



**TWEED VALLEY
SAILING CLUB**

INTRODUCTORY SAILING COURSE

NAME _____

AIMS OF INTRODUCTORY SAILING COURSE

By the end of this course it is expected that all students will:

Have a basic knowledge of 1) safety factors regarding sailing 2) boat parts and their uses 3) winds, tides and currents 4) basic rules of the 'road' on the water	and, for a sailing dinghy , be able to 1) rig and unrig 2) tie basic knots 3) care for the boat ashore 4) launch and retrieve from the shore 5) steer and crew 6) do basic manoeuvres – tacking and gybing 7) right a capsized dinghy 8) perform a 'Man Overboard' drill 9) sail unaided around a small triangular course
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The course is suitable for able bodied adults and school aged children.

Student requirements for this course are:

- 1) Be able to swim 25 metres,
- 2) Have suitable sailing attire: eg. swimming costume, shorts, long sleeved rashie or 100% wool jumper, spray jacket (if possible), hat/cap with restraining string, shoes and PFD life jacket (may be provided) - all prepared to get wet!
- 3) Pay the prescribed fee and complete the application & indemnity form prior to the first session.

The course should be completed in six three hour sessions. Either one three hour session per week or six three hour sessions held over three days. Numbers for the course will depend on the number of boats and assistant instructors available.

This course is based on Yachting Australia's Program and should be conducted by a qualified Sailing Master.

Contents

* Some good Videos:

Google these:

SailaBoatTV - on YouTube

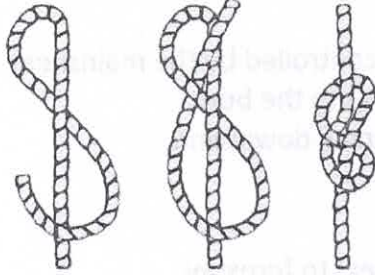
Also: <https://www.youtube.com/watch?v=Ay7Ldfcdell>

1. Ropes and Knots
2. Parts of the Boat
3. Vocabulary
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7. "Keep it Flat" - Side Trim
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22. Other Basic Rules
23. Tacking
24. Gybing (or "jibing" - US)

Ropes and Knots

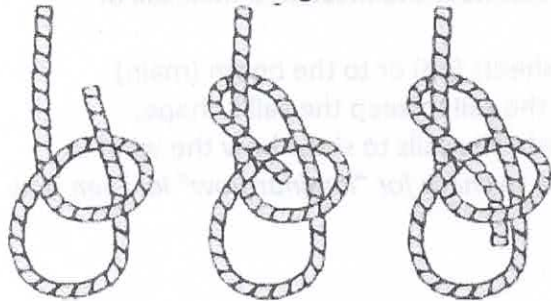
Tying knots comes in handy for all sorts of applications. The ability to tie a good knot fast can come in very handy when out on the water!

The Figure of Eight:

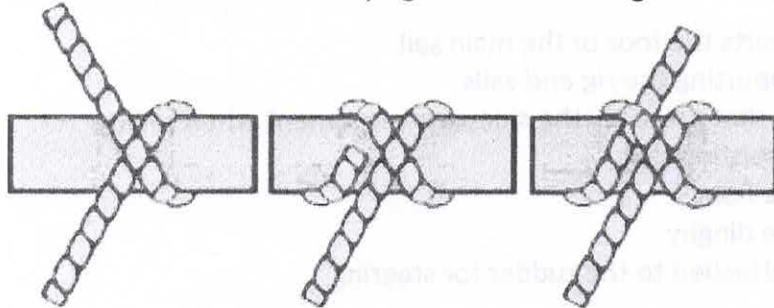


Used as a stopper knot for the end of sheets and halyards etc

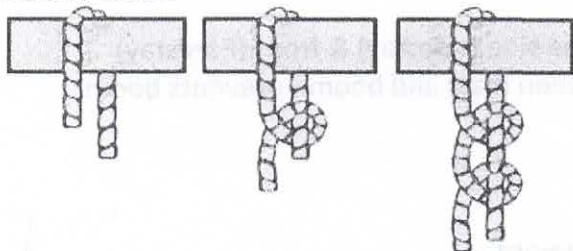
The Bowline: The best knot for tying a loop around something. It is very strong but is easily undone even after being under extreme load.



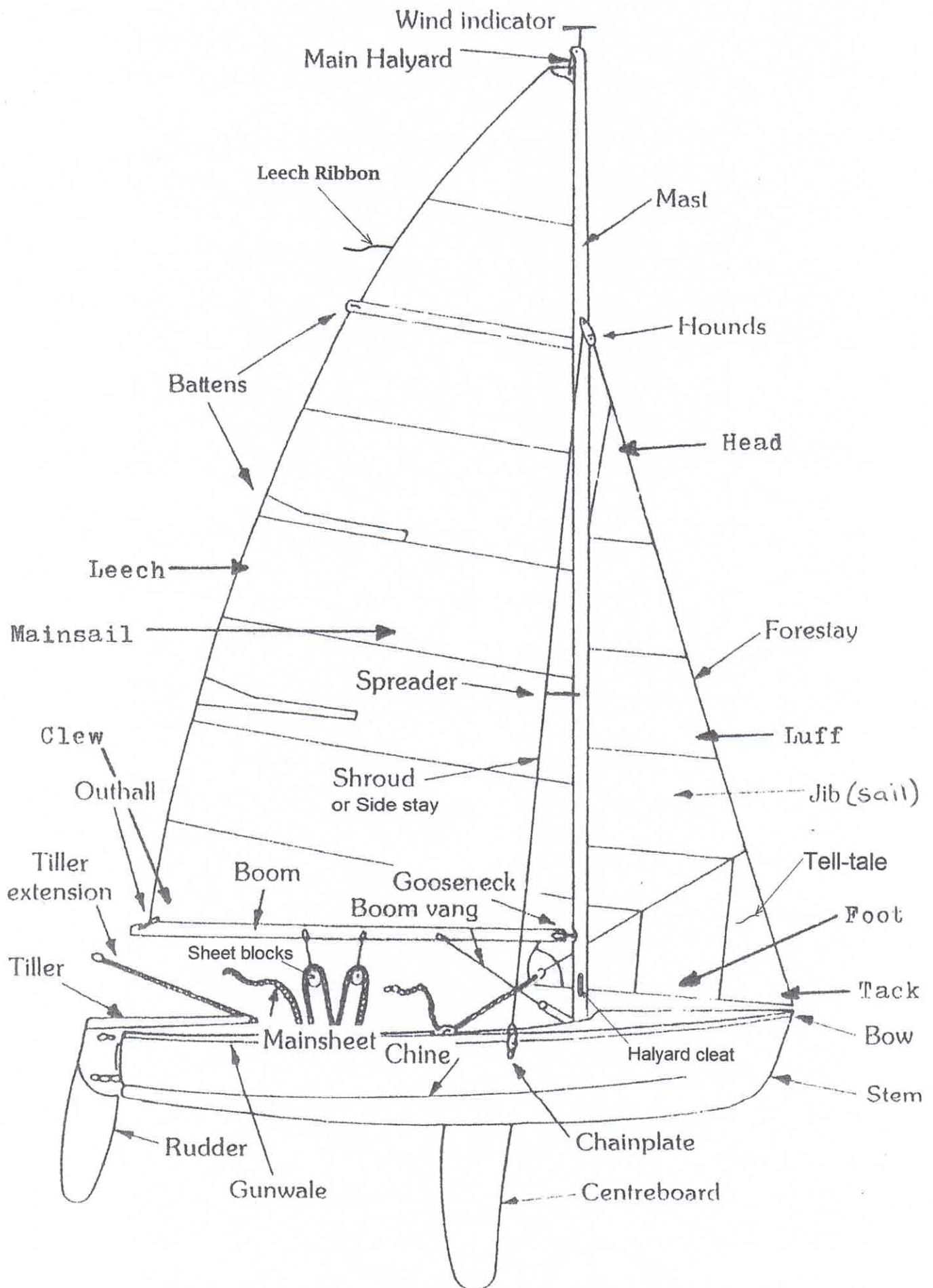
The Clove-Hitch: Great for tying fenders to railings!



Two half Hitches: A very simple knot to tie the end of a rope to something... but can be very hard to undo!



Parts of the Boat



NEW VOCABULARY

TYPES OF SAIL

- Mainsail** Largest sail attached to the mast and boom, controlled by the mainsheet.
Jib / Headsail Triangular sail at the front of the boat-attaches to the bow.
Spinnaker (Kite) Large sail used at front of boat for running downwind.

PARTS OF SAIL

- Luff** Front area of the sail. Mainsail – next to mast. Jib – next to forestay
Leech Back edge of sail – “trailing edge”
Foot Bottom of the sail
Head Top of the sail
Tack Front lower corner of the sail that connects near the mast on a mainsail or the bow on a headsail
Clew Back corner of the sail that attaches to sheets (jib) or to the boom (main)
Batten Thin stiff pieces of fibreglass sewn into the sail to keep the sail’s shape.
Tell Tales Pieces of wool or ribbon stuck onto the sails to show how the wind is flowing over the sail (*Allows crew to check for “laminar flow” ie. Even flow of wind both sides of the sail*)

PARTS OF A DINGHY

- Bow** Forward area of boat
Stern Rear of the boat
Boom A spar that supports the foot of the main sail
Mast Upright spar supporting the rig and sails
Centreboard A board or plate that prevents the sideways movement when sailing
Halyard Ropes used for hoisting sails
Hull Main body of the boat
Rudder Used to steer the dinghy
Tiller Stick or handle attached to the rudder for steering
Tiller Extension
Sheet Rope controlling the sideways movement of a sail or the boom
Mainsheet / Jib Sheet
Block
Stays Wires supporting mast - from the side (sidestay) & front (Forestay)
Vang Rope & pulley attachment between mast and boom - prevents boom rising & controls sail shape.

DIRECTIONS

- Port** Left side of boat when facing forward
Starboard Right side of boat when facing forward
Windward Side of boat that the wind crosses first
Leeward Opposite side to windward
Luff up Steering the front of the boat towards the wind.
Bear away Steering the front of the boat away from the wind.
Aft – towards the back (stern) of the boat

POINTS OF SAIL

The angle at which the wind comes towards the boat determines the Point of Sail.

It is imperative to always know where the wind is coming from so that sails can be correctly trimmed. Try to always feel where the wind is coming from. As an aid you can tie pieces of wool to the shrouds, or look at the 'windex' indicator on top of the mast.

THE 5 POINTS OF SAIL:

▲ **Close Hauled** is as close to the wind as the boat can sail without tacking over. This is usually at about 45° either side of the wind direction and the sheets are pulled on tight.

▲ **Fine Reach** is sailing at an angle of 50° - 80° from the wind, with the sails eased out around 1/4 of the way.

▲ **Beam Reach** is sailing at an angle of about 90° to the wind, with the sails eased out around 1/2 of the way.

▲ **Broad Reach** is sailing at an angle of 100° to 160° to the wind, with the sails eased out 3/4 of the way.

▲ **Running or Dead Run** is sailing at an angle of 160° to 180° with the wind directly behind the boat, and the sails "goosewinged" on either side of the boat (otherwise the mainsail blankets the headsail.)

A BASIC RULE OF SAIL TRIM is

"If in doubt, let it out".

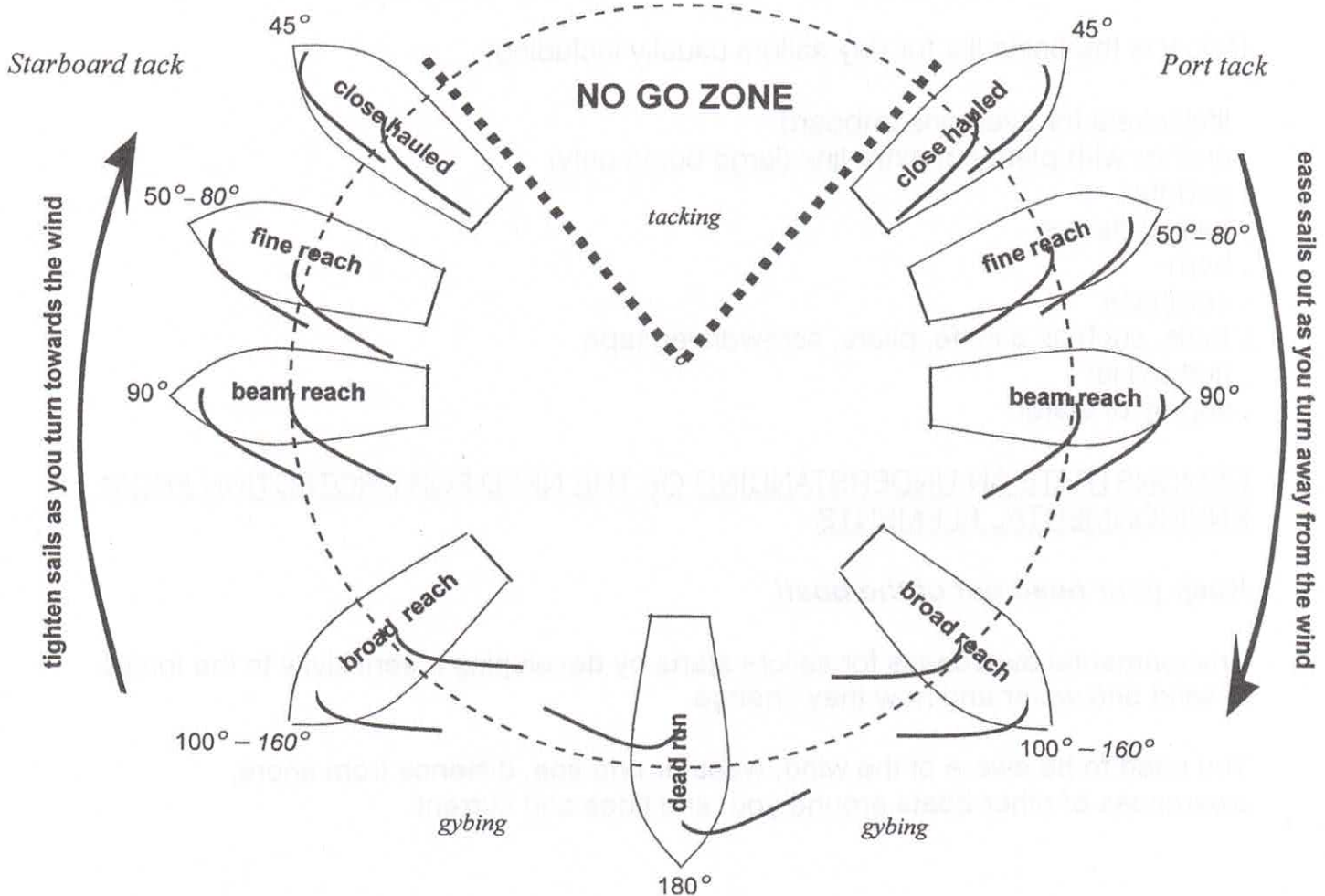
If the sail is not flapping, ease the sheet until the sail just begins to flap (luff.)

If the sail is luffing, pull on the sheet until the luffing just stops.

As the yacht turns away from the wind, the sheets are eased. As you turn towards the wind, the sheets are pulled on.

Yachts cannot sail in the 'NO GO ZONE' which is an area 45° either side of the wind direction. In this 90° area the sails flap, no matter how tightly you pull on the sheets, as wind is hitting both sides of the sails.

WIND DIRECTION



Good Fore & Aft Trim

(in non-planing conditions)

Crew weight in centre of boat -
Forward in cockpit.

Water flows along Designed waterline
- From bottom of bow to bottom of
transom.

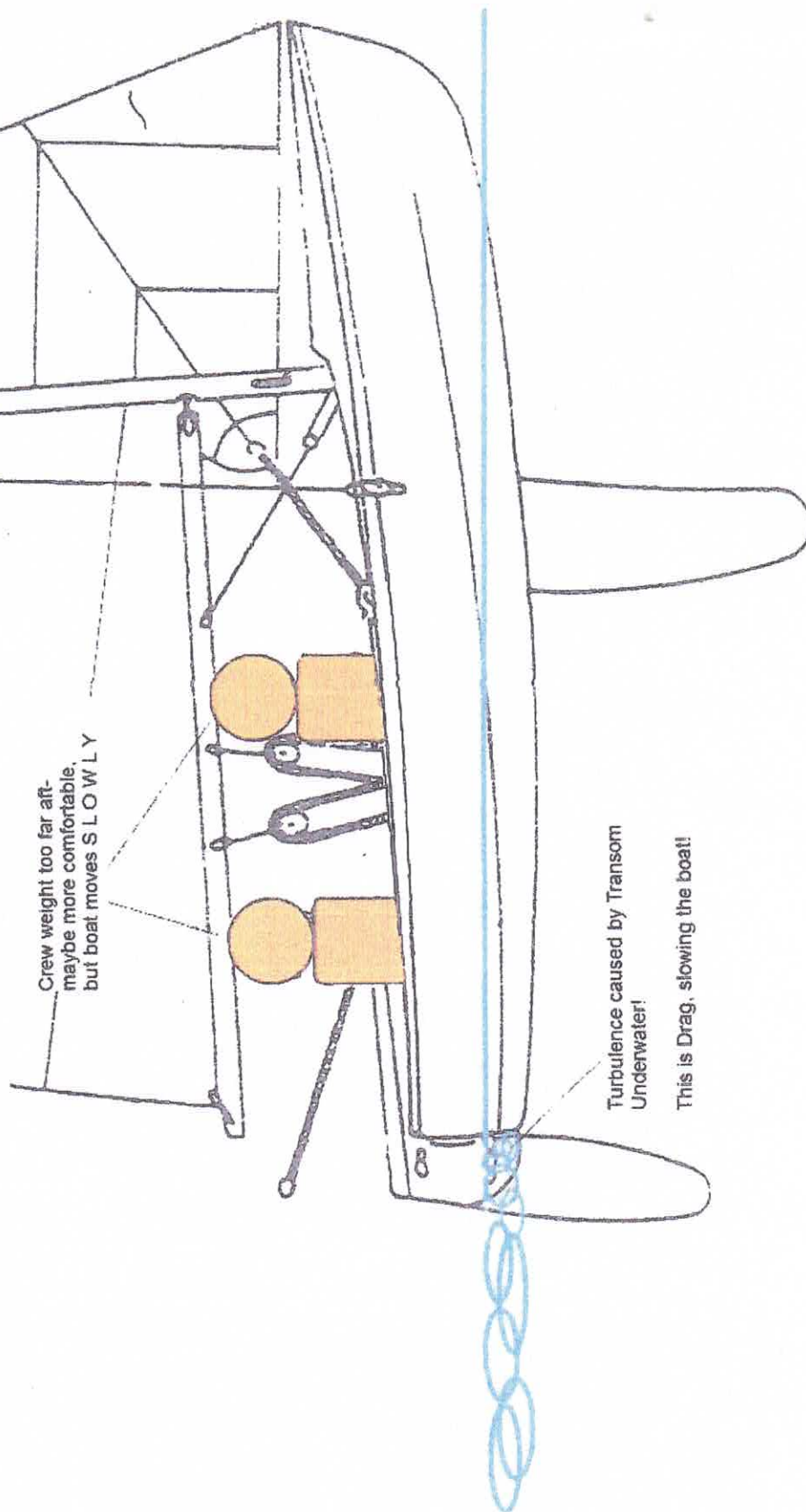
No water turbulence at stern



Poor Fore and Aft Trim

(for non-planing conditions)

- Crew weight too far aft, Transom submerged!
- causing water turbulence - SLOW!



Keep it Flat!

By using Crew weight (in combination)

This crew is keeping the boat 'Flat' -

- Foredeck Horizontal, Mast Vertical.

When wind eases, crew should move inboard, to keep it flat, and to keep helmsperson comfortable.

Helmsperson moves in later but stays to windward.

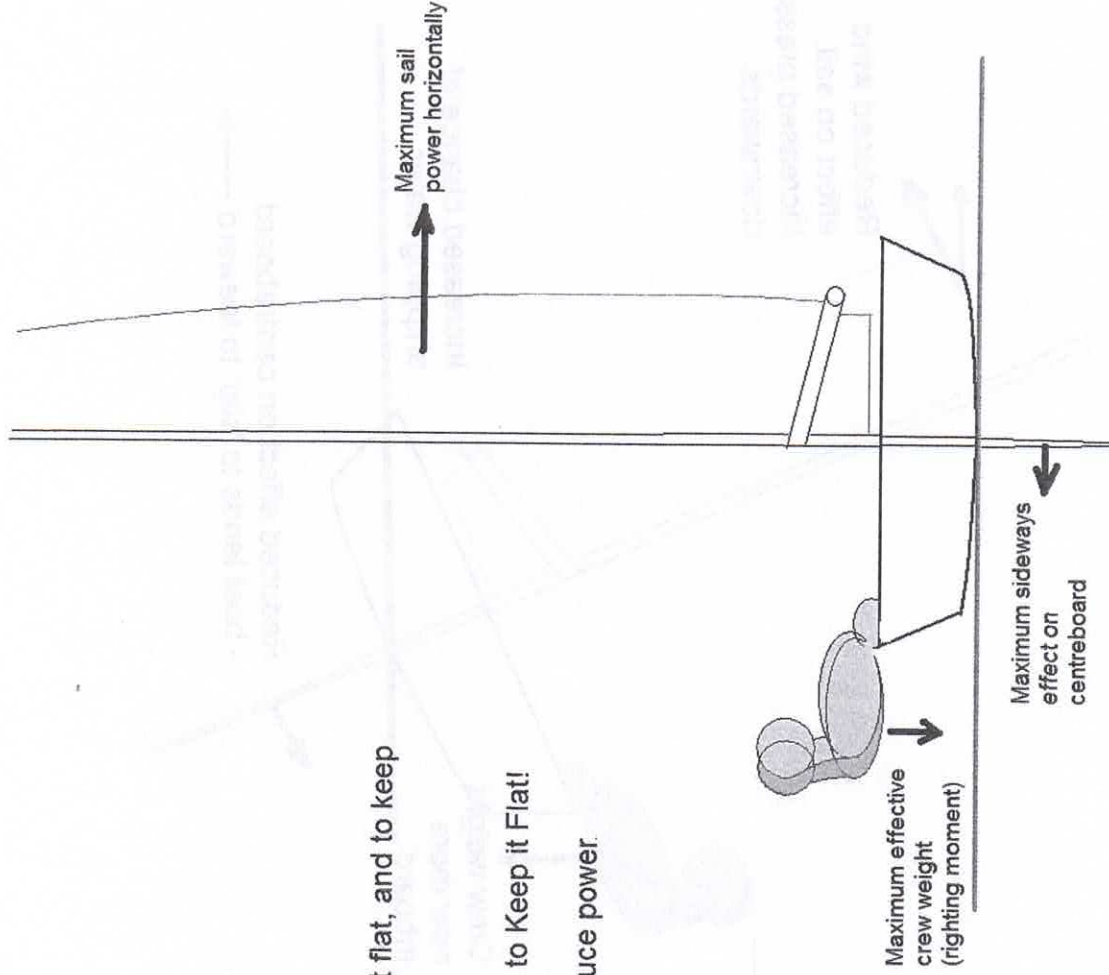
When a puff hits, Mainsheet eased a bit, then back on - to Keep it Flat!

When wind generally strengthens and crew fully out, reduce power.

The exception to Keeping it flat is in very light winds.

Then it is advantageous to heel the boat over a bit to:

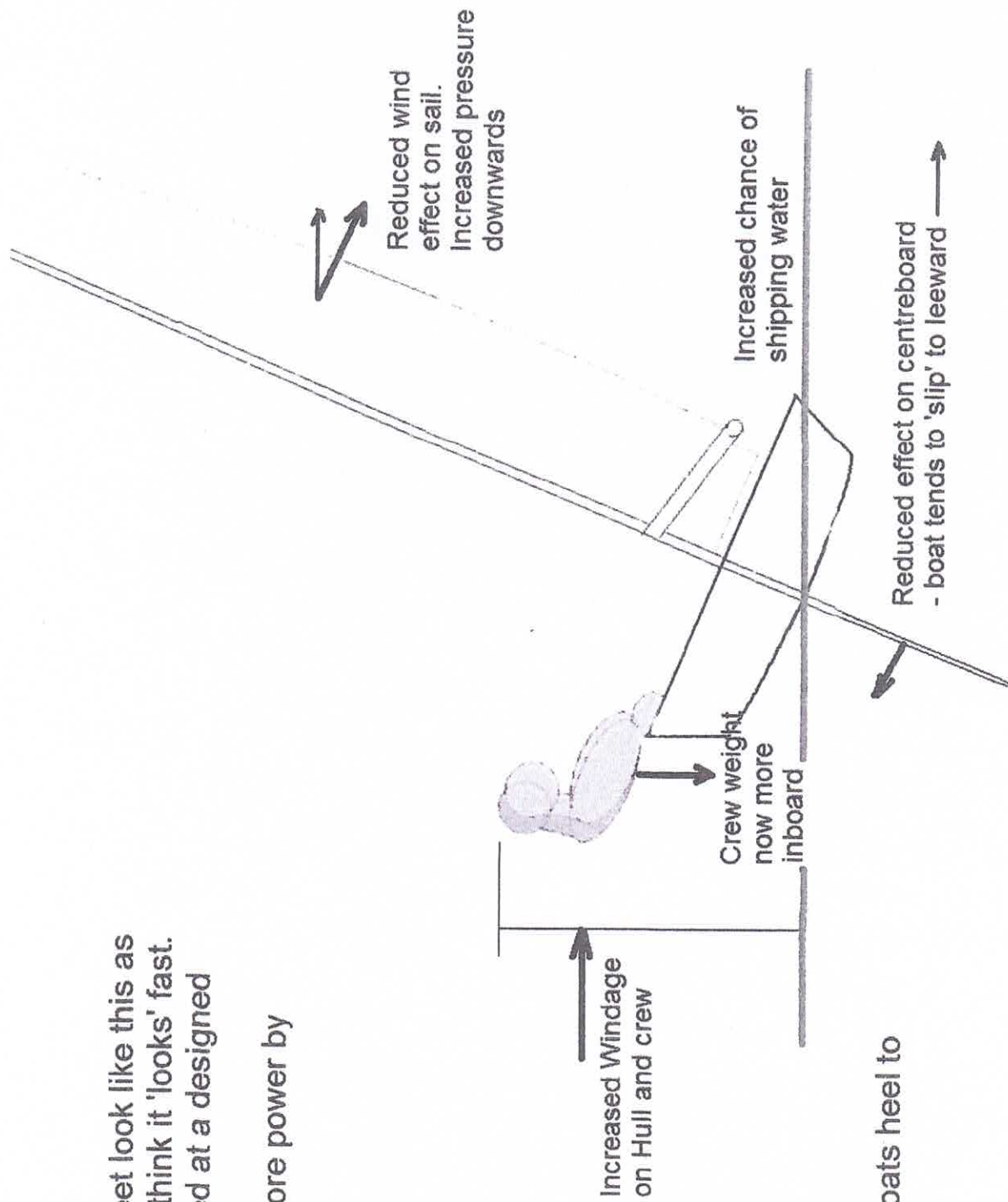
- allow boom and sails to keep shape,
- allow shape of hull to keep boat heading upwind



NOT Keeping it Flat

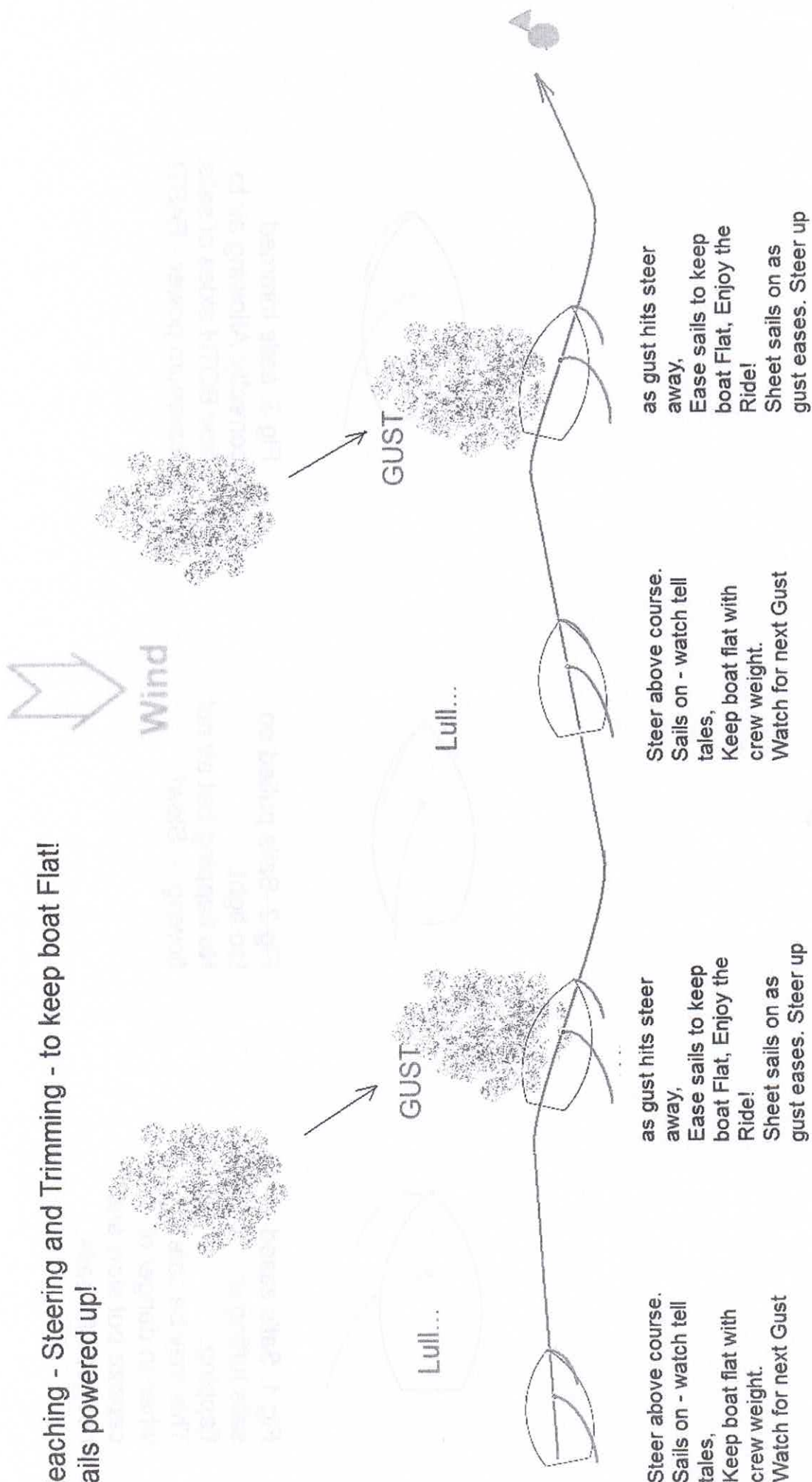
Boats at the back of the fleet look like this as psychologically the crews think it 'looks' fast. Keelboats need to be sailed at a designed angle of heel.

Centreboarders can get more power by Keeping it Flat!



Sailboards and foiling sailboats heel to windward to increase lift.

Reaching - Steering and Trimming - to keep boat Flat!
Sails powered up!



Beam Reaching -Trimming the sails

WIND

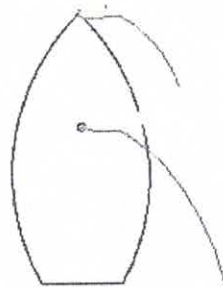


Fig 1. Sails eased -
sails luffing or
flapping.
This may be safe
when in danger of
capsize but slow and
not good for sails.

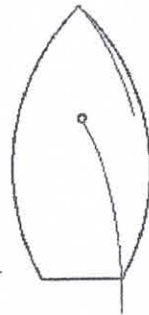


Fig 2. Sails pulled on
too tight.
No flapping but air not
flowing - Slow!

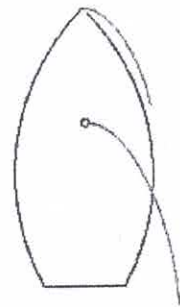
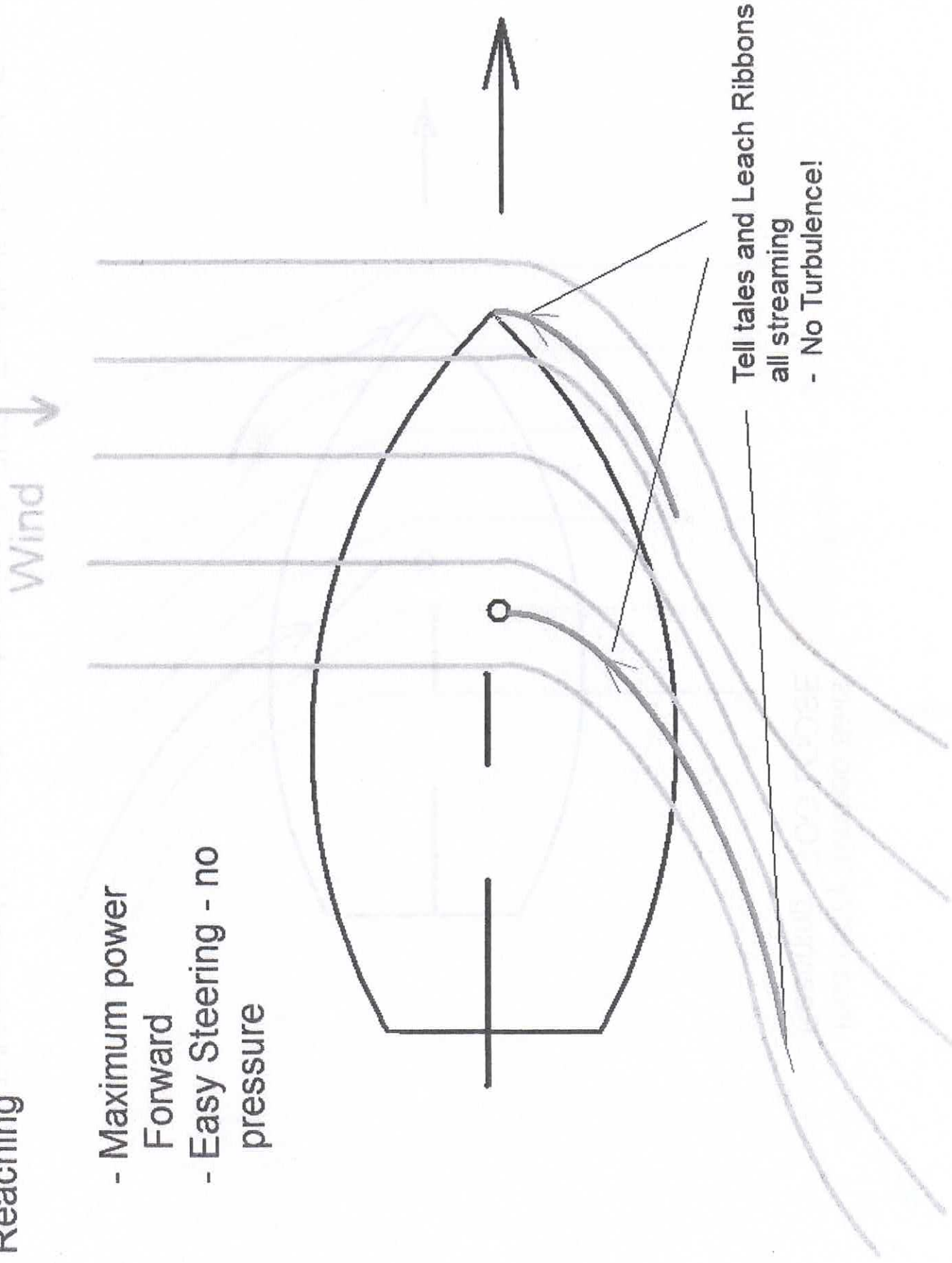


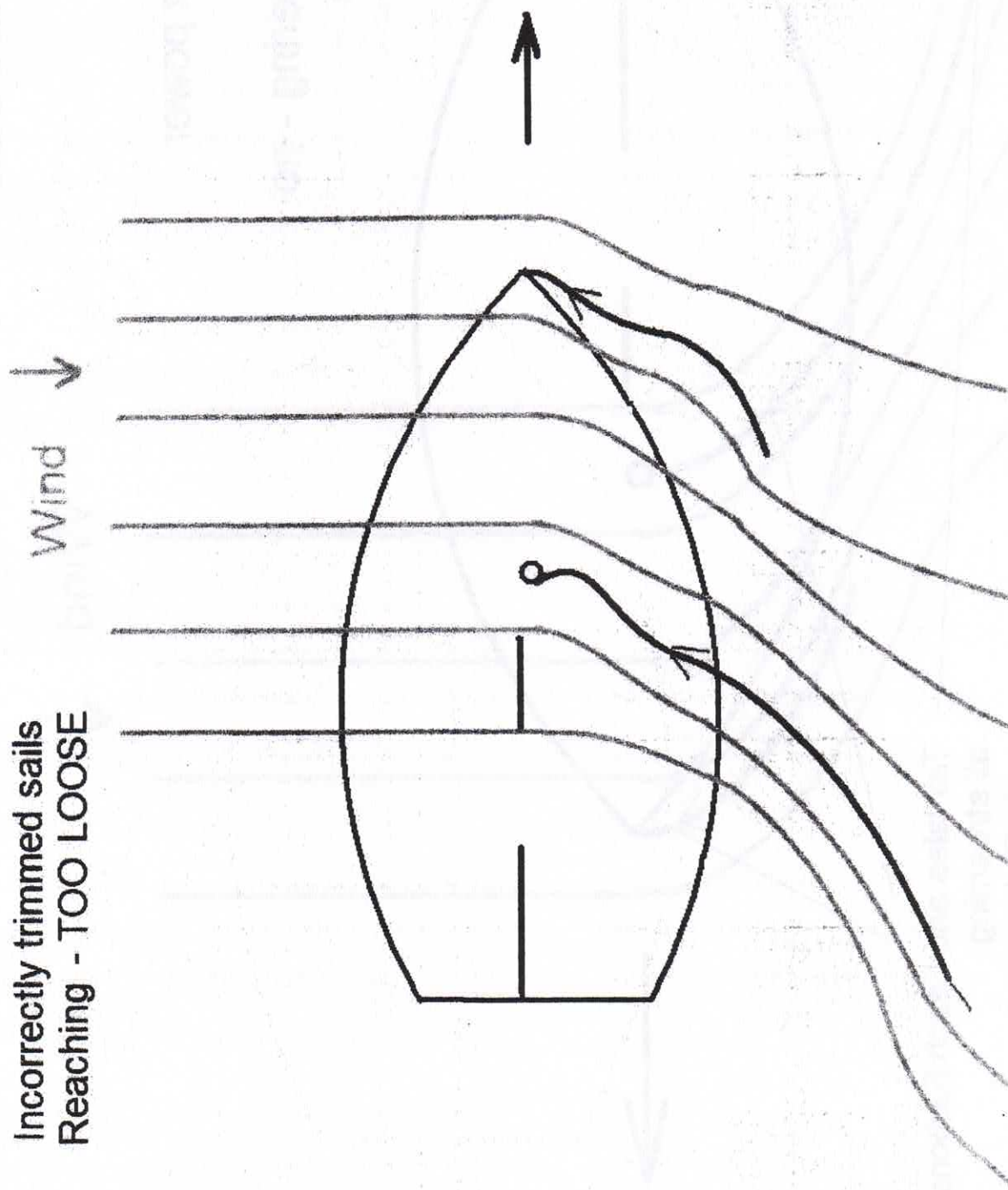
Fig 3. sails trimmed
correctly. Allowing air to
flow BOTH sides of sails.
Maximum power - FAST!

Correctly Trimmed Sails - Reaching

- Maximum power Forward
- Easy Steering - no pressure



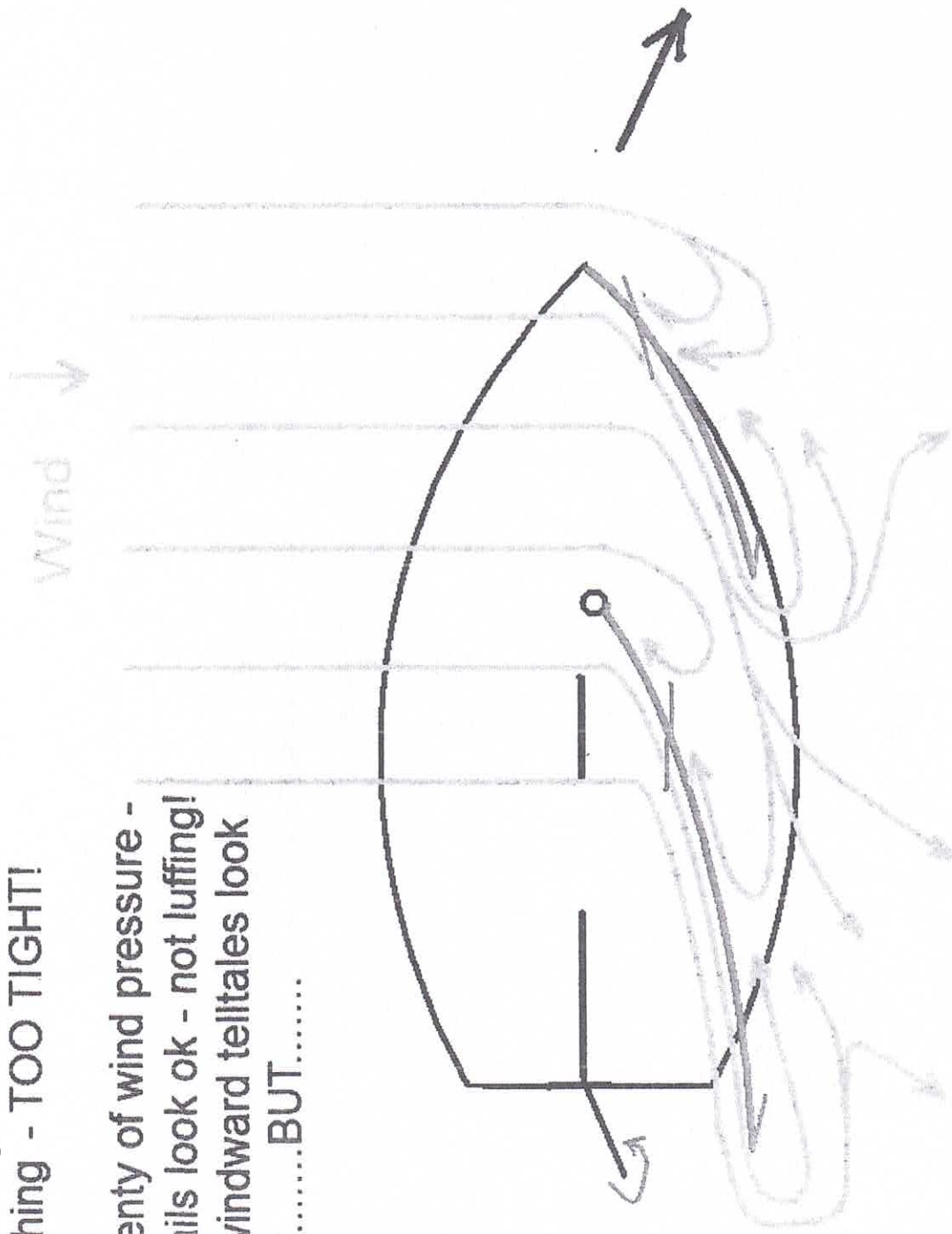
Incorrectly trimmed sails
Reaching - TOO LOOSE



Tell tales and Leech ribbons streaming ok, BUT....Front half of sails Luffing - only the back half of sails working. Ok in survival conditions but for racing - need to power down (flatten mainsail) so sails can be trimmed correctly.

Incorrectly trimmed sails
Reaching - TOO TIGHT!

Plenty of wind pressure -
Sails look ok - not luffing!
- windward telltales look
ok.....BUT.....



Leeward tell tales and leech ribbons all pointing the WRONG WAY!!

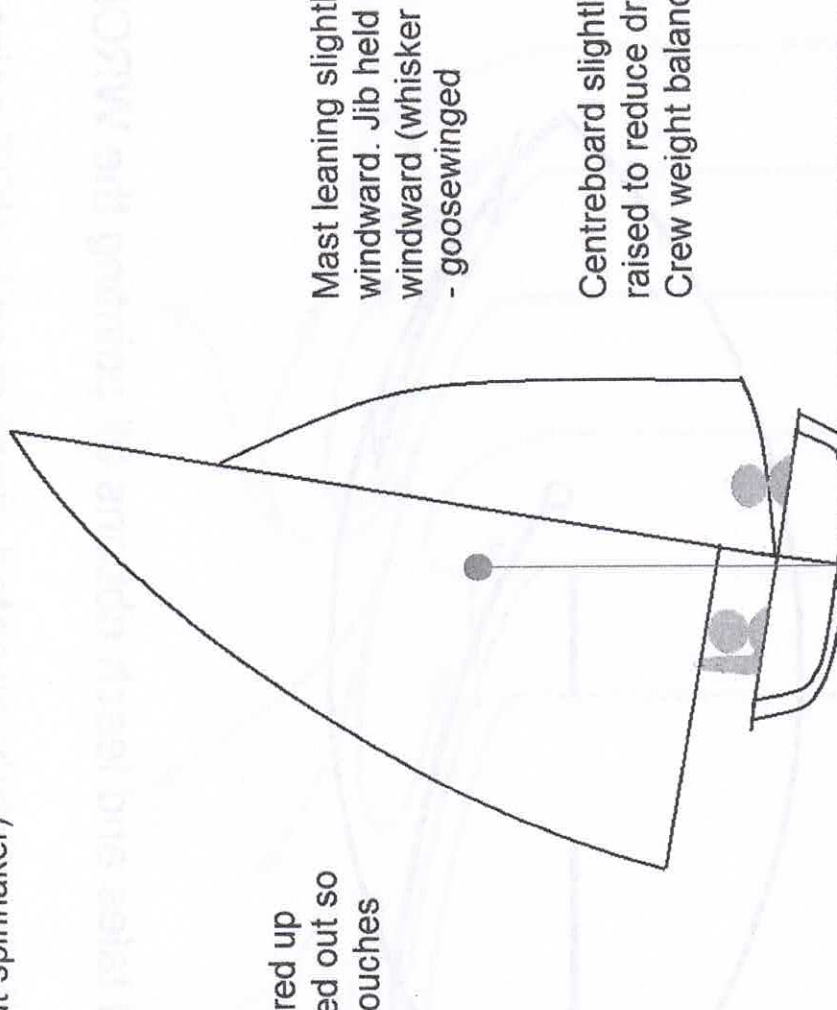
Because sails too tightly sheeted, front of sails NOT pointing into wind,
- Loss of laminar flow - Turbulence - Slow Boat

Running Square (without spinnaker)

Mainsail powered up (Full) and eased out so boom almost touches side stay

Mast leaning slightly to windward. Jib held out to windward (whisker pole?)
- goosewinged

Centreboard slightly raised to reduce drag.
Crew weight balancing



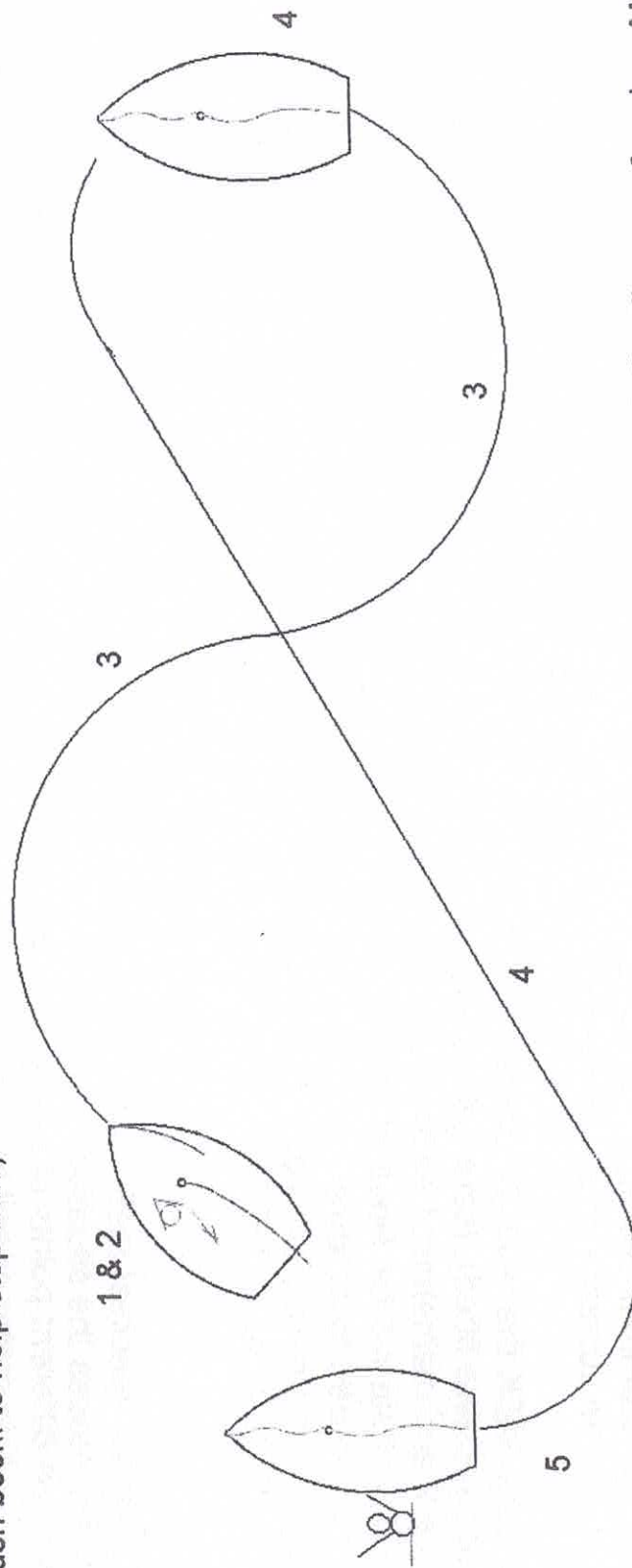
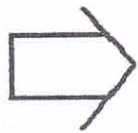
Centre of Sail Area over Centre of Boat
- means boat balanced - no rudder pressure

'Man Overboard' Drill - Figure '8'

(also invaluable as a boat control drill)

1. One crew yells "Man Overboard!"
2. He/she continues to point at 'him'
3. Helm reaches away until downwind of 'him'
4. Helm tacks and bears away until downwind
5. with sails shaking, judge your manoeuvre to STOP 'head to wind' alongside MOB, & retrieve.
(push boom to help stop boat)

WIND



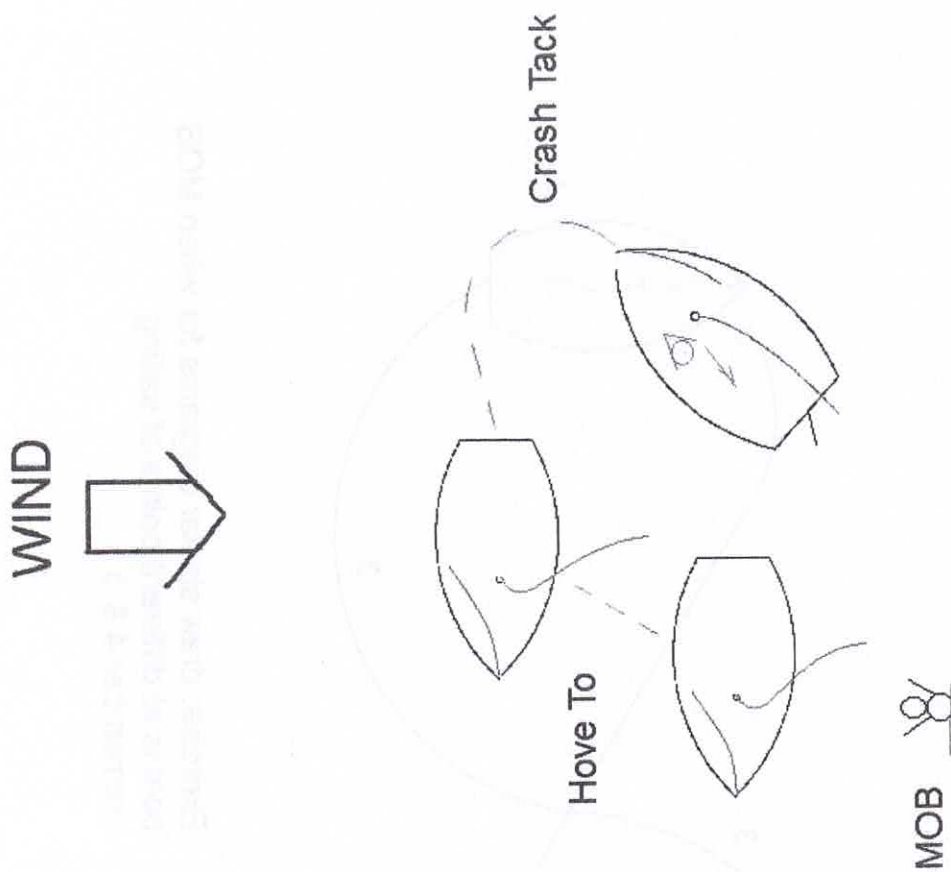
Exercise: draw similar diagrams for when MOB boat is at different points of sailing
- remember 4 & 5.

'Man Overboard' Drill - Crash Tack & Hove To

(Internationally recommended for rough conditions in open waters where current & visibility is difficult.)

1. Immediately TACK the boat (& activate MOB position, where fitted), leaving jib (headsail) cleated! and mainsheet free to run,
2. On new tack, boat will be 'Hove To', ie Jib backwinded to windward, Mainsail not drawing, but controlled
3. as boat drifts to leeward, MOB swims to be rescued.

Note: This is the quickest method to stop the boat to assess the situation. However, on different points of sailing it may be necessary to motor or sail to pick up MOB.



Exercise: draw similar diagrams for when boat is at different points of sailing
- remember 4 & 5.

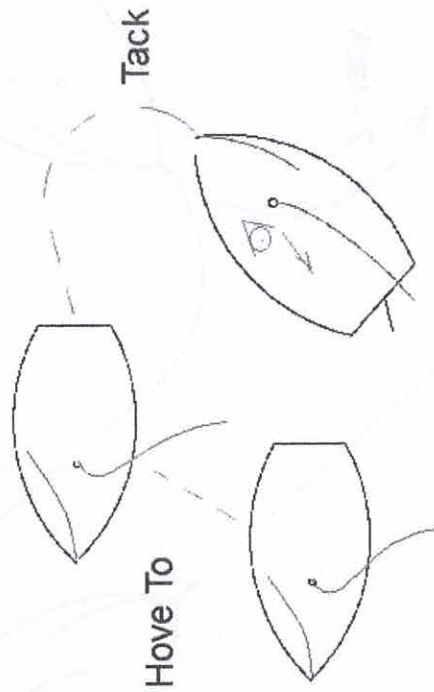
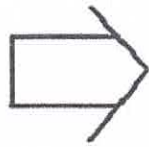
Hove To

1. Tack the boat, but leave jib cleated tight.
2. Jib will then backwind on new windward side, preventing forward motion.
3. use little or no trim on the mainsail to just balance the boat, side-on to the wind.
4. Boat will drift quietly to Leeward slowly.

This exercise is an easy way to almost stop the boat, rest, and assess a situation.

At sea, if the crew is exhausted AND there is sufficient 'sea room' to leeward, the boat can be left 'hove to' while the crew rests.

WIND



BASIC SAILING RULES

RULE 1 - AVOID COLLISION

(even if other rules apply)

This is number one rule!

You should always keep a lookout and give yourself room and time to manoeuvre.

Once you learn to sail/manoeuvre your boat, you must avoid collisions at all costs! The skipper of a vessel can be legally liable for Damage, Injury or Death

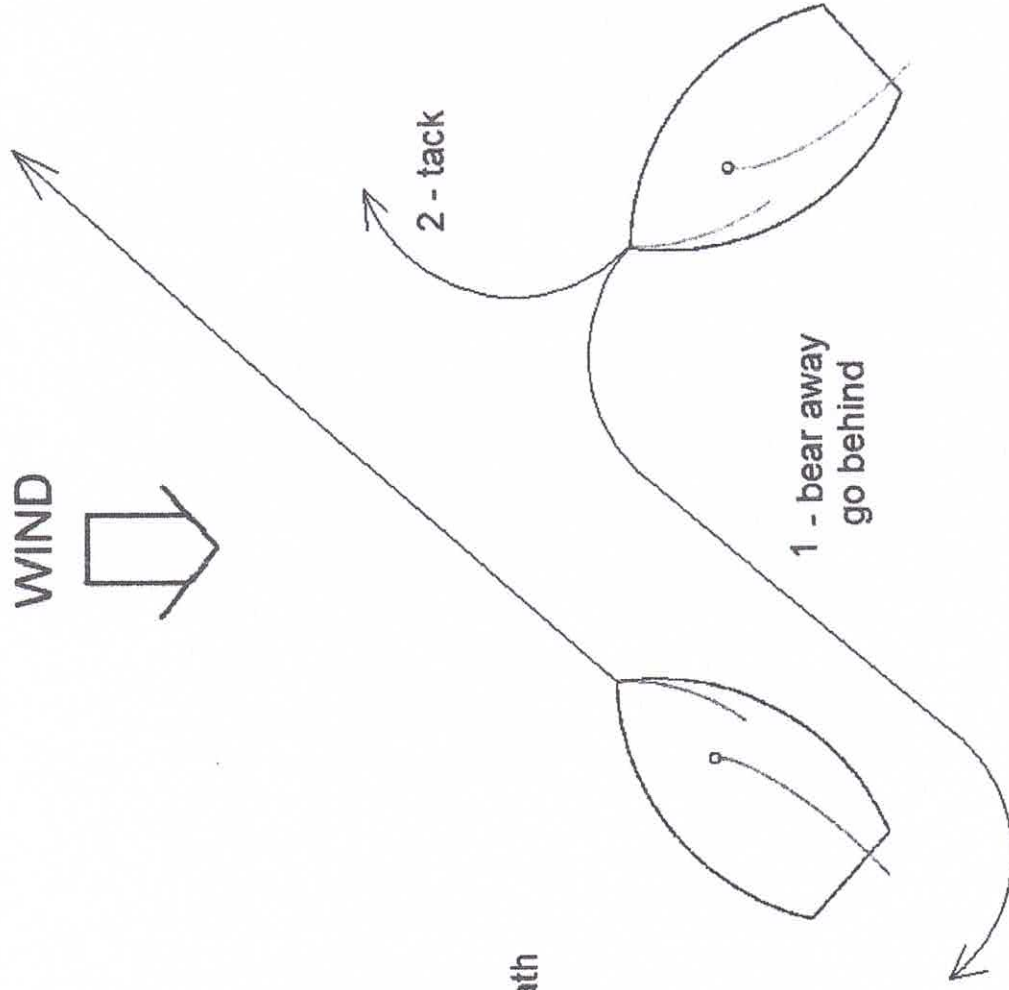
Boat Collisions are Dangerous and Costly.

In a race, if you have right of way over another boat and you collide you will both be penalised.

Example: Boat sailing on starboard tack may have right of way, but if Port tacker continues, Starboard tacker must either,

1. bear away and go behind, or
2. tack, to avoid collision.

Keep a lookout!
and Warn other boats in plenty of time!
Then they can react to who has right of way.



BASIC SAILING RULES

Rule 2. - Opposite Tack Rule (Port & Starboard)

If two boats are approaching on Opposite Tacks (one on port one on starboard) the one on PORT tack must give way.

Definitions:

A boat on Port tack has wind blowing over port (left) side, Red sails in diagram.

A boat on Starboard tack has wind blowing over (right) side, green sails in diagram.

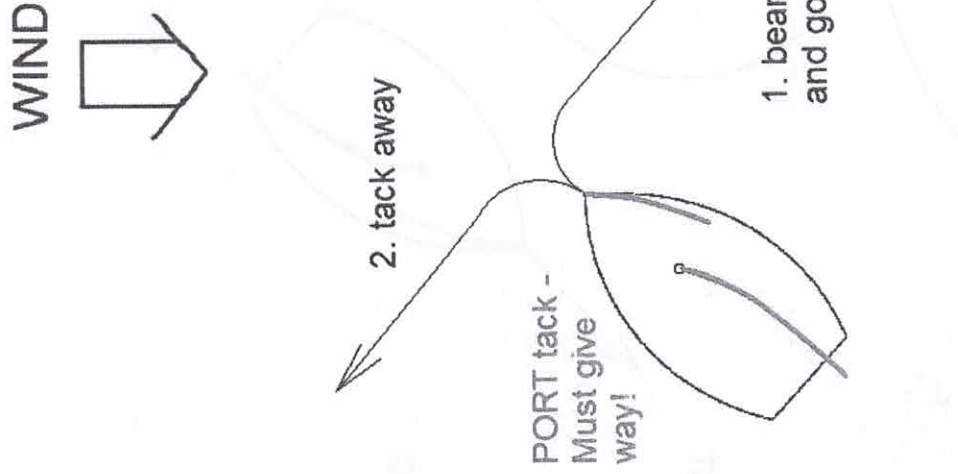
(A boat running square to the wind is deemed to be on the tack corresponding to the opposite side the mainsail is filling.)

In the example at right:

The boat with green sails is on Starboard tack, and has right of way. He MAY hail "Starboard!" to warn the other boat, and if acknowledged, should hold his course. (Rule1,!))

The boat with RED sails is on PORT tack and MUST give way. His options here are:

1. Bear away and go behind, or
2. Tack, to give way.



Question: What is unrealistic in this diagram?

BASIC SAILING RULES

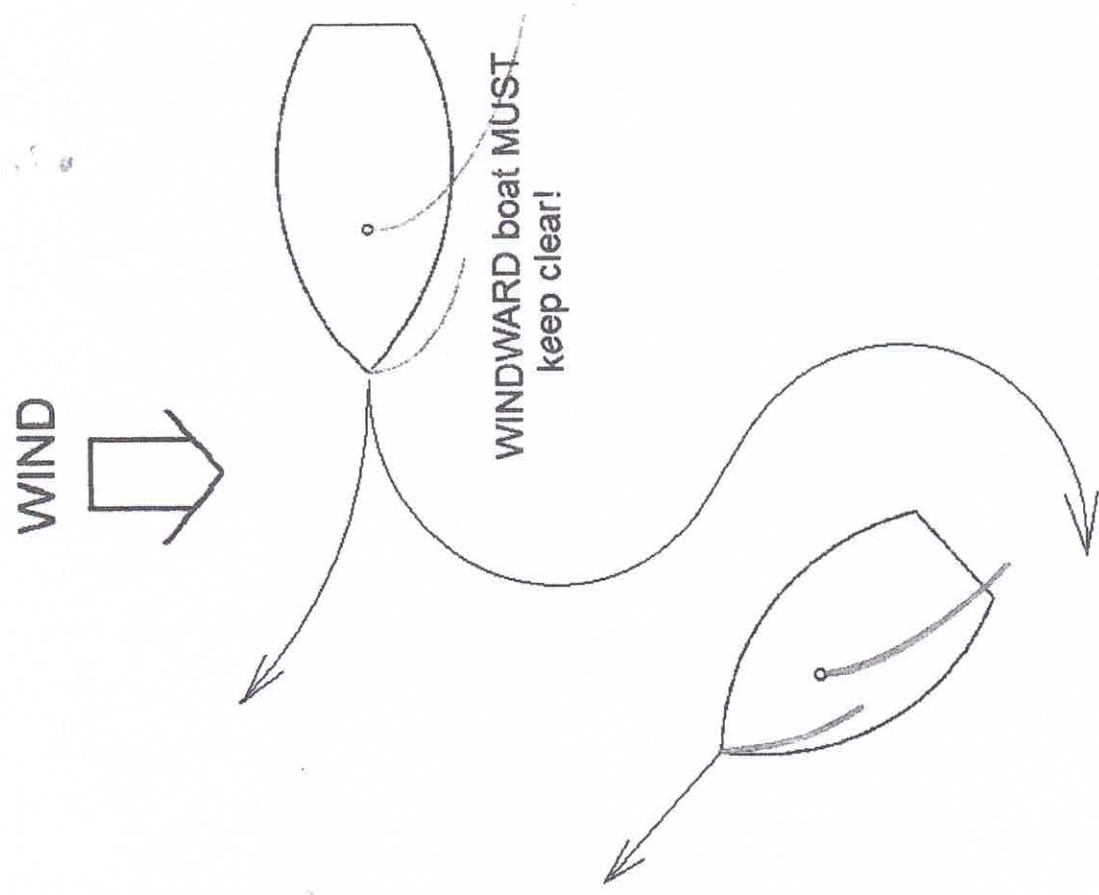
Rule 3. Same Tack Rule.

When two boats sailing on the same tack, approach, the WINDWARD boat must keep clear.

In the example at right, both boats are on the same (starboard) tack. However the one close hauled is to leeward of the one reaching. That is the Reaching Boat is the WINDWARD boat (further to Windward) and MUST KEEP CLEAR!

To Give Way he Must:

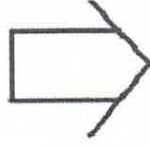
1. Slow down or bear away, and go behind, or
2. Head up and try to pass clear ahead, before resuming his course.



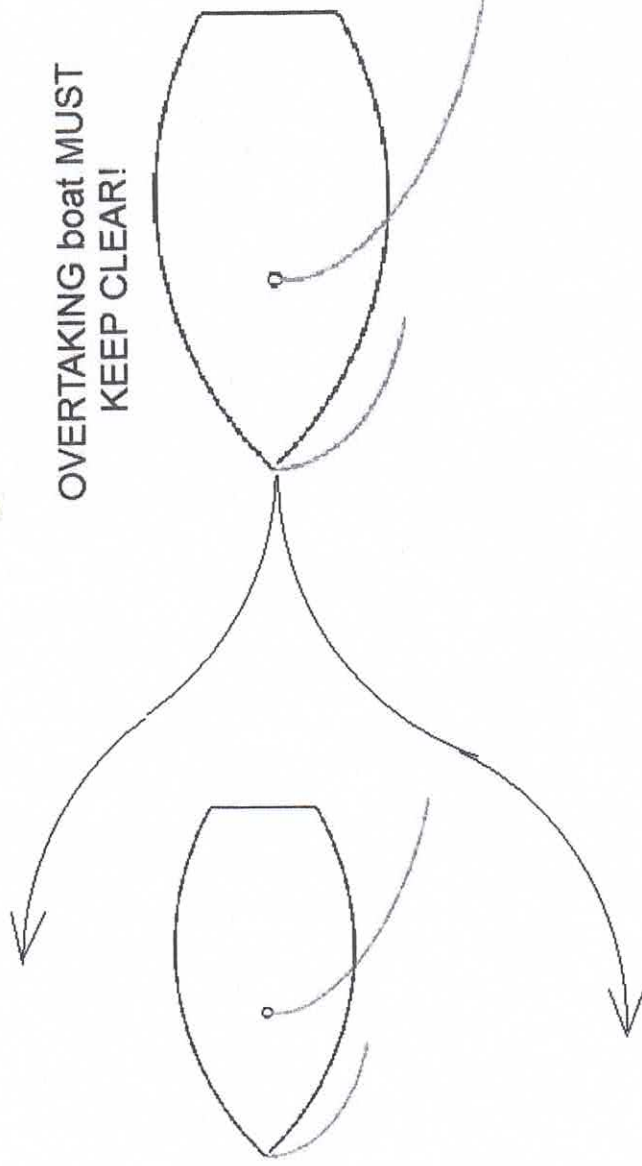
BASIC SAILING RULES

Rule 4. Overtaking boat must keep clear.

WIND



OVERTAKING boat MUST
KEEP CLEAR!



These four are considered the basic Rules of Sailing, however, For ALL current sailing rules, refer to the International Yacht Racing Union (IYRU or equivalent) whose Rules are accepted worldwide. All serious sailors will have a copy of these. Some Waterways Authorities may have additional rules pertaining to their particular area. When Racing you should be aware of Starting and Finishing Procedure, the Course, Rules pertaining to rounding marks of the Course etc. and penalties for breaching the rules. These should all be available in the Sailing Instructions and verbally given at a pre-race briefing.

LEARN TO SAIL – Basic Skills 1

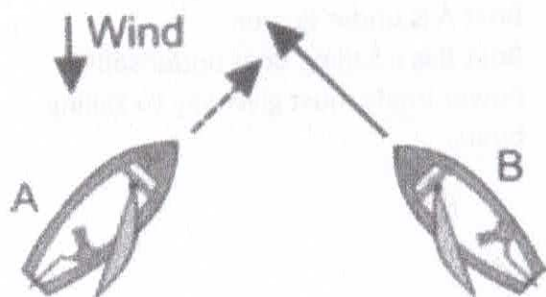
Rules

Just like on the road, there are rules that must be observed while sailing.....

Rule Number 1: AVOID COLLISIONS!

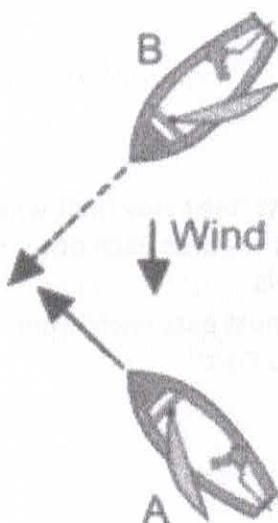
Right of Way Rules:

Port and Starboard:



- Boat A is on Port tack (with the wind hitting the port side first)
- Boat B is on Starboard tack (with the wind hitting the starboard side first)
- Boats on Port Tack (A) must give way to boats on Starboard Tack (B)

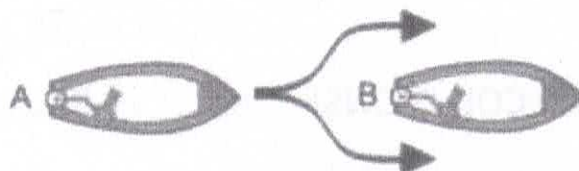
Windward Boat Keeps Clear:



- Both Boats are on the same tack (in this case Starboard)
- Boat A is the Leeward Boat (further downwind)
- Boat B is the Windward Boat (further upwind)
- Windward Boats (B) must keep clear of Leeward Boats (A)

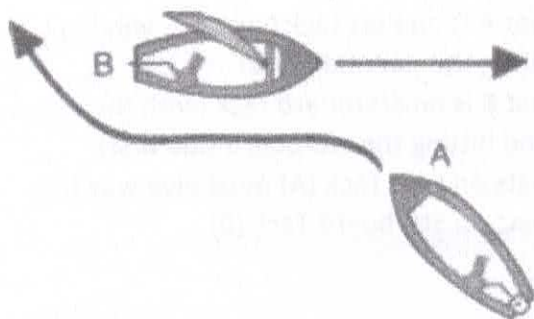
LEARN TO SAIL – Basic Skills 1

Overtaking Boat Keeps Clear:



- Boat A is overtaking Boat B.
- Boat A must keep clear of Boat B while overtaking.

Power Gives Way to Sail:

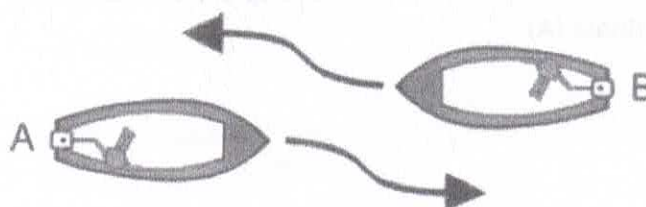


- Boat A is under Power
- Boat B is a Sailing Boat under sail
- Power boats must give way to Sailing boats.

EXCEPTIONS:

Commercial boats such as ferries, cargo ships, commercial fishing boats, Navy vessels etc have right of way at all times.

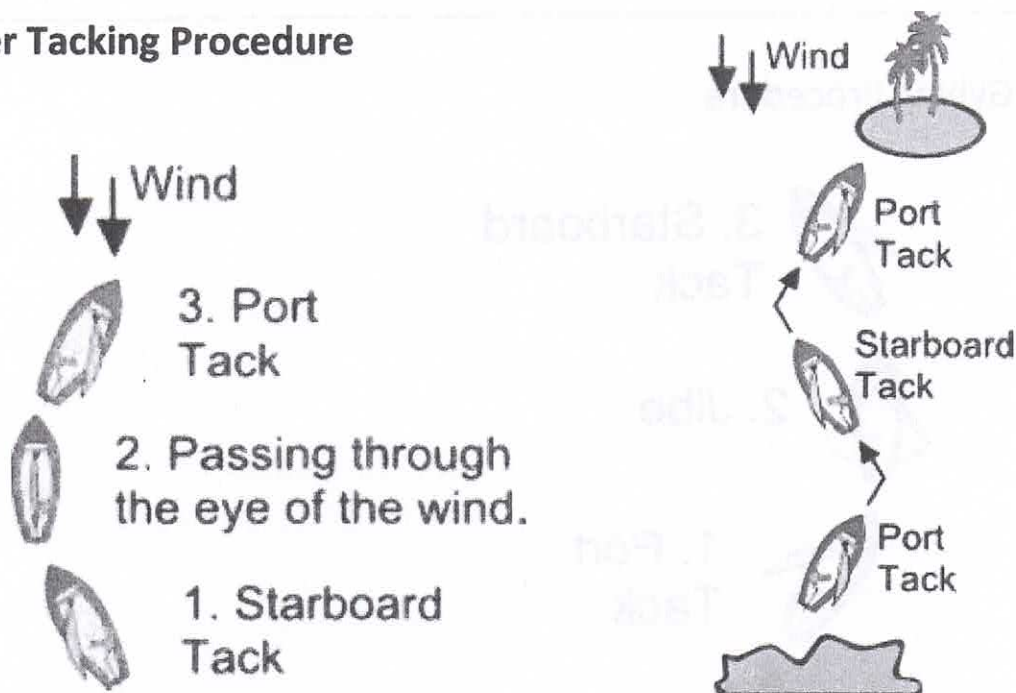
Stay Right in Channels:



- All boats must stay right when coming towards each other in channels.
- Boats must pass each other "Port to Port"

LEARN TO SAIL – Basic Skills 1

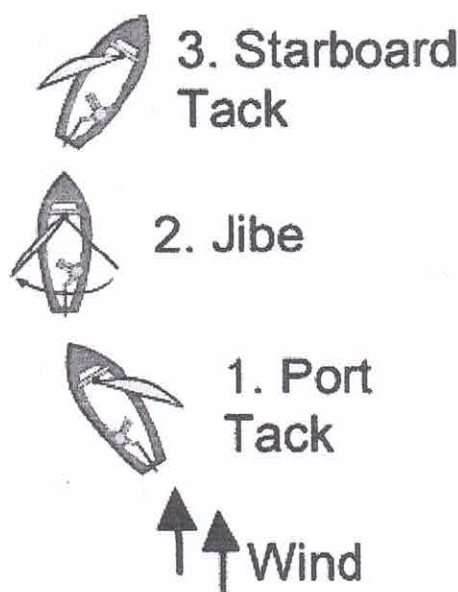
Proper Tacking Procedure



- **SKIPPER:** Seated before tacking with left foot on left side of boat and right foot on right side of boat.
- **SKIPPER:** "Ready TO TACK?"
 - **CREW:** Looks around to make sure there is room to tack..... "Ready"
- **SKIPPER:** "Tacking"
- **SKIPPER:**
 - Pushes tiller away gently & put BACK FOOT across to other side of boat.
 - As boom comes over centre, move underneath the boom
 - FACE FORWARD at all times – with tiller BEHIND you.
 - (Place mainsheet hand behind back and onto tiller)
 - Pivot to other side of boat and sit down
 - Put tiller back in the middle once you have reached your new course.
 - (Scoop up mainsheet with NEW front hand)
 - (Release mainsheet from back hand)
- **CREW:**
 - Release Jib Sheet
 - Move under boom as skipper moves
 - Pull on NEW leeward jib sheet from opposite side of boat and cleat.

LEARN TO SAIL – Basic Skills 1

Proper Gybing Procedure



- **SKIPPER:** Seated before gybing with left foot on left side of boat and right foot on right side of boat.
- **SKIPPER:** "Ready to Gybe?"
- **CREW:** Looks around to make sure there is room to gybe..... "Ready"
- **SKIPPER:** "Gybing"
- **SKIPPER:**
 - While sailing on a Broad Reach or Running, the Skipper pulls tiller gently towards his/herself.
 - Grab bundle of mainsheet and pull boom across. It will come across fast!
 - As boom comes over centre, move underneath the boom
 - **FACE FORWARD** at all times
 - Place mainsheet hand behind back and onto tiller
 - Pivot to other side of boat and sit down
 - Put tiller back in the middle once you have reached your new course.
 - Scoop up mainsheet with **NEW** front hand
 - Release mainsheet from back hand
- **CREW:**
 - Release Jib Sheet
 - Move under boom as skipper moves
 - Pull on **NEW** leeward jib sheet from opposite side of boat and cleat.