

# SEA KAYAKING BASICS

## The Boat

Bow—the front end.

Stern—the back end.

Cockpit—where you sit.

Bulkhead—wall separating the internal spaces of the boat.

Hatch—access portal in front or back of the cockpit.

Coaming—rounded lip surrounding the upper portion (entrance) of the cockpit.

Lifting toggle—handles with cord attached to bow & stern for lifting the boat.

Tie downs—bungee cords attached laterally, semi-permanently to the deck in front and back of the cockpit.

Rudder—vertical steering blade attached to the stern on some kayaks.

Length—distance from farthest point in the back to the farthest point in the front.

Beam—maximum width of the boat.

Height—maximum distance from top to bottom of boat.

## The Paddle

Non-feathered—blades are not at an angle to each other

Feathered—the blades are at a 70 to 90 degree angle to each other

## Basic Equipment

Essentials

--Boat

--Paddle

--Sprayskirt

--Personal flotation device (PFD)\*

--Front and rear flotation\*

--Wetsuit or drysuit

Safety Gear

--Spare paddle

--Pump\*

-- Knife

--First aid kit

--Throw bag with 30 feet of towline\*

--Matches in waterproof container

--Food rations and water

--Emergency shelter

Signaling

-- Flares\*

-- Whistle or air horn\*

-- Flashlight

-- VHF radio

-- Cell phone

--Mirror

--strobe

Navigation

--Light at night\*

--Chart with chart cover

--Dividers, parallel ruler, protractor

--Tide tables

--Compass: hand-held & deck mounted

Clothing

--Sandals or boots

--Dry wool or fleece in waterproof bag

--Paddling jacket

--Polyester, nylon, or wool insulating garments if the air or water are cold

--Cotton garments for cooling/sun protection if its sunny and the water is warm

--Headgear: baklava, stocking cap, sun hat, rain hat, helmet for surf conditions

--Gloves or pogies

## Typical Hazards

Heavy seas

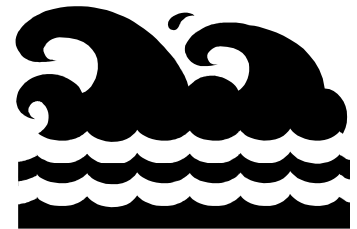
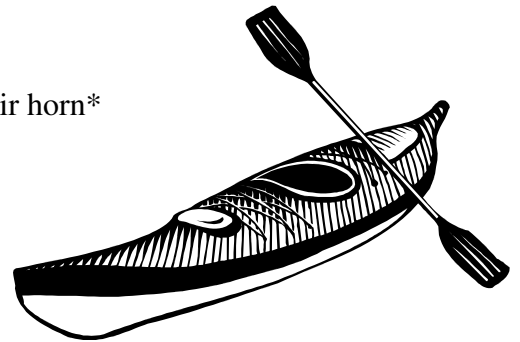
Wind

Fog

Darkness

Overheating

Getting cold



Running out of water  
Tidal rapids and strong currents  
Shipping and motor/sail boat traffic  
Injury on shore, where most happen

## **Hypothermia**

### Protection

- Wear wetsuit or drysuit
- Eat well & frequently
- Drink plenty of water
- Get plenty of rest
- Keep working hard

### Symptoms

- Shivering
- Hyperventilating
- Incoherent
- Poor reasoning
- \* Canadian Coast Guard requirements

--Loss of dexterity

### Treatment

- Serious medical emergency
- Strip off wet clothes, put on dry
- hot drink if conscious
- Rig tarp for shelter
- Keep them working if able
- Keep monitoring them
- Call help on 911 or VHF channel 16

### If unconscious

- Keep warm
- Keep horizontal
- Monitor pulse and breathing

## KAYAK TECHNIQUES

### **Getting in & out of your kayak**

#### 1. Paddle Method

- for most situations
- bridge paddle between shore and rear of cockpit
- shoreside hand on paddle shaft
- other hand grips coaming and shaft
- feet first, slide in
- sprayskirt on, from rear to front, leaving pull tab accessible

#### 2. Straddle Method

- for very shallow water
- straddle cockpit
- butt on seat, legs in
- attach sprayskirt

#### 3. Dock Method

- for alongside dock or float
- hold tight to cleat or rail
- lower, stand on seat
- keep weight on dock
- butt on seat, legs in

4. Getting out is the reverse of 1-3 above

### **Wet exit**

Used if you capsize & cannot roll

- take your time, relax
- grasp pull loop
- pull toward bow & off
- hold onto boat tight
- slow, controlled exit
- if possible, hold on to paddle
- use whistle or flare depending on gravity of the situation

### **Paddle float self-rescue**

- move to downwind side of boat
- roll boat cockpit side up
- slip float onto blade
- other blade under rigging behind cockpit
- get/stay forward of paddle shaft
- grasp boat, thrust kick and pull upper body onto rear deck

- chest hard down behind cockpit
- hook ankle over paddle shaft
- put other leg in boat
- keep weight in paddle float side
- slip other leg into cockpit
- rotate into sitting position
- bail or pump out
- retrieve paddle & stow float

### **Assisted rescue**

Used as a completion of a T-rescue or as a rescue in its own right

- draw 2 boats together, preferably nose-to-nose, i.e. bow ends up next to stern of other boat
- rescuer holds tight to both sides of victims cockpit
- victim thrusts up onto own deck, chest down behind cockpit
- victim slides legs in boat while prone
- victim and/or rescuer pump out
- make for shore if necessary

### **Forward stroke**

- 3 point contact, feet, knees & butt
- upper body vertical
- hold paddle with elbow bent at 90°
- reach forward, power face of paddle towards you
- use long back muscles, not shoulders
- ease back, power only to hip
- gradually withdraw astern
- keep center of shaft low for next stroke

### **Stopping and reversing**

- use back face of the paddle
- push instead of pull
- look behind you
- do not use too much power, you may capsize

### **Forward sweep stroke**

- reach forward on the left to turn to the right
- place the blade close to the boat

- with the power face outwards
- brace firmly in three point contact
- sweep out and around in a semi-circle
- Lean towards the paddle
- finish the stroke nearer the stern
- allow kayak to come back under you

### **Draw stroke**

Used for moving your kayak sideways

- hold paddle in normal forward-paddling grip
- twist your body
- hold paddle almost vertical
- dip blade 20-30 feet out
- opposite your hips
- gently pull the blade towards you
- do not let the blade go under the boat
- turn the blade 90°, slice it away from you and repeat the rule

### **Slap brace**

Used if you are caught off balance

- use the back of the blade
- hold the shaft low & horizontal
- extend your paddle and slap the water hard
- if using a feathered paddle, practice getting the slapping blade flat every time

# FORWARD PADDLE STROKE

## HOLDING THE PADDLE.

Use a range of grip widths for more or less power, depending on circumstances. For more power to accelerate or to paddle against wind and/or current, use a wider grip. For cruising and speed in calm conditions, use a less wide grip. The widest grip is determined by where your hands are when holding your paddle horizontally over your head with both hands, forming right angles (90 degrees) at the elbows. The minimum grip width is determined by holding the paddle horizontally at chest level with upper arms vertical against your torso. You may mark these positions on your paddle with tape at the outside edge of your hand on the widest grip and at the inside edge of your hand for the minimum width.

To achieve the proper blade angle in the water it is necessary to have a control hand that keeps a fixed grip on a feathered paddle. Either hand will work. If you feel more comfortable with a non-feathered paddle after trying a feathered paddle, you can use it with both hands acting as the control for blade angle in the water. The top knuckles of your control hand should be in line with the top edge of the adjacent blade. The blade angle is determined by using wrists and/or forearms to adjust it to desired position. The control hand(s) have to maintain the grip. It should be light and but controlling, primarily accomplished with thumb and forefinger. A tight grip is unnecessary and fatiguing.



## ARM PUSH/PULL.

- Sit upright or with a slight lean forward, with knees in contact with the deck, lower back firmly against its support, and feet in contact with the foot braces.
- Select your control hand for *feathered paddle*\* to use wrist and forearm to rotate the paddle to the proper angle in the water. Holding the paddle horizontally in front of you, practice rotating it with your wrist and forearm to achieve vertical water entry with both blades. Note that paddles can be feathered in opposite directions for left or right hand control.
- Start with the paddle shaft held horizontally away from your body at chest level, beginning the stroke on the right side by extending your right arm straight out and your left hand coming back to your left shoulder. Put the blade smoothly, almost gently, into the water near the boat, well forward without leaning into it. Put the whole blade, but not the shaft, into the water for the entire stroke. **Pull** back with your right arm, not the wrist, to pull the boat toward the paddle (not forcefully pulling the paddle through the water towards your body). As you pull with the right, **push** with the palm of your left arm forward and across the boat. The left hand should stay below eye level. Keep the blade vertical in the water with the most force applied after putting the blade in the water and before passing your hips. Once at your hips, begin to lift the blade crisply, straight up and out of the water. Keep raising your right hand until it is at your right

shoulder, bringing your left arm into a straightened forward posture with the left blade poised over the water, set to repeat the stroke on the left side of the boat.

- \**Feathered paddle*. To rotate the blade for vertical entry of a stroke on the non-control side after a stroke on the control hand side, raise the control forearm and bend the wrist backwards as the control hand is lifting away from the water at the end of the stroke. To rotate the blade for vertical entry on the control side after a stroke on the non-control side, bend the control wrist forward after the blade on the non-control side is lifted out of the water and the non-control hand is moving to the shoulder, and while the control forearm is moving down and forward in preparation for the next stroke.

- Practice the basic stroke slowly at first, concentrating on getting the fundamentals right with a fluid, balanced motion. Remember that you start and stop the push and pull motions at the same times.

### TORSO TWIST.

Using your **torso twist** to engage the major muscles of your upper and middle body will add significant power to your forward stroke. Begin the stroke by twisting your body above the hips to turn your shoulder of the extended arm in the direction of that arm. In other words, if the stroke is on the right side your torso will be twisted to the left, with your chest pointing at a 45 degree angle from your boat's centerline, before commencing the pull/push motions. This extends your stroke by placing the blade further forward. As you begin your push/pull, start a coordinated release of the twist, uncoiling your body in the direction of the stroke side. Continue to twist your upper body through 90 degrees during the pull/push motion, ending up coiled towards the opposite side of the boat as when the stroke began, i.e. on the same side as the stroke was made.

Now your upper body is staged to release the power of your shoulder, back and abdomen into the next stroke by twisting back in the direction of the next stroke at the same time you commence the pull/push. Repeating this 90 degree torso twist as a smooth part of each stroke, carefully coordinated with the arm motions, delivers maximum forward force transmitted from your body to the kayak at the points where your body contacts the boat. This force is transmitted primarily through your hip/butt, knee and foot on the same side as the stroke. To facilitate this you should fit snugly and can press the foot brace on the same side as the stroke with your foot. You may notice that the torso twist is doing part of the pull/push part, relieving your arms of part of that effort. Casual paddling does not require the full torso twist, but its extra power will be available when called on from the accomplished forward stroke.



### DOS & DON'TS

DO:

- Keep the power blade fully immersed and perpendicular to the water.
- Keep a constant alignment of the controlling hand to the nearest blade.

- Center your grip on the shaft and keep it loose.
- Sit upright with your head steady and eyes on the horizon.
- Hold the shaft away from your chest with elbows slightly bent.
- Place the blade as far ahead as possible at the beginning of the stroke without bending forward at the waist.
- Bring your shoulder forward to increase your reach.
- Put the blade in close to the boat and cleanly so there is no splash.
- Use the palm of the upper hand to push, guided by slightly opened fingers.
- Maintain as shallow a shaft angle as practical.
- Pull and push with a steady, even pressure that favors the pulling side.
- Get the majority of your power from the torso, then the pulling arm, and last of all from the pushing arm.
- Twist your torso and rotate your shoulders to pull one arm back while driving the other arm forward.
- Push against the foot brace on the pulling side.
- Apply maximum power in mid-stroke, usually as knees are passing the blade.
- Slice the blade up and out cleanly when your hip passes it.
- Avoid unnecessary force.

#### DON'T:

- Slouch or lean back in the seat.
- Hold arms close to the chest.
- Allow the pushing hand to go above eye level or across the centerline of the boat.
- Keep too tight a grip on the shaft.
- Juggle your grip to change the blade's angle to the water.
- Paddle using only your arms.
- Keep the upper blade high in the air to catch wind and drip water on you.
- Apply power before the blade is fully immersed.
- Continue the stroke far beyond your hips.
- Lean back and forth or rock side to side as you paddle.
- Take the blade out too early, losing power---or too late, creating drag.

#### CONCLUSION

Putting together each of the fundamentals of the forward stroke with thoughtful, slow-motion practice and dedicated adherence whenever paddling will result in an effective, effortless, and seemingly natural means of pulling your kayak through the water. The forward stroke is detailed here because it is the stroke you will use the most. The basic stroke is described, but as with all kayaking techniques, you may find variations.