



**ST NEOTS  
ROWING CLUB**

Established 1865

# A GUIDE TO ROWING

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## Outside the boat

The boats (or shells) are basically of two types and reflect the two forms of rowing, sweep rowing and sculling. In sweep rowing each rower handles a single oar (about 12.5 ft or 3.9 m long) in sculling a rower uses two oars, or sculls, (each about 9.5 ft or 3 m long).

The word shell is often used in reference to the boats used because the hull is only about ¼ inch thick to make it as light as possible. These shells are also long and as narrow as possible.

Each rower has his back to the direction the boat is moving and power is generated using a blended sequence of the rower's legs, back and arms. The rower sits on a sliding seat with wheels on a track called the slide.

### General boat terms

Boat	The boat itself – sometimes referred to as the shell.
Bow side (starboard)	The right side of the boat - when sitting in the cox's seat, looking forward. Oars for this side of the boat often have a green marking.
Stroke side (port)	The left side of the boat - when sitting in the cox's seat, looking forward. Oars for this side of the boat often have a red marking.
Stern	The back end of the shell, where the cox usually sits; also the end of the boat with the rudder and/or fin.
Bow	The front end of the shell, covered by a bowball.
Bowball	Small rubber ball that covers the end of the bow that is intended to prevent or reduce damage upon collision.
Fin	The fin under the stern of the boat which helps to keep the boat on course.
Rudder	A small, movable part, usually metal, that sits under the stern of the boat which allows the coxswain to steer the boat.

The boats are steered either by the coxswain, or by the bow seat (in boats without a coxswain, called coxless boats).

Cox's use a rudder to steer the boat, which they control using cables that are connected to it. To help keep the boat on course, all boats have a small fin in the stern.

There are two types of boat - rowing and sculling. There are also boats which can be used for either rowing or sculling, depending on how they're rigged (i.e. the boat comes with two sets of riggers - see the next section for information about riggers). Rowers (sometimes called sweep) have one oar each, while scullers have two oars each.

**i** In 2011 Chairman of the National Umpires Commission made the decision to promote the use of port and starboard as apposed to stroke and bow as the terms are understood by all other water users and are an international standard.

# Inside the Boat

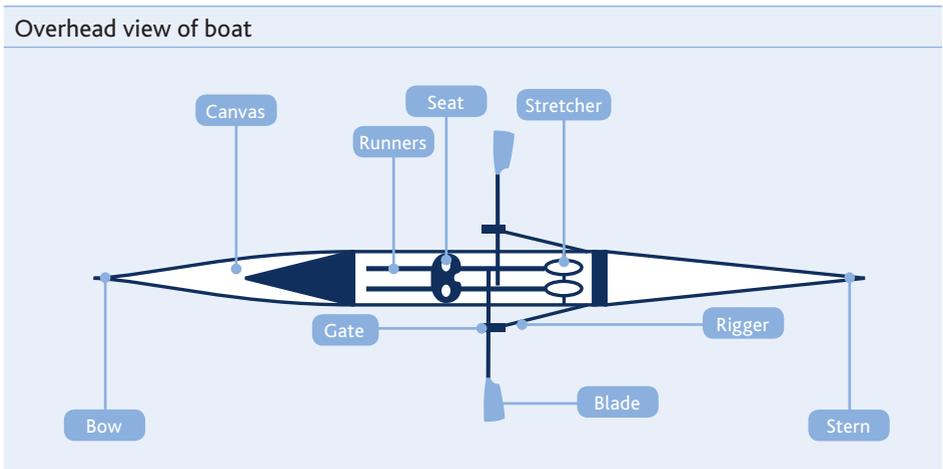
Originally made of wood rowing shells are now usually made with layers of carbon fibre, fibreglass and plastic. These boats are extremely lightweight and narrow, allowing the rowers to slice through the water. Each bow is covered by a bow ball - a small round piece of rubber that not only helps to judge photo finishes, but also helps to protect people from serious injury if the boat collides with another shell.

Each rower sits on a sliding seat that rolls on wheels along a fixed track called the slide. Feet are tied into shoes which are bolted onto footplates in the boat. Each oar is held in place by riggers, which extend from the saxboard. The rigger holds the gate in which the oar sits.

The gate is carefully set up so that the oar is held in the water with a specific amount of pitch or tilt. This is usually about five degrees at the midpoint of the stroke although it does not change through the stroke.

The footplate or stretcher is a fixture in boat that contains shoes screwed into a piece of wood. This contraption holds the rower's feet into the boat and is the only part of the boat where the rower is firmly attached. The shoes have quick release velcro straps, but should not be over tightened as you may need to release your feet in the event of a capsized.

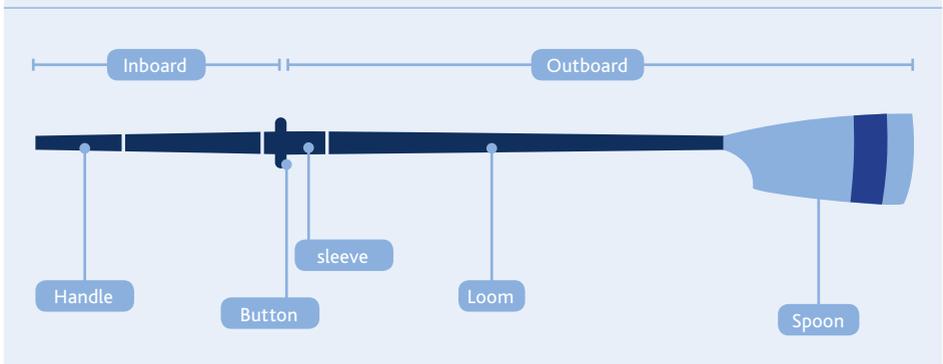
The position of the feet is adjustable to accommodate different height rowers. This is achieved by loosening the three wing nuts securing the stretcher to the tracks and then lifting and sliding the footplate to the required position. If you are rowing in the same boat regularly, it is a good idea to remember the position of the shoes so that you can adjust the boat before you get in.



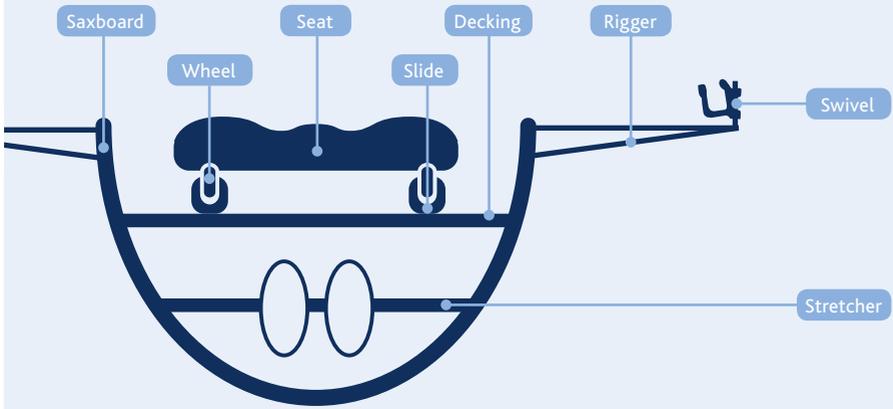
## General boat terms

Saxboard	This is the top side of the boat - the edges onto which the riggers are bolted.
Gate	The small plastic part at the end of the rigger that opens at the top. The rower opens the gate, places the oar into it, then shuts the top metal bar, screwing it tightly shut. The gate holds the oar in place during the rowing stroke.
Rigger	The metal support attached to the saxboard that holds the gate.
Slide	The tracks underneath each seat which the wheels of the seat slide on, allowing the rower to move back and forth in the boat, utilising their full leg power.
Cox box	A device used by the cox, consisting of a microphone and speakers, that amplifies the cox's voice through the length of the boat.
Oars	Oars are referred to as blades for rowing and sculls for sculling. They are made of carbon fibre although you may start with wooden blades; wooden blades are heavier but can make the boat easier to balance for beginners.
Cleavers	The most commonly used type of oar, made out of fibreglass and carbon fibre. The shafts of the oars are hollow, making them as light as possible.
Macon	Originally created in the 1960's. These were the blade of choice until cleavers came into existence. Macon blades are used for novices as they put less strain on your back if you have bad technique.
Blade or spoon	The end of the oar that is placed in the water and used to propel the boat forward; also the oar itself is often referred to as a blade.
Shaft	The long, (now commonly hollow) length of the oar.
Collar or button	A small plastic piece that is placed against the gate to keep the oar from slipping out.

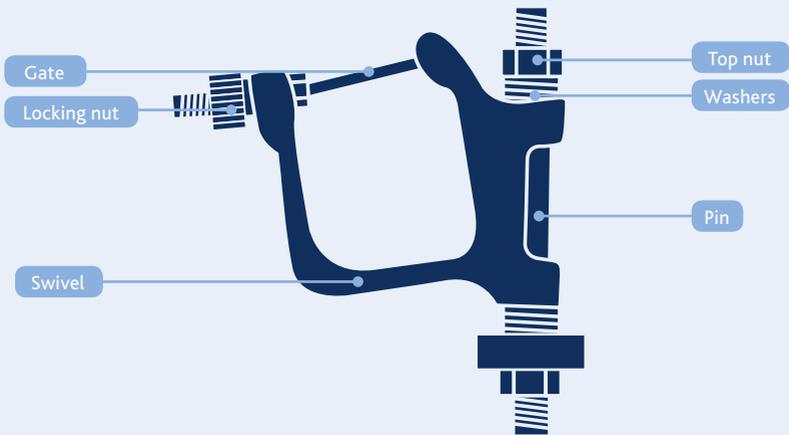
### Cross section of an oar



## Cross section of boat



## Swivel



# The rower and the stroke

Each person in the boat has a position, starting in the bow. The person closest to the bow is called bow seat. Every other seat is called by the number of the seat, except the lead rower, who is the stroke.

For example a crew in a four would be referred to as bow, 2, 3, stroke. In an eight it would be bow, 2, 3, 4, 5, 6, 7, stroke.

A coxswain or cox is the person steering the boat who also motivates the rowers, helps them keep their pace, helps to correct technique and unify the crew.

## Some general terms for the rowers stroke

Catch	The point where the legs are compressed in a 90 degree angle, the arms are stretched out, the body is angled forward and the blade is enters the water.
Drive	The part of the stroke where the legs are pressing down, then the back and arms swing backward, sending the body to the bow.
Finish/tap down	The point where the rower pushes down on the handle of the oar to pop the blade out of the water and begins to push the arms out of the bow.
Recovery	The time spent winding the body back up to the catch, it is like compressing a spring; first the arms extend, then the body angle is achieved, finally the legs are pulled up to the catch.
Square blades	Keeping the blade perpendicular to the water on the recovery.
Feathered blades	Keeping the blade parallel to the water on the recovery.
Crab	An unfortunate incident when the blade gets caught in the water and the handle of the oar hits the midsection of the rower. This can result in getting tossed out of the boat. It is caused by the blade not entering into the water fully square, when pressure is applied to the blade it will just go deeper and deeper in the water.

## Basic coxing commands

Most coxing commands are done in **three** or **next stroke**. For example, if you want the crew to lift the boat up, you would say, "lifting the boat to shoulder, in one, two, three" On the word three, the rowers would respond and lift the boat up. Or if you want the crew to stop you would say, "next stroke, easy there" this gives the crew time to respond and stop together.

During pieces, (a term that means whatever distance the rowers are doing) a cox will often count tens. For example, "let's take a ten for quick catches". The cox will then count the next ten strokes for the rowers.

Hands on	Put hands on the saxboard and get ready to lift the boat.
To waist	Lift the boat to waist level, holding the saxboard with both hands.
To shoulders	Lift the boat up to shoulder height and rest the saxboard on the shoulder.
Above heads	Lift the boat over the heads, one hand on each saxboard.
Full crew, rowing from backstops, Are you ready, go.	This is a classic command, the cox specifies who the command is to, what they are to do, gives them time to prepare and when the cox can tell the crew is ready they say go.
Easy there	Stop rowing, while maintaining the arms away position and leaving the blade feathered above the water, letting the boat glide over the water.
Drop	After telling the crew to easy there the cox will give the command to drop, the crew can then drop their blades on the water.
Hold it up	Put the blades into the water at an angle, causing the boat to decelerate quickly.
Firm/full pressure	Pull on the oar with 100% of your power.
Three quarter pressure	Rowing with 75% of your power.
Half/medium pressure	Rowing with 50% of your power.
Light pressure	Stop rowing with pressure and just lightly pull the blades through the water.
Back it down	Push the oar backwards through the water to move the boat toward the stern - predominantly used to turn the boat around (back it down on one side).

## Other terms

Stroke	The rower sitting nearest the stern (and the coxswain, if there is one). The stroke is responsible for setting the stroke length and cadence (with the coxswain's gentle advice).
Ratio or contrast	The ratio of the recovery time to the drive time. The recovery time should always be longer than the drive time. The recovery should be twice as long as the drive.
Rating	The number of strokes per minute. Also known as stroke rating.
Stern check	Bad technique that slows the boat down. Essentially, the momentum of the rowers sends the boat in the opposite direction. Any abrupt deceleration of the shell caused by some uncontrolled motion within the shell; an interruption in the forward motion of the shell. The coxswain is probably the most acutely aware of this abrupt deceleration and it has been known to cause whiplash in some extreme cases.
Airstroke	The rower starts the drive before the catch has been completed (or even started in some cases). This is also referred to as rowing into the catch.
Rushing the slide	Bad technique that causes stern check. Comes from coming towards the catch from the recovery too fast.
Skying	The fault of carrying the hands too low during the recovery especially when a rower dips his or her hands just prior to the catch. This usually results in the blade being too high off the water's surface.
Puddles	A measure of your power (and of run). If your blade leaves behind little dinky ripples, then you're not pulling hard enough. If you leave tidal waves after you pull your blade out of the water, then you're pulling just right.
Pyramid rowing	Strength/endurance building drill where the coxswain calls an increasing series of power strokes, then a decreasing series of power strokes. e.g. Power 10 10 normal strokes Power 20 10 normal strokes Power 10.
Ergometer (Erg)	An ergometer is a rowing machine that closely simulates rowing in a boat - a coxless quad, to be more precise.

# Boat classification

Boat classifications specify the gender, age and/or expertise, the number of rowers, whether they are rowing or sculling and if they have a cox or not. Most commonly boats have 1, 2, 4 or 8 rowing seats. Abbreviations are as follows:

M	Men
W	Women
J	Junior
E	Elite
NV	Novice
IM3	Senior racing categories according to points
14	Under 14 age group
2...	Number of people in the boat
x	Sculling
+	Coxed boat
-	Coxless boat



## For example

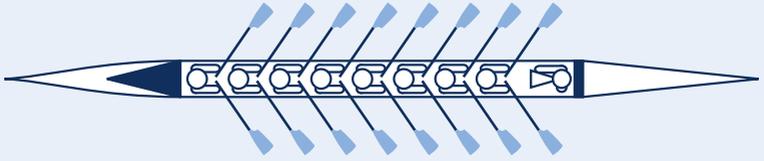
J154x+ would mean junior under 15 quad sculling with a cox

## Types of races

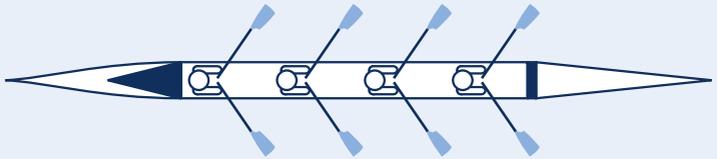
Regatta	The regatta season begins in April and is much more rewarding for spectators as this is side-by-side racing. There are often several heats in what can be a long day's racing. A heat might be first thing in the morning and if successful the final may not be until late afternoon. Regattas taking place on rivers will probably only have two or three racing lanes. The river course is unlikely to be straight and there will be other challenges to negotiate such as the bank. The larger regattas are often held on purpose built courses on lakes and allow for six lane racing.
Head Races	Head races are generally run between September and March. Each boat is sent down the course, one after another, and timed between the start and the finish line. Competitors will be divided into racing categories which might be determined by age, gender, experience. Heads are raced over a longer course than regattas.
Bumps	The Bumps evolved on rivers too narrow for side-by-side racing. Crews progress up a division by bumping the boat in front of them without being hit by the boat behind. Blades are awarded to the successful crews. Normally associated with Oxford and Cambridge universities but also run by some British Rowing clubs.

# Sculling boats

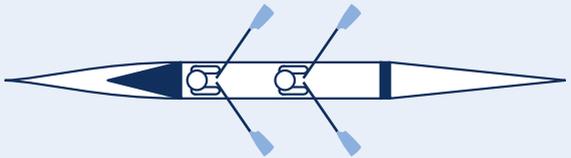
Oct 8x Octuple scull (coxed)



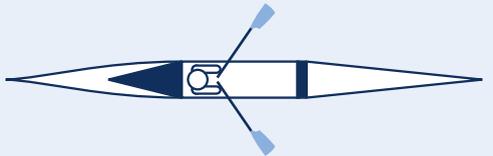
Quad 4x Quadruple scull



Double 2x Double scull

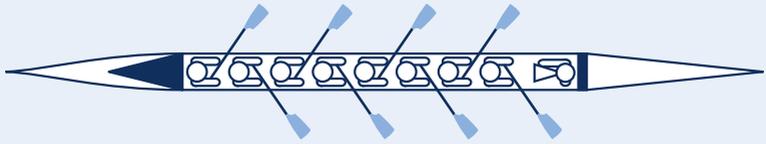


Single 1x Single scull

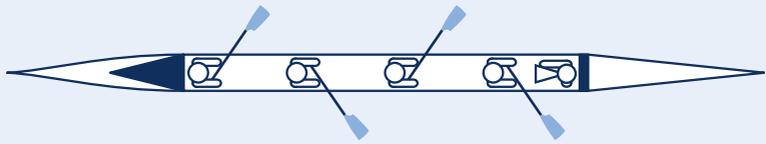


# Rowing boats

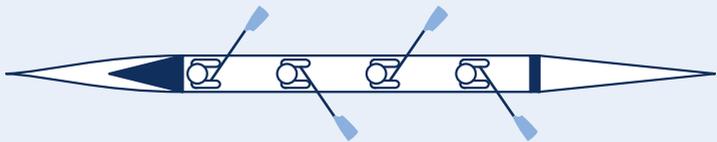
Eight      8+      Eight (coxed)



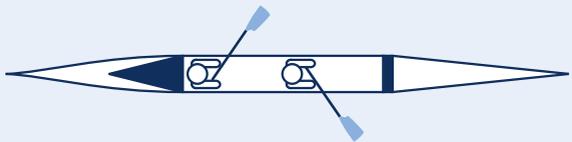
Four      4+      Coxed four



Four      4-      Coxless four



Pair      2-      Coxless pair



## Useful contacts

President	Robin Davies	president@stneotsrc.co.uk
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