LEARN TO ROW

world rowing
coach development programme

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Contents

Foreword

The World Rowing Federation, FISA, is pleased to offer a new programme to promote rowing worldwide.

This booklet gives basic information about the sport of rowing and includes some suggestions for beginner training activities. Added together the sessions cover all that the new rower needs to make a start in the sport and it will also help new rowing coaches/teachers to develop their skills. The sessions are aimed at all age groups: children, teenagers and beginner adults. These learners can come from schools or universities or sports clubs.

Rowing confers huge benefits on its participants in terms of health, education and social interaction. The sport provides a very special environment and some excellent role models. Rowing also promotes the Olympic ideals of respect, excellence and friendship. We have aimed to adhere to World Rowing's philosophies of universality, equality and sustainability. We want the users of these materials to take ownership of the learning programme to build a strong base for the sport in their community.

Objectives

This booklet is for you, the teacher of beginners.

The aim of Learn to Row is to get rowers on the water as soon as possible. They will learn about safety, both on and off the water, be able to identify boats and equipment, know what clothing to wear and most importantly learn good rowing technique.

Once your rowers have the basic skills they can choose what to do next. This might be more serious rowing or to take on a bigger role at their club. They may choose to become teachers themselves or join the administrative team or even help publicise and promote your club to a wider audience.

Last but not least, the booklet is part of a set programme that can be packaged and delivered through the training of trainers, by FISA experts, across all continents and will be available on the World Rowing website **www.worldrowing.com**

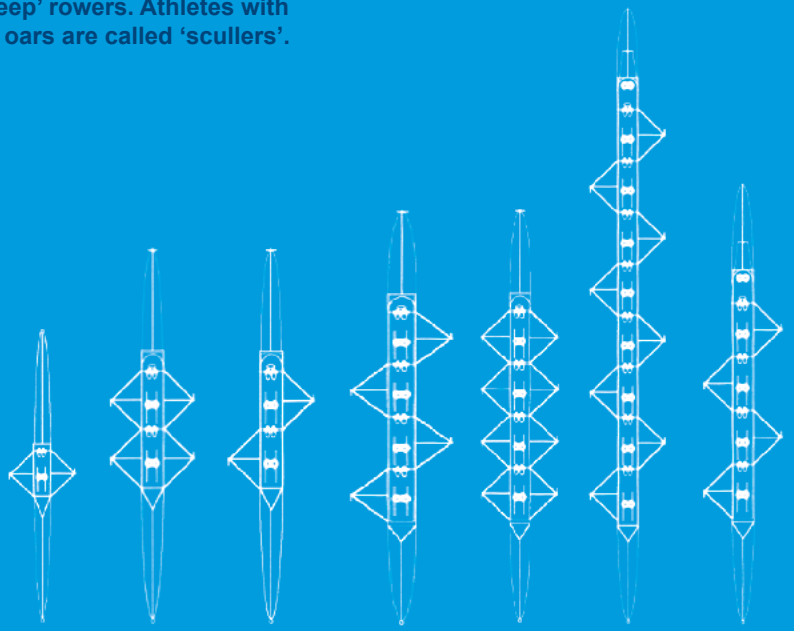
We would like your feedback about this project. Whether or not you liked using the booklet and how it could be improved or added to. Please tell us at **development@fisa.org**

Boat types

Racing boats come in all shapes and sizes. Below you will find the various boats used in disciplines of the World Championships and the Olympic Games.

Seats in a boat may be rigged for oars on one side or on both sides. Athletes with only one oar are 'sweep' rowers. Athletes with two oars are called 'scullers'.

The 8+ and 4+ boats carry a coxswain (hence the '+' in the boat category) to coach and steer a boat. In general, the 8+ is the fastest boat, because it has the most rowers.



However, there are many other types of rowing boats. Here are some examples:


Coastal rowing with the sliding seats


A Saint Ayles Skiff, a fixed seat boat


The Celtic longboat, a fixed seat boat

Cornish pilot gig


Ocean rowing boat

Rowing using other kinds of boats

There are many other sorts of rowing with each using specific boats and equipment. Below you will find a short description of other rowing disciplines.

Coastal rowing

Coastal rowing is the extreme version, the adventure side of rowing. It involves rowing along a sea coast and out into the sea. It can be found in all corners of the world including the Maldives and many parts of Africa. Rowing on rough water means that coastal rowing is quite different from the flat-water Olympic style of going in a straight line. Coastal rowing is easier to learn than flat-water rowing, due partly to the stability and robustness of coastal rowing equipment. The standard boats are singles (or solo), doubles and coxed quadruple sculls (4x). Good coastal rowing crews must be aware of tides and currents, learn about the course's topography and know how to cope with maritime traffic and bad weather.

www.worldrowing.com/coastal

Indoor rowing

Indoor Rowing is also known as ergometer rowing after the name of the equipment which is used. The ‘erg’ has been widely used in training and preparing athletes for many years. Recently indoor rowing has grown from off-the-water training for the serious rower to a sport in its own right.

The ergometer has become the **standard tool** for judging a rower’s speed over 2000 metres. It has become a fixture in boathouses and fitness centres around the world and is also widely used by athletes of other sports for cross training.

Nearly every rowing nation now holds national indoor rowing competitions. The longest running and best known is the C.R.A.S.H.B’s, held every year in February in Boston, USA. It is unofficially known as the World Indoor Rowing Championships.

www.worldrowing.com/indoor

Para rowing

Para rowing is rowing or sculling open to both male and female rowers with a disability. Para rowers participate at some of the World Rowing Cups and the World Rowing Championships each year. Rowing has been included in the Paralympic Games since 2008.

With a new event added in 2013, para rowing is currently divided into nine boat classes: PR3 Mix4+ (PR3 mixed coxed four), PR3 Mix2x (PR3 mixed double sculls), PR3M2- (PR3 men's pair) and PR3W2- (PR3 women's pair), PR2M1x (PR2 men's single sculls), PR2W1x (PR2 women's single sculls), PR2 Mix2x (PR2 mixed double sculls), PR1 W1x (PR1 women's single sculls), and PR1 M1x (PR1 men's single sculls). The PR3 and PR2 are mixed gender boats. Races are held over 2000 metres for all five events.

www.worldrowing.com/para-rowing

Tour rowing

Tour rowing is rowing over long distances. The tour can be divided into several stages which are done over the course of several days or a one day regatta which passes several checkpoints along the way towards the finish. The regatta Tour de Lac Léman is an example of a one day regatta where various boats row the distance of 160km around Lake Geneva in Switzerland.

Checking the boat

For safety reasons, rowers should always check these things before their outings:

The hull, to ensure that there is no damage.

Hatch covers, they should be in place and water tight.

Bow ball is intact and secure, otherwise it won't do its job. fig 01

Blades, the collars, sleeves and handles are all secure. fig 02 03

The riggers are attached to the boat tightly.

Watch the video "Checking the boat"

01
Bow ball

02
Handle

03
Sleeves, handles

Checking the boat

Pins swivels and gates, are all secure. fig 04

Seat, must be on the right way round and running freely. fig 05

Foot stretcher, should be secure and should have heel restraints. fig 06

Rudder, if there is one, must be working and not damaged.

Fin, intact and secure. fig 07

If you are using a safety launch it should have a paddle, kill cord, bailer, throw line, sharp knife, a megaphone and a first aid kit aboard.

And what if your boat is damaged?

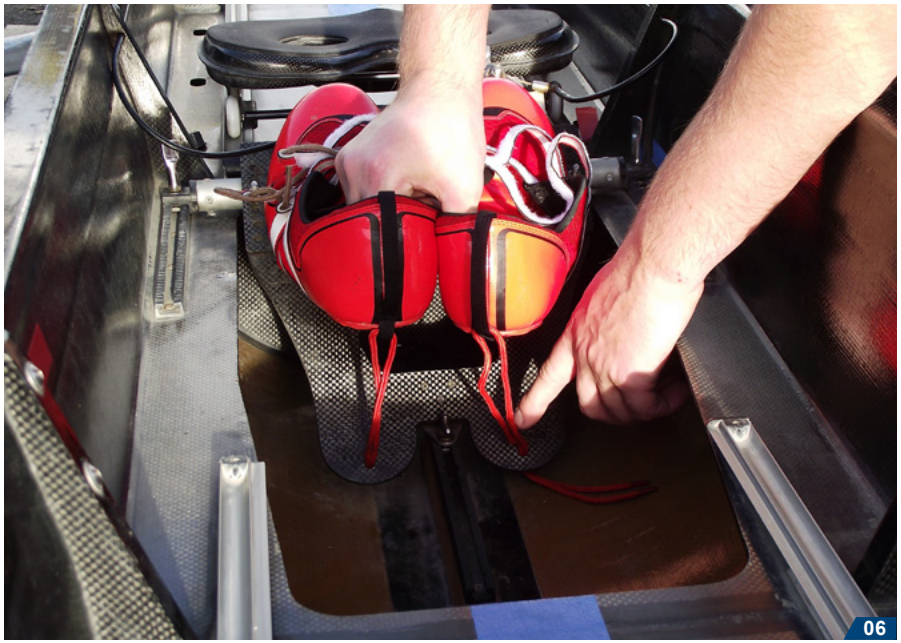
Minor holes and scrapes should be covered with a strip of plastic tape to prevent water getting into the fabric of the boat.

If you are unsure, don't use it until it has been mended.

Keep a small collection of nuts and bolts and fixers with you, these kind of things are the most frequent losses from boats and quickest to replace if you have a collection of replacements.


04


05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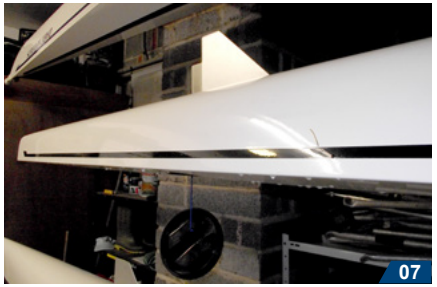
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Checking the boat

You will also need some tools: the basics are a 10mm and a 13mm spanner, a tape measure, a set of pliers, a flat-headed and a cross-headed screwdriver. As you progress you will want to add some specialist tools, a pitch gauge and a height stick.

Getting in and out

Getting in and out

Teach your rowers to get in safely. You may like to demonstrate this before they try it and in their earlier attempts have someone to steady the boat by holding a rigger down.

Here is the drill for scullers:

Put the blades into the swivels with the swivels facing to the stern and do up the gates. fig 08 09 10 11

Stand alongside the position you are going to sit in. fig 12

Hold both blade handles and press down on the rigger nearest to you with the other. fig 13

Slide the seat out of the way and place the foot nearest the boat between the runners (never in the footwell, it is not strong and may crack). fig 12

Bring in the other foot and sit down. fig 13

Getting in and out

Tighten the gates. fig 14

Put your feet in the shoes. fig 15


14

15

Adjust the foot stretcher so that the thumbs are a fist and a bit apart when sitting at back stops. If you need to use both hands, put them into your armpits when making this adjustment. fig 16

Crew scullers may either get in half at a time or else all together when they are more practiced.

Sweep rowers may use a similar technique. Half the crew holds whilst the rest get in, usually the half with their blades away from the shore or pontoon get in first. Once they are seated and holding the blade handles with the blades fully out and gates tightened the second half of the crew can get in.

Adjusting the foot stretcher: The blade handle should be held two fists apart, outside hand on the handle end. At the body the hands should be equally distanced from the mid line of the chest, when sitting at backstops. fig 17

Getting out is the same drill as getting in, but in reverse.


16


17

Getting in and out

Para rowing

Getting in and out will be different for some para rowers in the PR1 and PR2 sport class.

Transfers

Rowers who are wheelchair users may or may not require help when transferring from a wheelchair to boat or land-based rowing machine. (This will usually be determined by lesion level in spinal cord injury, higher levels requiring more assistance). Always ask before making assumptions. Some basic guidelines will vary depending on whether you are assisting transfer from a shore or pontoon.

It is a good idea to think of the transfer in two-three parts, regardless of whether a person is using a wheelchair, has difficulty walking or is visually impaired. Make athletes aware of any areas on the boat which might be a potential for injury during transfer, such as rigger, footplate. Ensure athlete has appropriate cushion/pad on seat and appropriate footwear to prevent pressure sore development.

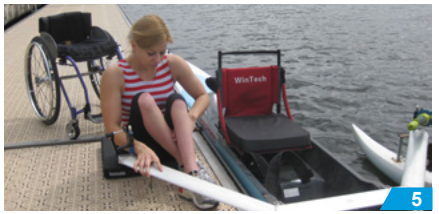
(Note: use of transfer cushion during transfer)

Park the wheelchair closely to the transfer cushion, parallel to the boat and safely undo any wheelchair strapping.

Edge towards the front of the wheelchair, with your feet facing forwards.

Slowly and carefully swing your lower body down unto the cushion, using your trailing hand to push off from the wheelchair and then steady your body once you have reached the cushion.

Lean forwards to place a hand on the cushion to steady your upper body.



Swing your legs round to face the boat.

Place the hand nearest the rigger on the pontoon and the other hand on the seat, ready to move your body over to the seat.

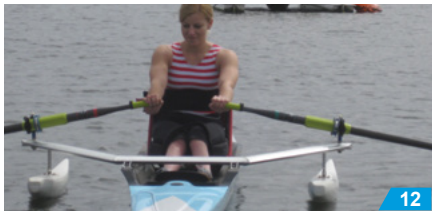
Move your bottom over to the seat, leaving your feet on the pontoon.

Move your feet over into the boat and place them in the foot-stretcher.

Strap each foot into the foot-stretcher ensuring they can be released in the event of a capsize.

Once your feet are strapped in, position yourself correctly and comfortably on the seat.

Do up the strapping on your seat, ensuring that the straps all open from same side and direction.



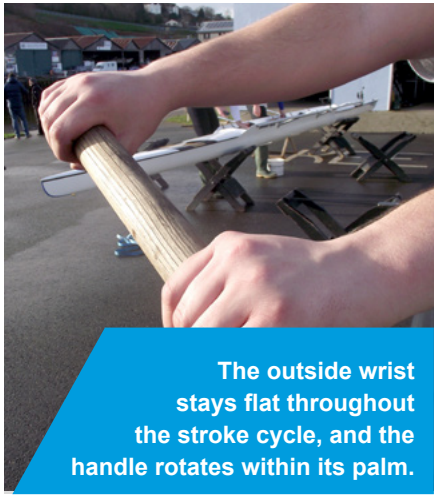
Receive the scull handles from your coach and you are good to go!

Holding the blades

Sculling grip

In sculling the thumbs provide the contact to roll the blade from square to feather by turning the handle with the fingers. Use the thumb by circling it on the end of the handle, one way to feather and the other to square. Excessive movement of the wrist should be avoided, wrists remain flat.

If the sculler has the handle too much in the palm of the hand the wrist is often arched; too much in the fingers and the sculler cannot control the blade. Control should come by pressing the blade out against the gate using the thumb. If the handle is too small or large then the sculler will also grip too hard.



The outside wrist stays flat throughout the stroke cycle, and the handle rotates within its palm.

Sweep rowing grip

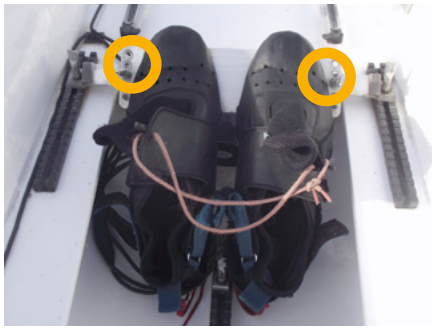
The hands should be no more than two widths apart. This should give a comfortable position in relation to shoulder width. Both thumbs remain under the handle. The outside hand (the one furthest from the oarlock) controls the height of the handle. The inside hand squares and feathers and maintains pressure outward on the swivel.

The outside wrist stays flat throughout the stroke cycle, and the handle rotates within its palm.

Para rowing

Modified gripping aid for a para rower with limited hand function. This consist of a self-closing Velcro glove which tensions to wrap the fingers around oar/scull handle.

Boat adjustments



Stretcher height

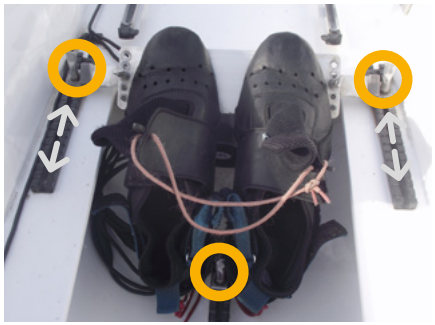
The simplest way to measure the height of the shoes is to count the holes showing above the nuts on the metal mounting plate.

Change the foot height by undoing the mounting nuts and repositioning the metal mounting plate to a different set of holes.

Feet high: rower may be unable to get shins vertical at the catch and may not be able to rock over from the hips easily.

Feet low: Rower may not be able to control their slide into front stops, arriving too fast or travelling too far so that they are over-compressed (shins beyond the vertical and knee tips beyond ankles).

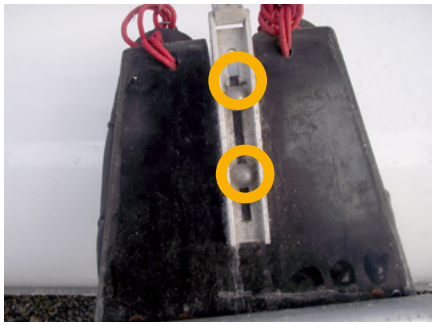
Start by setting the plate on the middle set of holes and adjust gradually to suit your rowers so that each can arrive into the catch position comfortably and under control.



Stretcher placement

The simplest way to measure the stretcher placement is to count the notches along the mounting bracket, starting from the bow end.

To change the placement loosen all 3 nuts circled in the picture. Move the stretcher towards the bow to increase finish angle and to the stern to increase catch angle. It is important that the rower is set up to row a comfortable stroke. The set-up is shown in ‘getting in and out’: adjust the footstretcher placement until your rower looks like one of the pictures shown on page 21 when they are sitting at backstops.



Adjusting stretcher angle

The rower should be able to get his/her heels down on to the plate below the shoes as the drive phase proceeds. This is related to ankle flexibility. The stiffer the ankle, the more shallow the footplate should be to accommodate the rower.

Some footplates are adjustable.
If the underneath of your footstretcher looks like the one in the picture, it is adjustable. Remove the foot stretcher from the boat. Loosen the two screws circled and re-tighten with the adjuster pulled out to make the stretcher angle more shallow. As a general rule the angle should be 42-45 degrees from the horizontal.

Boat adjustments

Para rowing

Foot stretcher with simple Velcro straps and cord release

For para rowers who have little or no lower limb function, a footplate with nylon heel cups is used. The Velcro straps can be released using a simple cord release, which when pulled by the athlete ensures that they can release their feet in the event of a capsize.

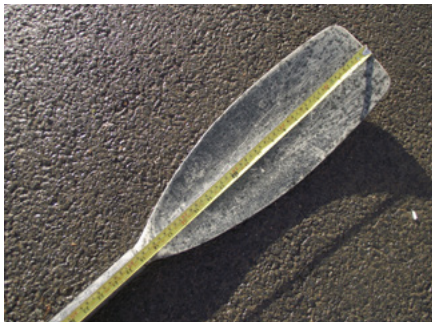
Modified stretcher to enable a para rower with a below knee amputation to use a sliding seat. For safety the prosthesis easily disengages from the footplate in the event of a capsize.

Athlete holding a prosthesis

Athlete holding a prosthesis (artificial limb) which quickly disengages with the footplate in the event of a capsize allowing the athlete to exit the boat quickly.

Para rowing seats

Blade adjustments



Measuring and adjusting blades

Measuring macon

This shape is known as a macon. Outboard measurement: hook the tape measure over the spoon tip at the mid point. Run the tape along the shaft to the outboard edge of the collar.

Measuring inboard

The inboard measurement includes the thickness of the collar and should include the rounded end of the handle.

Measuring cleaver

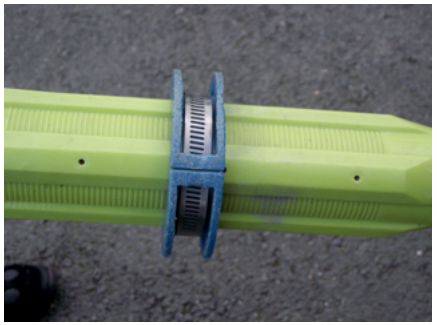
This shape is known as a hatchet, big blade or cleaver. Outboard measurement: The tape measure should run along the mid line of the shaft to the outboard edge of the collar and should be hooked over the far edge of the spoon in line with the shaft, as shown in this picture.

Adjusting blade length

The length of some blades can be changed. Some makes, like the one shown in the picture have screws on the shaft. Loosen these carefully (not too much), tap gently to loosen if the adjustment is frozen and pull handle out to lengthen or push in to shorten.

Another type has a screw in the domed handle end with which to lengthen or shorten the blade. There is a retaining collar to loosen on this type.

Blade adjustments



Changing inboard/outboard

Loosen the collar by unscrewing it at the side. Move it along the grooved sleeve, being careful to reseat the collar into the grooves of the sleeve before re-tightening.

Move the collar towards the handle to reduce the inboard. With blades adjustable for length, making them longer increases the inboard unless the collar is moved to compensate.

Short people should use short blades. Taller people use longer blades with longer inboards.

Clam

Use a clam to make a quick or temporary change to the inboard/ outboard. This will increase the inboard and decrease the outboard by the same amount and make the rowing feel easier. The clam sits against the outer face of the collar.

Fitting clam

Coxing

Some boats require a coxswain to steer them. The cox also calls commands to the crew to manoeuvre the boat and can make calls about how the crew is rowing. Some commands are explained on page 32. It is important that the crew and coxswain learn them.

As part of the crew, the coxswain should also be coached. Coxing is a skill which can only be improved through instruction and practice.

Commands made by the coxswain should be clear and to the point. Movements to steer the boat should be small and if necessary repeated until a manoeuvre is completed. The rudder should only be applied once the boat is moving. The coxswain will need to practice all the turning and stopping drills to perfect them.

Watch the video 'Small, calm and in control – the rowing cox'

Watch the video 'The role of the Cox in Rowing' (Gillette World Sport)

Commands

"Whole crew
From Backstops
Are you Ready
Paddling Light
GO"

Here are some commonly used commands

'Hands On' The coxswain is in charge of lifting the boat from its rack and this is the command to get everybody ready with their 'hands on' the boat.

'Number Off When Ready' This is used when the crew is in the boat and has pushed away from the shore or pontoon. It is usual for each crew member to shout out the number of their seat, in order, starting with the bow seat which is number one. If someone is not ready then they will not shout their number.

'Go' A command only ever takes effect when the cox shouts 'go' to make sure that the whole crew acts together e.g. 'hands on, are you ready, lift, go'.

'Are You Ready?' Is used to make sure everybody is ready for the command 'Go' which follows.

'Back Down' Is used to reverse the boat.

"Stroke Side
Paddle On
Come Forward
Are you Ready
GO"

'From Backstops' This is the command for a stationary crew to get ready to row, It makes sure that everyone starts in the same position, which is with the legs down flat and the handles at the body. To get the crew to row the cox might say 'Whole crew, back stops, are you ready, paddling light, go'.

'Wind Down' Is the order to slow the rate and ease off on the rowing pressure.

'Easy Oar' Means stop rowing. A good way for the cox to use this would be 'next stroke, easy oar' in time with the rowing so that the crew stop all together.

'Hold It Up' An emergency stop and is used if the boat or crew are in danger of collision or accident.

Safety

Safety is a shared responsibility and involves the club, the lead coach, yourself, the learners and if you are using one, the cox.

Discuss any activity you are planning with the lead coach and agree how the session will be conducted. Agree with the learners what they can and cannot do. You, as an instructor, must understand how to work safely and you must also teach your rowers. If your learners are youngsters you have a special responsibility to keep them safe.

Always tell someone that you are on the water, how long you will be and where you are going. Teach your rowers to do the same.

Can your rowers swim?

A swim test should be at least 50 metres of continuous swimming, some backstroke. It should involve putting the head under water and at least one-minute treading water. If your learners can't complete this simple swim test, then they should wear a personal flotation device (PFD). This can be a life jacket or a buoyancy aid. A life jacket is best because it keeps the wearer's head out of the water.

Do your learners have any health concerns?

You will have to decide how this affects their ability to take part in the rowing activities, whether a PFD will be necessary and what other steps might be necessary to keep them safe.

Discuss this with your lead coach.

Buoyancy aid (left), life jacket (right)

One way to keep safe is to go out in a group

Para rowing

Note: Caution for para rowers who wear PFD's, which may not be safe for use when combined with trunk strapping, as they may hinder a rower releasing themselves from the boat in the event of a capsize, where the additional buoyancy provided by the PFD can force the rower into the inverted hull, making rescue difficult.

Hazards on the water

Is where you are rowing safe?

Every piece of water is different. Familiarise yourself with your own, find out what the hazards are. The lead coach may have some rules to pass on to you. Make sure you know what they are.

These are some examples of what you might find. This isn't all of them, make sure that you are aware of potential hazards on your own piece of water.

Wildlife: Be careful of wild creatures. Know which may be approached and which should be avoided. Do not take chances.
Know who to ask about their current locations e.g. wildlife rangers.

Landings stages and pontoons: Water makes these slippery and they can be wobbly if a lot of people are on them together. Other crews may be using them at the same time.

Weather: If the weather changes while you are on the water, it might become rough. Make sure you know the forecast.

Waves, current and tide: You might use a piece of water which rises and falls daily. How will this affect the safety of your learners? There may be strong currents in certain places or at certain times, do you know where and when? The wind could affect the water, making waves and if the wind changes direction this might affect how big the waves are.

Trees and plants: Overhanging branches can injure rowers and damage equipment. Boats can get stuck in reeds.

Other water users: Who has the right of way? You need to know which side to overtake on and what the circulation pattern for your local water is, and where the buoys are.

Bridges: Know which arch your learners should use, for both directions.

If an accident happens... As careful as you might be there is always the chance of an accident (e.g. capsize, collision).

You should let your lead coach know of any that happen. Be prepared to describe exactly what happened and whether anyone was injured.

The information could be useful in avoiding a similar accident in the future. Make sure you also report any damage to equipment as repairs might be needed.

Capsize drill

All of your learners should practice this as soon as possible. Use either a swimming pool or a clean sheltered and shallow bit of natural water.

Have throw lines and dry clothes available if you are outdoors, or if either the air or the water is likely to be cool.

By getting your learners to practice in a safe environment you are helping them to cope in open water and they will be more confident because they will know what to expect.

You can also teach them how to get the boat upright again and how to return with it to the shore.

Practise in a single scull. It is the easiest boat to tip over and also the easiest to get upright again. The skills that you teach can be used in bigger boats.

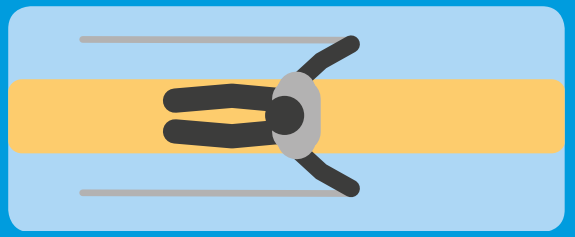
Here's how to do it

This basic drill can be performed in stages. Firstly without blades in the gates and feet on top of the shoes (the boat will need to be held steady). Next with feet in. Only when the learner is confident are blades put in the gates and the full drill practiced.

During the practice ask the learner to slap the upturned hull three times before coming up for air.

You wouldn't ask anyone to do this in a real capsize, it simply checks that the learner feels in control.

Capsize practice



Push the handles behind you. Let go.

Hold the sides of the boat. Lean to one side.

When you are upside down, release your feet from the shoes. Come up next to the overturned boat.

Reach across and get hold of the far side of the boat. Push the rigger on your side down with your foot, whilst pulling the other side over and towards you.

Capsize drill

Once the boat has been righted then the learner should be taught how to tow it, so that a re-entry from shallow water is possible. It is possible to re-enter the boat from deep water but this is more tricky. Keep the blades held and flat on the water. Straddle the deck belly down and then slide and turn on to the seat.

In a buddy rescue the capsizer straddles the stern canvas of another boat, belly down. The rescuer then paddles the boat to shore.

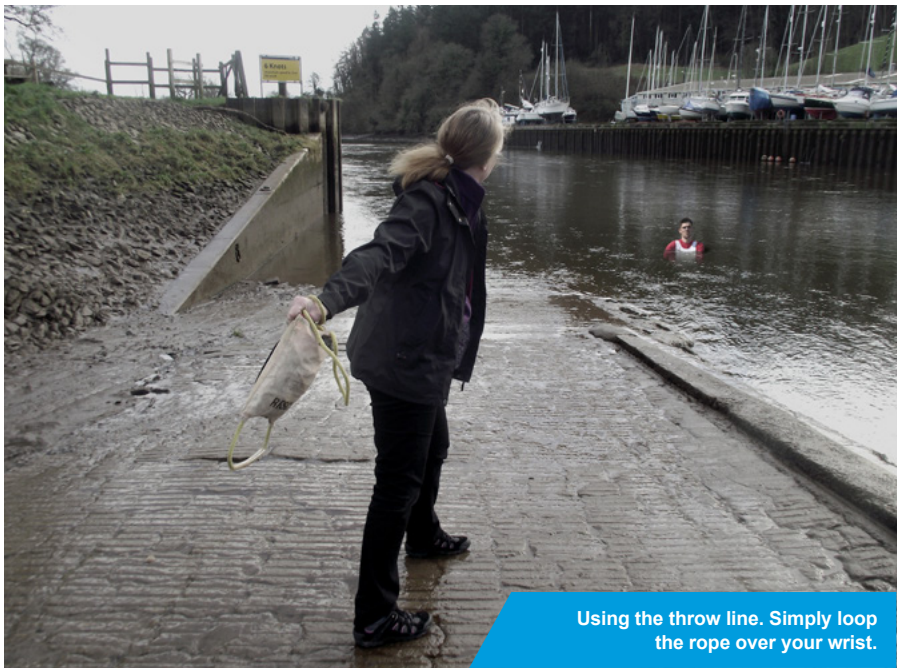
There is one important rule to teach; it is safer to stay with the boat in most capsizes. This is because the capsized boat is easier to see than a swimmer and so a launch rescue will be easier and because the boat floats and can be used as a raft. The capsizer can haul their body across the upturned boat to reduce rapid cooling. A capsizer should only leave the boat if it is drifting into danger.

Instructors should learn how to throw and coil a line and keep one close by when they are teaching. Do not go into the water to rescue, you may become in need of a rescue yourself if you do!

If you haven't got a throw line that looks like this one at your boathouse find a rope 15-20 meters long. Practice throwing and coiling it. It will work best if you add a soft weight such as a tennis ball to the end.

Getting ready for the drill

Re-entering the boat



Using the throw line. Simply loop the rope over your wrist.

Aim just beyond the swimmer

Capsize drill

Para rowing

Some further safety considerations are required when carrying out a controlled capsize and recovery drill with Para rowers.

• Para rowers with a visual impairment may become disorientated in the event of a capsize. Helpers should assist VI rowers in the pool who may become disorientated and panic.

• Para rowers who have a limited range of movement in their ankles or wear a prosthesis should ensure that if they have a foot-stretcher that relies on heel-restraints as a method of release or have in any way made modifications, in the event of a capsize, they are able to safely remove their feet from the boat.

• Para rowers strapping (hand, leg, trunk) should have no mechanical buckles and be released on the same side and in the same manner and direction. Coaches should understand the method of release for rowing straps and carry a safety knife, so if necessary, they can cut straps at the attachment point to seat frame.

• Poolside helpers should be conversant with uprighting an inverted boat with rowers who are strapped into seats.

• Poolside helpers should agree signage between all taking part in the capsize drill in case of emergency.

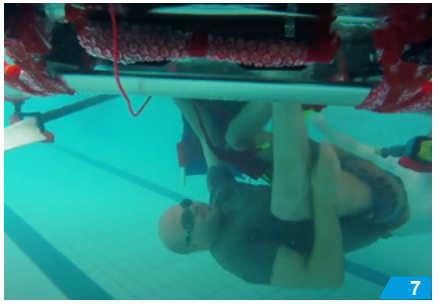
Athlete agreeing signage with coach (capsize without sculling blades)

Athlete preparing for capsize

Athlete inducing a capsize

Athlete inverted in boat preparing to release body strapping

Athlete removing body strapping by grasping release tag



Athlete removing leg strapping and feet from foot stretcher

Athlete swimming to surface staying close to boat

Athlete with arm across hull of boat with coach alongside in the water

Watch the British Rowing capsize & recovery drill video to help you stay safe on the water. There is also a section specifically for para rowers.

Rowing when it's hot... and when it's cold

Always take precautions. Weather can change and both you and your learners must be prepared.

When it is sunny, wear a hat that protects the back of your neck.

Keep and use a water bottle regularly. Dehydration is a gradual process and best avoided by frequent small drinks. Dark urine indicates dehydration, pale coloured urine means the body is properly hydrated.

Wear light coloured clothing which will reflect the sun's rays.

Avoid rowing in the midday sun.

Heat exhaustion can be recognised by feeling or being sick, cold but sweaty skin, muscle cramps, shivering, exhaustion and tingling skin. Heat stroke can follow. The skin becomes hot and dry, the sufferer can have noisy breathing, a strong thumping pulse, may behave strangely or may lose consciousness.

In either case cool the body with some shade and water-soaked towels and give the sufferer a cool drink if they are still conscious. Get medical help as soon as you can.

On cold, windy days or following a capsize even in warm weather, there is the risk of hypothermia.

A drop in core body temperature of only two degrees is enough for symptoms to occur. If nothing is done it can be as life threatening as heat exhaustion causing an inability to swim, heart attack or delayed reaction leading to death.

If someone you are teaching or you show any symptoms like these: shivering, confusion, loss of coordination, blue skin, numbness in their limbs, treat for hypothermia.

Get the sufferer indoors as soon as you can. Change them into warm dry clothes, give them a warm (not hot) drink. If the symptoms don't go away, get them to a hospital.

Protective cap

Female athlete with warm clothes

Rowing when it's hot... and when it's cold

Para rowing

Some para rowers may have difficulty in regulating their body temperature (thermoregulation dysfunction) and are therefore at an increased risk of developing hyperthermia/hypothermia.

There is an increased risk for rowers who have complete spinal cord injury where paralysis limits the ability of the athlete to shiver in order to conserve heat or perspire in order to dissipate heat at or below the site of their injury.

Note - this is of particular importance in the event of a capsize where they can become poikilothermic (when the body assumes the temperature of its environment) in a very short period of time, where safe and expedient removal from the water is required.

- The cooling vest helps to reduce skin temperature whilst maintaining a stable core temperature
- Delays the onset of dehydration by conserving fluid that would normally be lost through sweating
- Decreases blood flow to the skin
- Allows more blood to be sent back to the muscles resulting in a prolonged high level of performance
- Stays cold for up to 2 hours

Para rower wearing an arctic heat body cooling vest

Using the ergometer

Instructors should log on to the Concept 2 website www.concept2.com where they will find copies of the Owner's Manual for the machines. Monitor manuals are there under PM2/PM2+ Manual, PM3/4 Use Manual and PM5 Manual.

The website also has good tips for training. Log your rowers' workouts to measure their progress.

There are times when it is better to use the rowing machine rather than the boat, for example when the water is rough or when you want to coach a technical point without distractions.

Beginners can be introduced to the indoor machine in stages. Their learning should include:

Identify parts of the machine and how they work: seat, chain, monorail, foot adjuster, monitor, damper lever, fan cage.

Cleaning: Using a damp rag to wipe the handle, seat and monorail after the session.

Assembly: Machine rails detach and reattach easily from the fan cage with a little practice and this makes the machine easy to store. Details are in the Owner's Manual.

Using the Monitor: Start with the simplest readout showing time elapsed, distance rowed, stroke rate and split time. (The layout will depend on the model of monitor).

Change the units using the buttons. The most useful alternatives are power output (Watts) and Average Split (Time/500m).

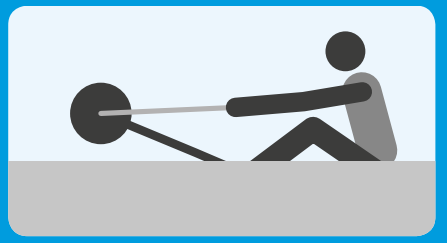
Set the machine to row a single time or single distance.

Set the machine to row a single time or distances repeatedly with a measured rest time.

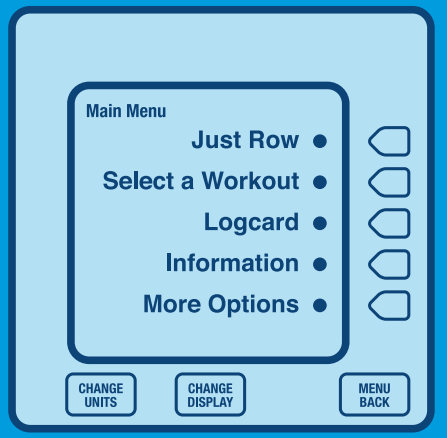
Force Time Curve: Good for showing learners how effective their stroke is. A good shape is a steep and early rise to a peak (strong and quick catch), a plateau (using legs well) and a gradual tailing off with no 'valleys' (coordinated legs and back during stroke).

Team Games: These should always follow a thorough warm up. Learners team up and row by sharing a machine. The challenge is to complete a set distance as fast as possible. All of the team should take part in the row and must cooperate to make their changes as fast as possible. Such competitions are good for bonding because teams have to work well together to succeed.

Testing: Ergometers are one of several ways in which rowers' fitness and efficiency is assessed for team selection purposes. Although not part of a learn to row programme the protocols can be introduced to them so that they understand what is required for high level competition.



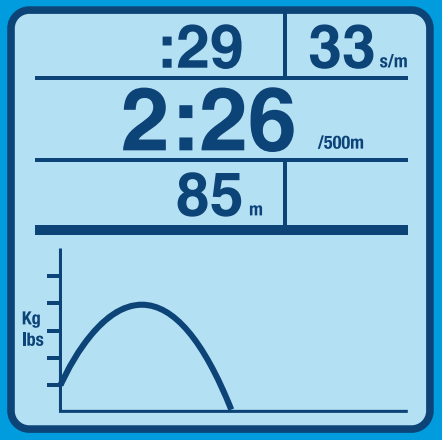
The Ergometer



The menu screen

Simple readout

The monitor has been programmed for a timed piece. The bottom read-out is predicting how far the rower will go.



Force time curve

Warming up and warming down

What is your experience of warming up for exercise? Do you have a set routine?

How would you set about teaching a beginner? What are the benefits of warming up and warming down properly?

Warm Ups prepare the body for exercise by increasing heart rate, warming the muscles and increasing joint mobility.

Warming down maintains blood flow to the muscles which speeds up recovery.

Warm ups should be performed with control and no rapid movements. A good warm up starts gently and gradually increases in intensity. It should include exercises for all the major muscle groups but concentrate on those used in rowing: rowing involves pushing with the legs, extending at the hips, being strong in the trunk and arms. An example of a pre-session warm up could include one-legged squats, two-legged squats, lunges, squat jumps, jumps off one leg, forward trunk bends, side trunk bends, arm circling and some running.

Research suggests that flexibility is gained most by post exercise stretching so use the warming down to do specific stretches for the hamstrings, quads and hip flexors. Each stretch should be held for 15-30 seconds.

Just as the warm up increases gradually in intensity, a warming down should gradually decrease in effort to bring the heart rate down gently.

Warming up and warming down

Para rowing

Sample para rowing warm up exercises for para rowers who are wheelchair users

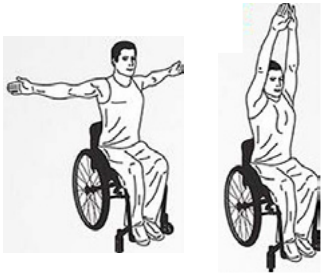
3 sets | up to 2 minutes rest between sets

0 chest expansions

10 dives

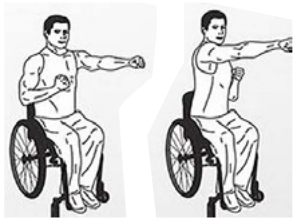
20 overhead punches

20 side arm raises



10 raised arm circles
5 clockwise / 5 counter-clockwise

20 punches



Technique

The catch and drive

This is a description of the basics:

1. **Entry/Catch**
   Raise only hands. Enter water before the leg drive begins.

2. **Drive 1**
   No change in body position. The body weight is off the seat. Work done by legs.

3. **Drive 2**
   Upper body gradually takes over from leg drive. Body starts to open up in a natural way. Arms stay straight.

4. **Drive 3**
   Legs almost finished. The upper body continues to swing. The arms begin.

5. **Drive 4**
   End of the layback. Arms move quickly and strongly into the body.

6. **Finish/Release**
   Forearms and hands move oar-handles around in a circular and continuous manner.

The extraction and recovery

7. **Recovery 1**
   Hands move away from body at a constant speed.

8. **Recovery 2**
   At the beginning of sliding hands are past the knees before the slide begins. Arms are straight. Body lean early.

9. **Recovery 3**
   At half slide upper body has finished reaching forward.

10. **Before Entry**
    Last part of the slide. All body movement has finished and concentration is on a quick catch.

Sitting pretty

A rower must sit in a strong position so that the stroke will be efficient and so that he or she protects the back from injury.

The position (angle) of the hips and its effect on the lower back is important. The hips should be tilted in such a way that the lower back is in 'neutral', that is to say the lumbar vertebrae are slightly concave. The impression on the rower is that they are sitting with the bottom edge of the pelvis balanced on the seat.

Poor posture is often seen as a convex lower back and the rower sitting on the soft part of their buttocks.

This neutral back shape should be seen through the whole stroke cycle. If the rower is inflexible in the hamstrings (the long muscles down the back of their thighs) then they will not be able to maintain it.

Make sure your rowers stretch regularly and thoroughly after each outing.

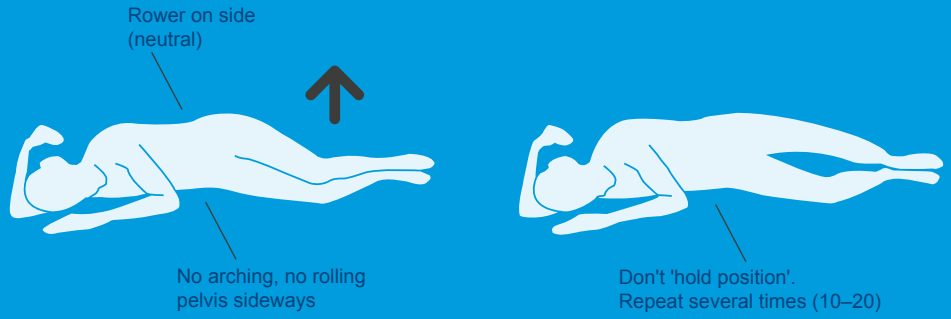
If they still can't keep a good back shape then core stability work will be necessary. This will mean giving your rowers exercises to develop their buttocks (gluteal muscles), abdominals and lower back muscles. These muscles are very important in maintaining good lower back posture but often become underdeveloped where a person regularly sits poorly for long periods. Some good exercises for the buttocks are shown here.

The abdominals can be developed with sit-ups and leg-lifting exercises.

Glute Triggering / Engagement exercises

The Clam

Keep the feet together, lift the top of the knee as far as possible without moving the back or pelvis.



Resisted bridging

Do an unresisted bridge first, then add resistance.
Lift the bottom slowly up and down.

Do the bridge, this time with partner trying to hold knees together, or theraband or boat tie.

Can be done in sets in a circuit or in a weights session.

Technique

Para rowing fixed-seat technique

The aim in fixed seat rowing technique is to keep things simple and aim to do the basics well so the rower's sculling is effective and enables them to use their physical potential to move the boat.

Technique must be reproducible at high rates. The ability to apply power effectively through the water by exhibiting the basics is paramount. All movements have to follow each other in a fluid, continuous cycle.

PR2


The Catch


The Catch


The Drive


Mid-Drive


End of Drive Phase


Extraction of blades at the finish


Recovery


Recovery

Technique

Para rowing fixed-seat technique

PR1

Catch

1. The shoulders are forward flexed, and the trunk is leaned against the chest strap.
2. The hands rise to “lock” the blades into the water.
3. The catch is initiated using powerful shoulder muscles.
4. The catch is taken with one smooth continuous accelerated movement (no pause), employing the powerful shoulder muscles and then the arms.

Mid-Drive

The Finish

5. The trunk is set against the backrest of the seat.
6. The shoulders and neck are relaxed.
7. The hands make a small tap downwards with flat wrists, to lift the blades clear of the water.

8. The hands move away level with the arms and shoulders fully relaxed.
9. The sculls are pushed smoothly out towards the front end with the blades squared early enough to enter the water again without having to pause to complete the squaring action.

Skills and drills

In this section you will find specific skills and drills which will help improve the rowing capabilities of the learners.

Emergency stop

The learner stops rowing, puts the blade flat on the water, pushes it into the water flat and when the boat speed has reduced, turns the blade square.

Spin turning

This can be taught in stages.

Early learners should practice alternately backing with one hand and rowing with the other, keeping their seat at the backstops. Whilst one blade is working the other should be feathered on the water.

Later learners can introduce a body lean, rocking back to row on and pushing forward from the hips to back down. The feathered blade should run over the water surface so that the handles stay together and again one blade should be feathered while the other is working.

The very last stage is to turn the boat alternately backing and rowing using full slide. The learner backs down with one hand while sliding forwards. Having arrived at front stops that blade is feathered, the other is squared and the learner rows a one-handed stroke. The cycle continues until the boat has completed its turn.

Backing with the right hand

Sliding forward and continuing to back with the right hand. Left blade is feathered

At front stops, right blade feathers and left blade is used to row on

Sculler has returned to the back stop position

Skills and drills

Slaps

Learner sits in the safe position: legs down, handles level at body, blades feathered and on the water. fig 18

Start the exercise with alternate slaps. Ask the learner to do this by shifting weight from one foot to the other and keep the shoulders still. Blade handles are pushed down into the lap. fig 19

Then the learner should try slapping both blades at the same time.

Good for balance and hand position.


18


19


19


19

Chops

Learner sits at the front stops. Back should be straight, shoulders should be relaxed. fig 20

Dip the squared blades in and out of the water by moving the hands up and down. After some practice the learner should be able to make small hand movements to get the blade in and out and not wet much of the oar. fig 21

Good for fine tuning the hand movements at the catch.

Hand circling

Learner starts at the safe position. fig 22

Holding the handles, the hands are rolled around one another. fig 23

As the learner gets better, the circles should get smaller so that the hands remain close together.

Good for hand positioning and therefore boat balance.


20


22


21


23

Skills and drills

Rock the boat

Learner starts at the safe position. fig 24

Raise one hand and lower the other alternately to tip the boat from side to side. fig 25

As the learner gets more confident, he or she should push hands away and slide forward. Here the tips will be bigger. The biggest tips are at front stops and they are called rigger dips, because the tip of the rigger will get wet.

Both these exercises are good for confidence and balance.

Legs only rowing

Learner sits at the catch with blades flat on the water. fig 26

Make sure the learner has a strong back position. Square blades into the water and drive legs using 5cm of the slide. The learner should use the legs only, and remain rocked forward at the hips and arms straight. As the rower improves allow more slide, but maintain a legs only stroke. fig 27

Good for teaching drive sequence.

Watch the video 'VID 20140325 093553 Body Mechanics'

Square blade paddling

This is difficult for beginners, but worth the effort. fig 28

A good exercise for lots of reasons, particularly extraction.

Start by asking for a few square blade strokes without much slide, later adding more repetitions and more slide. fig 29

Watch the video 'Men's Square Blade Paddling'

Session plans

Introduction

The following plans are designed to help you get started.

You should use them for guidance, but not be afraid to adapt them to your own coaching circumstances. Each session is designed to last for about 90 minutes from brief to debrief, but could be delivered as two shorter sessions or can be lengthened by using the suggested extension activities.

There are nine plans in all. The order in which they are taught can be changed. Each plan has a review sheet afterwards. This is to help you think about your teaching and plan improvements. There is also a blank planning form which you are invited to copy and use for your later sessions.

All of the sessions are suitable for any age group. The youngest learners (10-14 years old) would however benefit from shorter sessions and their workload should be biased towards teaching skills and away from heavy work.

Although boat types are sometimes suggested, it is possible to use different boats, including fixed seat boats, for all the sessions. Capsize drill is, however, most easy to perform from a single.

A megaphone is a very useful teaching aid. If an electronic megaphone is not available, cut down and use a traffic cone.

Session 01 – The boathouse

Objectives

Get to know the boathouse.

Equipment needed

- Trestles
- Boat to put on them
- Selection of blades
- Paper labels with names of boat parts

Skills and information that will be learned

Where everything is, and what things are called.

Briefing with lead coach, what do I need to know before I meet the learners

Which boat and blades can I use? Do I need the boathouse key?

Briefing and warm up

This session is a chance for learners to ask questions and the instructor to introduce the sport to them and show them where everything is kept. No warm-up is necessary for this session.

Content (timing)

A boathouse tour to show where the following items are:

20 min Boats, blades, throw lines, PFDs, first aid kit, trestles, map of water, safety noticeboard and what it displays. Changing rooms, telephone.

10 min Safe lifting with commands.

(5min) Placing boat correctly on trestles without injury or damage.

20 min Name the boat and blade parts, a short exercise for learners to try. Leads to a discussion of the names and functions of boat components.

10 min Racking boat correctly.

5 min Appropriate dress for rowing and hydration/food for next session should be discussed.

Cool down and stretching

No cool down or stretching is required for this session.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 02 – Getting ready to row

Objectives

Getting ready to row.

Equipment needed

– Sufficient boats for group: one seat for every two rowers

– PFDs

Skills and information that will be learned

Launching and adjusting.

Briefing with lead coach, what do I need to know before I meet the learners

Which boats and blades can I use? Are they ready or do they need rigging or minor repairs? Will there be any other water users? What safety equipment will I need e.g. throw lines? What is the weather forecast? What are the water conditions like?

Briefing and warm up

Tell the group that it is easier to row a boat which has been set up properly for the rower and that you are going to teach them how to do this.

Explain that until learners have performed a swim test they must wear a PFD.

No warm-up is necessary for this session but rowing leaders may like to teach one here.

Content (timing)

10 min Safe lifting of boat on to trestles (revision).

10 min Boat safety checks. Leads to a discussion of how boats are built to be safe.

20 min Demonstrate getting in, trapping blades, adjusting foot stretcher, holding the handles, getting out.

30 min Group practice.

Extension activity: Wobbling the boat. Paddle with one hand keeping blade square and using arm only.

Cool down and stretching

No cool down or stretching is required for this session, but leaders may like to teach one here.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 03 – Learning to paddle 1

Objectives

Learning to paddle 1.

Equipment needed

– Rowing machines (ergometers)

Skills and information that will be learned

Basic stroke sequence.

Briefing with lead coach, what do I need to know before I meet the learners

Will anyone else be using the machines or teaching space at the same time?

How many machines will be available for learners group?

Briefing and warm up

Explain that it is easier to learn the rowing stroke on the rowing machine because it does not tip!

Ask if anyone has used a rowing machine before.

Gentle dynamic warm up with general stretch necessary for this activity **10min.**

Content (timing)

Split group into equally sized groups around each machine.

5 min Demonstrate how to sit properly with lower back straight.

3-5 min per person Backstops rowing arms only.

5 min pp Arms and body rock no slide, sequenced so that arms straighten before body rocks over.

5 min pp Arms, body and ¼ slide.

5 min pp Arms, body and ½ slide.

5 min pp Full stroke.

3-5 min pp Full stroke starting at catch position.

(Teachers may wish to reverse this sequence and start at front stops using legs only).

Cool down and stretching

Gentle cool down can be used on the rowing machines. Leaders might like to teach some specific stretches here.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 04 – Learning to paddle 2

Objectives

Learning to paddle 2.

Equipment needed

- Sufficient boats for group: one seat for every two rowers
- PFDs
- Throw line to use as a tether on the boats

Skills and information that will be learned

Moving a boat.

Briefing with lead coach, what do I need to know before I meet the learners

Which boats and blades can I use. Are they ready or do they need rigging or minor repairs? Will there be any other water users? What safety equipment will I need e.g. throw lines? What is the weather forecast? What are the water conditions like?

Briefing and warm up

This session is about transferring skills learned on the rowing machine into the boat.

Explain that boats will be used in pairs, one learner in the boat at a time with the other holding the safety rope keeping the boat from floating away.

Explain that until learners have performed a swim test they must wear a PFD.

A gentle land warm-up should precede this session with some general stretching.

Content (timing)

10 min Safe lifting boat on to trestles (revision).

10 min Boat safety checks (revision).

5 min Getting in and adjusting (revision).

10 min Hands only stroke, one hand only, swap to the other hand, lastly both hands.

10 min Hands only back down with one hand, swap to the other hand, lastly both hands.

Swap positions and repeat practice.

Learners can be asked by the instructor to move the boat around various points of the compass to check understanding of the drills e.g. both hands, forward stroke for north, right hand backing down boat travels southeast.

Extension work: Rowing both blades (still on safety rope), hands only, hands and body over, with slide.

Cool down and stretching

Gentle cool down can be used on the rowing machines. Leaders might like to teach some specific stretches here.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 05 – Staying safe

Objectives

Staying safe.

Equipment needed

- Sufficient boats for group: one seat for every two rowers
- PFDs
- Throw lines Safety boat

Skills and information that will be learned

Controlling a boat.

Briefing with lead coach, what do I need to know before I meet the learners

Which boats and blades can I use? Are they ready or do they need rigging or minor repairs? Will there be any other water users? What safety equipment will I need e.g. throw lines? What is the weather forecast? What are the water conditions like?

Briefing and warm up

Before learners can be allowed to row away from the nursery area they need to know how to stop the boat safely but quickly and the best way to turn around.

Explain that until learners have performed a swim test they must wear a PFD.

A gentle land warm-up should precede this session with some general stretching.

Content (timing)

10 min Safe lifting boat on to trestles (revision).

10 min Boat safety checks (revision).

5 min Getting in and adjusting (revision).

10 min Hands only stroke, get the boat moving, slap, bury, turn (emergency stop procedure).

15 min Using the slide, repeat emergency stop procedure.

15min Fixed seat: back one stroke on right hand, row one stroke on left hand. Repeat until boat returns to start position (360 degrees).

Extension work: Convert hands only turn into a spin turn by introducing the slide backing down with one hand whilst sliding forward and rowing on with the other hand when returning to back stops.

Cool down and stretching

Gentle cool down should be done to include some specific stretches.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 06 – Improving your stroke

Objectives

Improving your stroke.

Equipment needed

- Sufficient boats for group: one seat for every two rowers
- PFDs
- Throw lines Safety boat

Skills and information that will be learned

Drills to improve technique.

Briefing with lead coach, what do I need to know before I meet the learners

Which boats and blades can I use? Are they ready or do they need rigging or minor repairs? Will there be any other water users? What safety equipment will I need e.g. throw lines? What is the weather forecast? What are the water conditions like?

Briefing and warm up

This is a set of exercises that learners can practice and use now and in future sessions to improve technique. Each should be explained to the learner in terms of what aspects of technique each is used for (details in the manual).

Explain that until learners have performed a swim test they must wear a PFD.

A gentle land warm should precede this session with some general stretching.

Content (timing)

5 min Safe lifting boat on to trestles (revision).

5 min Boat safety checks (revision).

5 min Getting in and adjusting (revision).

10 min short warm up paddling using hands only increasing up to full slide.

45 min Choose from:

Balance: hand circling, rock the boat, slaps.

Drive phase: Legs first or legs only.

Catch: chopping.

Extraction: Square blades.

Recovery: Feet out (all boats), eyes closed (crew boats).

Instructors should use exercises suitable to the ability and progression of the group.

Cool down and stretching

Gentle cool down should be done to include some specific stretches.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 07 – If the water is rough

Objectives

If the water is rough.

Equipment needed

– Ergometers, one for each learner if possible

Skills and information that will be learned

Using the machine to its full potential.

Briefing with lead coach, what do I need to know before I meet the learners

If you have established that it is not safe for your learners to go out on the water and your Lead Coach suggests the ergometers, find out how many machines there are, where they are stored, who else might be using them at the same time.

Briefing and warm up

This is a good opportunity to discuss what is safe and what is not safe water for learner rowers, pointing out the added hazards provided by bad weather at your venue.

Suggest that learners should always turn up for training even if the weather forecast is bad because the coach will always have an alternative and useful session in mind.

A gentle land warm should precede this session with some general stretching.

Content (timing)

10 min Position machines in the training area so that learners can get all the way round them. Demonstrate how to put machine together if slide is not already attached to fan cage (instructors may want to practice this before learners arrive!). Let learners practice.

10 min Name machine parts. Explain functions.

5 min Adjust foot stretcher and damper setting for first user (foot stretcher low enough to allow easy swing from the hips, damper at a low setting. Instructors can use drag factor calibration if they are confident but a scale setting of 3 or 4 is adequate).

10 min Allow learners to explore the readout and change it with buttons. Explain split time and show how to set for different distances and times. Instructors can show other readouts here if they want to: force/time graph, power output etc.

15 min Set machines for 1 or 2 minute pieces with 30 second rest periods and allow free rowing here. Coach good technique, not rowing hard.

5 min Clean and store the machines.

Extension activities: team competition fastest 2000m with all team members contributing.

Fish game (this is available on the PM3, 4 and 5 monitors), instructors might like to experiment with the game before trying it with learners.

Cool down and stretching

Gentle cool down should be done to include some specific stretches.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 08 – Capsize drill

Objectives

Capsize drill.

Equipment needed

- Swimming pool or stretch of still, shallow, clean water
- Throw lines. At least one racing single
- Each learner will need to bring a towel and a change of clothes

Skills and information that will be learned

How to recover from a capsize.

Briefing with lead coach, what do I need to know before I meet the learners

Are there any non-swimmers in the group?

Briefing and warm up

It is important to find out from the group whether they are well enough to swim and if they have any injuries or disabilities which could make the capsize more tricky. The responses may mean a further discussion with the Lead Coach.

Explain that the drill first teaches capsizing the boat without injury to boat or rower, but that the important part is learning how to recover yourself and the boat afterwards.

Discuss any worries the learners may have. Explain that the drill will make them more confident to row and that capsize recovery is a skill like all the others they will learn.

A gentle land warm-up should precede this session with some general stretching.

Content (timing)

Swim test the group. Ask them to swim 50 meters (minimum) using a front stroke and a back stroke. Ask them to immerse themselves completely (head under) and then tread water for 1 minute (minimum).

Timings for the following depend on how many boats are available

Boat(s) on to water. No blades in the gates. Helper holds rigger to steady the boat and then lets it go to let it invert. Capsizer leans to help invert the boat, stays in the seat, upside down, taps hull 3 times slowly before surfacing. Rights the boat pushing down with one foot on rigger and pulling upon the other rigger by reaching across the boat.

Repeat with blades in gates, pushing handles away firmly before holding riggers to invert boat. (Note this practice can be extended for the less confident learner to include extra attempts without the feet in the boat shoes).

Tow boat from bow ball to poolside.

Try straddling and paddling an upturned boat.

Try re-entry into the boat holding blade handles with spoons flat on the water (tricky).

Extension activity: a buddy rescue, rower in the single holding blades flat on water, partner in the water straddles stern deck and sits facing rower.

Cool down and stretching

Gentle cool down should be done to include some specific stretches.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 09 – Having fun

Objectives

Having fun.

Equipment needed

- Sufficient boats for group: one seat for every rower
- PFDs
- Throw lines Safety boat

Skills and information that will be learned

Refining some of the skills taught on the course.

Briefing with lead coach, what do I need to know before I meet the learners

Which boats and blades can I use? Are they ready or do they need rigging or minor repairs? Will there be any other water users? What safety equipment will I need e.g. throw lines? What is the weather forecast? What are the water conditions like?

Briefing and warm up

Explain that the group has a choice of activity because this is the last L2R session, but they must all do the same activity and choose between a long 'tour' of the local water, some games in the shallow water, a skill competition.

Explain that until learners have performed a swim test they must wear a PFD.

A gentle land warm-up should precede this session with some general stretching.

Content (timing)

60-90 minutes total

Tour: Decide which boat type to use. A crew boat, if available, might be a valuable new experience for the learners and could extend the distance you can go during the time available.

Games: retrieving floating objects from the water uses boat manoeuvres and can be used as a competition to see which team or individual can find the most. Water football or netball is also possible where the players are asked to flick a light ball with their oars or retrieve and throw it (more difficult!)

Skill competitions: A timed slalom course.

Or rigger dips, spin turns, blade slaps, hand circles: counting how many are achieved in thirty seconds.

The debrief discussion can include future plans now that the Learn2Row course is complete, if this is the last session.

Cool down and stretching

Gentle cool down should be done to include some specific stretches.

Review

How did I do?

What did the learners tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

Session 10

Objectives

Content (timing)

Equipment needed

Cool down and stretching

Skills and information that will be learned

Briefing with lead coach, what do I need to know before I meet the learners

Briefing and warm up

Review

What do I need to tell the learners at the end?

What did they tell me?

What do I need to tell the Lead Coach?

What went well?

What bits of the session do I want to improve?

What does it mean?

'Back Down '	Reverse rowing used to move the boat backwards, or turn.
'Backstay'	The back brace of a rigger, closest to the bows.
'Backstops	When the rower sits with their legs straight and the blade handle in at their chest.
'Blade'	Also called an oar. Used to propel the boat.
'Bow'	Front of the boat or the rower who sits in the seat nearest the front of the boat.
'Bow Ball'	Ball-shaped cap that sits over the bow end of the boat. It's there for safety.
'Bow Loader'	A boat in which the cox sits at the front (bow).
'Bowside'	See Starboard side.
'Burst'	A small number of strokes taken at full pressure.
'Canvas'	The covered deck section of the bow and stern of the boat.
'Catch'	The moment at which the blade drops into the water and foot pressure is applied.
'Cleaver'	Type of blade that has the spoon in the shape of a meat cleaver or chopper.
'Collar'	The plastic circular section of the blade, is pressed against the swivel when rowing. It can be moved along the sleeve to adjust the blade gearing.
'Cox (Coxswain)'	Person who steers the boat, using a steering mechanism. Can sit either in the stern or the bows. Some boat types do not have coxswains.
'Coxless'	A boat type without a cox.
'Crab'	When the blade becomes caught in the water at the moment of extraction. Can cause the rower to let go of the handle and slows the boat. When this happens the rower is said to 'catch a crab'.

'Drive'	The part of the stroke between the catch and extraction, when the blade is in the water and propels the boat. Also called the Power Phase.
'ERG/ERGO'	Indoor rowing machine.
'Extraction'	The removal of the blade from the water by applying downward pressure to the handle. Also called the Finish.
'Feather'	Blade spoon is parallel to the water. This is the position of the blade spoon for the recovery section of the stroke. Rowers must extract the blade from the water before feathering.
'Fin'	A metal or plastic plate attached to the underside of the boat towards the stern. It helps to keep the boat on course and prevents it from moving sideways.
'Finish'	See Extraction.
'Firm'	Term used to suggest that the rower applies full pressure to the drive phase of their rowing stroke.
'FISA'	The international rowing federation. Responsible for international racing and rules. FISA promotes the sport of rowing world-wide. Active in providing international competitions for all age groups: Olympic Regatta, Paralympic Regatta, World Championships, World Cup series, World Under 23 Championships, Junior World Championships, World Masters and Continental Qualifiers.
'Fixed Seat'	A boat type without a sliding seat mechanism OR a rower rowing arms or arms and body only and not moving their seat from backstops.
'Front Stay'	The front brace of a rigger, closest to the stern of the boat. Some riggers do not have a front stay.
'Front Stop'	When the rower sits at the front of their slide with their shins vertical.
'Gate'	The metal bar at the top of the swivel. Tightened with a screw to secure the blade.

What does it mean?

'Gearing'	Determines how much power the rower can apply. In a lightly geared boat the work feels easy but more strokes are needed to move the boat 100m. In a heavily geared boat fewer strokes are needed to move the boat 100m but the strokes are harder to make.
'Heel Restraint'	Attaches the heel of the rowing shoe to the foot plate. Will help the rower release their feet in a capsize.
'Height'	Vertical distance from seat to bottom edge of swivel.
'Inboard'	Length of blade from outside face of collar or button to end of handle.
'Length'	Length of stroke, the arc from catch to extraction.
'Loom'	The part of the blade between handle and spoon.
'Macon'	Type of oar that has a regular shaped spoon.
'Mainstay'	Centre brace of a rigger.
'Oar'	See Blade.
'Outboard'	The length of the blade from outside face of collar or button to tip of blade.
'Overlap'	The amount that the scull handles overlap when a rower holds them horizontally at right angles to the boat.
'Pin'	The spindle on which the swivel rotates.
'Pitch'	The angle of the spoon in the water during the Drive.
'Port'	Left in the direction of travel.
'Portside'	Left hand side of the boat, or the right hand side of the rower. Often marked by a red stripe on the blade. Sometimes called Strokeside.

'Posture'	Position of the back and hips during the stroke.
'Power Phase'	See Drive.
'Pressure'	The amount of effort applied by the rower to the drive phase of the stroke (usually light, ½ pressure, ¾ pressure, firm).
'Rate or Rating'	Number of strokes rowed in a minute.
'Ratio'	The ratio of time taken for the drive to the time taken for recovery phase of the stroke. Time for the recovery will be up to twice as long as the drive, 1:2.
'Regatta'	A competition with events for different boat types, usually involving heats, semi-finals and finals for each event. Boats compete side by side from a standing start.
'Rhythm'	Regular and consistent stroke pattern.
'Rigger'	Metal or carbon fibre strutting attached to the side of the boat next to each seat, on which the pin and swivel sit.
'Rigging'	The way in which the riggers, slides, swivel, pins, foot plate, seat and blades can be adjusted to optimise the rowers comfort and efficiency.
'Rudder'	Device under the boat that can be moved to make the boat change direction. Linked to a steering mechanism.
'Running Start'	A racing start undertaken with the boat already moving. Often used in training.
'Saxboard'	The sides of the boat above the waterline and around where the rowers sit.
'Scull'	A smaller version of the blade used in sets of two and held in either hand for sculling.
'Sculling'	Rowing with two blades per rower, one on either side of the boat.
'Sequence'	Methodical movements of the arms, back and legs during the stroke cycle.

What does it mean?

'Shell'	The smooth hull of the boat. Can be made from wood but now more commonly made from synthetic materials.
'Sleeve'	Plastic sleeve fixed to the blade and which collar or button encircles.
'Slide'	Two metal runners on which the seat travels.
'Span'	Measurement made on a sculling boat. The distance between the centres of each pair of pins.
'Spin Turn'	A term used to describe the way in which a boat is rowed around on its axis.
'Spoon'	The end of the blade, the part which is immersed during the rowing stroke.
'Spread'	Measurement made on a rowing boat. The shortest distance from the centre line of the boat to the centre of the pin.
'Square'	To turn the blade so that the spoon is at nearly 90 degrees to the water surface. This is done early during the recovery so that the rower is prepared for the catch.
'Standing Start'	A race start done from stationary.
'Starboard'	Right in the direction of travel. Sometimes called Bowside.
'Starboard Side'	The right hand side of the boat, or left hand side of the rower. Often marked by a green stripe on the blade.
'Stakeboat'	An anchored boat or pontoon from which racing boats are held.
'Stern'	The back of a boat.
'Stern-Loader'	A boat where the cox sits at the back (stern).
'Stroke'	One cycle of the blade OR the rower who sits closest to the stern of the boat, in front of all the others and is responsible for the rate and rhythm of the boat.
'Strokeside'	See Portside.
'Stretcher'	A plate to which the boat shoes are attached. Secured with adjustable screws.
'Sweep'	Rowing with one blade each.
'Swivel'	The plastic open square shape mounted on the pin in which the blade sits when rowing. Closed with the gate.
'Tap Down'	To lower the hands at the end of the stroke to remove the spoon from the water.
'Trestle'	Portable stands used to hold a boat for rigging, washing, checking etc.

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