult to handle: let the swimmer do some work:
  - the swimmer reaches across the rescuer's deck to grasp the handhold of the capsized boat
  - drag it across the deck
  - with feet on the gunwale, keep pulling until the cockpit is over the rescuer's deck
  - pull downward to begin draining
  - the rescuer must hold the boat by the cockpit rim as usual
  - the swimmer must stay in contact at all times, and return to the rescuer's bow.
- Put the boat back into the water, on the side opposite from where you picked it up and facing the opposite direction, and support it for the swimmer to reboard.

## Wedge rescue

This rescue is for sea and touring kayaks with bulkhead cockpits, and is one of the fastest methods of clearing the cockpit of water. The capsized paddler rights the kayak after leaving the cockpit, moves to the bow and waits. The rescuer approaches the victim's bow with an angle of 45–60° between the two. As the rescuer's bow passes the swimmer, he or she transfers to the rescuer's bow. The rescuer grasps the swimmer's kayak by the deck lines and pulls so that it rides up onto their foredeck.

When the cockpit is clear of the water the boat is pushed forward on the deck clear of the rescuer's cockpit, and rolled towards the rescuer to drain. The kayak is then righted and slid off the deck and supported for the swimmer to re-enter.

## Key points

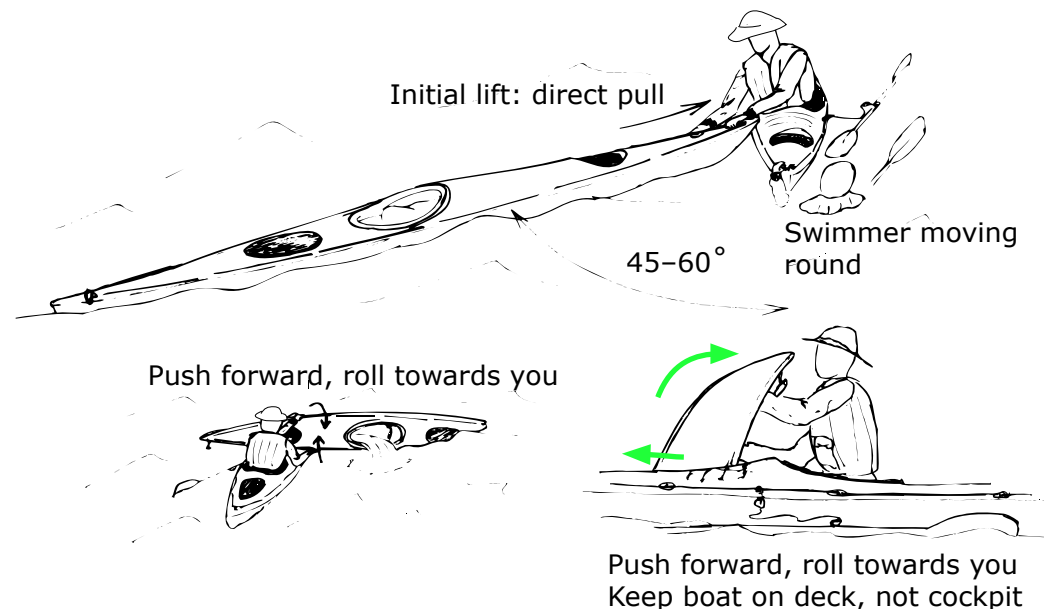
- Grab the bow of the boat by the deck lines, with an angle between the boats of 45 – 60°
- Pull the bow: it will come up and across in front of you
- Keep pulling until the cockpit is clear of the water
- Push the boat forward on the deck and roll the boat towards you and watch the water draining
- Roll the boat upright and slide it back into the water facing the opposite direction
- Re-entry is by any of the methods shown above.

## Eskimo rescue\*

The Arctic people had to survive capsizes without getting out of their boats: swimming in freezing water was fatal within minutes. Rolling was a vital skill. (For modern paddlers it is still an essential skill in rough water.)

Those who could not roll for any reason depended on their companions for rescue. They waited upside down, waving their hands in the air, until a colleague put either his bow or paddle within reach so that the capsized hunter could pull himself up on it.

\*The word 'Eskimo' means 'eater of raw meat', a derogatory term. The Arctic peoples called themselves Inuit, 'the people'.



The rescue is still occasionally used by people who either cannot roll or have missed a roll. As in the Arctic, it relies on everyone watching everyone else and being ready.

Instructors have a variety of progressions leading up to the complete rescue, usually based on pushing up from the bottom in shallow water, and practising the rolling part by holding the bow of a partner's boat. As with the support stroke, it's a case of boat first, head last, by rolling the boat with body movement.

Two variations are worth knowing. The first works well for learning the skill on flat water.

The capsized person bangs several times on the upturned hull, and then waves their hands fore and aft along the sides of the kayak, preferably palms outwards.

As rescuer, approach the capsized kayak, aiming at a point midway between the bow and the cockpit: the footrest bolts are a good target. You need to stop your boat on contact, and let the bow slide along until your partner can grab it and roll up. Keep your boat under control: bouncing off out of reach is not what you want at this stage.

## SSABSA Year 12 kayaking

As the capsized person, you need to have the confidence to wait. In clear water, you will be able to see the other boat coming. You will certainly feel the bump when the other boat makes contact. If you can see the rescuing boat you know which side it is, otherwise keep waving both hands until you can feel it. Once you have a firm grasp with both hands, roll up.

If you think you're about to run out of air, lean to one side or the other to let your PFD bring you part way to the surface, then with a breast stroke arm action lift your head for a quick breath.

The other variation is suited to sea kayaks in rough water. This time the aiming point is whichever end of the capsized kayak is nearer. Grab it with both hands and swing your bow within reach of the waving hands.

It may take fractionally longer, but people and boats are less likely to be damaged.

The key to this rescue is confidence.

### Distance paddling

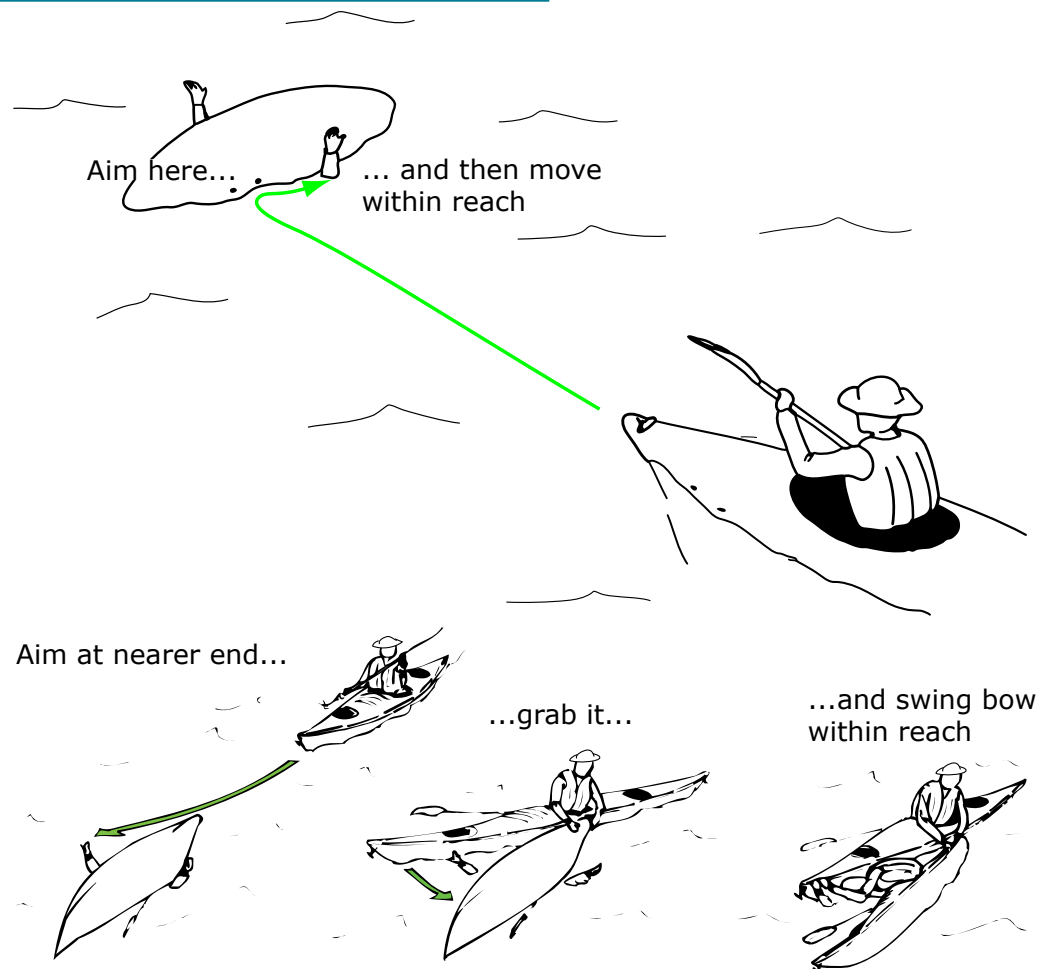
Paddlers, like bushwalkers, like to go places, and it's possible to cover long distances on the river or at sea in kayaks, with food, water and camping gear. People regularly paddle the length of the Murray, and Kangaroo Island has been circumnavigated several times.

You're not ready for that yet, but the general principles apply:

- paddling must be efficient and relaxed
- food, water and equipment for contingencies is appropriately stowed
- everyone keeps together and keeps an eye on everyone else.

If the group is a large one, the instructors may set front and back markers, with everyone else between them. Markers or not, keep close to each other, not so close that paddles clash, but close enough to converse normally\*. Make sure everyone is paddling comfortably, and be ready to help anyone who has trouble keeping up, is feeling cold, or whatever. (Some instructors have nasty habits with 'scenarios' to keep everyone on their toes.)

Enjoy the sights.



\* 'A collision at sea can ruin your entire day' –attributed to the Greek historian Thucydides (460–404 BCE (?)).

## Assessment

The syllabus document states “Each of these criteria should be assessed in some open situation such as a game.” That may work for other activities, but for kayaking your instructor will assess your paddling by asking the group, in turn, to perform a set of manouvres and then the rescues.

## Resources

Several books...

Dillion, P, Oyen, J, *Kayaking*, Human Kinetics/American Canoe Association, 2009

Comes with a DVD showing strokes in detail

Mattos, W, *The Practical Guide to Kayaking & Canoeing*, Hermes House, 2003

Ferrero, F, (Ed), *The British Canoe Union Canoe and Kayak Handbook*, Pesda Press, 2002

Don't buy any book unless it has been published this century and is endorsed by either the American Canoe Association or the British Canoe Union.

...and Web sites:

Australian Canoeing: <[www.canoe.org.au](http://www.canoe.org.au)>, and particularly <[www.education.canoe.org.au](http://www.education.canoe.org.au)>

Canoe South Australia: <[www.sa.canoe.org.au](http://www.sa.canoe.org.au)>

## Acknowledgement

This resource is Based on Australian Canoeing Award Scheme training materials, and was written and illustrated by Peter Carter, a member of the Australian Canoeing Education and Safety Technical Committee