

# **FOX CHAPEL CREW**

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**2017-2018**

**PARENT HANDBOOK**



**W**elcome to all Fox Chapel Crew parents and athletes.

We are happy that you will be joining us for an exciting new rowing season. We hope that this handbook will answer a lot of questions. Please do not hesitate to ask questions if there are topics that we have not covered.

Rowing is a wonderful sport. Your child will grow and develop both physically and emotionally. Many of us who have participated in the sport as athletes and parents of athletes have come to believe that rowing is one the best uses we have ever made of our family's resources. Fox Chapel Crew has taught our children about discipline, motivation, respect, dedication, competition, winning and losing, humility, joy, teamwork and has established lasting friendships for both athletes and parents. The character development our young adults have gained has outweighed the financial commitment we have made. This benefit of rowing has been worth every penny and much, much more.

We wish all rowers and families the very best in the coming season.

Sincerely,

Fox Chapel Crew Board

## **History of Fox Chapel Crew**

The Fox Chapel Crew was created in the spring of 1995 with a roster of 8 girls and 5 boys, led by Head Coach Mark Bellinger. Our team has grown to include over 50 student athletes. We are a club sport affiliated with Fox Chapel Area High School and managed by our Board of Directors.

Fox Chapel Crew is not simply a team, but an organization of coaches, students, and parents. FC Crew parents play a fundamental role in the continuing success of the club. We encourage each family to become involved by volunteering in some capacity. Our parents have learned that participating in the crew experience provides a rare opportunity to mingle with their child's friends and share in their child's triumphs, building long-lasting memories. If only a few parents volunteer, the commitment for each is significant. When each family volunteers to do one or two jobs, the involvement is spread among the group, and the rewards are the greatest for all.

Rowing benefits its participants in ways that go far beyond fitness and competition. Discipline, leadership, dedication, teamwork and time management are among the skills developed during participation. Fox Chapel Crew rowers are consistently ranked at the top of their classes and have a record of academic excellence and scholastic leadership.

## Coaching Staff

Head/Mens, Novice Coach	Mark Bellinger	412-973-6653	<a href="mailto:mfbellinger@gmail.com">mfbellinger@gmail.com</a>
Women's Head Coach	Katie McCarthy	412-551-0263	<a href="mailto:klmccarthy08@gmail.com">klmccarthy08@gmail.com</a>
Assistant Coach	Molly Schneider	724-612-2921	<a href="mailto:molly.l.schneider@gmail.com">molly.l.schneider@gmail.com</a>

## FC Crew Board

President	Mark Bellinger	412-973-6653	<a href="mailto:mfbellinger@gmail.com">mfbellinger@gmail.com</a>
Secretary	Alice Paviglianiti	412-952-0006	<a href="mailto:alicepaviglianiti@gmail.com">alicepaviglianiti@gmail.com</a>
Treasurer	Monica Gay		<a href="mailto:fccrewtreasurer@gmail.com">fccrewtreasurer@gmail.com</a>
Boys Captains (one per season votes)	Daniel Andrud Joe Kirklewski		
Girls Captains (one per season votes)	Sarah Seay Anna Paviglianiti		

## Vice Presidents:

VP Communications	Amy Mclvor		<a href="mailto:letzgopens87@gmail.com">letzgopens87@gmail.com</a>
VP Fundraising	Tera Higgins		<a href="mailto:ehiggins207@hotmail.com">ehiggins207@hotmail.com</a>
VP Travel	Lisa Andrud		<a href="mailto:fccrewtravel@gmail.com">fccrewtravel@gmail.com</a>
VP Food	Paul Brach		<a href="mailto:paul.brach@gmail.com">paul.brach@gmail.com</a>  the
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## Other Contacts:

Merchandise/Crew Gear	Gina Gilmore		Jamsam57@comcast.net
Car Wash Committee	Erich Klatt Steven Hinz		<a href="mailto:Eklatt380@gmail.com">Eklatt380@gmail.com</a> Shinz57_@yahoo.com
Giant Eagle Cards Fundraiser	Ann Paulini	412-781-5075	<a href="mailto:annpaulini@yahoo.com">annpaulini@yahoo.com</a>
Banquet Committee	Tracey Marsh Alice Paviglianiti		<a href="mailto:traceybmarsh@comcast.net">traceybmarsh@comcast.net</a> <a href="mailto:alicepaviglianiti@gmail.com">alicepaviglianiti@gmail.com</a>

Team captains are elected by the student-rowers. The election is held at the end of the season and once elected, the captain's term of service runs from the spring banquet until the banquet of the following year. Being elected a captain is an honor that carries with it a great many responsibilities. The election of an individual to this position and the amount of work required of a captain should not be taken lightly.

# Membership Information

## Forms, Waivers, Fees, and Dues

The Fox Chapel Crew, Inc. is a 501(c) (3) non-profit organization supported by membership dues and fundraising. Membership forms and waivers are required for each season and are available before the start of practice for each season. All athletes must register with the Athletic Department via Family ID registration on the FCAHS Athletic Department web page by the deadline date set by the school.

## Financial Obligations

Without a doubt, running a rowing program is expensive. With limited support from the school district, we raise money through dues and fundraisers. Funds are also needed to ensure excellent coaching support and to provide partial scholarship assistance to students and families for whom fees may be otherwise prohibitive.

## Payment Plans and Scholarships

The club is willing to arrange payment plans to meet any family's budgeting requirements. Requests for payment plans and for partial scholarships may be made to the club treasurer at the beginning of each season. All information regarding scholarships and payment plans is confidential.

## Dues and Travel Fees

These are some of the items that are covered by dues payments:

- Coaches' salaries
- Insurance for our boats and equipment
- Storage fees for our boats
- Membership to Three Rivers Rowing Association for each team member (as a member of FCC)
- Membership to US Rowing Association for our team
- Hotel and transportation fees for each race trip
- Food/snacks at race course
- Race entry fees and other race-related expenses
- Equipment purchase and maintenance

Dues must be paid in a timely fashion in order for athletes to be allowed to practice.

Travel, hotel, and food expenses for SRAA Nationals are *not* included for those who qualify.

## Fundraising

Because registration fees and travel fees do NOT completely cover the cost of operating the club, we rely heavily on fundraising. Fundraising allows us to maintain fees as low as possible, make necessary capital purchases, provide scholarships, and maintain existing equipment.

Our fundraising efforts include both mandatory and optional components. Each rower/family is required to complete mandatory fundraising as part of their membership. Optional fundraising supports the club and therefore requires help from the entire FC Crew community. We make an effort each season to offer optional fundraising as a means to permit families to earn credit towards paying down their dues. FCC also gratefully accepts donations from individuals and businesses who would like to support our team. All donations to Fox Chapel Crew, Inc. are tax deductible.

### **Giant Eagle Gift Cards: an all-year fundraiser**

**Giant Eagle Gift Cards** are the *easiest* way to help us raise funds for Fox Chapel Crew. We earn 5% of the face value of every card! The gift cards can be used at Giant Eagle to purchase food, prescription medicines, gift cards to over 50 other stores (such as Sears, Kohls, Olive Garden, Best Buy, Home Depot, and just about anything in the store except money orders. Gift cards also can be used at GetGo for gasoline purchases. Fuel perks are earned on each purchase just as though you were using cash or credit/debit cards for your purchase. Cards come in \$25, \$50, \$100 and \$200 denominations. Contacting our head of gift card distribution will allow you to receive the cards in an easy manner. You can also set up a monthly standing order using a form available at [www.foxchapelcrew.org](http://www.foxchapelcrew.org)

### **Fall Dues**

### **Spring Dues**

Dues amounts are determined before the start of each season and depend primarily upon coaching fees, race entry fees and travel fees. Spring dues are higher because we travel and race more in the spring.

Partial scholarships and payment plans are available by contacting our treasurer.

Dues payments must be received or special arrangements must be made prior to dues deadlines in order to allow athletes to continue to practice.

## Practice, Race, Travel Information

### Practice Facilities

The team trains at the Millvale facility of Three Rivers Rowing Association on the quiet channel beside Herr's Island. Located in Millvale's Riverfront Park under the 40<sup>th</sup> Street Bridge, the Millvale boat house is actually two buildings, one for storing boats and the other for training. The training center has two indoor rowing tanks that allow 16 people to simulate rowing. It also has a weight room, a large room with indoor rowing machines, lockers, showers, meeting rooms, and room to house equipment.

The boat house is shared by many teams and appropriate security measures should be observed. The locker rooms are open to all who use the facility, and rowers are advised to bring a lock and use a locker during practice. Locks may not be left on lockers overnight, and should be removed at the end of each practice.

*Fox Chapel Crew members are only permitted to be at or in the boathouse as a part of a coached practice, and an FC coach must always be present at each practice. We are guests at TRRA. Each team member should participate in keeping the facility clean and neat.*

**Directions to the Boat House:** Take the Millvale exit from Route 28 South. Go straight at the STOP sign at the end of the exit ramp. After continuing straight, you must be in the right lane at the at first traffic light. After the first light, there are three lanes, and then the lanes split. The far right lane turns right. You do not want to be in this lane. The far left lane must turn left onto Rt. 28 North. You should be in the middle lane after the first light, so that when the lanes split, you are in the right lane, which goes towards Rt. 28 South. Turn left after you pass through the second light. You will go under a railroad underpass and across train tracks at a sign for Millvale Riverfront Park. Once you cross the railroad tracks, you will go under a second overpass. At the STOP sign, turn right into the park and follow the road all the way to the end. You will see a red, white, and blue building which houses Three Rivers Rowing. The building behind the first one you come to houses our boats.

## The Rowing Season

The rowing potentially season extends through the entire school year, with summer camps available. Most students commit to the fall and spring racing seasons, and the majority of them participate in winter training. A few substitute another sport for the winter, and some row only spring or fall.

### Fall Season

The fall season is composed mostly of training and conditioning in preparation for “head” races and some sprint racing. *Head* races are timed races in which boats start one at a time down a race course (about 3 miles long), a boat starting about every ten seconds, as opposed to *sprint* races, which are side-by-side racing and generally take place in the spring. In the fall we attend the Head of the Ohio, our local race on the Allegheny River, and typically participate in some sprint racing with other local high school teams. The Allegheny Boat Race (boys) and Fall Classic (girls) are held in November. Our fall season ends with the Central Catholic Biathlon (indoor ergometer racing and a 6 mile run) in December.

### Winter Training

Over the winter, the team works hard on technique and conditioning to build endurance and to be ready for a quick start in the spring racing season. The indoor season primarily consists of training on indoor rowing machines, called ergometers. The team trains by running, rowing on ergs, lifting weights, and rowing in the indoor tanks. Core training, calisthenics, and some yoga and stretching are pivotal.

The team will race at an indoor racing event once during the winter season. Scores compiled from erg training are crucial information for athletes interested in rowing at the college level.

### Spring Season

Spring is by far the busiest season for high school rowing, with several sprints races, many of them requiring travel out of town. The season builds in anticipation of the Midwest Scholastic Rowing Championship in May, where the Foxes row against 50+ teams from across Ohio, Illinois, Michigan, Indiana, and West Virginia. Finishing first or second in a Midwest final qualifies a boat to attend national competition at the Scholastic Rowing Association of America on Memorial Day weekend, the ultimate goal of every Fox Chapel rower and coxswain.

One additional note about the spring schedule: **WE WILL HAVE PRACTICE DURING the beginning of SPRING BREAK.** Spring break training camp is a very important element of the spring season, and can make or break the team’s ability to race successfully in the championship season. Rowers should plan on being present for the practice days scheduled during spring break week.

# **On The Water**

## **Commitment**

Practice is the foundation of success in any sport. Rowing is a unique sport in regards to practice. If just one member of a boat lineup does not attend practice, the other athletes in that boat may be unable to practice. Therefore, all athletes are expected to attend all scheduled practices. The coaching staff recognizes that legitimate conflicts arise and ask when at all possible, that athletes notify coaches in advance of an impending absence. Makeup workouts may be assigned by coaches when practices are missed.

## **Safety**

When rowers train on the water, coaches accompany them in safety launches. The launches are equipped with safety gear and all coaches carry a cell phone. No rower is allowed on the water without the direct supervision of a coach.

## **Weather**

On the water practice continues in all weather conditions, except lightning and high winds. Practice may be transferred to land in the case of high water flow, a particular problem that we are most likely to see in the spring. Cancellation of water practice is at the discretion of the coaches. Unless otherwise announced by coaches, athletes should report to the boathouse for practice in any weather. Land practice may replace practice on the water on inclement days. Notice of practice cancellation on school days will be made by an announcement at school and by email or text to the crew.

When classes at FCHS are cancelled or early dismissal from school is made for weather reasons, practice will be cancelled as well.

## **Swimming Test**

Basic swimming skills are required in the unlikely event a rower should go into the water. A swimming test is required for each rower.

## **Practice Clothes**

Rowing gear can be as minimal as a pair of shorts, tank top or t shirt, and a pair of socks. Clothing should be close-fitting to minimize wind resistance and to prevent clothes from getting caught in the slides of the seat and oar handles while rowing. Slip-on sandals that may be worn over socks are important. Sandals can be slipped off just before getting into a boat and slipped back on again before carrying the boat up from the docks. Tennis shoes should be brought to every practice in case erging or running is required.

Layering of clothing usually works best for colder weather practices. Rowers will be instructed how to dress for the cold. Rowers are encouraged to always bring a bottle of water, even on cool days when there is not much sun. Sunscreen should be in every rower's bag.

## **Dressing for races**

Novice rowers will dress in black spandex shorts or long black spandex, and a colored t-shirt for races in the fall. The novice team usually designs and creates their own racing shirt.

Goretex jackets and unisuits are required for spring racing. Arrangements for fitting and purchase of these items will be made in December and in the early winter season so that they are delivered in time for spring racing.

## **Communication**

The nature of any team sport makes communication critical. Our VP of Communication will send emails to rowers and parents as necessary to inform rowers and parents of important issues. Coaches will communicate directly with rowers via email or text or tweet as necessary. We treat all athletes as adults as much as possible. When an athlete has a question or needs to miss practice, that communication should go directly from the athlete to the coach, not from parent to coach. Athletes are expected to know the schedule and team rules, own their own participation on the team, and act responsibly towards coaches and teammates. Check out our website ([www.foxchapelcrew.org](http://www.foxchapelcrew.org)) for more information, including calendars and links to team photos.

## **Carpooling**

Carpools are a necessity in order to transport rowers to and from practices, and are especially critical for ninth and tenth graders. Carpooling is a necessity. Drivers should be aware that, even if their own child is ill or cannot attend practices, other athletes in the carpool still need to get to and from the boathouse, so alternate arrangements must be made when necessary. Due to the nature of water practice and the need to share docks and docking with many other teams, ending exactly on time is difficult even when coaches plan well. Parents who are scheduled to pick up crew members after practice should not be surprised if practice runs a bit long on occasion.

## **Travel and Racing Information**

Races are a part of both fall and spring seasons. Even novice rowers race and compete in events specifically designed for novices. All rowers on the team are expected to attend each race. When a rower is training for a particular season it is assumed he or she will attend the races on the schedule unless the coach has been notified several weeks in advance. If you cannot attend a race for any reason, please notify your coach as soon as possible.

Fox Chapel Crew travels as a team, with parent drivers or a charter bus. We work to hard keep travel costs per rower as low as possible. Rowers are never permitted to drive themselves to an out of town regatta.

All rowers must travel with the team. If a parent or guardian wants to make special arrangements for an athlete to travel home from an event separate from the team, arrangements must be made with the Travel Coordinator prior to the event. A release form (see APPENDIX) must be signed and given to the Travel Coordinator BEFORE the date of the race. The athlete can only leave the event separately from the team when a Coach and the travel coordinator have signed the form and released the athlete from the event.

## **Trip Itineraries**

The Travel Coordinator will make all necessary arrangements for crew participants' transportation, accommodations, and restaurant reservations. Information containing departure and return times,

what to bring, where we are going, and where we are staying, will be emailed to parents approximately a week before the trip. For economical reasons we attempt to do many out-of-town regattas in one day, leaving in the early morning and returning in the late evening.

### **Chaperones and Travel Rules**

Chaperones experience a most rewarding volunteer experience. Chaperones are entrusted with the safety and well-being of the rowers. In the absence of coaches, the Travel Coordinator and Chaperones act as team authorities. Chaperones are to be respected by athletes and should always respect athletes in return. For out-of-town regattas, we require at least two adult chaperones to ride the bus.

It is expected that the bus will be clean when we first load it and it will be clean at the end of the trip. Captains, under the direction of Chaperones, should ensure that no athlete leaves the drop site until the bus is clean.

When staying overnight, students are housed four to a room. Room assignments for rowers will be set prior to the trip. Rowers must lodge in assigned rooms. No room switching is permitted. No girls are permitted in boys' rooms, and no boys in girls' rooms. Parents are not permitted in rower rooms.

All rowers are required to be in rooms at a time set by coaches at the Team meeting. Lights are out at the time set by coaches at the team meeting. All rooms are to be left in a neat condition when we leave.

All rowers are to recognize that their appearance and conduct represent our team, school, coaches and parents.

### **Packing for a Regatta**

Be prepared! Some items to bring include: race uniform, extra pairs of socks, sneakers and sandals, long sleeved t-shirt to wear under racing tank in cool weather, several changes of clothes to layer for warmth, rain gear, warm jacket, gloves, hat, towel, water bottle, sunscreen, lip balm, toiletries, cell phone (to keep parents informed), sleeping bag and pillow (in a waterproof bag), spending money, and something to pass the time (music, cards, HOMEWORK). Please do not bring anything of great value.

Parents and spectators may want to bring lawn chairs, binoculars and cameras, in addition to plenty of clothing options.

### **Typical Rower Race Day**

A one-day race day usually starts very early; the bus will leave from FCHS around 3-4am and arrive on site around 6-6:30 am. Rowers will gather at the boat trailer to unload, rig and meet with their coaches. Chaperones will help the food committee set up breakfast and put up the tents. When rowers meet with their coaches they learn their race times, plans, etc. and are told when to meet back at the boats prior to racing. Many rowers will race several races on race day depending on the length of the race, regatta schedule, and equipment demand. Coxswains are in charge of keeping their particular boats together.

Towards the end of the regatta, the team will begin to de-rig the boats and load them onto the trailer. Parents/chaperones will break down the tents and pack up the equipment trailer. This process usually takes no longer than one hour after the final event. The entire team travels home from the regatta together unless the head chaperone permits athletes to ride home with parents by a pre-arranged plan, which includes a coach and the Travel Coordinator signing the release form (See APPENDIX).

### **Race Information for Parents**

Each regatta follows a similar format but each venue has its own schedule. Most of the regattas have event information online. Coaches will register boats for specific events in the regatta several weeks before a race. A heat sheet will be created by the regatta organizers that will post the start times for each heat or event, and will be available on the regatta website.

The final race schedules are posted a few days before the event. It is only then that we have a good idea of when each rower will race. Because rowing is very weather-dependent, delays in the event schedule are likely in many weather conditions. It is for that reason that we encourage rowers not to plan other activities on race days. When we travel, our return times to Pittsburgh are only estimates, and rowers will call when they are about an hour from town. If we are going to be late returning home we will certainly have the rowers call parents.

### **Boat lineups**

Coaches spend weeks working on boat lineups. Coaches need to balance between trying to allow each athlete to race, and finding the fastest lineups to put in a race. Especially in the Spring season, as we work towards qualifying for SRAA Nationals, setting lineups becomes more competitive. Making lineups can be a difficult task for coaches. Athlete attendance at practice, athletic ability, daily work ethic, the will to improve, coachability, attitude, technique and fitness, erg scores and ability to make a positive effect on boat speed are all coaching considerations for seating in a boat. Lineups are a coaching decision and are not subject to debate.

## Volunteerism

The participation of crew parents is crucial to the continuation of this club. We have no professional club managers. Everything the club does is accomplished by parents like you, most of whom knew nothing about rowing when their children joined the team. Sign up sheets will be available at the parent meetings. You may also sign up through the website and/or contact the Vice-President in charge of the particular area in which you are interested.

- **Car Wash:** Additional parents are always needed to help out at these fundraisers.
- **Hauler:** Provide a pick-up truck (or equivalent) capable of pulling the equipment trailer to a race. If you are experienced in trailer driving but don't currently have a vehicle up to the task, let us know in case there is a need for a substitution driver.
- **Cook:** The food committee provides the menu and supplies. Cooking positions are available in shifts on regatta day.
- **Server:** The perfect spot for those who like to nurture. Servers keep the food coming, re-supplying the team throughout the day. It requires only 2-3 hours volunteering and several parents can work together.
- **Kitchen Supply Cleaner:** Following a regatta, arrangements are made between the food committee and cleaner for all the dirty cooking and serving utensils to be cleaned and returned before the next regatta. A great task for someone who is unable to attend a regatta but wants to help.
- **Set-Up Team:** Occurs a little before the team bus arrives at the regatta site. Set up tents, grill, food tables, etc.; there are plenty of tasks for all levels of physical ability. Get your volunteer task in early and relax and enjoy a day of competition.
- **Tear-Down Team:** During the last hour or so of the regatta, the campsite and kitchen gets packed up while the rowers are busy getting the boats ready for travel. Perfect for those who cannot attend the entire regatta but can come towards the end of the day.
- **Recruitment Team:** We are looking for ways to attract new rowers. The committee will take part in FCHS club days, open houses, and other school-sponsored events that potential rowers may attend. The team may also attend DMS events where information about the sport can be distributed.
- **Fundraising:** Each season the fundraising committee develops several mandatory fundraising projects. Other events planned are usually not mandatory but offer opportunities to help offset our expenses.

- **Towel Person:** Need someone to collect, wash and return towels that are used to wipe down the boats after practice. This job needs to be done once or twice per week.
- **Many more options available! Please contact a board member to volunteer.**

## **A Rowing Primer for Parents and Athletes**

### **What is Rowing?**

Rowing is a sport for recreation or competition in which athletes' race against each other on rivers, lakes or on the ocean. The boats move across the water by person power through the use of oars. Rowing competitions have been established for juniors (under 19 years old), Masters (27+ yrs), and is an Olympic sport.

### **Fitness and Health**

Rowing is one of the few non-weight bearing sports that exercise all the major muscle groups. Rowing improves cardiovascular endurance and muscular strength

### **The Equipment**

Rowing is done in a boat called a 'shell'. Perhaps this name comes from the very thin veneer-like hull, once made of wax paper and later a thin layer of wood, fragile as an egg shell. Currently, shells are significantly sturdier; made of carbon fiber and plastic. Still, a 60 foot long and 2 foot wide shell big enough for eight 200 pound rowers and a 120 pound coxswain (almost a ton in total) weighs little more than 200 pounds and costs about \$40,000+ these days.

There are several different types of boats. They are classified referring to one of five variables and use a shorthand notation. The notation is crucial since race programs and results use the shorthand regularly:

- Number of rowers in the shell. In all forms of modern competition the number is 1, 2, 4, or 8.
- Position of 'coxswain'. Boats are either coxless, 'bow'-coxed, or 'stern'-coxed.

'Sweep' or 'scull'. In sweep rowing, each athlete has one oar, either port or starboard (port is on the left facing the bow of the boat) and so each athlete is either a 'port' or 'starboard'. In sculling, each athlete has two oars, one in each hand.

- Sculling options and notation: single (scull) (1x), double (scull) (2x), quad (or quadruple scull) (4x), octuple (scull) (8x). **Note** the designation (x). This is shorthand to denote a sculling shell.

- Sweep options and notation: straight pair (or coxless pair) (2-), coxed pair (2+), straight four (or coxless four) (4-), coxed four (4+), eight (8+) (always coxed). The designation has no “x” for sweeping, and the + or – indicates whether there is a coxswain.
- Lightweight or Openweight: Lightweight men maximum weight in high school is 150lbs, for women it is 130lb. Put an “L” in front of the boat designation to indicate lightweight.
- Gender. Men’s crew is designated with an M, women is with a W. So, a Men’s lightweight 4 with coxswain would be designated ML4+.

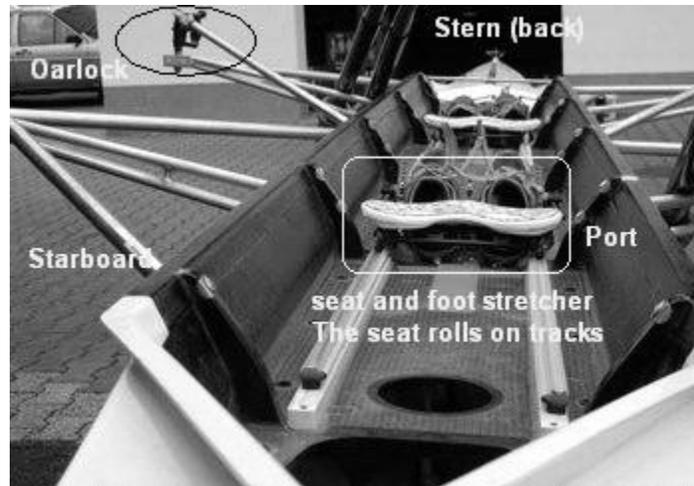
### Oars, Riggers, and Seat

Sweep Oars are long poles (360 cm or 11.8 feet) with one flat end about 50 cm (20 inches) long and 25 cm wide, called the blade. Modern oars are made from synthetic material, the most common being carbon fiber. The current blade shape is called the cleaver or ‘hatchet’ and was first introduced in 1991. This replaced the tulip or Macon blade in use from the 1950’s that replaced the long blade used since the turn of the century.

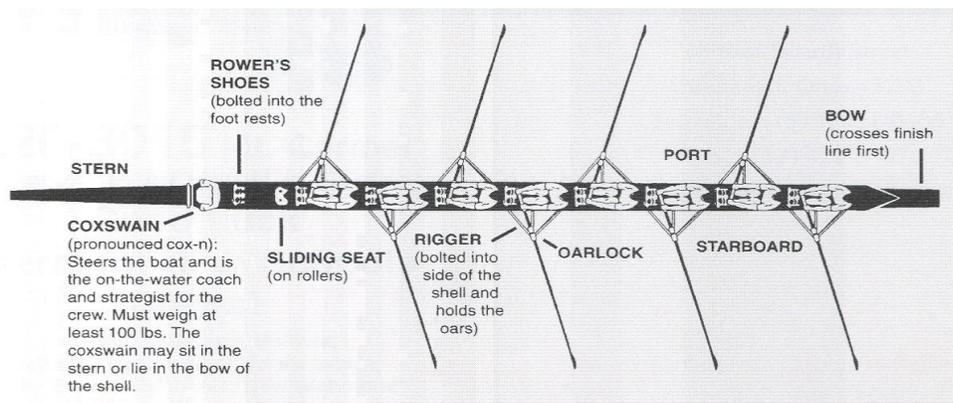


Oars are adjustable. The most common adjustment is at the ‘collar’ that determines how much of the oar is inside or outside the ‘oarlock’ that holds the oar to the boat on the ‘rigger’. Each oar (whether it is a sweep or sculling oar) is designed to be a port or starboard one. Both the asymmetric hatchet blade and collar determine which side the oar fits on.





At each athlete's seat is a rigger (a metal wing or triangle of tubes) that is attached to the hull of the shell. The rigger serves to hold the swiveling oarlock well away from the side of the hull permitting a much longer oar and narrow hull quite different from typical rowboats. Riggers are highly adjustable to accommodate to weather, athlete build, performance, etc.

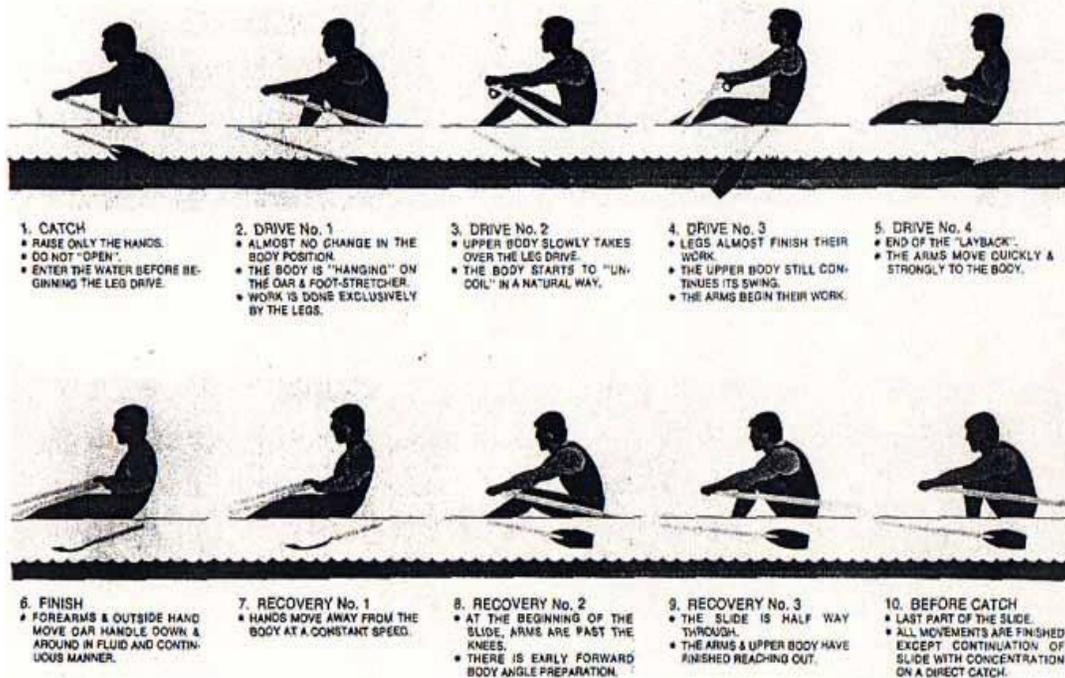


The seat that the rower sits in rolls fore and aft on tracks. This sliding seat permits the rower to use his or her legs as a major propulsive force. The feet of the athlete are placed in shoes attached to the boat (called foot stretchers) that also adjust to permit the many different sized members of the crew to use the equipment.

### Rowing Basics

So, how does an athlete row? When rowing, the athlete sits in the boat facing backwards (towards the back of the boat or stern), and uses the legs, back and then arms to lever the boat forward. The major power comes from the legs that 'push off' the foot stretchers, rolling the seat toward the bow (front) of the boat. It is a demanding sport requiring balance as well as physical strength and cardiovascular endurance. Thus, rowers actually push the boat with their legs, accelerating with the body and arms.

## Rowing Techniques by Kris Korzenfowski and Thor Nilsen



### Anatomy of a stroke

Rowing technique consumes much of the attention of coaches, rowers and coxswains. Good technique is essential for crews to go fast enough to cover 1500 meters in less than 5 minutes. There are two reference points in the rowing stroke cycle. The 'catch' when the oar blade is placed in the water, and the 'finish' or 'release' when the oar blade is removed from the water.

After the blade 'catches' the water, the rower 'drives' the boat forward. While on the drive, the blade must be down in the water, 'square'. If the blade is not square it either jumps out of the water (over-squared), or dives deep (under-squared) in what is called 'catching a crab'.

After the 'finish' the blade is taken out of the water and the rower is on the 'recovery' to bring him or herself to the next catch. When on the recovery, the blade is 'feathered' flat to minimize air drag before it is 'rolled up' square to be ready for the next 'catch'.

### Boat Speed

Boat speed is determined by the amount of water covered between strokes and the stroke rating in terms of strokes per minute. The power of each stroke and the length of the stroke in the water combine to add speed to the boat during the drive.

With races often decided by a second or two over 5 minutes, fractions of a centimeter difference in the run of a boat between strokes (around 200 strokes for a high school race) can be a deciding factor in who wins and who loses.

Of course, a fast boat steering a serpentine course will take much longer to get down the course than one that steers straight. Steering is in the hands of the coxswain, but is made much easier by a technically sound crew. Although it might seem easy, steering a shell is very challenging due to the large weight of the boats with crew, uneven pressure between port and starboard, and the very small rudder.

Crews of two or more move the best when the members of the crew are in time with each other. The unison of body swing on the recovery, blades in at the catch, swing through the drive, and exit of the blades at the finish is required for fast boats.

Perhaps more than any other feature of the moving boat, the set or balance of the boat is attended to the most. A shell can roll so that either side can be lower than the other. The seat is now slanted. The oar on the recovery may 'chip' the water. On the drive, the roll puts strain on the back and shoulders. Upright posture, uniform movement, and timing at both catch and finish are crucial for maintaining a boat's set and a constantly set boat is the dream of every rower

### **The coxswain**

The coxswain is the conductor of the crew. Five vital skills for coxswains are: 1) Steering. 2) Technical coxing/liaison. The coxswain can feel the boat move and communicate this to the crew and the coach. 3) Flow of practice. It is often the coxswain who can make a practice work effectively. 4) Motivation and Teamwork. 5) Racing and strategy. The coxswain is required to implement the 'race plan' as unlike all other sports, Crew is raced without the input of the coach who is not allowed to communicate to the crew in any way. Moreover, every race plan has its strengths and weaknesses. Though a plan may be rehearsed, it is the adjustments made in the race in response to real conditions that can determine victory or contribute to defeat.

### **Things to Know About Rowing:**

- Rowers are arguably the world's best athletes  
The sport demands endurance, strength, and an ability to tolerate the pain that rowers' muscles experience in the last 500 meters of the race.
- It's in the legs  
Rowing only looks like an upper body sport. Although upper body strength is important, the drive which moves the boat comes from strong legs. Rowing is one of the few athletic activities that involves all of the body's major muscle groups.
- Meters not miles  
The standard length of a high school scholastic sprint race is 1500 meters – just under a mile. Rowers refer to the parts of the race in 500-meter sections.
- It only looks easy  
Great rowing looks graceful and fluid, but don't be fooled. Pulling oars in unison smoothly and effectively through the water while balancing a boat that may be as narrow as 11" across with 11' – 12' oars is very difficult work. Watch how quickly that graceful motion before the finish line turns into pain and gasping for air afterwards.

- High tech version of age-old equipment  
Although wooden boats were the norm for many years, most of today's rowing boats – called shells – are strong, lightweight carbon fiber. The smallest boat on the water is a single scull, only 27-30' long, a foot wide and approximately 30 pounds. The largest is the eight at 60'. Today's oars – not paddles – are also incredibly lightweight. Sweep oars are somewhat longer than sculling oars and have longer handles that are made of wood or rubber grips.
- SPM not MPH  
Rowers speak in terms of “rating” or strokes per minute (SPM); literally the number of strokes completed in a minute's time. The stroke rate at the start of a race is high - 38-45, and then “settles” to a cadence typically in the 30's. The boats sprint to the finish, taking the rate up once again. The coxswain may call a Power 10 – a demand for the crew's best, strongest strokes. Although the number of strokes a boat is capable of rowing per minute is indicative of speed and talent, the boat getting the most distance out of every stroke (“pulling hardest”) may win the race.
- Timing is everything  
Spring rowing competitions are typically conducted on six lanes on the water. They follow a double elimination format in a system designed to identify the fastest six crews for the final race in each category. Heats are first, followed by semi finals or a *repechage* (French for second-chance) races. There are no style points for rowing - the bow that crosses the line first is the winner.
- Teamwork is number one  
Rowing isn't a great choice for athletes looking for MVP status. It is, however, teamwork's best teacher and the ultimate team sport. No one team member hits the homerun or makes the 3-pointer, touch-down or goal to win the game; the athlete trying to stand out in the eight will only make the boat slower. The boat goes over the finish line only once, with everyone in it. It is the crew made up of individuals willing to sacrifice their goals for the team, the athletes determined to match their desire, their talent and their oar blade with the rower in front of them that will be on the medals stand together.

## Glossary of Rowing Terms

Blade:	Flattened or spoon-shaped end of oar or scull; often used as term for oar
Bow:	Forward end of boat
Bow (man):	The rower or sculler in the seat nearest the bow
Bow ball:	Safety ball fitted to sharp stem of racing boat
Bucket Rig	An eight, rigged so that the riggers or seats # 4 & 5 are on the same side, while the others alternate
Button:	Plastic sheath on oar or scull to prevent it from slipping through the oarlock; adjustable on modern oars
Cadence:	Uniform stroke rate
Catch:	The part of the stroke when the blade is put in the water
Cockpit:	Space for a person in a racing boat
Coxswain (cox):	Steers the boat from a seat in the stern or a lying position in the bow
Crab:	Occurs when rower fails to get the oar out of the water at the end of the stroke; can result in the rower being ejected by the oar from boat to water
Crew:	Rowers who man a boat
Deck:	Covered-over areas at bow and stern of boat
Drive:	The part of the stroke between the catch and the finish, pull-through
Erg	Rowing ergometer. A rowing machine to measure the metabolism rate or amount of energy expended during work measured in ergs (unit of work).
Erging	Rowing on a machine off the water.
Feather:	To turn the blade parallel with the water surface at the start of the recovery to reduce wind resistance
Fin:	Small flat plate perpendicular to the bottom of the boat to aid steering a straight course
Finish (release):	The part of the stroke just before and as the blade is taken out of the water
FISA:	Federation Internationale des Societes d'Aviron; the International Rowing Federation.
Frontloader:	A boat in which the coxswain lies in the bows
Gate:	Bar across a oarlock to retain the oar
Gig:	Inboard-or outboard-rigged pleasure or racing boat with straight gunwales
Gunwale:	Horizontal plank at the top of the hull running the length of the boats cockpit
Hands away:	The act of dropping the oar handle at the finish of the stroke so that the blade leaves the water and is feathered at the start of the recovery; sometimes referred to as "out of bow"
Inboard:	The distance between the far end of the handle of an oar or scull and the face of the button. The remainder is called the outboard
Layback:	The amount of backward lean of the rower's body towards the bow at the finish
Length:	The length of a boat (i.e. "won by a length")
Oar:	A lever approximately 12 ½ feet long by which the rower pulls against the oarlock to move the boat through the water; sometimes used as a shortened form of oarsman
Oarlock:	A device which swivels on the end of the rigger to support the oar
Port:	The left-hand side of the boat when facing the bow, all the rowers whose oars are in the water on the left hand side of the boat when viewed from the stern
Puddles:	Whirls left in the water caused by the blade as the rower pulls

Recovery:	The part of the stroke cycle between the finish and the catch in which the oar is feathered and the seat is returned to the aft end of the slide
Regatta:	A competitive event raced in boats.
Release:	The finish of the stroke removing the oar from the water.
Repechage:	A second heat to afford another chance of qualifying to those running second best in preliminary heats
Rhythm:	The proportion of time occupied on the recovery to the time taken on the pull through
Ribs:	Braces between the keel and gunwale for supporting the hull
Rigger:	A metal framework or a carbon-fiber reinforced arm to support the oarlock which is placed approximately 85 cm from the center of the boat
Rudder:	Steering device attached vertically to the stern or under the hull of a shell
Run:	The distance a boat travels in one stroke
Sculling:	Using two oars or sculls
Sculls:	A short oar used in each hand for single, double, and quad sculling boats
Shaft:	The part of the oar between the blade and the handle
Shell:	Smooth-bottomed racing boat; made of carbon fiber, fiberglass or wood
Slide:	Parallel rails on which the seat which moves on wheels
Standard rig:	Uniform alternation of riggers (and therefore oars and rowers) in the boat; the rower in the seat nearest the stern is usually on port side
Starboard:	The right-hand side of the boat when facing the bow, all the rowers whose oars are in the water on the right hand side of the boat when viewed from the stern
Stern:	The rear or aft of the boat
Stretcher:	A frame with shoes to anchor the rower's feet
Stroke:	The complete cycle of moving the boat through the water using oars or sculls; the rower seated nearest the stern
Sweep:	Sweep rowers each use one oar

**APPENDIX**

**Request for early dismissal or alternate travel from Race Site**

**THIS FORM MUST BE GIVEN TO THE TRAVEL COORDINATOR PRIOR TO THE EVENT**

Rower's Name: \_\_\_\_\_

Rower's email address: \_\_\_\_\_

Rower's Cell number: \_\_\_\_\_

Request for alternate transportation from (event): \_\_\_\_\_

Date and time leaving the event: \_\_\_\_\_

Driver who is transporting the rower: \_\_\_\_\_

Driver's Cell number: \_\_\_\_\_

Rower signature: \_\_\_\_\_ Date \_\_\_\_\_

Parent signature: \_\_\_\_\_ Date \_\_\_\_\_

Driver signature: \_\_\_\_\_ Date \_\_\_\_\_

Travel Coordinator Signature: \_\_\_\_\_

Coach signature: \_\_\_\_\_

This signed form must be given to the travel Coordinator or Head Chaperone at the time of dismissal from the event or race site:

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Signature of Coordinator or chaperone signing rower out for dismissal: \_\_\_\_\_