

ROWING CLUB STUDY GUIDE 2016

This study guide is a reference of topics related to rowing club and was created in collaboration with Irene Lysenko, Head of Training at Great Salt Lake Rowing and Utah State Parks and Recreation

ROWING CLUB STUDY GUIDE

Before the Row

1. Each club should have a safety committee that will develop and annually review all the safety rules, protocols and procedures.
2. All rowers must be able to pass a swim test, preferably including putting on a life jacket while in the water.

Wearable/Safety Requirements

1. When carrying passengers for hire, or leading (coaching) other boats, the Captain/Guide/Coach is responsible for the passengers on their vessel or in guided rowing shells to be in compliance with all PFD requirements. Each vessel **may** have, for each person on board or in guided boats, one PFD, which is approved for the type of use by the commandant of the U.S. Coast Guard. All personal Flotation Devices (PFDs) must be used according to the conditions or restrictions listed on the U.S. Coast Guard Approval Label.

Each Personal Flotation Device (PFD) shall be:

- In serviceable condition;
- Legally marked with the U.S. Coast Guard approval number; and
- Of an appropriate size for the person for whom it is intended.

2. Know that your shell has been designed for flotation. Your boat is not a Personal Flotation Device (PFD); it is an emergency flotation device and your oars are neither a personal or emergency flotation device. All unaccompanied boats must carry appropriate Coast Guard approved PFDs. A copy of the Coast Guard Regulations concerning PFDs is available upon request from US Rowing.

3. Before ever getting into a shell on the water, a rower must understand the following terminology: bow, stern, port, starboard, weigh enough, ready to row?, back, tie-in, untie, stop, the stroke, bow person, seat numbers in between and what number/seat s/he is that day. The term “stop” should be used only when talking to a specific crew in a race. When a coxswain/Instructor or coach wants a crew to stop immediately, the proper term is “Weigh enough! Hold water!”

4. Each club should post a map of local waterways that includes traffic patterns and any known hazards.

5. Every club should use a logbook. Everyone on the water should sign in and out. If you are rowing without the benefit of a monitored logbook let someone know where you are rowing and what time you should be expected in. Remember, a logbook is only useful if someone checks the book to see if there is still a boat on the water.

6. Each person is 100% responsible for the whole boat and 100% accountable for their own oars, riggings, foot stretchers, seat and slide. Check to make sure that all equipment is functioning properly before leaving the dock. If you aren't sure, ASK! Check the following:

- a. That nuts on the rigging are tight, position of your foot stretchers and the smoothness of your slide are acceptable.
- b. That the forward end of the slide is blunt and will not gouge your calves.
- c. That the persons in front and behind you have sufficient room for their complete stroke.
- d. That the heel ties on your shoes are tied and in good condition.
- e. That your seat fits your body type; Adjust with seat pads or a different seat.
- f. That your oar handle is properly sized.
- g. That your oarlock height is proper.
- h. That your clothing cannot become tangled in your seat or oar handle.
- i. That you have proper safety devices on board your rowing shell.
- j. Make sure that you are aware of the local traffic patterns and rules on the water.

7. Right-of way rules have been developed by the USCG. Vessels with the least maneuverability have the right-of way, but always play it safe and take action to avoid all other types of boats. The maneuverability rule can be confusing. For example, a sailboat without wind has the right-of way, but a sailboat with wind must give right-of way to the shell. Be aware of the following:

- a. Boats will be shoving off and approaching the dock for landing. Be alert and familiarize yourself with the local traffic patterns.
- b. Familiarize yourself with shallow water, stumps, rocks, seasonal problems and landmarks.
- c. Stay clear of bridge abutments and other man-made or natural obstacles. Do not negotiate a turn near such an obstacle.
- d. The coxswain or single sculler should make frequent checks on both sides. Listen for oncoming traffic.
- e. Be courteous to others on the water. Be aware of powerboats and treat them with respect.

8. The safety or coaching launch provides safety supervision when rowing and support assistance in and emergency. A launch may prove useless unless the following precautions have been taken:

- a. The driver must be trained in the proper use and operation of the powerboat.
- b. A radio or cell phone is recommended to allow a quick direct link with rescue services and other coaches on the water in the event of an emergency.
- c. Emergency supplies in the launch should include a first aid kit, fire extinguisher, night lights and tool kit. The tool kit should contain wrenches, appropriate nuts, tape, washers, and other materials needed to make small repairs. Only minor repairs should be done on the water.
- d. Ensure that everyone in the launch is wearing a life jacket and that there is one for each person rowing under the coach's care.

- e. Practice man overboard safety drills. Know how to have rowers enter the coaching launch from the water. Approach from the leeward side, keeping the outboard propeller away from any victims. Turn off the engine as soon as contact is made. Avoid overloading.
- f. The launch driver must wear the cord that activates the safety/kill switch in accordance with the motor manufactures literature.

Conditioning

1. Conditioning should be part of any rowing program. Most people do not have perfectly balanced bodies or sufficient stamina when they begin to row. Take it upon yourself to seek professional training advice. Consult a physician before starting any form of exercise program.
2. Land warm-ups should become part of your training ritual. Before rowing, get your body up to the proper intensity by taking three minutes before you touch the boat to get your body warmed up by jogging, jumping rope, or running in place. Follow that with basic stretching.
3. Water warm-ups should be used to gradually build from no pressure up to full intensity. An example would be building from no pressure “hands only, bodies over, ¼ slide, ½ slide, ¾ slide, full slide”, and then adding pressure until proper workout intensity is reached.

Safety and Emergency Protocol Discussion

A license or permit holder shall conduct a safety and emergency protocols discussion with passengers prior to the vessel getting underway. This discussion shall include the topics of water safety, use and stowage of safety equipment, wearing and usage of life jackets and initiating the rescue of a passenger(s). R651-206-3(14)

Emergency Communications Plan

An outfitting company shall have appropriate communication equipment for contacting emergency services, or, have a policy and emergency communications protocols that describe the quickest and most efficient means of contacting emergency services, taking into consideration the remoteness of the area in which the vessel will be operated. For vessels traveling in a group, this requirement can be met by carrying one communication device in the group. R651-206-6(1)

Boat Accidents and Emergencies

It is the duty of the operator of a vessel involved in an accident, if he can do so without seriously endangering his own vessel, crew, or passengers, to render aid to those affected by the accident as may be practicable. The operator shall also give his name, address, and identification of his vessel in writing to any person injured or to the owner of any property damaged in the accident. 73-18-13(2)Any boating related accident that includes combined property damage in excess of \$2,000 or the complete loss of a vessel; injury requiring more than first aid; or the death or disappearance of an individual shall be reported immediately to a

law enforcement officer. The operator or owner of a vessel involved in an accident shall file a report with Utah State Parks and Recreation within 10 days of the accident.

On the Water

1. Proper supervision protocols must be developed and carried out to ensure the safety of the rowers. Under no circumstances should athletes who are minors be allowed or left unsupervised on the water.

2. Rowers in multi-person shells should always be quiet and attentive to the coxswain or coach.

3. Be aware of weather conditions. There are several inexpensive models of weather radios on the market. Use a weather radio or listen to local radio weather reports before going out on the water. Watch for gathering clouds, changes in wind speed and direction, temperature changes and other boats returning home. If on a river or tidal body of water, check the current direction and look for floating objects or kelp.

- a. Do not row in whitecaps or winds of 12 knots or higher under any circumstances.
- b. If sudden winds come up, return to the boathouse if the trip is safe, or take the boat to the nearest shore and wait for the winds to calm.
- c. Try to minimize equipment damage, but remember that you are more valuable than the boat.
- d. Do not row in fog unless your visibility to shore is at least 100 yards. Be sure to have land reference points. If fog sets in while you are on the water, move slowly, and be prepared to stop quickly. Use a sound-making device (coxbox, horn, or whistle) to advise other boats of your location as you take your boat to shore, following the shore back to the dock.
- e. Do not row in an electrical storm. Lightning detectors are inexpensive and can clip on your belt. If you are on the water and see lightning, hear thunder, or notice your hair standing on end with static electricity, head for the nearest shore. If the storm is upon you, take your boat ashore and wait for the storm to pass.

4. Waves are generated by winds, tides, currents, or wakes from passing boats. Because shells are vulnerable to high waves, specific care is needed with approaching wakes.

- a. If an approaching wake is higher than the gunwale, the shell should be turned parallel to the wake to avoid having part of the shell unsupported by the water. It is possible to split a shell under these conditions. Rowers should stop rowing and lean away from the approaching wake, with oars on the wake side lifted slightly.
- b. If the wakes are lower than the gunwale and widely spaced, continue to row without a course adjustment. Deep and closely spaced wakes that are lower than the gunwale may be taken at a 90 degree angle with the bow directly toward them.
- c. Turning in waves is tricky; allow plenty of room, energy and time.

5. Light conditions -- The greatest danger while rowing is a collision caused by limited vision or carelessness. Great care should be taken when rowing in darkness or near-darkness. Take extra care to look and listen. Minimize conversation. Be careful not to get too close to shore or known hazards. Only row in familiar waters while rowing at dusk, dawn, or in the dark.

- a. There should be an all round white light on the stern of each rowing shell when rowing between sundown and sunup. It should be visible enough to warn approaching vessels. We recommend a red (port) and green (starboard) light on the bow. Another recommendation is that reflective tape be placed on top of the gunwales and splashboards. Refer to local laws for lighting.
- b. Carry a sound-making device.

6. Water temperature should always be monitored.

Emergency Conditions

1. Under no circumstances should a rower in the water leave his/her shell. Even if a swamped boat is within swimming distance from the shore, the rower should swim the boat to the shore. Do not leave any means of flotation even if you consider yourself a strong swimmer.

2. Should someone give the command "Weigh enough! Hold water!", don't ask questions, just respond immediately by stopping all forward body movement. Square the blades in the water and bring the boat to a halt.

3. Use these distress signals to communicate to other boats: wave the arms or a shirt above your head or raise one oar in the air.

4. Man overboard - Immediate command: "Weigh enough! Hold water!" If the safety launch can get to the victim first, allow the launch to rescue the victim. If the launch is not in the immediate vicinity, back the shell to the victim and have him/her hang onto the shell until the launch arrives. Another rower may have to enter the water to assist if the victim is injured.

5. Rower injured - Immediate command: "Weigh enough! Hold water!" Signal launch if first aid is needed.

6. Shell damaged but afloat and not taking on water - Immediate command: "Weigh enough! Hold water!" Make adjustments or signal launch for assistance.

7. Shell swamped - Immediate command: "Weigh enough! Hold water!" A shell is swamped when the interior water reaches the gunwales. The following protocol should be initiated:

- a. Coxswain directs rowers to untie, and by seat number rowers should carefully, but quickly, slip overboard.

- b. If the boat is taking on excessive water, signal the launch and unload rowers by pairs - starting in the middle of the boat - as soon as possible in order to avoid damage to the boat. Pairs should form “buddies” and keep watch of each other. The cox should buddy with the stern pair.
- c. If rescue is not imminent, take the following steps: 1) Remove oars and place them parallel to the shell. All persons should move to the two ends of the shell. It is dangerous to roll a shell when near riggers. 2) Then roll the boat to form a more stable flotation platform so rowers can either lie on top of the hull or buddies can hold onto each other across the hull. 3) Remember that body heat loss occurs 25 times faster in the water. Do not attempt to roll the boat if rescue is on the way.
- d. A launch can shuttle rowers to the nearest shore. Be careful not to overload the launch.
- e. When the boat has been brought to the shore, remove the oars. If the ends of the shell have filled with water, they must be drained before the boat can be removed from the water. Lift the shell carefully to avoid injury or damage. A boat full of water is very heavy, so try bailing first, then roll the boat slowly and lift it from the water.

8. Flipping a single - Singles should be rowed with a buddy boat or launch, especially in cold weather. Your buddy boat or the launch can help stabilize you for re-entry. Options:

- a. Entering the shell directly from the water may cause splashboard damage but if necessary, stand on the rigging while pulling the boat toward you to make upright. Straddle the boat across the gunwales and maneuver yourself back to a sitting position while holding oars for stability.
- b. Swim the boat to shore, lying on the stern, using the shell as a paddleboard.
- c. In very cold weather you can abandon your shell and lie on the stern deck of your buddy’s boat to be taken to shore. The loss of muscle control can occur very quickly and dramatically in cold water. The stern deck rescue may be your only option.

9. Larger shell capsized - Immediate command: “Untie!” This rarely happens except in small boats. Be sure that all rowers and cox are accounted for. Stay with the boat until assistance arrives.

10. Shell broken and sinking - Immediate command: “Untie!” Get out of the boat and follow the same procedures as for a swamped shell. Do not leave the floating boat. Swim boat to shore if launch assistance is not immediately available.

11. Another boat in distress - If a distress signal is seen and insufficient assistance is near that craft, maneuver your shell to the distressed shell. Assist in any way that does not jeopardize the lives in your shell.

12. Shells should stay within hailing distance of their safety launch. The launch has been outfitted to provide assistance to rowers and/or their shell in the event that it is needed. Most frequently, the toolbox and coach’s expertise is available for small equipment adjustments or breakdowns, which allow the shell to continue rowing after a short stop. If more serious needs arise, the launch is there for rapid transportation.

13. Paddle-down at the end of your workout. It is important to your health that you don't race up to the dock. Once the boat and oars are stored, it is important to take another few minutes to go through your basic stretching exercises to identify unnoticed sprains or strains that began during your row.

Summary

As a coach, you expect 100% from your athletes. They, in turn, expect the same from you. They expect you to be the best coach possible. To be the best you have to have your priorities in order. Safety should be at the top of your list.

GENERAL DEFINITIONS

Agent – A person(s) designated by an outfitting company to act in behalf of that company in certifying: The verification of a license or permit applicant's vessel operation experience, appropriate first aid and CPR certificates and identifying information. The verification of an annual dockside or a five-year dry dock inspection of a vessel. R651-206-1(1)

Beached – A vessel's hull is resting on the bed or shoreline of a waterbody. 73-18-2(2)

Board - The Board of Utah State Parks and Recreation. 73-18-2(3)

Boat livery - An entity, which holds any vessel for renting or leasing. 73-18-2(4)

Carrying passengers for hire - To transport persons on vessels or to lead persons on vessels for consideration. 73-18-2(5)

Certifying experience - Vessel operation or river running experience obtained within ten years of the date of application for the license or permit. R651-206-1(4)

Consideration - Something of value given or done in exchange for something given or done by another. 73-18-2(6)

License - A Utah Boat Captain's/Guide's/Instructors License or U.S. Coast Guard Master's License. R651-206-1(10)

Low capacity vessel - Any vessel with a carrying capacity of two or fewer occupants (e.g., SUP, kayak, inflatable kayak or similar vessel). R651-201-1(11)

Operate - To navigate, control, or otherwise use a vessel. 73-18-2(12)

Operator - The person who is in control of a vessel while it is in use. 73-18-2(13)

Outfitting company - Any person who, for consideration: -provides equipment to transport persons on all waters of Utah; and-supervises a person who operates a vessels to transport passengers; or-leads persons on vessels. 73-18-2(14)

Owner - A person, other than a lien holder, holding a proprietary interest in or the title to a vessel. "Owner" includes a person entitled to the use or possession of a vessel subject to an interest by another person, reserved or created by agreement and securing payment or

performance of an obligation. Owner does not include a lessee under a lease not intended as security. Example: a boat rental. 73-18-2(15)

Permit - A Utah Crew/Apprentice Permit. R651-206-1(14)

PFD - Personal Flotation Device (e.g., life jacket), which is approved for the type of use by the commandant of the U.S. Coast Guard. R651-215-1(1)

Vessel - Every type of watercraft, other than a seaplane on the water, used or capable of being used as a means of transportation on water. 73-18-2(18)

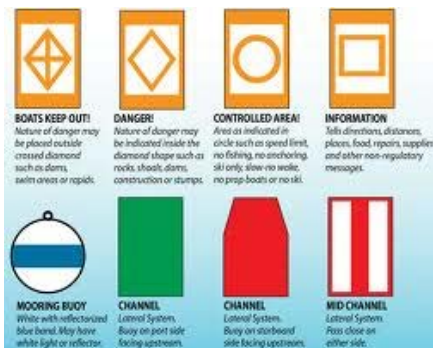
Vessel length - The measurement of the permanent part of the hull, from bow to stern, across the deck down the centerline, excluding sheer. R651-215-1(2)

Waters of this state - Any waters within the territorial limits of this state. 73-18-2(20)

Wear - To have the PFD worn properly with all fasteners connected. R651-215-1(3)

Regulatory Markers

The following regulatory symbols shall be international orange on a white background, and descriptive wording within or accompanying the regulatory symbols shall be in black letters. R651-203-1



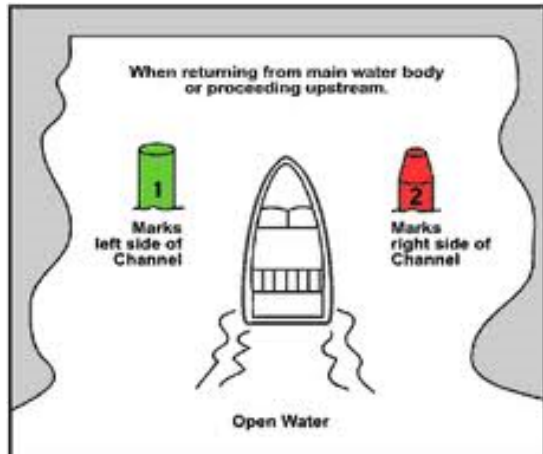
Channel Markers

Vessels operating in a narrow channel must keep as far to the right of the channel as is safe and practical.

White buoys with red vertical stripes mark the center of a channel and may be lettered alphabetically from downstream to upstream.

Green can buoys have odd numbers and mark the left side of the channel when proceeding upstream or returning from the main body of water.

Red nun buoys have even numbers and mark the right side of a channel when proceeding upstream or returning from the main body of water.



CPFH Captain/Instructor/Crew/Apprentice Endorsements

Lake and Reservoir Captain/Instructor is required when carrying passengers for hire on any lake or reservoir.

Lake and Reservoir Instructor (LRI) **(ii) Lake and Reservoir Instructor (LRI)** – a minimum of at least 40 hours of actual vessel operation experience. At least 10 hours of these hours must be obtained through mentored coaching

CPFH Crew/Apprentice Endorsements

Lake and Reservoir Crew (LRC) - A minimum of at least 20 hours of actual vessel operation experience. At least 10 of these hours must be obtained while operating the vessel, or a similar vessel, on which the operator will be carrying passengers for hire.

Expiration and Renewal of Utah CPFH License and CPFH Crew Apprentice Permit

A Utah Captain's/Instructor's License and Boat Crew/Apprentice Permit is valid for a term of five years. It will expire five years from the date of issue, unless suspended or revoked. It may be renewed within the six months prior to its expiration.

First aid and CPR certificates must include the following information:

- Name, or title of the course,
- Course provider,
- Length of certification, and
- Name of the person certified and legible name of the course instructor;

Note: Permits must be accompanied by current and appropriate first aid and CPR certificates. A photocopy of both sides of the License/Permit, first aid and CPR certificates is allowed when carrying passengers for hire in Row Club activities and on rivers. R651-206-3(2a)

Rowing terms

Boat Classes

In competitive rowing events, abbreviations are used for different boat classes.

Weight

L, LWT or Lt: Lightweight rowing. If not present the crew is open weight

Age

J: Junior (Under 19 years of age)

B: Senior B (Under 23 years of age)

Masters: over 27, includes a letter designation for the average age of the crew:

A - 27–35 years of age

B - 36–42 years of age

C - 43–49 years of age

D - 50–54 years of age

E - 55–59 years of age, and so forth.

If none of these abbreviations are present the crew is Senior A

Crew Size

1, 2, 4, 8: The number of rowers in the crew.

Discipline

x: Sculling boat

If not present then the boat is sweep-oar

Coxwain

+: Coxed (with coxswain)

-: Coxless (without coxswain)

If not present then the boat is coxless, except for an eight.

Examples

M8+ = Men's eight

W4- = Women's coxless four (or "straight four")

LM2- = Lightweight men's coxless pair

BM1x = Men's single sculls under age 23

JW4x = Junior women's quad

Masters WC2x = Masters women's double sculls with average crew age between 43-49

Mixed Masters 8+ = Eight with 4 women and 4 men as rowers and a coxswain of either gender.

The Athletes

Ambidextrous (bi-sweptual): (UK) A rower who can row both on stroke side and bow side.
(US) A rower who can row both on the starboard and port sides of the boat.

Bow (or bow seat): The rower closest to the front or bow of a multi-person shell. In coxless boats, often the person who keeps an eye on the water behind him to avoid accidents.

Coxswain: The oar-less crew-member, usually included, who is responsible for steering and race strategy. The coxswain either sits in the stern or lies in the bows of the boat.

Engine room: The middle rowers in the boat. In an 8-person shell, these are generally seats 5, 6, and 3 and 4 to a lesser degree. They are generally the biggest and strongest rowers.

Port: (US) A sweep rower who rows with the oar on the port or left side of the boat. Sculler - A rower who rows with two oars, one in each hand.

Seat number: A rower's position in the boat counting up from the bow. In an eight, the person closest to the bow of the boat is "bow," the next is 2, followed by 3, 4, 5, 6, 7 and finally 8 or "stroke." In certain countries the seats are numbered the opposite way, from stroke up to bow.

Starboard: (US) A sweep rower who rows with the oar on the starboard or right side of the boat.

Stroke (Seat): The rower closest to the stern of the boat, responsible for the stroke rate and rhythm.

Sweep: A rower who rows with one oar (in both hands).

Types of Shells

Eight (8+): A shell with 8 rowers. Along with the single scull, it is traditionally considered to be the blue ribbon event. Always with coxswain because of the size, weight and speed of the boat.

Four (4-) or (4+): A shell with 4 rowers. Coxless fours (4-) are often referred to as straight fours, and are commonly used by lightweight and elite crews and are raced at the Olympics. In club and school rowing, one more frequently sees a coxed four (4+) which is easier to row, and has a coxswain to steer.

Pair (2-) or (2+): A shell with 2 rowers. The Coxless pair (2-), often called a straight pair, is a demanding but satisfying boat to master. Coxed pairs (2+) are rarely rowed by most club and school programs. It is no longer an Olympic class event, but it continues to be rowed at the World Rowing Championships. The bow loader coxed pair was nicknamed "the coffin" due to the difficulty for the cox to escape in the event of a capsized.

Sculling: In a sculling boat, each rower has two oars, one on each side of the boat. Quad (4x) A shell having 4 rowers with two oars each. Can be coxed (4x+) or coxless (4x-).

Triple (3x): A shell for three scullers with two oars each, usually without a coxswain. These boats are considerably rare.

Double (2x): A shell for two scullers generally without a coxswain.

Single (1x): A shell designed for an individual sculler. Very good for skill development, particularly beginners, and a very competitive class at world events, WRC. Extremely rare is the coxed single which is only used as a training boat or for adaptive rowing.

Open Water Boat: A shell with positive flotation, self-bailing capacity, a non-binding stretcher, and no forestay so re-entry is easier. These boats are generally shorter and wider at the waterline than boats designed for flatwater racing.

Equipment / Parts of the Boat

The term "Rigging" is used to describe how the boat is outfitted, including all of the apparatuses (oars, outriggers, oarlocks, sliding seats, etc.) attached to a boat that allow the rower to propel the boat through the water. It is derived from an old Anglo Saxon term wrigan or wrihan, which means "to clothe." It literally means to outfit or clothe a boat. "Rigging" is also used to describe the configuration of the boat and settings of the apparatuses. The following terms are often associated with a boat's rigging, along with other often-used terms for equipment used in rowing.

Backstay: A brace which is part of the rigger of sweep rowing boats, which extends toward the bow from the top of the pin.

Backstop: The stop mechanism on the seat slides which prevents the rower's seat from falling off the sliding tracks at the back end (towards the boat's bow) of the slide tracks. Also, in the UK, the sliding seat position closest to the boat's bow. As a command, it instructs the crew to adopt this position. (The US calls this seat position the "back end").

Blade: The spoon or hatchet shaped end of the oar or sweep.

Bowloader / bowcox / bow steered: When a coxswain is placed in a seat partially enclosed in the bow of the shell.

Bow: The forward part of the boat, usually designated by a "bow ball".

Bow ball: An essential small, soft ball no smaller than 4 cm diameter securely attached to a rowing or sculling boat's bow. Primarily intended for safety but also useful in deciding which boat crossed the finish line first in very close races.

Bow number: A card holding the number assigned to the boat for a race.

Cox box: Portable voice amplifier; may also optionally incorporate digital readouts displaying stroke rate, boat speed and times.

Ergometer (also ergo or erg): An indoor rowing machine.

Foot stretcher (or Stretcher): An adjustable footplate which allows the rower to easily adjust his or her physical position relative to the slide and the oarlock. The footplate can be moved (or "stretched") either closer to or farther away from the slide frontstops. (also Footplate and Footchock) Two sculling oars. The "blades" are at the top of the picture and the handles are at the bottom of the picture. The blades are "hatchet blades."

Frontstop: The stop mechanism on the seat slides which prevents the rower's seat from falling off the sliding tracks at the front end (towards the boat's stern) of the slide tracks. Also, in the UK, the sliding seat position closest to the boat's stern. As a command, it instructs the crew to adopt this position. (The US calls this seat position the "front end").

Gunwales: (pronounced: gunnels) The top rail of the shell (also called Saxboard)

Handle: The part of the oar that the rowers hold and pull with during the stroke.

Hull: The actual body of the shell.

Launch: A motorboat used by rowing instructors, coaches or umpires. Referred to as a "coach boat" in Canada.

Oar: A slender pole which is attached to a boat at the Oarlock. One end of the pole, called the "handle," is gripped by the rower, the other end has a "blade," which is placed in the water during the propulsive phase of the stroke. The blade portion of the oar is similar to a razor blade or a piece of paper: Essentially two-dimensional, the third dimension is very thin, although it should be noted that there is a very important element to the third dimension of the blade, namely that it is curved into a sort of hydrofoil, which helps provide much of the thrust.

Oarlock: The rectangular lock at the end of the rigger which physically attaches the oar to the boat. The oarlock also allows the rower to rotate the oar blade between the "square" and "feather" positions.

Port or Portside: (US) The left side of the boat when facing forward.

Rigger: A "Rigger" is the rowing slang name for an Outrigger. It is a projection from the side (gunwale) of a racing shell. The oarlock is attached to the far end of the rigger away from the boat. The rigger allows the racing shell to be narrow thereby decreasing drag, while at the same time placing the oarlock at a point that optimize leverage of the oar. There are several styles of riggers, but they are most often a triangle frame, with two points attached to the boat, and the third point being where the oarlock is placed. Rigging is also used to describe whether a boat is stroked by a port or starboard (i.e. port-rigged, starboard-rigged). With sweep rowing, riggers typically alternate sides, though it is not uncommon to see two adjacent seats rigged on the same side of the boat.

Rudder: Adjacent to the skeg and used by the coxswain (or in some coxless boats, by a rower using a "toe") to steer the boat via attached cables. Extra-large rudders are used on narrower and/or bendier rivers.

Scull: (a) An oar made to be used in a sculling boat where each rower has two oars, one per hand (b) A boat (shell) that is propelled using sculling oars, e.g., a "single scull," is a one-person boat where the rower has two oars.

Seat: Molded seat mounted on wheels, single action or double action. Single action is fixed bearing wheel, double action is wheel on axle that rolls on track and rolls on horns of seat. A secondary meaning of location in the shell]], the bow seat is one, and is numbered upward to the stroke seat (8, in an 8 man shell). Thirdly can mean a competitive advantage in a race, to lead a competitor by a seat is to be in front of them by the length of a single rower's section of a shell.

Seating: Seating positions in a racing shell are generally numbered from the bow to the stern in English-speaking countries, unlike many non-English-speaking countries which count from the Stroke forward. Generally the forwardmost rower is called the "Bow" and the aftmost rower the "Stroke", regardless of the number of rowers in the boat, with all other seats simply being numbered. So, for instance, the crew of an eight (with coxswain) would number off from the bow: "Bow", "Two", "Three", "Four", "Five", "Six", "Seven", "Stroke", whereas a four (with or without coxswain) or a quad would number off: "Bow", "Two", "Three", "Stroke".

Shell: The boat used for rowing.

Skeg (or fin): Thin piece of flat metal or plastic that helps stabilize the shell in the water. SlingsFolding, portable temporary boat holders. Two are required to hold a boat.

Starboard (or Starboard side): (US) The right side of the boat when facing forward.

Stern: The rear section of a shell.

Rowing Commands

"(#) Fall in/out": These commands tell the rower(s) either to stop rowing or to start rowing with everyone else. (#) indicates the number of rower(s) who should start or stop – e.g.

"Bow pair fall-out, stern pair fall-in in two.. "(#) Hit it" or "(#) row on" Tells the rowers to row until told to stop –e.g. "Two, hit it.."

"Back it": To have the rowers place their blades at the release position, squared, and push the oar handle towards the stern of the boat. This motion causes the shell to move backwards.

"Check it/her down": Square the oars in the water to stop the boat.

"Count Down" (or "number off"): Tells the crew to call out their seat number, starting at the bow, when ready to row.

"Down on port/starboard": Means that the boat is leaning to one side or the other. Rowers on the side that is down must raise their hands, and the other side must lower their hands.

"Hands on": Tells the rowers to grab the boat next to their seats, so that the boat can be moved.

"Hard on port/starboard" (or "port/starboard pressure"): The rowers on that side of the boat must row harder (and the opposite side must row slightly easier) in order to facilitate a sharper turn.

"Hold Water": (USA) Emergency stop, also used after the command way enough. It instructs the rowers to square their blades in the water to stop the boat.

"In 2...": Most water commands are appended prior to the command to take place after two strokes. For example "In 2, Power 10" or "In 2, Weigh-enough."

"Let it/her run": To stop rowing after a given piece of on the water rowing length, but to put the handles of the oars either to the gunwales or out in front of the rower, in such a manner that the oar paddles are parallel to the water yet not touching it. This allows the boat to glide for a distance leaving no paddle wake in the water. Similar, but not exactly the same is the command "Gunnel", where rowers push the oars until the handle touches the boat's gunwale.

"Paddle": Tells a crew to row with just enough pressure to move the boat. The paddle command is also used to bring a crew down from full pressure at the end of a workout piece or race.

"Power 10" (or "10 firm"):The command to take 10 strokes at more than full pressure. Used for passing and gaining water in a race. (sometimes "Power 5", "Power 20", or "Power 30")

"Ready all, Row": Begin rowing."Set it up"Reminds the rowers to keep the boat on keel.

"Shoulders, ready, up": Tells the crew to lift the boat from any position below their shoulders, up to

shoulder height. Can be reversed to lower the boat from heads to shoulders, i.e.,

“Shoulders, ready, down!”: This is the best position for carrying a shell.

"One foot up & out": The command for exiting a team boat.

"On the square": To row without feathering the blades on the recovery.

"Watch your blades (side)": Tells one side to look out at their blades, and take action to prevent them possibly hitting something.

"Weigh enough" (or "Wain... 'nuff", or "Way enough"): (USA) The command to stop what ever the rower is doing, whether it be walking with the boat overhead or rowing.

The Stroke

Catch: The part of the stroke at which the oar blade enters the water and the drive begins. Rowers conceptualize the oar blade as 'catching' or grabbing hold of the water.

Crab: A rowing error where the rower is unable to timely remove or release the oar blade from the water and the oar blade acts as a brake on the boat until it is removed from the water. This results in slowing the boat down. A severe crab can even eject a rower out of the shell or make the boat capsize (unlikely except in small boats). Occasionally, in a severe crab, the oar handle will knock the rower flat and end up behind him/her, in which case it is referred to as an 'over-the-head crab.'

Drive: The propulsive portion of the stroke from the time the oar blade enters the water ('catch') until it is removed from the water ('release').

Feather: To turn the oar so that its blade is parallel with the water (opposite of square).

Finish: That portion of the pull-through just as the oar is taken from the water.

Inside hand: The oarsmen's hand nearest the oar lock. This is the feathering hand.

Lay-back: What the rowers have when they sit with their legs flat and lean towards the bow of the boat with their body.

Leg Drive: Power applied to the stroke, at the catch, by the force of driving the legs down. Often heard being yelled from the coach boat.

Outside hand: The hand of a rower that is placed on the end of the oar handle.

Rating: The number of strokes executed per minute by a crew. (also Stroke rate)

Ratio: The relationship between the time taken during the propulsive and recovery phases of a rowing or sculling action.

Recovery: The non-work phase of the stroke where the rower returns the oar from the release to the catch.

Release: At the end of the drive portion of the stroke. It is when the oar blade(s) is removed (or released) from the water.

Run: Distance a shell travels during each stroke.

Rushing: Term for when rowers move too quickly along their tracks into the catch. The boat will lose the feeling that it is gliding or "running out."

Set: The balance of the boat. Affected by handle heights, rowers leaning, and timing, all of which affect the boat's balance, after which the coxswain tells rowers to "set the boat". (see keel).

Shooting your slide: Term used for when an oarsman's seat moves toward the bow faster than his shoulders.

Skying: Term used to describe a blade that is too high off the surface of the water during the recovery. The rower's hands are too low causing an upset to the balance of the boat (the "set").

Split time (split): Amount of time it takes to row 500 meters. Displayed on all ergs and on coxboxes installed on boats with speed coaches (see above).

Square: To turn the oar so that its blade is perpendicular to the water (opposite of feather).

Stroke: 1. One complete cycle through the process above. 2. The rower in the stern of a multi-person shell, whose timing is followed by the other rowers.

Stroke rate: The number of strokes executed per minute by a crew. (also rating)