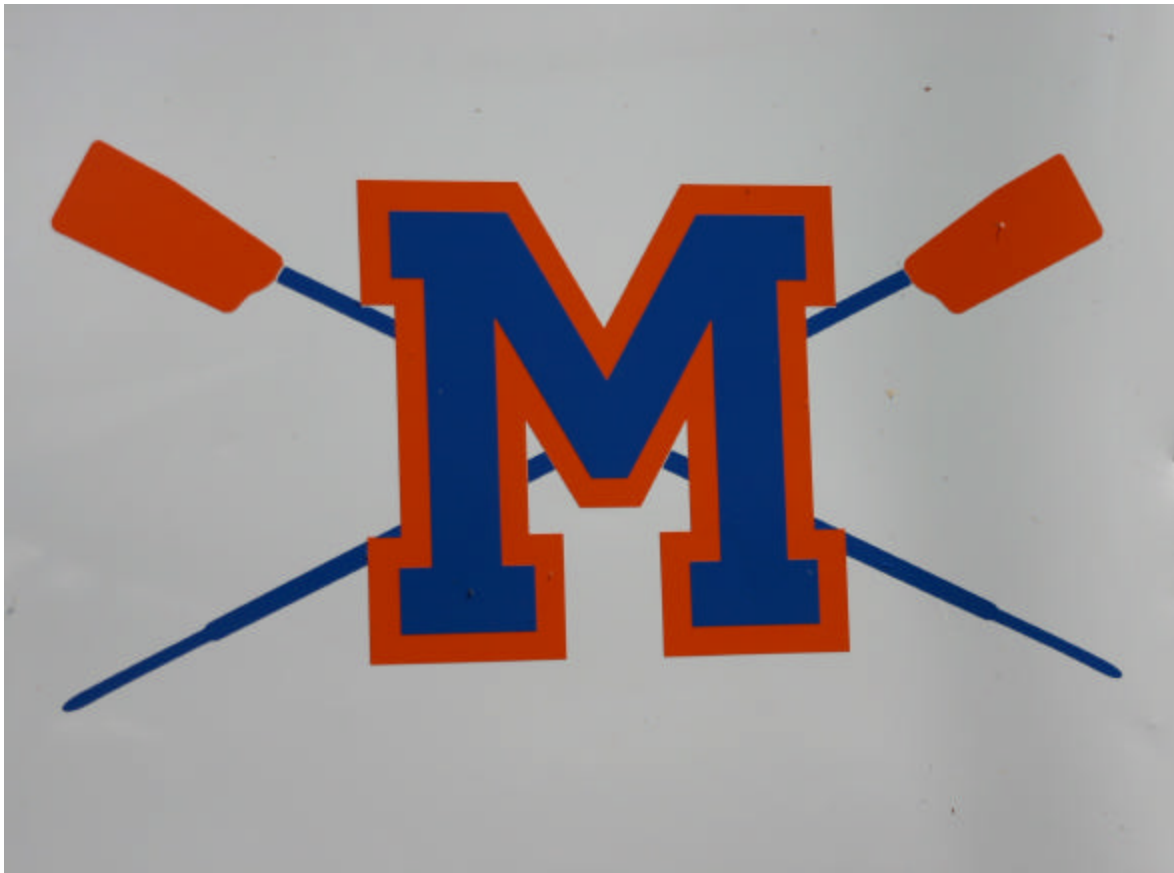


MANHASSET HIGH SCHOOL CREW



ROWING GUIDE

Fall, 2007

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INTRODUCTION TO ROWING GUIDE

The purpose of this Rowing Guide is to provide each rower with some general advice as to what they should do if they are a serious rower and want to improve, if they want to know what to expect every year, and how to go about the recruiting process. Crew is a new sport for most high school rowers as well as a relatively new sport in Manhasset.

The next section contains an outline of what you should be doing on the water and off the water, broken out for each grade, as well as for pre-9th graders so they know how they can prepare for being a novice rower. While there is the basic assumption that you are a serious rower and want to row in college, these guides apply to anyone who wants to become a well-rounded rower.

Subsequent sections include Common Rowing Terminology to help the Novice rower, highlights on technique, tips for coxswains, and some performance enhancing stretches for before practices and regattas.

We hope you find this guide helpful – feel free to share with your parents!

ROWING GUIDE FOR PRE-9TH GRADERS

Phase I: What is rowing?

The more experience and knowledge of the sport you have before rowing for the first time the better off you'll be. Here are some ways that will help you to prepare for your first year of rowing and give you that competitive edge.

- 1) *Rowing Camp* – this is the best way to prepare for high school rowing. Entering high school with as little as a week of rowing camp will put you at a much higher level than any other entering freshman. From a coach's perspective, the rowers who went to camp before freshman year were significantly better and well prepared to row.
- 2) *Watch a Regatta* – before freshman year come to a race during the spring of eighth grade and find out what rowing is about. We have about two local regattas a season so you won't have to travel to Saratoga or Philadelphia to see us in action.
- 3) *Talk to rowers* – ask rowers from the team what it's like to row and how it differs from other sports. Asking rowers will help you make an informed decision about joining the team.
- 4) *Erg* – If you can't do the real thing, then try the next best thing. The rowing machine simulates the rowing motion and will strengthen rowing muscles. The high school has four ergs as well as most gyms. Before erging, learn how to do it properly by either asking an experience rower/coach/trainer or read about proper technique. Our website has a link to Concept II and a tutorial on technique.
- 5) *Work out* – Work out over the summer and arrive in great shape. Rowing is a very demanding sport that requires the use of many muscles and a high aerobic threshold. A well rounded plan of running, erging, and calisthenics will help you be in the best shape. Flexibility is a key component of rowing so make an effort to stretch before and after you workout.
- 6) *Stay in the know* – Read about rowing online (www.row2k.com posts thousands of articles about the sport and other high schools/colleges). Subscribe to Rowing News magazine – includes weekly advice columns on training, nutrition, recruiting, technique as well as camp listings, Olympics coverage, college coverage, regatta results. (www.rowingnews.com)

ROWING GUIDE FOR 9TH GRADERS/NOVICES

Phase II: Learning to row

Freshman year is essential as it will serve as the foundation for learning about the sport, learning how to row, and learning about competitive racing as you experience your first regatta.

1. *Learning About the Sport:*

- absorb as much as you can from rowers and coaches
- read about rowing online (www.row2k.com)
- become a *USRowing* member
- subscribe to Rowing News magazine (www.rowingnews.com)

2. *Learning How to Row:*

- listen carefully to the coach's lesson on rowing safety
- learn how to rig from teammates and coaches, how to use tools
- learn how to lift, hold, dock, clean, and get into the boat
- learn how to put your oar in, how to hold an oar, differentiate b/w starboard/port
- learn the rowing terminology from coaches and teammates
- learn how to put in and take out the launches
- coxswains will learn from coaches and fellow coxswains about rowing commands, how to steer, how to cox during races
- learn technique and rowing drills

3. *Learning About Competitive Racing:*

- learn how to unload and load the trailer
- learn about new courses and racing rules
- learn about the timing of races and how to prepare before your race
- learn about your competition
- learn about racing strategy

Freshman year is basically the year of learning as you can see above. It is too early to start considering the recruiting process but it is the right time to learn as much as possible about the sport. On the water we will be heavily focused on drills and working on our technique as a solid base. Freshmen will participate in most of the same regattas as the varsity and will be able to see the difference in varsity, junior varsity, and freshman rowing.

Preparation for Sophomore Year (Phase III)

Work out over the summer and be ready to row in the fall. Going to a rowing camp would be great to develop your rowing skills and learn from college coaches. (there is a listing of camps on www.row2k.com) The more you row the more prepared you will be for you sophomore year. The level of rowing will increase as you will be racing with and against juniors and in some cases seniors.

ROWING GUIDE FOR 10TH GRADERS

Phase III: Intermediate Rowing and Early Recruitment Process

Sophomore year is a transition year between learning how to row to the more advanced rowing and recruitment process of junior year.

- The entire field of rowing events will be open to sophomores including lightweight boats, juniors varsity, and varsity boats if they can compete at a high level
- Rowers should be familiar with most drills as well as all other aspects of practice
- Keep in mind that in a year you will be considering and visiting schools. Rowing can be a big help to get you into the most prestigious schools. A good erg score helps a lot but remember having both good grades and a good erg score will really set you apart from the crowd.
- Set long term goals for both your erg scores and your grades. By junior year you will want to be able to tell schools what great grades you have and how fast you can pull a 2K
- After fall rowing, continue working out over the winter to prepare for spring rowing. This would be a great time to work on your erg score. Put together a workout plan (ask coaches if you need help) to help you reach your goal. Do a 2K once a month and see your improvement.

Early Recruitment Process

- Research colleges that offer rowing programs
- Go to a more advanced camp over the summer and ideally to a school where you may be interested in going to. Camps expose you to the coaches, rowing programs, and college campuses – overall a great experience.
- Colleges are not allowed to contact you before junior year but it is important to learn about the process and NCAA guidelines (www.ncaa.org)
- Over the summer would also be a great time to work on your erg score. Remember, when you are a junior you will be sending schools your erg scores or posting them on the college clearinghouse.
- If you have older brothers or sisters visiting schools, join them if we don't have a regatta that weekend.

Preparation for Junior Year (Phase IV)

As mentioned above, go to a rowing camp. Try different camps to see different schools and learn from crew coaches that have varying expertise. Start visiting colleges – as you know junior year is hectic and it becomes difficult to visit colleges especially when you're on the crew team! Junior year is an important year both academically and athletically.

ROWING GUIDE FOR 11TH GRADERS

Phase IV: Advanced Rowing and College Recruitment Process

The level of competitive rowing will continue to increase as you may be rowing in varsity and senior boats. Junior year is a very busy year from a rowing and academic perspective as the college selection process begins.

Advanced Rowing

- Junior year is the year the coaches will be looking for potential leaders for next year's team. If you expect to be considered for captain, it will be important that you demonstrate a higher level of maturity, effort, and leadership.
- Juniors should be at a level in their rowing experience where they are able to act as mentors to the underclassmen.
- Talented juniors should consider being on the junior national team, elite or developmental camps. (Discussed more below)

College Recruitment Process

- Visit the schools your are interested in – do some research before you go so you know what you want to see and what questions you need answered
- Begin to think about if you want to row in college and how that fits into your decision making.
- If you are interested in rowing in college, contact the coach to see if you can talk with him about the program when you visit.
- Talk with others who rowed in college or even better those who are currently rowing about their experience.
- If you go to a school and are disappointed or don't like what you see, then remember what you don't like about it and find schools that are different. Remember, finding out what you don't like will help you make a more informed decision – unintentionally you will find what you do prefer. Also, keep this in mind when you talk with someone who didn't have such a great rowing experience in college. Learn from their mistakes so that you can choose the team that is right for you.
- Work hard to get a competitive 2K – for guys you want to be close to 7 min. (1:45 split) for lightweights and under 7 min. for heavyweights. Girls you want to be as close to 8 min. (2:00 split) as possible and under 8 min. you will be heavily recruited.

- There are programs for everyone: if you don't think you are as serious but you still want to row then try a club team. You don't need a 6:30 2K to be on a college team. Rowing is probably the biggest walk-on (open tryouts) sport, the fact that you rowed in high school is a major plus. Women's crew has the highest average team participation rate in the nation – basically they need bodies, the more experience the better. The more serious you are about crew and the better team you want to be on, the harder you'll have to work to get those competitive spots.
- Some of the best programs in the nation are Division II or III so keep your options open. Go to this site and click on participating schools for a list of DII and DIII teams. (<http://www.ncaasports.com/rowing/womens/schedules/divi>) Women only.

COLLEGE RECRUITING TIMELINE

Fall of Junior Year

- Fill out the Recruiting forms (sometimes called questionnaires) on the college websites. Below are examples of Princeton's & Northeastern's questionnaires:

First Name Last Name Social Security #

Email Phone Mobile Phone

Street Address

City: State: ZIP Code: Country:

Highschool Graduation Year:

GPA: SAT I Verbal: SAT I Math: SAT I Writing:

SAT II: SCORE: SAT II: SCORE:

SAT II:

Height: Weight:

Erg times in minutes:seconds Best 2k erg: Best 6k erg:

Side:

Once you have completed the form, feel free to tell us a little about yourself:

Northeastern Men's Rowing
Prospect Profile

Name: _____ E-Mail: _____

Address: _____

Social Sec. #: _____ (required for recruiting visits)

Home Phone: _____ Cell: _____

Date of Birth: ____/____/____ Graduation Date: ____/____/____

High School: _____

Academic: GPA: _____ SAT/ACT total _____ M _____ V _____ W _____

SAT II's: _____

Academic Programs / Concentrations of Interest: _____

Rowing: Club/School Affiliation: _____

Coach's Name: _____

E-Mail: _____ Tel#: _____

Years Rowing: _____ Ht: _____ Wt: _____ Port Strbd Scull All

Erg Scores: 2k _____ date: ____/____/____ Other Erg Scores: _____

Other Sports: _____

Race Results / Athletic Achievements: _____

- Most schools will have these forms, if not contact the coaches directly via email or phone. Below is Villanova's site – they offer a link to the Coaches email:



- You can also see where the other athletes come from by looking at the Team Roster and which regattas they row in.

- If you are contacting them by email, give them the same information that would be on a typical recruiting questionnaire like the one above.
- Contacting the coach doesn't mean that you have to go there or that you are committed to their school – coaches know this and they also are looking to help you make the best decision.
- Post your erg score on the college clearinghouse sponsored by Vespoli (www.irow.com). You may be contacted by schools that you never considered and may be interested in attending.
- Submit your erg scores to *USRowing* to get selected for Junior National Team (www.usrowing.org) – you must be a *USRowing* member. Junior National Team members will be heavily recruited by some of the best schools.

Winter of Junior Year

- Continue working on your erg score, just because its junior year doesn't mean you have to use the same erg score. Update the college coaches on your improvement or your team's success from the fall racing season. If a coach tells you they are looking for a sub 6:45 2K, then if you are determined to go there show the coach what it means to you by surpassing his expectation.
- Work hard to get into a top boat for the spring time. College coaches research teams and boats that do well and then seek them out. If your boat medals, then that will help your marketability.
- Attend Junior National Team ID Camp – go to the *USRowing* link above for more info.

Spring of Junior Year

- Contact the admissions offices of the schools that you are interested in. Find out what SAT/SAT II scores you need to go there. The coaches will also be able to help you with this and may be good to know what kind of pull they have in the admissions office.
- Visit schools and check out the boathouse or where they row
- If you have a free weekend, watch a college regatta – actually not much different than most high school regattas.
- Ask your current coaches to contact college coaches for you or ask for their help

Summer after Junior Year

- Visiting schools in the summer may be easier as your spring will be busy with regattas and practices. Stop by the crew coach's office to see if anyone is in to speak with you or contact them ahead of time to make an appointment.
- Go to a rowing camp or join a club team for the summer

Note: Men's crew is not a NCAA sport so men do not have a NCAA tournament like the women do as well as fewer scholarship opportunities. Check with the college coaches on what they can offer financially. Depending on what school you go to, the team will have different requirements to comply with their team's standards. Many teams will still have you apply to NCAA Clearinghouse, others you don't have to do a thing.

ROWING GUIDE FOR 12TH GRADERS

Phase V: Closing the Deal

The level of competition will once again increase as you will no longer be able to participate in junior events. Senior year is when you will be making your final decision on colleges and obviously the last year of high school rowing.

- Try to narrow down the colleges that you will be applying to
- Contact the coach and schedule an official visit with the team. Official visits usually consist of going to a practice or a regatta, meeting the team, meeting the coaches, touring campus, and seeing the facilities. Official visits are a great way to experience the school as a typical team member would.
- If the team has a “recruit day” and you are one of them, make sure you are there.
- The fall is your last chance for the SAT’s so prepare accordingly.
- Decide on a plan for your applications – which schools you will be applying early to, most coaches will want you to do early decision or action
- Update your college coaches during the year on your success in rowing (PRs, gold medals won, named a captain)
- Apply to the NCAA Clearinghouse (www.ncaaclearinghouse.net)
- Have a backup plan if you don’t get into your number one choice
- If you row in the fall, try to meet up with the coach during one of our regattas. Many of the fall regattas hold college events so most of the regional college crew teams will be there in action.

Preparing for College Rowing

- Ask your coach what you should do over the summer in order to be best prepared for fall rowing. Many coaches will have summer workout plans for their rowers.
- If the coach doesn’t have a plan of his own, then ask your high school coaches to help you set up one.
- Work on your cardio and erging over the summer
- Row as much as you can
- Good luck!

COMMON ROWING TERMINOLOGY

Boats or Sculls

The subtypes of rowing shells are classified according to the number of rowers in the shell:

Sculling Boats – each rower has two oars.

These shells almost never have a coxswain. Steering is done by applying more power or pressure to the oar(s) on one side of the shell. The hands can overlap (usually left over right in the U.S.) or the left hand is in front of the right.

- **Single** (1X) - A scull for one rower. Singles are about 26 feet long and less than 1 foot wide. Racing singles can weigh as little as 30 pounds. There are heavier, shorter and wider versions often referred to recreational singles.
- **Double** (2X) - A scull for two rowers. Most racing doubles also can be used as a pair with a different set of riggers designed for sweep oars, usually with a rudder added. There are also recreational versions of sculling doubles.
- **Quadruple** (4X) - A scull for four rowers, often referred to as a Quad, and usually has a rudder attached to one of the sculler's foot stretchers as in the straight four. Most quads also can be rigged as a straight four using a different set of riggers.

Sweep Boats – each rower has one oar each.

The shells usually have a coxswain, referred to simply as the cox, who steers the shell using a rudder and guides the rowers with commands.

- **Coxless pair** (2) – Two sweep rowers without a coxswain. Steering is done via a rudder attached to a cable that is connected to one of the rower's foot stretchers.
- **Coxed pair** (2+) – Two Sweep rowers with a coxswain
- **Coxed four** (4+) – Four sweep rowers with a coxswain
- **Straight (or coxless) four** (4) – Four sweep rowers without a coxswain; steering is done with a similar type of rudder setup as the coxless pair.
- **Eight** (8+) – Eight sweep rowers with a coxswain. Eights are 60+ feet long and weigh about 250 pounds.

The most commonly used shells, and the shells used by the Manhasset High School Crew Team), are with 8 oarsmen/one coxswain and four oarsmen/one coxswain.

Weight

Classifications

Basically, there are two weight classes for rowers – heavyweight (HWT) and lightweight (LWT). A rowing shell usually is built with a particular weight class of rower in mind.

Men (M) – For LWT boats, 160 lbs is the individual maximum and the boat cannot average more than 155 lbs. per person.

Women (W) – The individual maximum is 130 lbs and the boat must average no more than 125 lbs per person. In the U.S., women are only subject to the individual maximum only.

Positions

<i>Bow</i>	The person sitting in Position 1
<i>Bow four</i>	Bowman, 2, 3 and 4 rowing together
<i>Bow pair</i>	The Bowman and 2 rowing together
<i>Coxswain</i>	The person who directs, commands, and steers the boat. He/She either sits in the stern or lies in the bow.
<i>Stern four</i>	Stroke, 5, 6 and 7 rowing together
<i>Stern pair</i>	Stroke and 7 rowing together
<i>Stroke</i>	The person sitting in the 8 position and is stern-most in the boat. He/she also is the one who sets the pace or cadence.

Backsplash

The water thrown back toward the bow by the blade after the catch. The smaller the backslash, the better the catch.

Blade

The wide, flat part of the oar used to move the boat through the water. The blade is painted with the school's colors and is a way to distinguish among boats at a distance.

Bow

The front of the boat

Bowman (or Bow)

The rower in the bow of the boat. When the boat is coxless (i.e., no coxswain), the bowman issues the commands or steers the boat.

Button

A wide collar on the oar that keeps it from slipping through the oar locks

Cadence

The number of strokes per minute.

Check it

Take a quick stroke to correct the direction of the boat. Check is also a term for wasted energy due to poor technique.

Commands

Directions given by the Cox

Cox-box

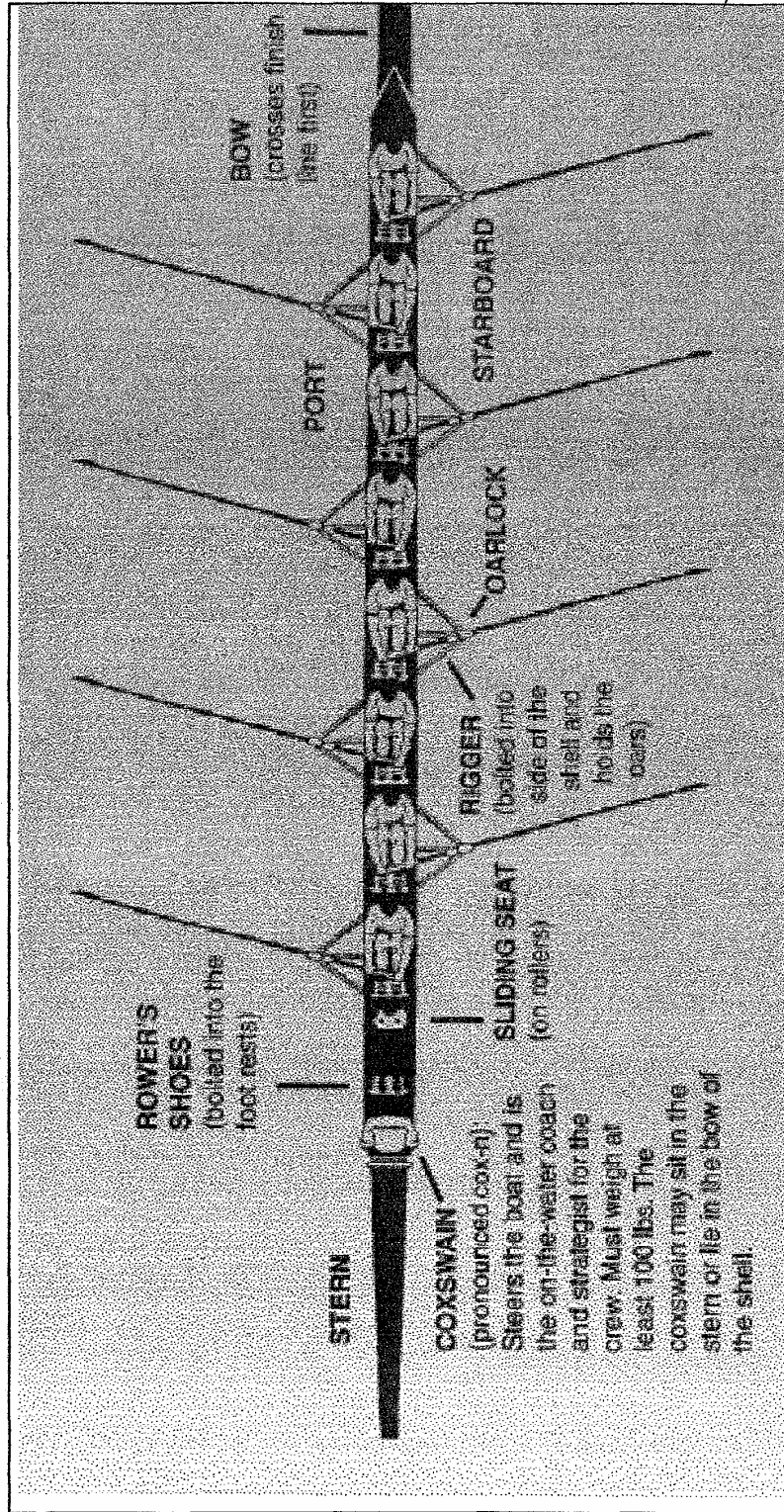
An electronic amplifier for the coxswain's voice that plugs into a speaker system built into the boat, so that each rower can hear his/her instructions. It also contains a stroke meter that works from the magnet under the stroke's seat and measures the cadence or strokes rowed per minute.

<u>Deck</u>	The flat upper surface at the ends of the hull equal to approximately 2 – 3 seats. Often used as a race measurement, as in “they won by a deck”. That portion of the bow and stern is covered with fiberglass cloth or thin plastic.
<u>Eight</u>	A Sweep for eight rowers
<u>Ergometer</u>	Also called an "erg," is a rowing machine that closely approximates the actual rowing motion. The verb, "to erg", means to work out on an ergometer. An "erg piece" is a particular set of work on the ergometer, such as rowing 2000 meters. Erg tests are used by coaches to ascertain an athlete's aerobic and endurance capabilities.
<u>Four</u>	A sweep for four rowers
<u>Gate</u>	The bar across the oarlock that keeps the oar in place.
<u>Gunwale</u>	Pronounced “gunnel” – The top edge of the side of the boat. It is common to refer to the rowers by number. The convention is to number from bow to stern, so that the bowman is No. 1, the person behind him/her is No. 2, etc. You can also address the rowers by pairs or fours, making Bow Pair No. 1 and No. 2, Stern Four No. 5, 7, 8
<u>Hands on</u>	Get ready to lift the boat.
<u>Hold water</u>	Put your blade in the water to stop the forward motion of your boat.
<u>Keel</u>	The backbone of the shell, running down the center, to which the ribs attach. Not all boats have keels.
<u>Loom</u>	The section of the oar between blade and handle.
<u>Oars</u>	Oars propel the boat through the water. Sweep oars are about 12-13 feet long and made of wood (sturdy) or graphite (lighter). They cost over \$250 each.
<u>Oarlock</u>	The U-shaped swivel devise that holds the oar in place. It is mounted at the end of the rigger and rotates around a metal pin to let the oar pivot on the rigger. A gate closes across the top to keep the oar in.
<u>Pair</u>	A sweep for two rowers
<u>Pitch</u>	The angle of the blade to the water. Pitch prevents the blade from digging uncontrollably deep into the water. The pitch is positive, in other words the top of the blade tilts toward the stern.
<u>Port</u>	Left side of the boat, looking from stern to bow. (On your right when you are rowing!)
<u>Rating</u>	The number of strokes per minute
<u>Races</u>	There are two types of races: Head races, and sprints. Head races are usually held in the Fall and sprints in the Spring. Sprints are 1500 meters for high school and 2000 meters for college.
<u>Rigger</u>	The triangular-shaped metal extension device that is bolted onto and protrudes from the side of the boar and holds the oars.

<u>Rudder</u>	Steering device at the stern. The rudder, in turn, is connected to some cables (“tiller ropes”) that the coxswain can use to steer the shell.
<u>Rushing the Slide</u>	Results from coming too fast toward the catch from the recovery, and causes check.
<u>Scull</u>	A boat in which a rower has two oars. The term is interchangeable when referring to one of the oars used in a sculling shell, the shell itself, or the act of rowing a sculling shell.
<u>Set</u>	The balance and feel of the boat. A "good set" provides a level, stable shell that is the basis for a symphony of motion. The most efficient boats are balanced evenly over the center line and remain so throughout the strokes. The set of a boat can be affected by a variety of factors: rower’s posture, hand levels, rigging, timing at the catch and release, and weather conditions such as the wind. If rowers are not aligned properly, or if a rower swings off center as part of his or her motion during a stroke, or if rowers on one side of the boat are pulling with more or less force than the other side, the set of the boat can be altered, introducing drag.
<u>Shell</u>	Another word for the rowing boat
<u>Skeg / Fin</u>	A small fin located along the stern section of the hull, which helps stabilize the shell in holding a true course.
<u>Slide</u>	The little tracks in which the seats are set to allow the seats to slide back and forth as the rower complete his or her movement.
<u>Slings</u>	Collapsible, portable frames with straps upon which a shell can be temporarily placed.
<u>Square your blade</u>	Blade straight up, ready to slice into the water.
<u>Starboard</u>	Right side of the boat, looking from stern to bow. (On your left while you are rowing!)
<u>State room</u>	One rower’s space in the boat
<u>Stem</u>	The back of the boat
<u>Stretcher</u>	The device a rower's feet are strapped into. The stretcher consists of two inclined footrests which hold the rower's shoes. The shoes are bolted into the footrests.
<u>Weigh enough</u>	Stop rowing.

OVERHEAD VIEW OF AN EIGHT MAN SHELL

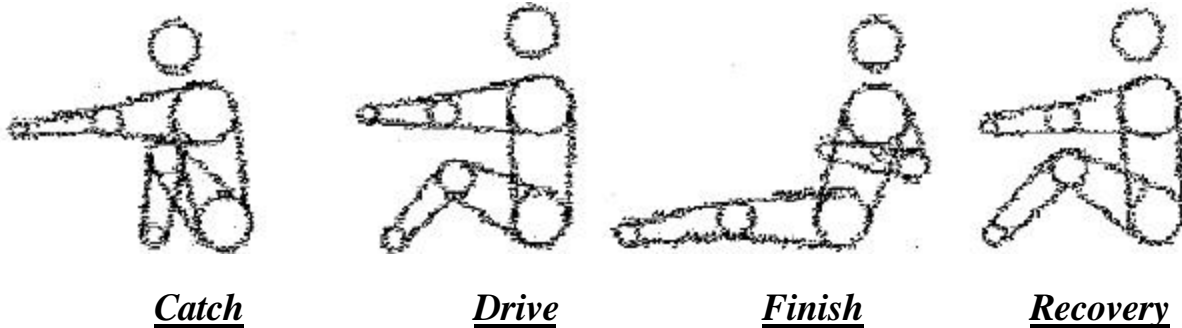
Overhead View of an Eight Man Shell



*Note that the comment on the coxswain is not universal. Each regatta has its own set of regulations on the weight of the coxswain as well as if there are coxswain weigh-ins.

**The rower closest to the coxswain is the stroke. In this diagram, the boat is port stroked but it can also be starboard stroked.

THE STROKE / TECHNIQUE



The stroke or rowing cycle starts with the rower at rest with legs fully extended and the oar blades immersed in the water, almost perpendicular to the water's surface, and ends with the rower at the end of a pull through the water.

Catch

The beginning of the stroke, when the oar blade enters into the water. The rower applies power to the oar in a fluid motion as it enters the water, starting with a leg drive and then the back and finally the arms. The catch is supposed to happen at the very end of the recovery, when the hands are as far ahead of the rower as possible. Rowers who begin to uncoil before they drop the oar blades are sacrificing speed by not getting a complete drive. "Lunging at the catch" means the motion is not smooth. If you see a lot of splash at the catch, assuming the water is relatively smooth (or "flat"), the oar blades are not entering the water properly.

Reach

The distance an oarsman is able to extend his/her arm forward at the catch.

Crabs

When the rower's oar gets "stuck" in the water, either right after the catch or just before the release; caused by improper squaring or feathering. The momentum of the shell can overcome the rower's control of the oar. A crab occurs when an oar blade enters the water at an angle, instead of perpendicularly, and gets caught under the surface. The oar handle drives into the stomach and has the potential to throw a rower out of the boat entirely! Even if not that disastrous, "catching a crab" will certainly drastically interrupt the flow of the boat through the water.

Drive

The propelling part of the stroke. Just after the catch, the rower begins pulling back on the oar. Initially, the body position should not change as the legs are doing all the work, then the upper body begins to uncoil, and the arms start their work of pulling the oar through the water. Finally, the rower pulls his or her hands quickly to the body, finishing in a "layback" position.

Finish

The last part of the drive when the oar is taken out of the water, and when the power is mainly coming from the back and arms. After the drive, the oar handle is moved down, drawing the oar blade from the water. At the same time, it is turned horizontal to the surface ("feathered").

Feathering Turning the oar blade from a position perpendicular to the surface of the water to a position parallel to the water; which is done in conjunction with the release. When the blades are brought out of the water, they should all move horizontally at the same height, just above the water. The rower is "skying" if the hands are dropped too low before the catch causing the oar blade to rise before it drops into the water. Proper feathering is always difficult, but becomes extremely challenging in choppy water.

Recovery

The slide forward, before the catch. The part of the cycle from the release up to and including where the oar blade enters the water. The oar remains out of the water as the rower first pushes his or her hands away from the body and past the knees. Then the body follows the hands and the sliding seat moves forward until, knees bent the rower is ready for the next catch.

Squaring A gradual rolling of the oar blade from a position parallel to the water to a position almost perpendicular to the surface of the water, done during the recovery portion of the rowing cycle and in preparation for the catch.

Layback

The amount of backward lean of the rower's body at the end of the finish.

Pressure

The amount of effort a rower puts into the stroke. Races, of course, are conducted at full pressure, but practices and warm-ups may entail a series of strokes at half or three-quarter pressure.

Release

A sharp motion of the hand, downward and away, which removes the oar blade from the water and starts the rowing cycle.

Stroke Rate

The number of strokes per minute at which the team is rowing. At the start of the race, the rate is high, perhaps 40 for an eight, and then settles to the low 30's for the body of the race, then may move back to the low 40's for a finishing sprint.

Swing

The inexpressible "feel" of a boat that is moving together as a single unit.

PROPER ROWING TECHNIQUE

- Have someone watch you to help you match your body positions to those shown below.
- These positions should be blended together to make a smooth and continuous stroke with no stopping at any point in the stroke.
- Aim for a stroke rate of between 24 and 30 strokes per minute as displayed on the Performance Monitor.
- Grip should be loose and comfortable; wrists should be level.



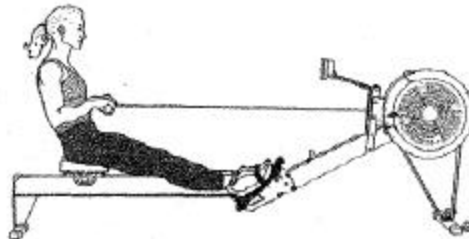
the catch

- Extend your arms straight toward the flywheel.
- Keep wrists flat.
- Lean your upper body slightly forward with back straight but not stiff.
- Slide forward on the seat until your shins are vertical (or as close to this as your flexibility will allow).



the drive

- Begin the drive by pressing down your legs.
- Keep your arms straight and hold your back firm to transfer your leg power up to the handle.
- Gradually swing back with your upper body, bending your arms and prying against the legs until you reach a slight backward lean at the finish.



the finish

- Pull handle all the way into your abdomen.
- Straighten your legs.
- Lean your upper body back slightly.



the recovery

- Extend your arms toward the flywheel.
- Lean your upper body forward at the hips to follow the arms.
- Gradually bend legs to slide forward on the seat.
- Be sure your arms are extended before you bend your knees.



the catch

- Draw your body forward until the shins are vertical.
- Upper body should be leaning forward at the hips.
- Arms should be fully extended.
- You are ready to take the next stroke.

Training on the Concept2 Indoor Rower

THE ART OF COXING

Coxing can be considered an art. It takes experience, intelligence, and common sense to become a master.

Learn from other coxswains. Chances are they know something about the role. Talk to them, watch them. If you have the chance, go to a camp or a coxswain clinic. The more knowledge and experience you have, chances are the better you will be.

Learn how to row. One of the most important things that one must do if they are to master the art is to learn how to row. Don't just watch video or other people row. Jump in the boat and do it! If you cannot row yourself, your abilities will be limited. You could know the correct technique, and everything there is to know, but it is not the same as actually doing it.

Motivational skills. **You must be able to motivate your crew.** During the last 200 meters of a race when your boat is right next to your opponent, you have to say the right things to get your crew rowing to their fullest, giving it all they have. Your words have the power to make them pull ahead. This holds true for the entire race. Tell your crew where they are in the race, "500 meters left to go, pick it up for a ten!" Tell them where other boats are, "We're riding the stern, get me up there! Pull ahead, you have the ability!"

Earn respect. As a coxswain you have responsibility. Don't go on a "power trip". Learn how to work with the other members of your team.

Know your crew. Know the names of every oarsman in your boat. Don't just use their number. Try to build a relationship with the rowers on your boat. It's a big plus if your rowers like you.

Personality. Personality is an important issue. Oarsmen tend to like it if their coxswain has a personality. Be able to be serious, but have a sense of humor at the same time.

Style. Style is another important part. Style is what you say and how you say it. Some coxswains swear every other word. Some are able to stay calm the whole race, but still have the control and burning desire. And some are true motivational masters. Style is up to you. Find what works with your crew.

Sun glasses. Sun glasses are the key to intimidation. Sunglasses can give coxswains that certain look, the mysterious look. Sun glasses hide your eyes. Because others are unable to see your eyes, they don't know what you're thinking. If a boat's coxswain has the right style, other boats may be intimidated. Rowing is both physical and psychological.

A few Golden Rules when you cox:

- *Keep your crew in line.*
- *Be aware, alert, and observant.*
- *Know how to handle your boat. You may need to make quick maneuvers and decisions.*
- *Don't ramble. Pick something to focus on. Sound calm and in control.*
- *Make sure your crew is focused.*

COXSWAIN COMMANDS

<u>Back down (or Back)</u>	Row backwards.
<u>Check it or Eight Check</u>	Same as Hold Water
<u>Hold Water</u>	Square the oar in the water (to stop the boat fast)
<u>Paddle</u>	Row easy, <i>i.e.</i> , no power on the stroke
<u>Half Power</u>	Next step up from Paddle. Next step is 3/4 Power and the Full Power.
<u>Power (N)</u>	Take (N) strokes at Full Power
<u>Ready all-row</u>	The command to start rowing. Should be preceded by “from the finish” or “From the catch”
<u>Weigh enough</u>	Finish the stroke in progress and stop rowing

Rowing Performance Enhancers - Hints by Karen Orlando



LYING ON YOUR BACK WITH ONE LEG BENT
Bring your knee over the other leg and push your knee against the floor with the opposite hand. Then reach with the other arm to the opposite side looking in the same direction. You will feel the stretch in your lower back and bottom. Hold approx. 30 seconds.



CRAWLING POSITION
Let your arms slide along the floor as far as possible. Push your bottom back and down and the chest towards the floor. Breathe out while doing the exercise. HOLD for 30 seconds.

ALTERNATE FOR PEC'S
Stand sideways against a wall with arm closest to the wall straight out with palm facing the wall. Feet should be turned slightly in the opposite direction. Arm should start out at about a 30° from the floor. Move the arm up only as tolerated. Now turn the entire body in the direction of the flat arm remains leading so the body is turning away from the wall.



HIP FLEXORS
Get into a half-squatting position and tighten your stomach muscles so your back doesn't arch. Push your hips forward.

STAND STRAIGHT WITH FEET APART
Support your back with your hands while hunching your back as far backwards as possible. Keep your knees straight during the exercise.



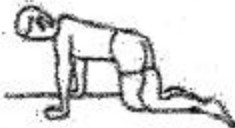
HAMSTRINGS
Sit with one leg bent towards your chest and crossed over the other leg. Pull your bent knee with your arms towards your chest. The stretch should be felt behind the thigh and in your buttock.



HAMSTRINGS
Sit on a table with one leg straight in front of you and your other leg on the floor. Bend your body forward keeping your back straight.



Lying on your back, bend one knee into your chest and wrap a towel around the ball of your foot and try to straighten your leg.



BUTTOCK
On all fours, cross your right leg over your left. Keep abdominals tight so the pelvis stays level - don't twist your spine. Extend your right leg back and keep your weight on the left leg. Stretch should be felt along outer edge of your right leg.



CALF
Stand in a walking position supported with your leg to be stretched directly behind you with the knee straight and then repeat with the knee bent. Lean forward until you feel the calf being stretched.

"When doing these stretches, the body position is important. The body will naturally want to take the path of least resistance which in most cases will not be stretching the correct group of muscles. It will compromise another body part. Do not try to stretch beyond the "pulling feeling". Hold the position for at least 30 seconds. Rowers need guidance to ensure the correct body position is being held."

Karen Orlando, BScPT, Dip in Sport Physiotherapy.

Physiotherapist for Canada's National Rowing Team.