HYC JUNIOR SAILING

Huguenot Yacht Club
Junior Sailing Handbook

With supplemental information on instruction technique, recommended detailed curricular for courses, and skill requirements for each rating.

partially adapted from: CBYRA Junior Sailing Manual circa 1970

CHALLENGE #1: PARTS OF AN OPTIMIST DINGHY

Name _____

Date _____

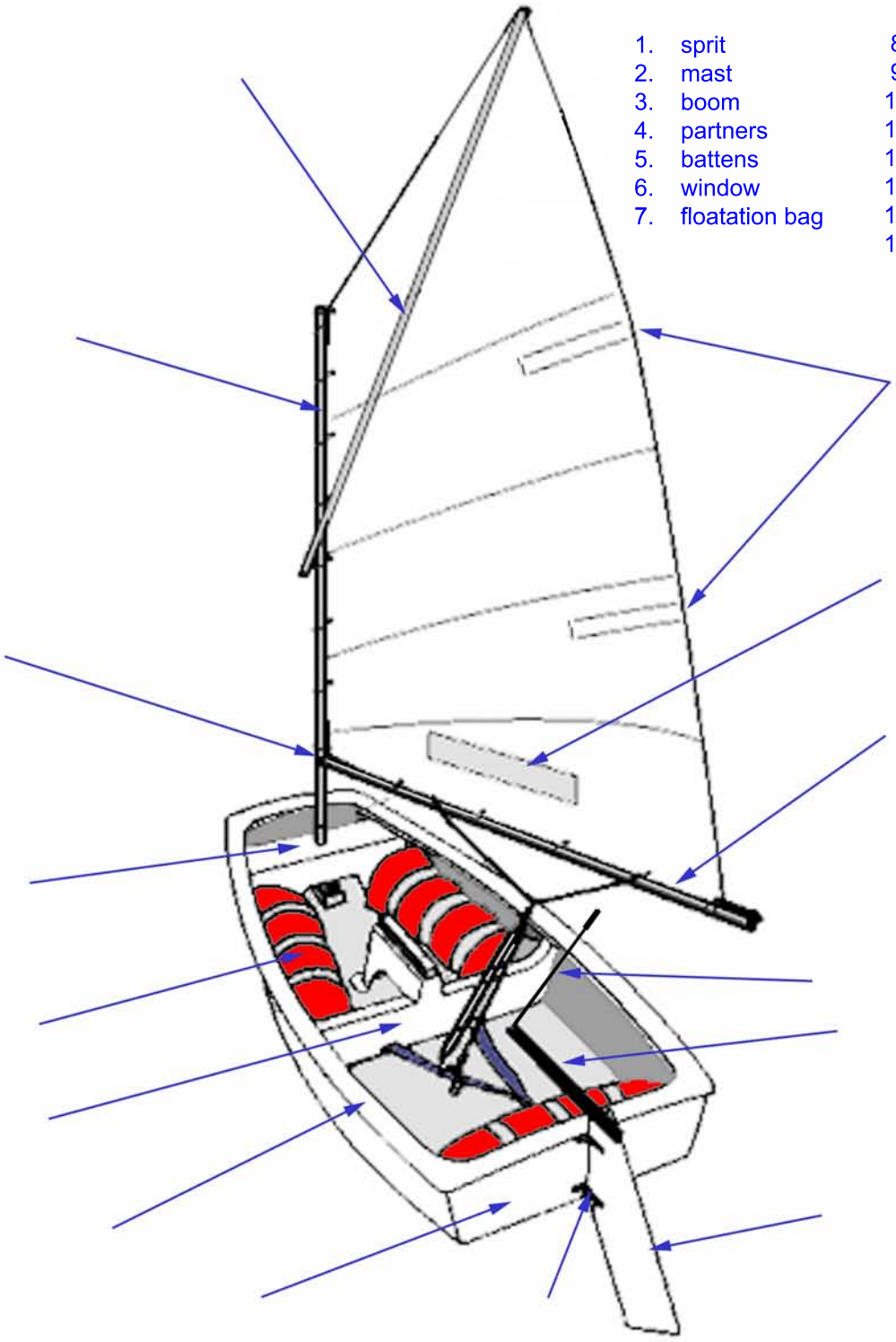
CLASS: Discuss Care of sails. Sail and boat nomenclature for optimist dinghy.

DO: 1. Inspect an Opti. Point out and name all parts.

2. Rig up boat on shore. Get to know all fittings, and which parts go on first.

WRITE: Label names of all parts of sails and lines on diagram.

1. sprit
2. mast
3. boom
4. partners
5. battens
6. window
7. floatation bag
8. tiller extension
9. tiller
10. rudder
11. pintle and gudgen
12. gunnel
13. thwart
14. gooseneck
15. transom



CHALLENGE #2 -- PARTS OF AN LASER DINGHY

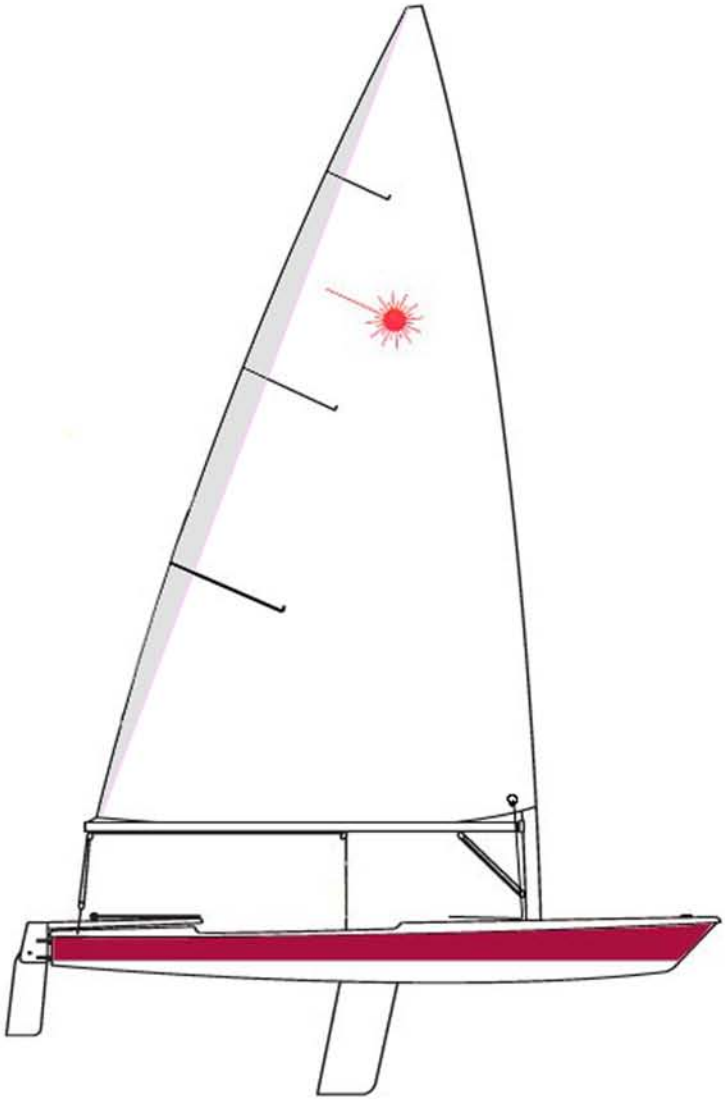
NAME _____

DATE _____

CLASS : Care of sails. Sail and boat nomenclature for Laser Dinghy..

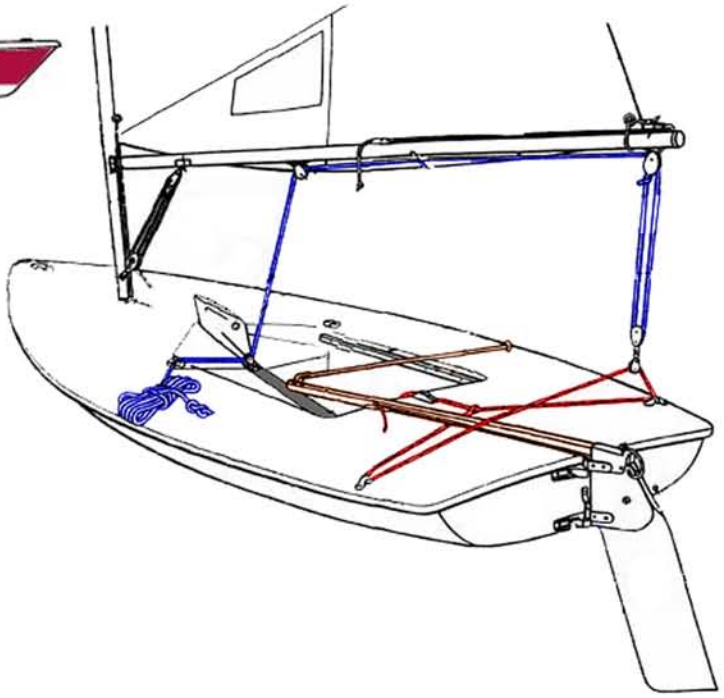
DO: 1. Inspect an Laser. Point out and name all parts.

2. Rig up boat on shore. Get to know all fittings, and which parts go on first.



WRITE: Label names of all parts of sails and lines on diagram.

1. head
2. tack
3. clew
4. luff
5. foot
6. leach
7. roach
8. dagger board
9. cunningham
10. boom vang
11. outhaul
12. sheet
13. battens
14. traveler
15. tiller
16. tiller extension
17. pintle and gudgen
18. grab rail
19. hiking strap
20. window
21. bow eye
22. rudder
23. goose neck
24. drain plug



CHALLENGE #3 -- KNOTS, CLEATS, CARE OF SAILS

NAME _____

DATE _____

CLASS: Discuss cleating halyards. Care of sails.

DO:
1. Watch instructor demonstrate how to fold a suit of sails. Practice folding your suit this way.
2. Take a piece of line about 3 feet long. Practice assigned knot and others to follow.
3. Practice securing line to a cleat.

WRITE: Answer the following:

1. In bending a sail on an Opti, which part of the sail is fastened first?

   _____

2. In bending a sail on a Laser, which part of the sail is attached first?

_____

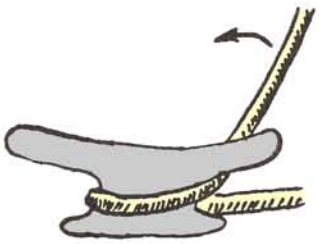
3. Should sails be left on a small boat overnight? _____ Why? _____

   _____

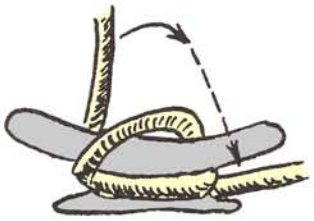
4. Is it okay to put wet or damp sails in a sailbag? _____ What should you do with them? _____

   _____ Where? _____

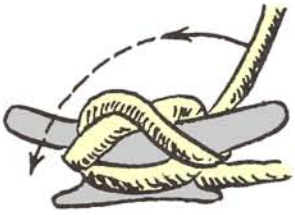
HOW TO CLEAT A LINE:



Step 1: round turn



Step 2: cross over



step 3: cross back (no half-hitches)

step 4: finish with round turn

6. Why are half-hitches NOT used in cleating halyards? _____

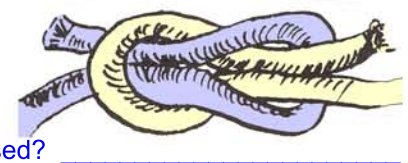
   _____

7. What should be done with excess lines in the bottom of the boat? _____

   _____

TODAY'S KNOT

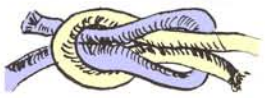
square, or reef knot



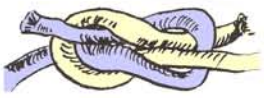
Where is it used? _____

Note how it differs from a granny knot or a thieves knot.

Thieves Knot



Granny Knot



CHALLENGE #4: HOW TO STEER

NAME _____

DATE _____

CLASS: Discuss use of Tiller and Rudder

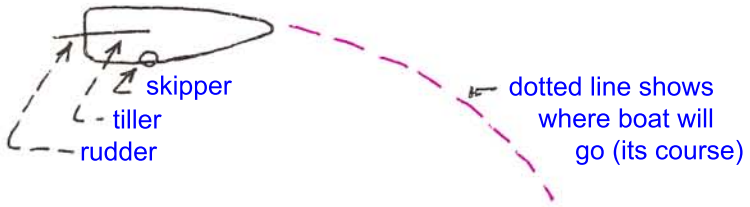
DO: 1. Show on model boat, or on actual boat on water: Direction boat will turn when rudder is pushed away from you, or pulled toward you. Change sides and repeat.

2. In boat, sail straight course for a point on shore

3. Sail straight course without looking at point on shore. Sail by wind, wake, and "feel" of boat.

WRITE: After learning effect of tiller on direction the boat will turn, fill in questions on this chart. If in doubt, remember sailboat tiller "steers" boat in the same way at the handle on an outboard motor.

Example: Show course boat will take when skipper pushes tiller away .



Problems: Show by dotted lins the course the boat will take in each case. It may help to draw in the new position of the tiller and ruder.

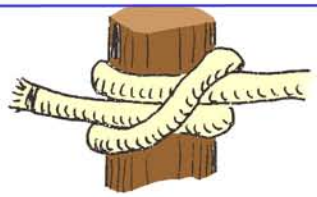
1. Skipper pushes tiller away

2. Each, skipper pulls tiller

3. Skipper pulls tiller, sails 2 boat-lengths . . . . then pushes tiller away

4. Both skippers push tiller away

=



CHALLENGE #5: DOCKING AND MOORING

NAME _____

CLASS: Discuss Landing and Mooring.
Heaving a line.

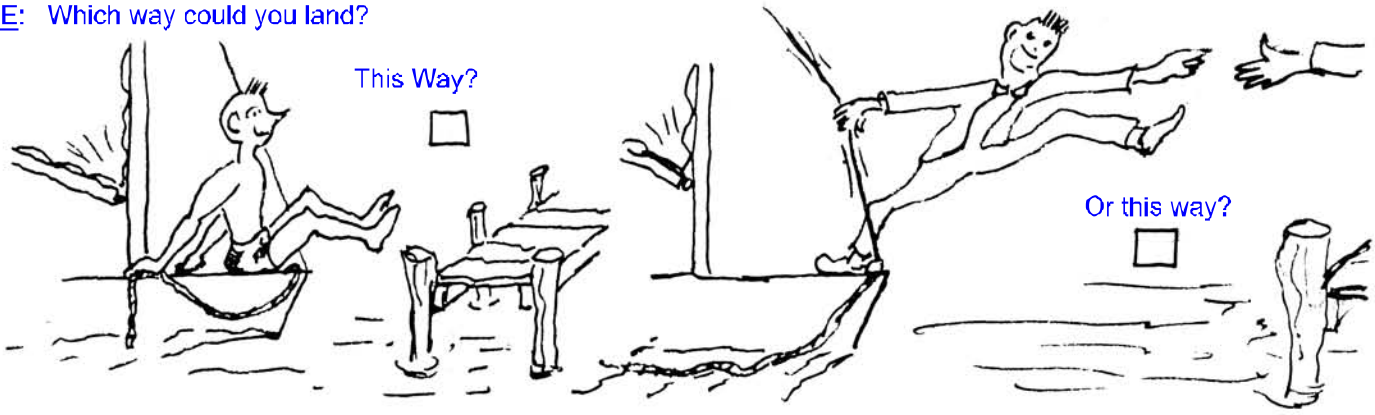
DATE _____

DO: 1. Practice picking up mooring. Use course markers, bouys, rafts. Come up so you can just touch, shove off and try again. Make 3 good pickups.

2. Make 3 practice landings at dock. Hold boat properly for person to board or leave.

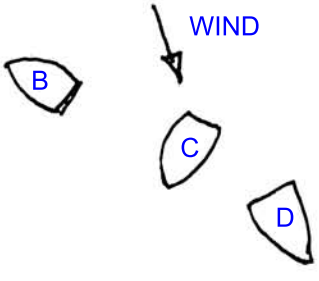
3. On shore, practice heaving a line to a target 20 feet away. Try it with a small anchor.

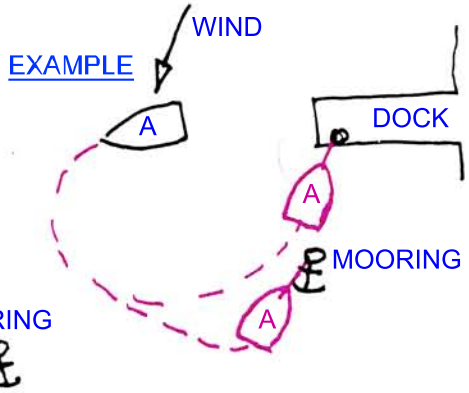
WRITE: Which way could you land?

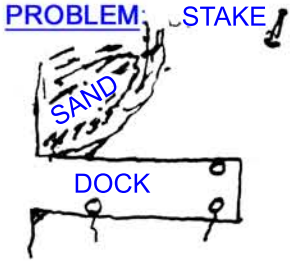


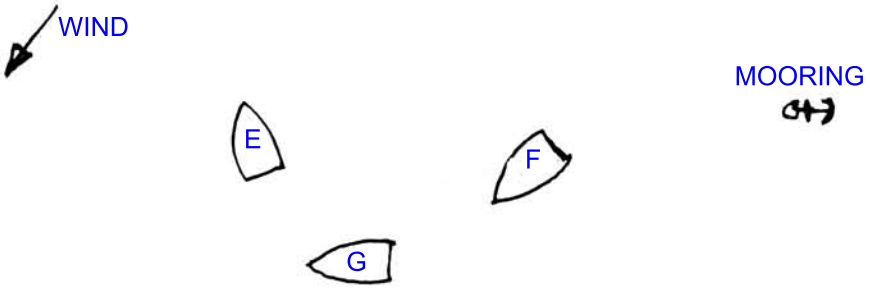
2. Why? _____

3. Show proper course you would steer to pick up mooring and land to a dock. Use dotted lines. NOTE CAREFULLY the direction of the wind!









4. In what direction should you head in making a landing? _____

5. How do you slow a boat? _____

_____ TRY IT!

CHALLENGE #6: WIND AND SAILS

NAME _____

DATE _____

CLASS: Discuss effect of wind on sails.Trimming sail. Luffing. What is a Jib?

DO:

1. Trimming sail. While out sailing, let sail out completely - notice how sail luffs. Trim in sail slowly until it stops luffing - notice how sail shape changes. Trim sail in tight - what's different?

2. Trim in sail tight, then let it out. Can you steer boat this way? TRY IT!

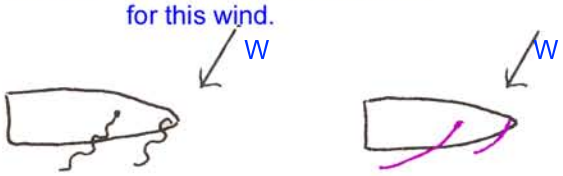
3. Meeting puffs -- Trim sail in tight until boat heels. Let out fast.

   Trim sail tight again. When boat heels, head up fast into wind. NOTICE WHAT HAPPENS EACH TIME.

   Use these two ways to meet puffs.

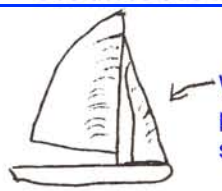
WRITE:

EXAMPLE: Draw correct "set" of sails for this wind.



Main and Jib are Luffing . . .

so trim in!

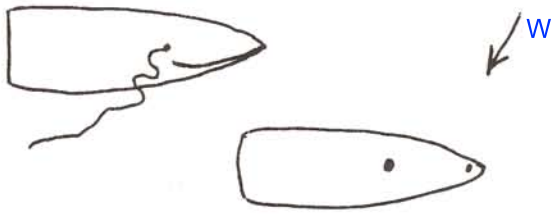


When sails are luffing this shaded portion shakes or "luffs." You lose speed, power and control.

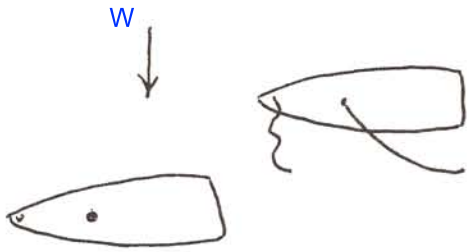
We will represent this luffing on our diagrams by wavy lines. Curved lines are wind-filled sails.

PROBLEMS:

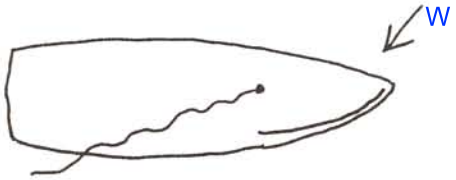
1. Jib in too tight. Main luffs. Draw correct set of sails.



2. Jib luffing. Draw correct set of sails.



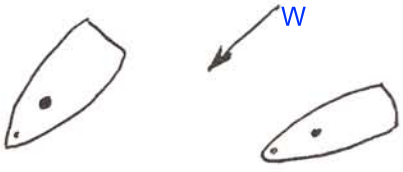
3. Main luffing. Draw wind currents from Jib that causes this luffing.



What are these currents called?

_____

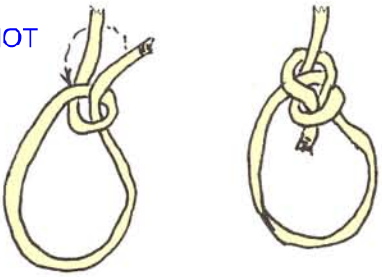
4. Draw correct set of sails for thesw two boats.



5. Draw correct set of sails for boat after changing course.

TODAY'S KNOT

Bowline



Where is it used most? _____

_____

CHALLENGE #7: TIPPING OVER

NAME _____

DATE _____

CLASS: Discuss tipping over. Safety afloat. Required equipment.

DO:

1. Check your boat for required equipment of its class. Does EACH person have a PFD? PFD = life jacket ( )yes ( )no.
2. Each time you sail, put on a PFD and fasten it. Yes, it's bulky and warm. (It's also stylish and required.) WEAR IT!
3. Capsize a rowboat or Optimist, with instructor supervising. Hang across it with your crew. Climb on overturned bottom. Notice how much weight the boat can hold up, even though full full of water.

WRITE:


paddle


sails


life jacket


anchor


crew


stop watch

YOUR BOAT HAS TIPPED OVER --

1. Which of the objects above would you look for first? _____
2. Which would you look for next? _____
3. Which would you find third? _____
4. Will YOUR sailboat float if tipped over? _____

REMEMBER THIS RULE -- "When tipped over, NEVER leave your boat."

5. Why is this a good rule? _____
6. Would it apply if you are only 20 feet from shore? _____
7. Do you think a tipped over sailboat or rowboat would hold up 10 people in the water if they hung on? _____

_____ Did you try it? _____

EQUIPMENT CHECK LIST -- Put an (X) below if your boat has this equipment:

Required	Handy		Required	Handy	
( )	( )	paddle or praddle	( )	( )	ditty bag or box
( )	( )	small anchor	( )	( )	pocket knife
( )	( )	anchor line	( )	( )	band-aids
( )	( )	bow line	( )	( )	adhesive tape (duck tape)
( )	( )	watter bottle	( )	( )	stop watch
( )	( )	PFD for EACH person	( )	( )	sun glasses

In addition to a Good Attitude and Smile, list other euipment required by your class: _____

_____

CHALLENGE #8: WIND AND HOW TO FIND IT

NAME _____

DATE _____

CLASS: Discuss effect of wind on sails. Wind indicators.

DO: 1. Show instructor 6 things in sight that tell the direction the wind is blowing.

2. With instructor or experienced sailor in the boat, handle sail, then take tiller.

A. Practice trimming sails:

On any heading, let sail out until it just begins to luff. Then trim it in slowly until the luff dissappears.

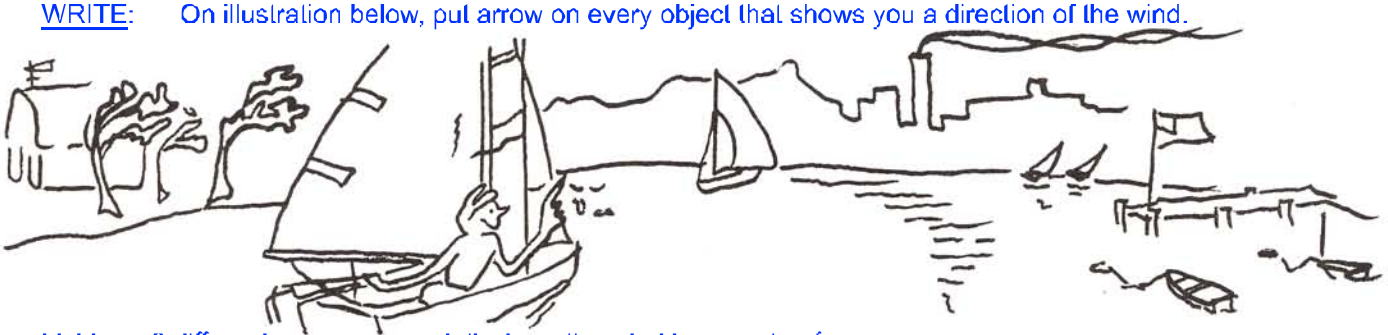
This gives you perfect trim.

B. Practice proper heading:
without adjusting sails, head up into the wind until the sail starts to luff. Then fall off slowly until the luff just dissapears.

This is your best heading -- you now have top speed.

3. Show 2 ways to keep boat on even keel.

WRITE: On illustration below, put arrow on every object that shows you a direction of the wind.

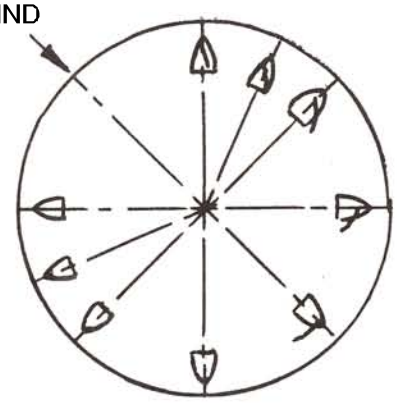


List here 8 different ways you can tell where the wind is comming from.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

_____ Tack.

WIND



_____ Tack.

Draw in sail positions for this tack..

Label on circle the SAILING HEADINGS:

1. beating/ close hauled
2. close reach
3. beam reach
4. broad reach
5. running / dead down wind

Remember, sailing headings are given with respect to the direction of the wind.

TODAY'S KNOT

Figure Eight

Where is it used? _____

_____

CHALLENGE #9: PORT OR STARBOARD TACK?

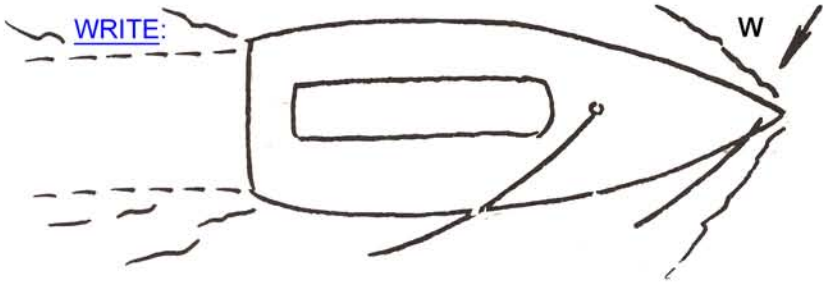
NAME _____

DATE _____

CLASS: Review nomenclature and definition of Port and Starboard Tack.

DO:
1. Show on model boat 3 position of a Port Tack boat, and 3 positions of a Starboard Tack boat.
2. When sailing, YELL out the name of each tack you are on each time you change tacks or jybe.
3. Familiarize yourself with these terms: • upwind, • downwind, • above course, • below course, • leave it to Port, • leave it to Starboard, • offshore breeze and • onshore breeze, • lee shore, • windward shore, • bear off, • bear up, • fall off, • head off, • harden up, • pinch up, • drive off

WRITE:

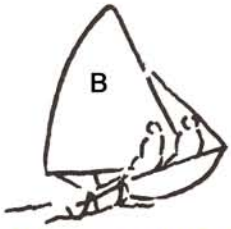


Label on boat to the left:
- • Port • Starboard
- • Bow • Stern
- • forward • aft
- • bow wave • stern wave
- • wake
- • windward • leeward

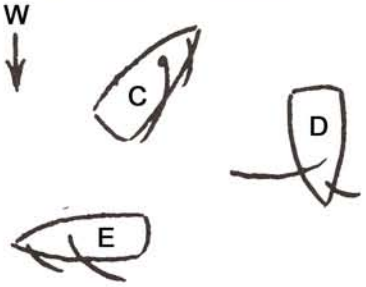
What tack? "A boat is on the tack designated by the side OPPOSITE to the Boom."

EXAMPLES:

A is on PORT tack. The Boom is on oppoite to the Port side.

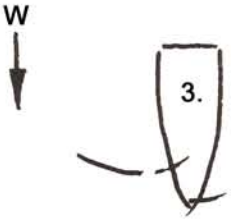


B is on STARBORD tack. The Boom is over Port side.



C is on PORT tack, and beating
D is on PORT tack, and running
E is on STARBOARD tack, and reaching

PROBLEMS: Write in the name of TACK, and SAILING HEADING (beating, running or reaching) for each boat:



1. _____ _____

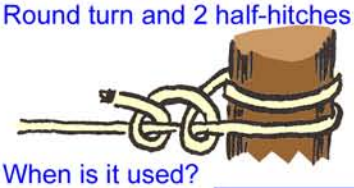
2. _____ _____

3. _____ _____

4. _____ _____

5. _____ _____

TODAY'S KNOT
Round turn and 2 half-hitches



When is it used? _____ _____

CHALLENGE #10: TACKING TO WINDWARD

NAME _____

CLASS: Definition of tacking. Duties of skipper and crew when coming-about.

DATE _____

DO: 1. Follow the leader -- Sail around small course (passing all marks on the same side) following a leader. Tack in the same place he does. Yell out new tack "PORT TACK"! etc.

2. Decide commands you will give to come-about.

3. Know and practice duties of both skipper and crew in coming about.

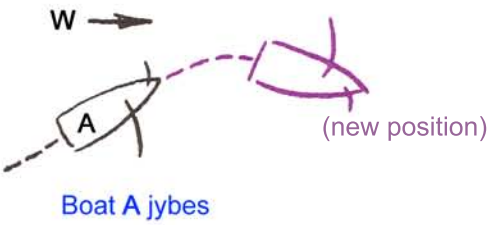
WRITE:

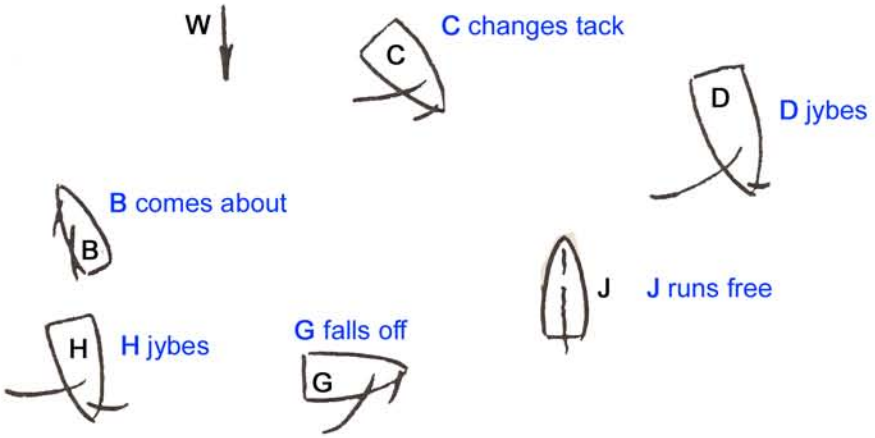
1. TRUE or FALSE

_____ "Tacking" is to change course only while "beating."
_____ "Jybing" is tacking downwind.
_____ A boat has "tacked" when sails have crossed from one side to the other.

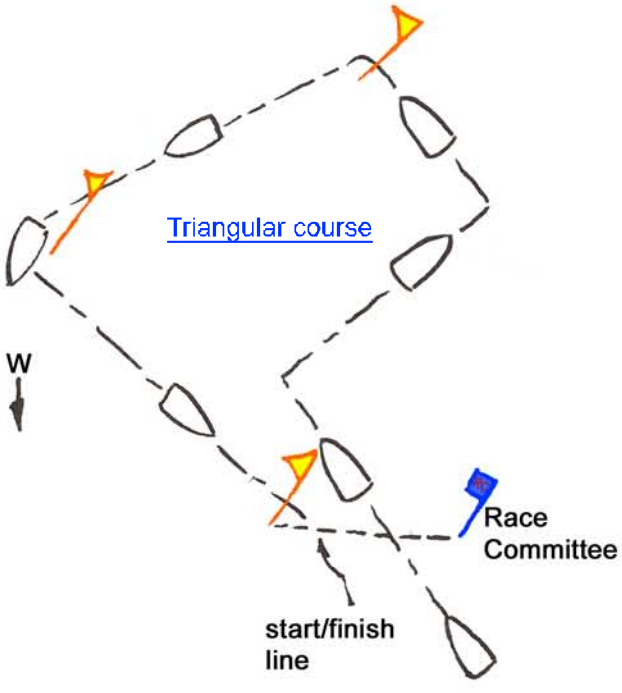
2. Draw dotted line to show course, and new position of sails for each maneuver:

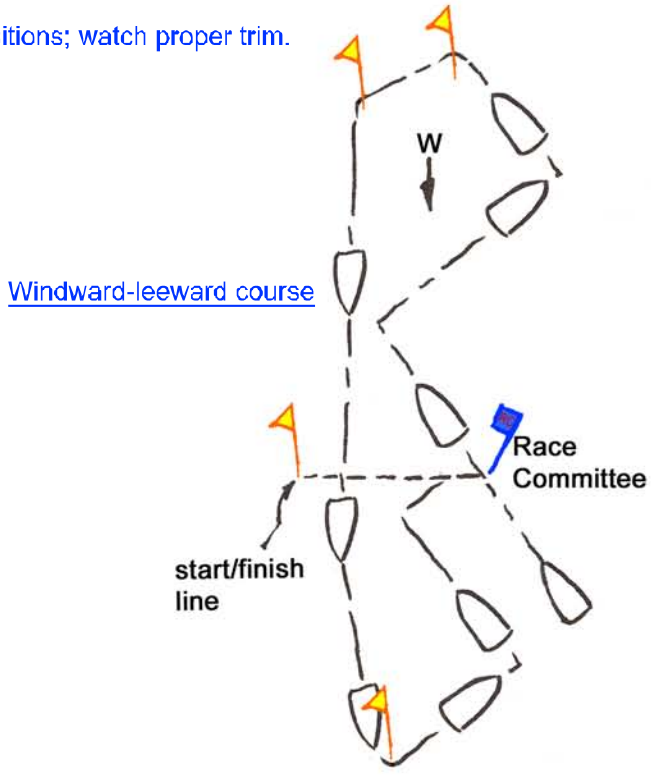
EXAMPLE:





HOW TO SAIL AROUND A RACE COURSE: Draw in sail positions; watch proper trim.





CHALLENGE #11: RACING RULES 10 and 11

NAME _____

DATE _____

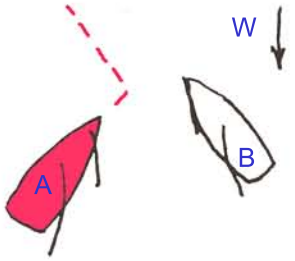
CLASS: Opposite tack rule (RRS10) and Same tack rule (RRS11) Review definition of tacking, windward boat and leeward boat.

DO: Sail 2 practice races over a short course.

When near another boat, yell out Racing Rule that shows who has the RIGHT OF WAY.

For example: "Starboard Tack!" or "Leeward Boat!"

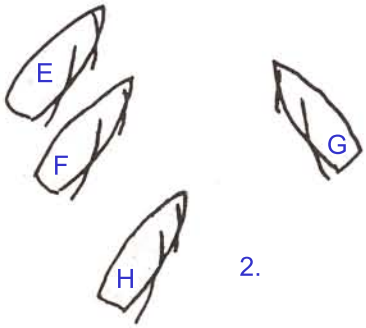
WRITE:



EXAMPLE: Boat A. on Port Tack, gives way to B

RULE #10 "Port Tack boat keeps clear"
(Starboard tack has right-of-way)

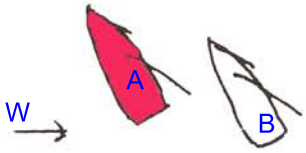
1.



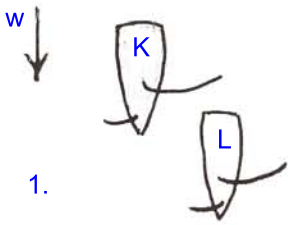
2.

PROBLEMS: For each group of boats, shade in those who must give the other right-of-way.

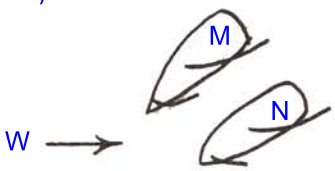
RULE #11 "The Windward Boat shall keep clear"
(When 2 boats are on the same tack.)



EXAMPLE: Boat A, being to windward of B, must keep clear.



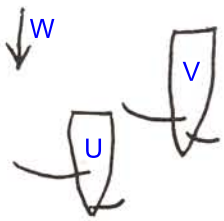
1.

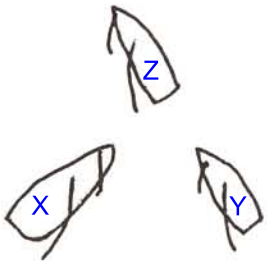


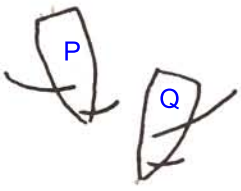
2.

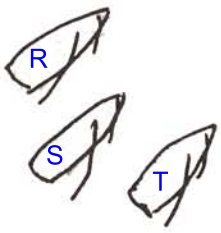
PROBLEMS: Notice wind direction for each group of boats. Shade in those which must KEEP CLEAR of the others.

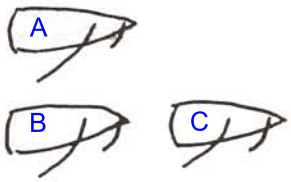
Use RRS #10 and #11. Shade in each boat who must give another -- with-in 1 boat-length away -- the Right-of-Way.











CHALLENGE #12: SAILING IN HEAVY WEATHER

NAME _____

DATE _____

Heavy winds are safe, and fun . . . if you take a few simple precautions.

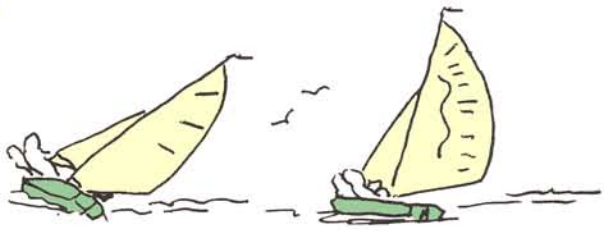
CLASS: Sailing in strong winds. Signs of the weather. Meeting puffs.

DO: 1. Wear a PFD (life jacket)

2. Haul in sheets and let boat heel. Slack sheets, sail level. Notice increased speed as boat levels.

3. In heavy weather sail with jib tight. Let main luff completely. Notice boat stays flat, moves fast. Compare speed with main trimmed in, jib luffing.

4. In strong wind, let go of tiller. Boat heads into the wind by itself. Try it, but keep control of the helm.



WRITE: Fill in answers to the following:

SAILING IN STRONG WINDS

1. Which boat is being trimmed crorrectly?

   Why? _____

2. Can sheets be belayed like this? YES (_) NO(_)

   Why? _____

   _____

3. White-caps on the water may mean (_) safe sailing (_) a reef may be needed.

IF A HEAVY SQUALL HITS while you are under sail, name 2 things you would do to prevent capsizing:

1. _____ 2. _____

IF A BAD STORM IS APPROACHING while you're on the water, check each thing that (if necessary) . . .

		WOULD DO	WOULD **NOT** DO
1.	lower sails, pull up board	1. _____	_____
2.	keep boat moving to maintain steerage	2. _____	_____
3.	finish race at all costs	3. _____	_____
4.	put on a PFD (life jacket)	4. _____	_____
5.	throw anchor and extra lines overboard to lighten boat	5. _____	_____
6.	head boat into wind (beat), sails up	6. _____	_____
7.	head boat across the wind (reach), sails up	7. _____	_____
8.	head boat down wind (run), sails up	8. _____	_____
9.	capsize and ride out the storm in leisure	9. _____	_____
10.	cleat both sheets	10. _____	_____
11.	cut both halyards	11. _____	_____
12.	abandon ship and "swim for it"	12. _____	_____
13.	run boat up on nearest shore	13. _____	_____
14.	throw caution to the wind	14. _____	_____

WET WEATHER

1. "Thunderheads " in the sky usually mean: (steady wind) (squalls & rain)

2. The wind is usally (towards) (from) a "thunderhead"?

3. Foulweather Gear is (unnecessary, I expect to get wet on the water) (important, I like to be warm, dry.and comfortable)

CHALLENGE #13: STARTING A RACE

NAME _____

DATE _____

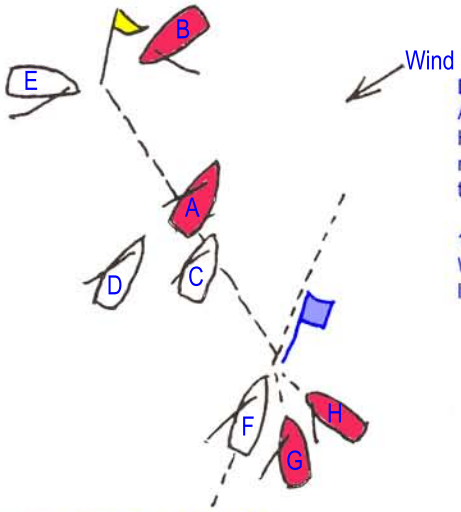
CLASS: Discuss rules that apply at the start. Read RRS 2009-2012 (Racing Rules of Sailing) rules 10,11,12,13,14,15,16,17, 18, 21, 26 and Apendix S.

DO: 1. Pick an imaginary starting line between bouys, raft, tree on shore, etc. Time distance sailing from it and back. How long does it take to come about? To jybe?

2. Sail for a bouy. Guess the time it will take to reach it. Sail it and time it. Repeat.

3. Apply starting rules in your next race.

WRITE:



Race Committee is shown by SQUARE pennant. Triangular flag is starting pin.

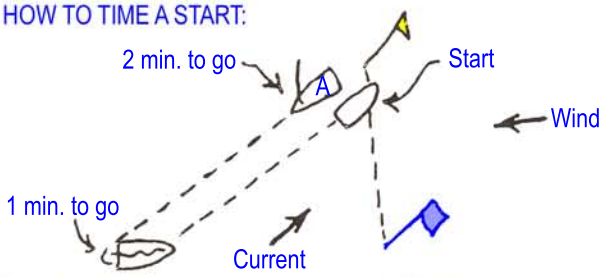
RULE AT START

Definition:Windward / Leeward
A boat's leeward side is the side that is or, when she is head to wind, was away from the wind. However, when sailing by the lee or directly downwind, her leeward side is the side on which her mainsail lies. The other side is her windward side. When two boats on the same tack overlap, the one on the leeward side of the other is the leeward boat. The other is the windward boat.

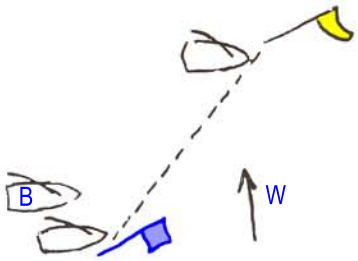
11 On the same tack, overlapped
When boats are on the same tack and overlapped, a windward boat shall keep clear of a leeward boat.

F is close-hauled, will just make the starting mark.
G & H, windward boats, are "Barging", and may get DSQ.

HOW TO TIME A START:

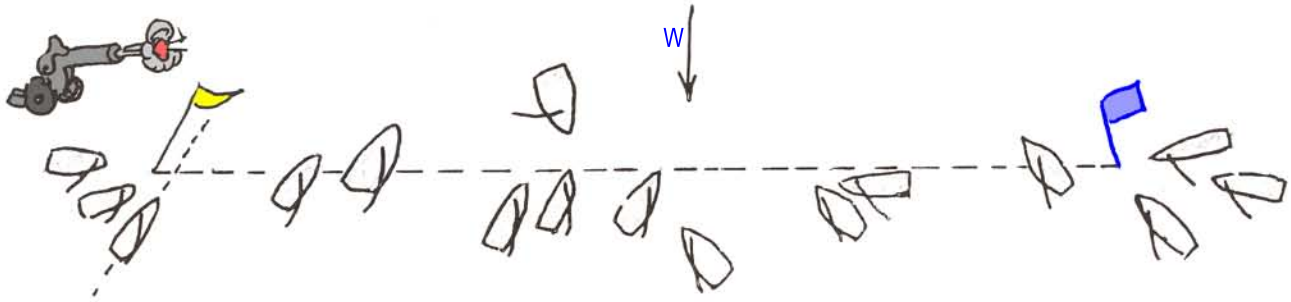


Boat A, planning a start at Leeward end of the line, times distance away from line at 2 minutes to go. Goes for 1 minute and return. Does the tide have an effect?



Show by dotted lines , course boat B might take in making a windward start. Write time it will take (from 3-minutes). Be sure B doesn't barge!

HERE'S YOUR START! WHO HAS THE RIGHT OF WAY? Shade in all boats who must keep clear. Use all racing rules you know.



CHALLENGE #14: STARTING TACTICS

NAME _____

DATE _____

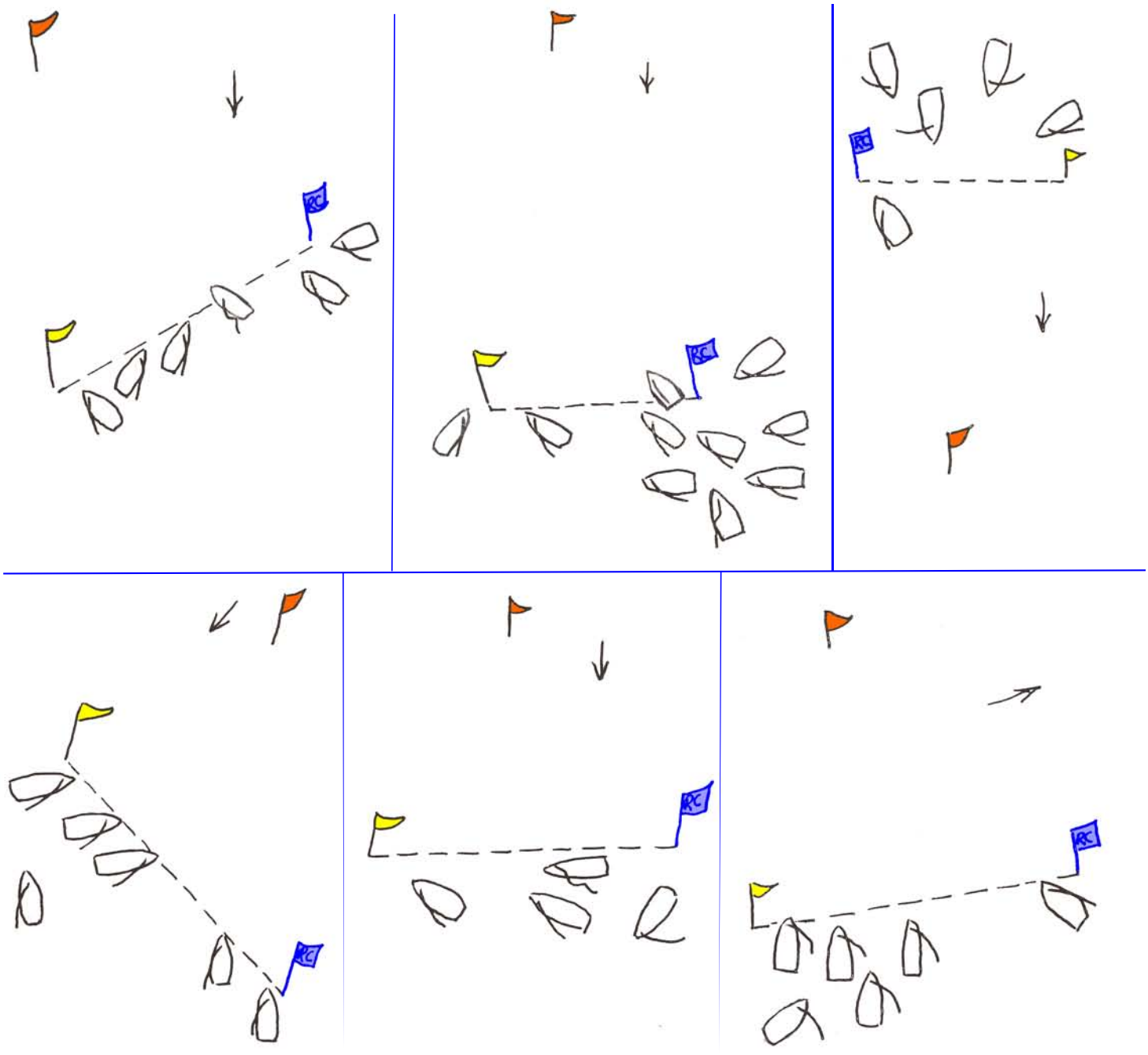
If you can solve a tactical problem on shore, you can solve it on the water. Good racing skippers are usully good strategists.

CLASS: Starting tactics. Rules that apply at the start. Starting flags and sound signals.

DO:

1. Make practice starts. Time with a wrist watch, or stop watch.
2. Know starting signals for your races. Know how many sound singals.
3. Plan your next start before the Prepelory Signal. DO NOT CHANGE PLANS, even if the wind shifts, or the other boats pick the other end. Carry out your original plan, then see why you were right . . . or wrong.

WRITE: Shade in 2 boats in poor starting position, in each case below.
Put an X on one boat with the best start in each race.
Draw dotted line to show direction boats will take to first mark.



EXTRA CREDIT #1(rain day): PARTS OF BOAT AND STANDING RIGGING

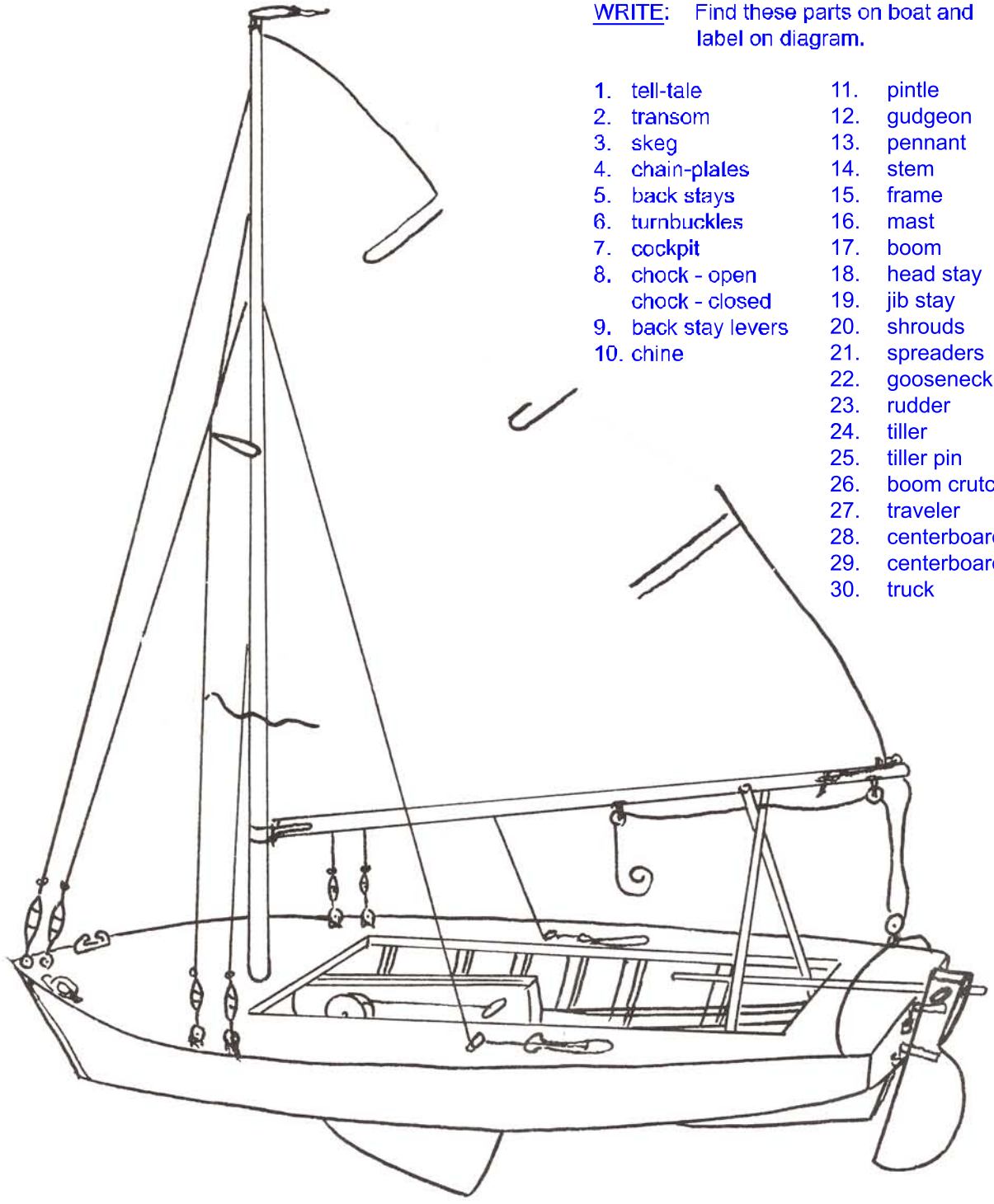
NAME _____

DATE _____

CLASS: Discuss nomenclature (names of parts) of boat a sailboat. What parts are common to Laser and Opti.

DO: 1. Insptect sailboat on shore. Touch each part and identify it out loud.

2. Watch instructor demonstrate stepping mast, then do it yourself. Put on boom, rudder, tiller. Disassemble.



WRITE: Find these parts on boat and label on diagram.

1. tell-tale
2. transom
3. skeg
4. chain-plates
5. back stays
6. turnbuckles
7. cockpit
8. chock - open
   chock - closed
9. back stay levers
10. chine
11. pintle
12. gudgeon
13. pennant
14. stem
15. frame
16. mast
17. boom
18. head stay
19. jib stay
20. shrouds
21. spreaders
22. gooseneck
23. rudder
24. tiller
25. tiller pin
26. boom crutch
27. traveler
28. centerboard
29. centerboard well
30. truck

EXTRA CREDIT #2(rain day): NAMES OF SAILS AND RUNNING RIGGING

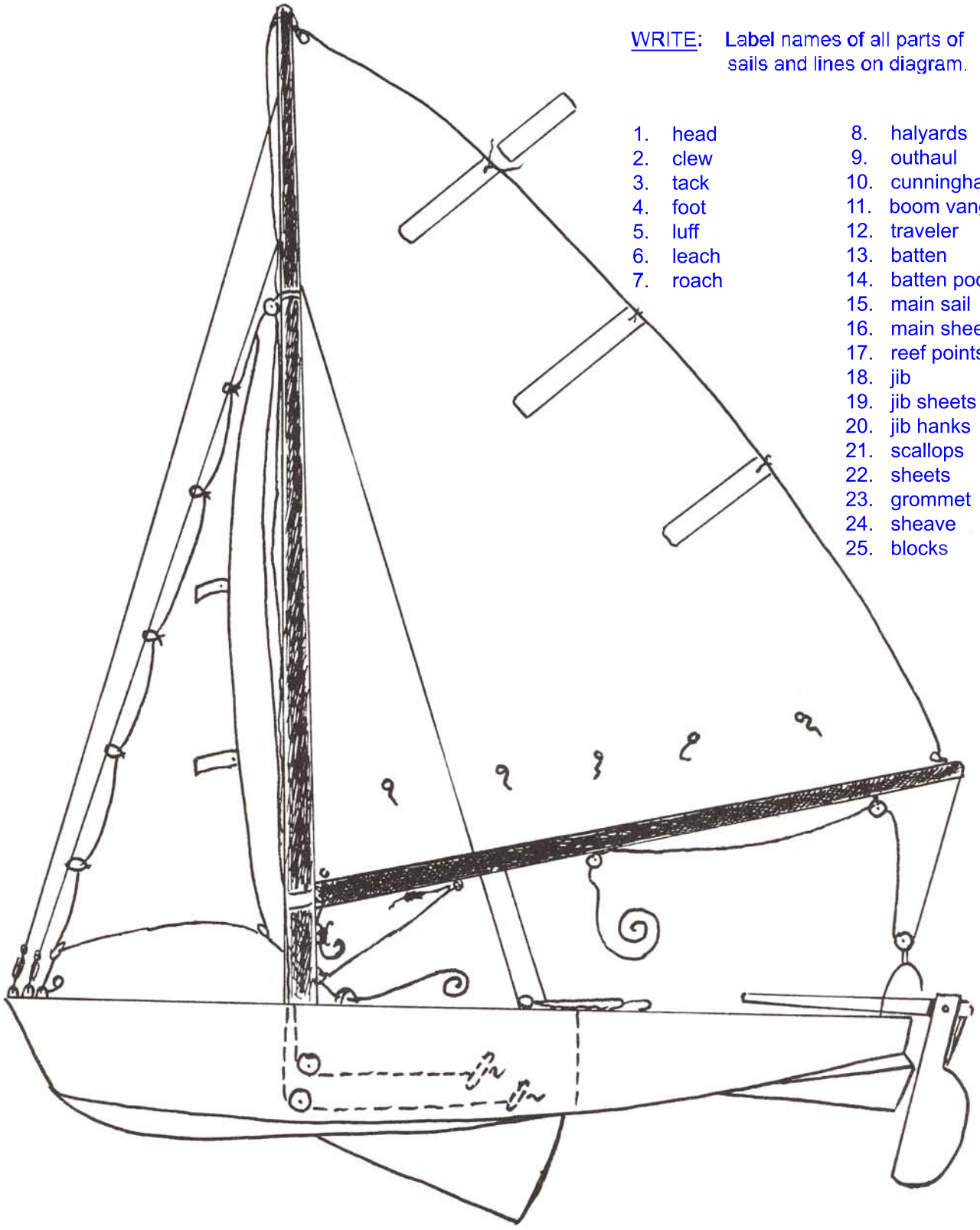
NAME _____

DATE _____

CLASS: Care of sails. Sail nomenclature.

DO:
1. Inspect a suit of sails. Point out and name all parts. How is a Mainsail different from a Jib or Genoa.
2. Bend onto boat on shore. Get to know all fittings, and which parts go on first.

WRITE: Label names of all parts of sails and lines on diagram.



1. head
2. clew
3. tack
4. foot
5. luff
6. leach
7. roach
8. halyards
9. outhaul
10. cunningham
11. boom vang
12. traveler
13. batten
14. batten pocket
15. main sail
16. main sheet
17. reef points
18. jib
19. jib sheets
20. jib hanks
21. scallops
22. sheets
23. grommet
24. sheave
25. blocks

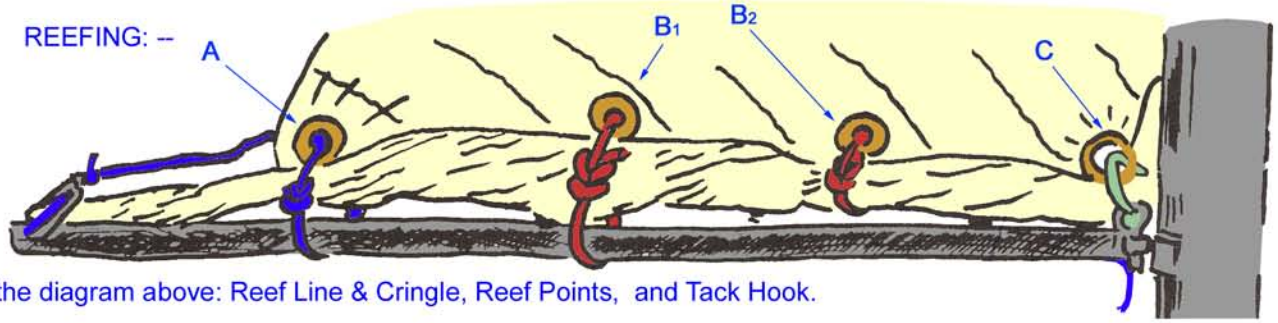
EXTRA CREDIT #3 (big boat): REEFING , TUNING , TRIM NAME

CLASS: How to reef a sail. Shaking out a reef.
Trim of Boat. Standing Rigging.
Tuning Spars. Vessel Rigs.

DATE _____

DO: Practice reefing, tuning, trimming.

WRITE: 1. REEFING: --



Lable on the diagram above: Reef Line & Cringle, Reef Points, and Tack Hook.

Which is put in correctly, B_1 or B_2?____ Why? _____
Put a number 1,2,3, or 4 next to **A**, B_1, B_2 and **C** in the order you would tie them in reefing the sail.

What knot is used? _____

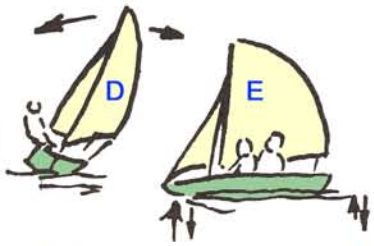
Should the sail be dropped before reefing? ____ Before shaking out the reef? ____

2. TUNING: --

An "S" curve in the mast is good? _____ A hook aft in the mast is always benificial? _____
The lee shroud should be ( ) slack or ( ) tight when underway?
You will go to windward better with a jib stay that is ( ) loose or ( ) tight?
To tune the mast, you should view it ( ) at anchor, ( ) on shore or hoist, ( ) while the boat is under sail?

Why? _____

3. TRIM OF BOAT: --



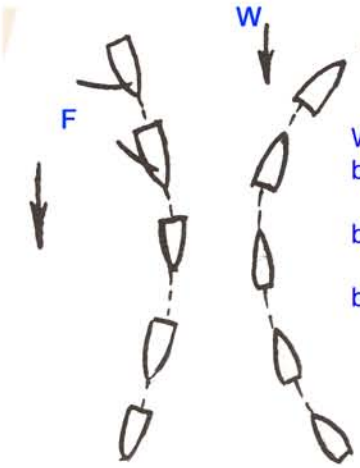
Which is fore and aft Trim, **D** or **E**?
Whick is athwartships trim?

If boat is "down by the head," the skipper and crew should move ( ) aft or ( ) forward.

In general, skipper and crew should sit
( ) close together near "pivot point" or
( ) crew far forward, skipper far aft?

4. TACKING: --

Show how the position of the sails change for each heading of the boat A and B ,below.

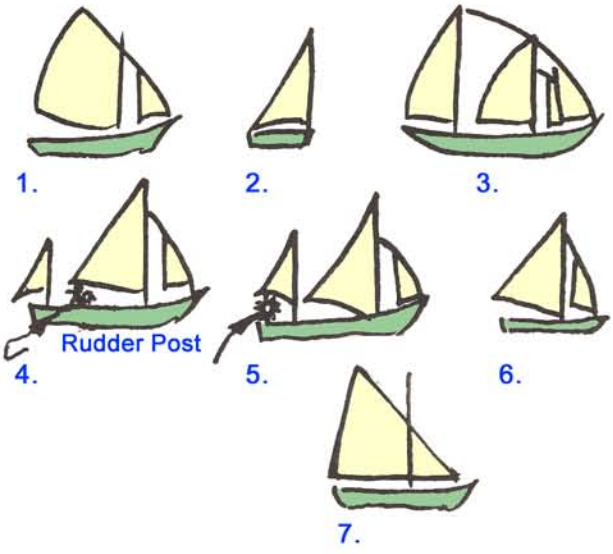


What maneuver is being made?

by F? _____

by G? _____

5. What RIG is each of these vessels?



EXTRA CREDIT #4 (big boat): HANDLING THE SPINNAKER

NAME _____

DATE _____

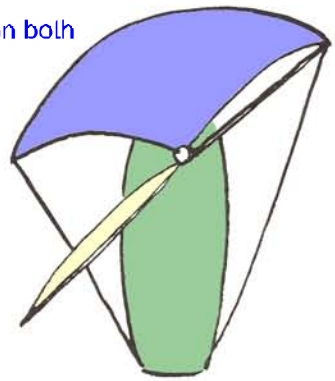
CLASS: Handling Spinnaker. Hoisting, Dousing. Trimming When to use it, etc.

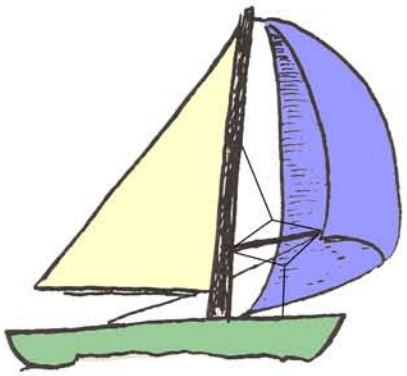
DO: Spinnaker drill: set in stops, douse, set flying, douse. Repeat. Trim correctly, luff spinnaker, jybe. Repeat often, train crew.

Try to sail with experienced spinnaker trimmer.

WRITE: 1. Nomenclature: -- Lable on both boats at right:

a. spinnaker luff
b. spinnaker leach
c. topping lift
d. guy
e. downhaul / foreguy
f. pole
g. spinnaker sheet





What angle does the pole make with the masthead pennant? _____ Is it correct? _____

2. When can s spinnaker be carried? Put down YES or NO for each boat below if she can reasonably carry a spinnaker:

What sailing angles are best for spinnakers?

3. Hoisting and Jybing: --

What are stops? _____

What is meant by "setting the Spinnaker in stops"? _____

"Set the spinnaker flying"? _____

Are guys and sheets unshackled in jybing? _____ Is the Pole? _____

4. True or False: --

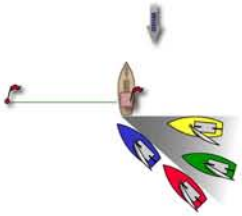
_____ guy and sheets as well as halyard are snapped on before hoisting?
_____ spinnaker may be doused with the jib up?
_____ pole is snapped to sail, not to guy?
_____ pole is trimmed to be at right angles with masthead pennant?
_____ spinnaker is not doused on leeward side, behind the Mainsail?

5. Which boats have spinnaker pole at the best trim?

Which angle should the pole Make with the mast? _____

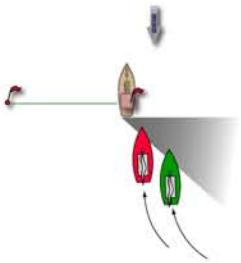
A B C

Article by Greg Chisholm, Diagrams by Paul Pascoe
Barging at the start line is a very poor strategy, it is unprofessional and is totally illegal.



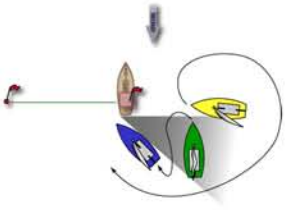
What is "barging"
Barging is approaching the starting line from a point to windward of the lay-line of the starboard or committee boat end of the line. In the diagram, the blue and red boats are on the layline to the committee boat. The green and yellow boats are windward boats and are required to keep clear.

What is wrong with "barging"
In order to sail through the start line the barging yacht must sail at less than close hauled. Any yachts with an overlap to leeward (i. e. forward of a line projecting to leeward from the transom, hence nearly all the fleet) have right of way and can push the barging boat to windward. This will cause the barging boat have to sail to windward of the windward end of the start line and miss the start. That can be extremely dangerous if there is no barging buoy.



Note the overlapped boat can push the barging boat as high as head to wind, as long as enough room and opportunity is given. The barging boat has to respond immediately.

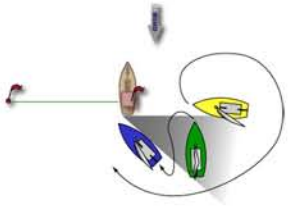
If you are thinking of barging - don't
As you will put yourself in an indefensible position. At best, you may find a hole on the second or third row, at worst, you will be pushed to windward of the start-line and miss the start completely.



If you are caught in a barging position

Firstly, recognise early that you are going to be in trouble rather than leave it to the last minute. Then all you can do is slow or stop the boat, wait for a gap in the fleet, which may mean waiting until all the boats at the windward end of the line have started, then proceed when it is clear. You do not have any rights at all, so do not try to force your way in. Alternatively it may be best to peel off, tack onto port, gybe back on to starboard, sail behind the fleet to find a hole and re-approach the start line from a safe position.

If it appears that other boats are going to "barge"



Call them early and call them loud - the earlier the better. Start looking for potential barging boats at about the one-minute mark. Call them by name or boat number, try and catch the skipper's eye and let them know they have no rights and there will be no room. Watch their tiller for a reaction - you will know if they are responding. If they are responding give them room to manoeuvre. If tiller does not move and the helm does not go down, call louder and by name. Counting out loud can help, as it lets the other skipper know you are serious and it is useful if you do end up in the protest room. Whilst all this is going on keep your cool, keep control of the position of your boat relative to other boats to leeward and behind and watch your own speed in approaching the line.

The rules that apply

Definition:Windward / Leeward
A boat's leeward side is the side that is or, when she is head to wind, was away from the wind. However, when sailing by the lee or directly downwind, her leeward side is the side on which her mainsail lies. The other side is her windward side. When two boats on the same tack overlap, the one on the leeward side of the other is the leeward boat. The other is the windward boat. In the diagram, the red boat is the windward boat.

11 On the same tack, overlapped
When boats are on the same tack and overlapped, a windward boat shall keep clear of a leeward boat

Note: The following rule is included to show why there is no such thing as 'bouy room' at the first mark

18 Rounding and Passing Marks and Obstructions
In rule 18, room is room for an inside boat to round or pass between an outside boat and a mark or obstruction, including room to tack or gybe when either is a normal part of the manoeuvre.

18.1 When This Rule Applies
Rule 18 applies when boats are about to round or pass a mark they are required to leave on the same side, or an obstruction on the same side, until they have passed it. However, it does not apply
(a) **at a starting mark surrounded by navigable water** or at its anchor line from the time the boats are approaching them to start until they have passed them.

Fitness For Sailing

David Mellor & Andy Matthews
Version Sep03

Content

General Pre-exercise Routines For Youth Sailors

Key principles:

Always warm up before you start any 'energetic' exercise!

Always stretch after vigorous exercise!

Never exercise when injured unless you have checked with a physiotherapist/Doctor that it is ok to do so!

Getting With The programme:

- **Warm up**
- **Mobility exercises**
- **Game/exercise/training**
- **Stretching while warm**

1. The Warm up

5-20 mins duration

Exercises: Jogging, walking briskly, cycling, etc

The aims: This section is just to start to get the body ready for action. All activity should be gentle and not athletic as this could lead to injury. Wear appropriate clothing i.e. tracksuits, and layers depending on the weather conditions (even indoors). Your sailors should be sweaty at the end of the session.

Coaching Tips: This could be done even before boats are unloaded. Many injuries are caused by people jumping out of cars and lifting heavy objects without warming up.

Try to insure that your sailors travel to training weekends with tracksuit and are ready to go when they arrive.

Note : most pictures show minimal clothing worn in order to highlight the positions).

2. Mobility Exercises

(5-20 mins duration)

The aim of this session is to start to single out specific ligaments, tendons and muscles, preparing them for exercise.

A) Hip circles and twists

Hip circles: Hands on hips, feet spread further than shoulders.
Keep head still, make circles with your hips, clockwise and then counter-clockwise. (10-40x each direction).

Hip twists: Straighten arms to shoulder height. Then twist arm and torso to the right, allowing weight to move onto right leg. Repeat to each side alternately. (10-40x each side).

B) Arm circles and opposite arm circles

Arm circles: In same stance as above, rotate both arms alternately in a circle forwards allowing hands to touch near thigh (if any problems with shoulders, do not swing hands above height of the shoulder). Repeat direction of both arms. (10-40x each direction).

Opposite arm circles: As above, but have both arms rotating clockwise (! will appear to be opposite directions). Then repeat in the other direction. (10-40x each direction).

Also can incorporate gentle wrist rotations within these exercises to loosen forearms.

C) Knee raise and twists

: Lift right knee while balancing on the left leg, then rotate torso to the right side and touch the left elbow with the right knee. Repeat on the other side. (10-40x each side).

D) Heel taps and 'look'

Heel taps: While standing, lift right heel towards buttock and touch sole of foot with the left hand.

And 'look': while tapping right heel, look over the left shoulder to look at the sole of the right foot. (10-40x each side).

E) Across body leg swings. ("Pendulum")

Bend leg at knee and raise to hip height. Swing right leg across the body to the left, and then out to the right fully opening the hip joint. (do all reps on this leg, before changing sides). (10-40x each side).

F) Side to side switch with opposite arm and leg. ("Robot")

Standing, put right leg out to side 20-30cm, and at the same time lift left arm out to the left side at shoulder height. Then bring right leg in and left arm down to the side, and put the left foot out to the left side and right arm up to the right side. Keep alternating side to side and
increasing the speed of change over until all reps done. (10-40x each side).

G) Forward and backward leg swings

While standing, cock and then kick the right leg to the front and slightly across the body with partially bent knee, to contact with the left hand at ~ waist height directly in front of the left arm. Repeat on the other side. (10-40x each side).

H) 1-leg Balance, and ankle 'circling'

Stand on right leg, and lift left leg off the floor. Balance without holding on to anything for 15 seconds. With left leg do ankle 'circling' first clockwise 4-5 turns then anti-clockwise 4-5 turns. Then repeat on the other leg.

I) Shoulder shrugs.

Adopt an upright standing position. Gentle raise both shoulders towards the ears and hold briefly, then lower the shoulders and depress the shoulders towards the floor. Repeat rhythmically for ~10 reps or until neck, and upper back invigorated.

J) Karate punches.

Adopt upright position. Perform slow karate punch, while holding torso stable. Increase rate of punches while still maintaining a still standing position. Total punches 20-40.

General Post Exercise & Training Routines For Sailors

Stretching is an essential routine to help prevent injury and to help fatigued bodies cool down efficiently.

General Principles: You can only stretch muscles and ligaments that have been warmed up. This may mean that on a cold day you have to warm your sailors up before stretching.

If you are in any doubt or experience pain when doing these stretches then you must consult a doctor of physiotherapist

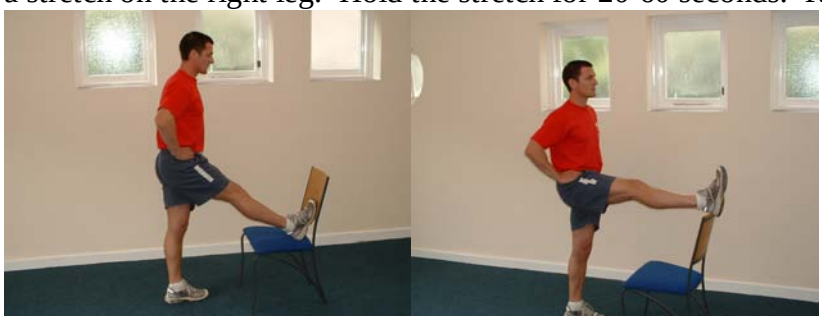
1st **5-20 mins** of gently exercise. Wear appropriate clothing.

2nd **5-20 mins** of Stretching exercises. Keep body temperature up.

3. Stretching exercises

A) 1-leg Hamstring stretch

Standing on left leg and keeping the left foot pointing straight ahead, lift right leg in front and place right foot on an object at hip height. Bend forward slightly to initiate a stretch on the right leg. Hold the stretch for 20-60 seconds. Repeat on the other leg.



B) 1-leg Adductor stretch

In the same position as above. Rotate the standing leg ~90 deg (shown on opposite leg). Hold the stretch for 20-60 seconds. Repeat on the other leg.

C) 'Dog' stretch (Calf and Hamstring)

Adopt an all '4's position on the floor. Without moving hands and feet, lift the knees off the floor, lift the buttocks as high as possible straightening legs and dropping the heels. Hold the stretch for 20-60 seconds. Repeat again if required.

D) Whole-back stretch. (from chair)

Grasp under thighs pulling chest onto the thighs and allowing head to drop forward. Hold the stretch for 20-60 seconds. Repeat again if required. If necessary move feet further away (1cm every 15-20 secs).

E) Stomach stretch

Laying on your front. Place hands under shoulders and slowly extend the arms to place a stretch at the front of the body. Hold the stretch for 20-60 seconds. Repeat again if required.

F) Kneeling Hip-flexor stretch

While kneeling place the right foot a large step away from the left knee (ensuring that the knee angle is not less than 90deg.). Then place your weight over the right leg to stretch the muscle from the left knee into the left groin. Hold the stretch for 20-60 seconds. Repeat on the other leg. Repeat again if required.

G) Buttock stretch

Laying on the back pull the right knee towards the chest. Hold the stretch for 20-60 seconds. Repeat on the other leg. Then repeat again on both legs if required.

H) Shoulder-rotator stretch

Laying on back, arms at sides. Keep elbows as close to the ribs as possible, and touching the floor. The forearms should be at 90 deg to the upper arm. Try to push the backs of your hands towards the floor hold for 5-10 seconds. Repeat again for 3-10 reps.

I) Chest stretch

While sitting/kneeling. Place both hands on the head, and slowly pull the elbows back to place a stretch at the front of the shoulder and chest. Hold the stretch for 20-60 seconds. Repeat again if required.

J) Tricep stretch

While sitting/kneeling. Place the right hand behind the head, and place the other hand on the right elbow and slowly push the elbow down towards the floor. Hold the stretch for 20-60 seconds. Repeat on the other arm. Repeat again if required.

K) Bicep stretch.

While sitting/kneeling. Place the right hand behind the head, and place the other hand on the right elbow and slowly push the elbow down towards the floor. Hold the stretch for 20-60 seconds. Repeat on the other arm. Repeat again if required.

L) Wrist stretches 1 & 2.

1: While sitting/kneeling. Place the backs of the hands together (fingers pointing down and thumbs pointing towards the abdomen). With elbows out to the sides of body, try to increase the stretch in forearms by lowering the elbows slightly. Hold the stretch for 20-60 seconds. Repeat again if required.

2: From kneeling place the palms on the floor in front of the body, fingers pointing back towards the knees and thumbs pointing out to sides and forearms rotated outwards. Use bodyweight, or place hands further away to increase the stretch. Hold the stretch for 20-60 seconds.

* Other more specific stretches should compliment these basic exercises if necessary.

4. Warm Up Games

Making fitness fun

A) Cone relay

Divide group into teams of 4 or 5 and get them into a line one behind the other, with each team next to each other. Lay lots of cones out in front of each team (the same amount for each team). The idea is that the first person from each team runs forward and collects one cone, returns to the line and puts down just in front of the team and joins the back of the line, then the next person goes until all the cones are stacked up in front of the team. The winners are the team that completes first.

B) Turning cones

Divide group into 2 teams. Scatter lots of cones over a large area (30mx30) some upside down and some the right way up. For one team the objective is to turn as many cones upside down as possible and for the other team they must turn cones the right way up. Start with a whistle and run the game for about 90 seconds. The team that has more cones their way up wins.

C) Coloured lines

Ideally find a grid square or mark a large square on the ground about 10mx10m. Using four different colours mark out each line with a cone in the middle of the line. The whole group starts on one line, you call a colour "blue line" and they run to that line. After 3 or 4 goes take away the cones, so they have to memorise the colours, try to confuse them by pointing to the wrong line as you call a colour.

D) 5v1

This has many different possible conditions. It was first used for rugby but can be used for any ball game. Using a marked area, ideally about 10mx10m. Divide the group into 6's, one group per area. The first condition is 5v1. The 5 must pass the ball between themselves without the 1 intercepting, tagging the player with the ball or the ball hitting the ground (unless you are using the bounce pass say for basketball or netball). When the 1 gets the ball he or she swaps with the player who last had the ball before it was lost. Some possible conditions on this are 4v2, only passing the ball backwards (rugby style), you cannot pass straight back to the player you just received the ball off and no over head passes.

E) Snake walking

Give every person one cone. Tell them to place the cone down over a large area 30mx30m minim, then divide the group in teams of 5 or 6. In their teams they must stand in a line one behind the other. On the whistle the person at the front of the line leads the team to his or her cone without breaking the snake (line) or touching another cone. He or she then stands by their cone and the next person in the line leads the snake to his or her cone. As the snake passes the first person then he or she joins the back of the line.

The aim is to pass everyone's cone in your team and get back to the finish first without breaking the snake or touch another cone.

F) Bib tag

Using coloured bibs or ribbons, get the group to place part of the ribbon it the top of their shorts, leaving a tail out behind. Nominate two chasers who must try and collect as many tails as possible. Use a restricted area about 20mx20. Once you have lost you tail then you become a chaser until only one person is left - the winner.

G) Ball pass relay

Mark out two lines about 60/70metres apart. Divide the group into teams of 4 or 5 and give them one ball per team (any ball will do, football, rugby, etc.) The aim is starting at one end they must get the ball to the other line and back without running with the ball and without the ball touching the ground. If the ball touches the ground or they run then they must start again. The winning team is the team who is first back or the most amount of

completed goes in 90 seconds.

H) All v all

Use a marked area about 20mx20m for a group of 15. Each person has a football. The aim is dribble round the area trying to knock other peoples balls out of the area, whilst keeping control of your own ball, you cannot leave your ball. Players are eliminated from the game if their ball is kicked out of the area. The game continues until one player is left.

I) Nutmeg races

Divide the group into two teams. Give one team a football each. Position the other team about 10m apart scattered around an area, standing with their feet apart. The aim is for the team with the balls to pass the ball through the legs or nutmeg as many opponents as possible. Players cannot pass the ball through the same opponent twice in succession. After 2 minutes add up the combined score and then swap roles, the winning team is the one with the
highest combined score.

J) Dodge ball

Divide the group into two teams, using a 20mx20m area, give one team a football each. To start the team without the balls stand in the area and the team without stand outside, on the whistle the team with the balls dribble into the area and try to hit a member of the other team below the waist with the ball, once you are hit you are eliminated and must leave the area. After everyone is eliminated, teams switch roles. The winning team is the fasted team to eliminate all opponents. Remind the players that it is accuracy not power that counts.

K) Chain tag

Using an area about 20mx20m. Nominate 2 players to be taggers. They must run round trying to tag the others, when you have been tagged then you form a chain with your tagger by holding hands. There can only be two chains and the winner in the last person left.

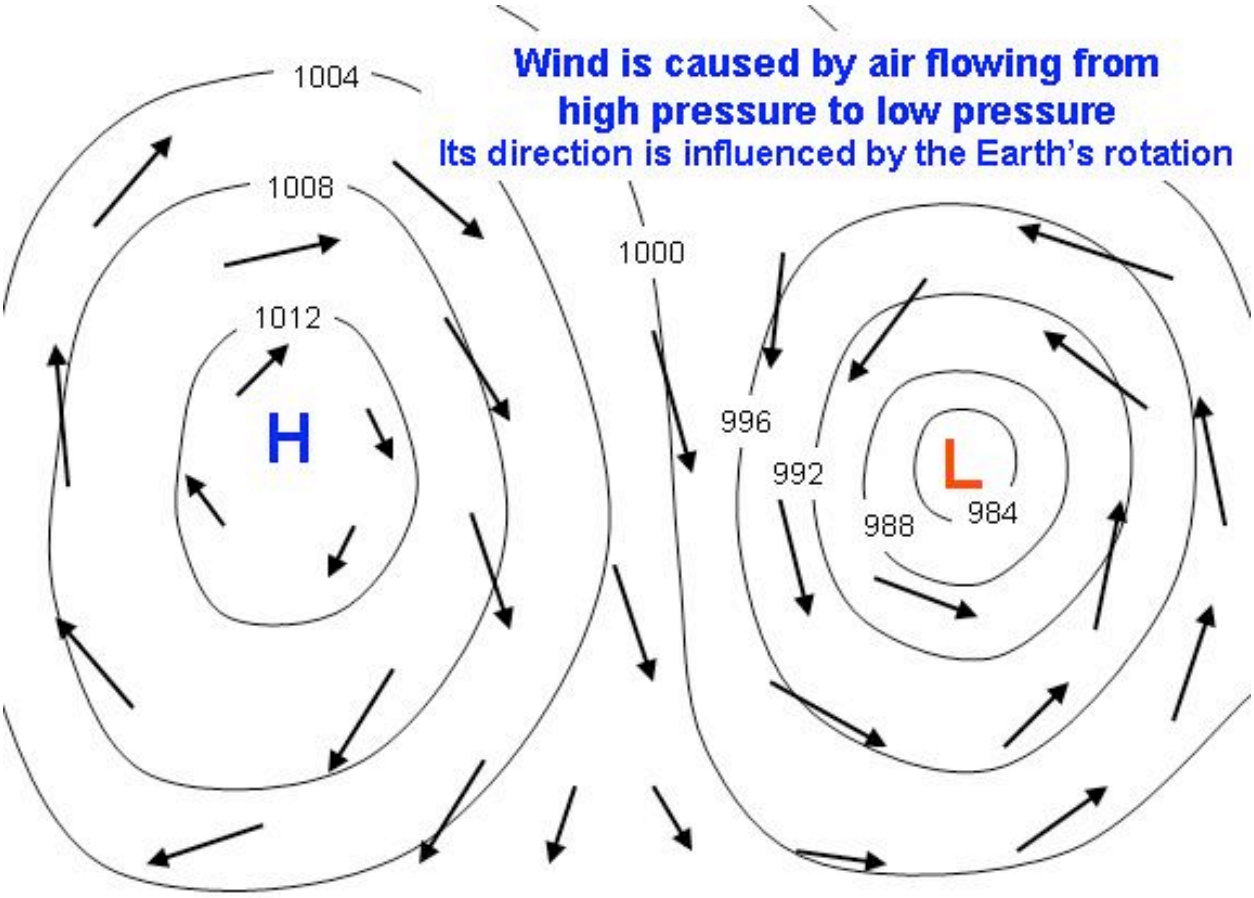
L) Circle run

Divide the group into two teams, pair each player with a person from the other team, give each pair a number. Mark out a large circle and get each pair to stand opposite each other around the circle. You call out a number and then they race to the other side of the circle, changing places with their opposite number, the first one to the other side scores a point. Continue calling random numbers for about 5 minutes, sometimes calling 2 or 3 numbers at once. Then at the end of 5 minutes calculate the scores, highest wins.

M) Circle commands

Organise as in circle run. This time one member of each pair has a football. The game begins when you call out a number. The person with the ball for that number must dribble the ball round the outside of the circle anticlockwise and the other person must try to catch them up and tag them before he or she gets back to their starting position. If you get back untagged then you keep the ball, if you get tagged then the other person gets the ball. The size if the circle should be that the catcher has a reasonable chance of catching the dribbler, a variation can be the dribbler must complete two laps of the circle.

What causes wind?[1]



Wind is caused by air flowing from high pressure to low pressure. Since the Earth is rotating, however, the air does not flow directly from high to low pressure, but it is deflected to the right (in the Northern Hemisphere; to the left in the Southern Hemisphere), so that the wind flows around the high and low pressure areas. This effect of the wind "feeling the Earth turn underneath it" is important for very large and long-lived pressure systems. For small, short-lived systems (such as in the cold outflow of a thunderstorm) the wind will flow directly from high pressure to low pressure.

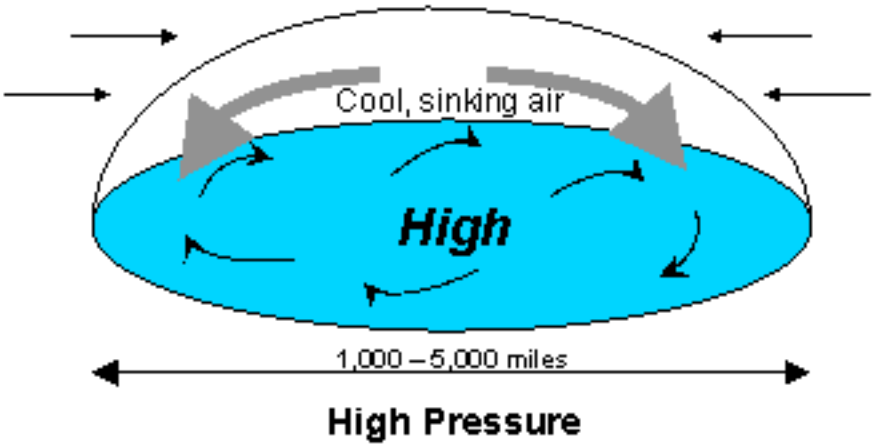
[1] http://www.weatherquestions.com/What_causes_wind.htm

The closer the high and low pressure areas are together, the stronger the "pressure gradient", and the stronger the winds. On weather maps, lines of constant pressure are drawn (as in the example, above) which are called "isobars". These isobars are usually labeled with their pressure value in millibars (mb). The closer these lines are together, the stronger the wind. The curvature of the isobars is also important to the wind speed. Given the same pressure gradient (isobar spacing), if they are curved anticyclonically (around the high pressure in the above example) the wind will be stronger. If the isobars are curved cyclonically (around the low pressure in the example above) the wind will be weaker.

Near the surface of the Earth, friction from the ground slows the wind down. During the day, when convective mixing is stirring up the lower atmosphere, this effect is minimized. At night, however, when convective mixing has stopped, the surface wind can slow considerably, or even stop altogether.

Wind can also be thought of one way that the atmosphere moves excess heat around. All wind is, directly or indirectly, helping to transport heat either away from the surface of the Earth, where sunlight causes an excess of energy buildup, or from warm regions (usually the tropics) to cooler regions (usually the higher latitudes). Extratropical cyclones accomplish much of this heat transport outside of the tropics, while in the tropics the trade winds, monsoons, and hurricanes transport much of the heat.

What causes high pressure?[2]



High pressure areas form when an airmass cools over a cool land or ocean surface. The cooling causes the air layer to shrink, becoming slightly thinner. This shrinkage then causes surrounding air in the upper troposphere to fill up the extra space. The added weight of the extra air causes higher pressure at the surface. The higher pressure air at the surface then tries to flow outward toward lower pressure, but as it does, the rotation of the Earth turns the wind to the right, resulting in the clockwise wind flow around the high pressure (in the Northern Hemisphere...it flows in the opposite direction in the Southern Hemisphere).

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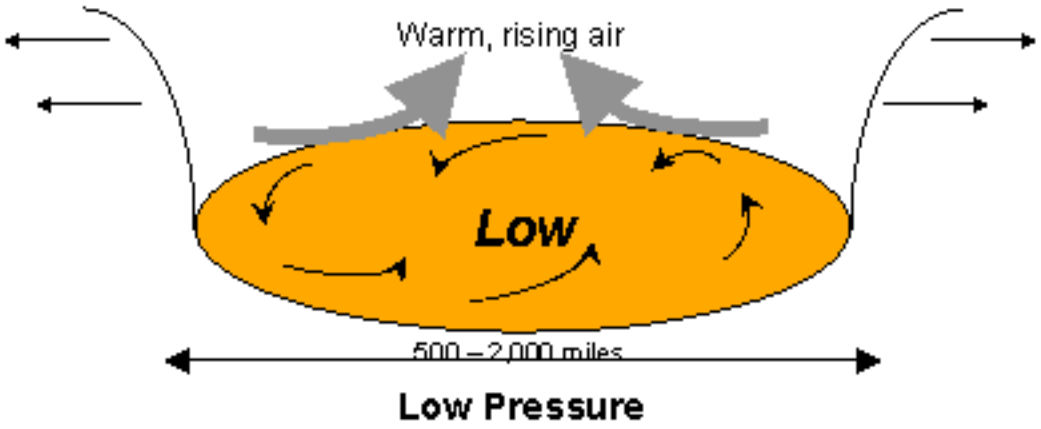
[2] http://www.weatherquestions.com/What_causes_high_pressure.htm

What causes low pressure?[3]



Low pressure areas form when an airmass warms, either from being over a warm land or ocean surface, or from being warmed by condensation of water vapor in large rain or snow systems. The warming causes the air layer to expand upward, becoming slightly thicker. This expansion then causes air in the upper troposphere to flow away, leaving less mass, and so less weight (pressure) at the surface. The lower pressure air at the surface then causes higher pressure air around it to flow toward lower pressure, but as it does, the rotation of the Earth turns the wind to the right, resulting in the counter-clockwise wind flow around low pressure (in the Northern Hemisphere...it flows in the opposite direction in the Southern Hemisphere).

Outside of the tropics, low pressure centers are usually associated with extratropical cyclone systems, along with their fronts and precipitation systems.

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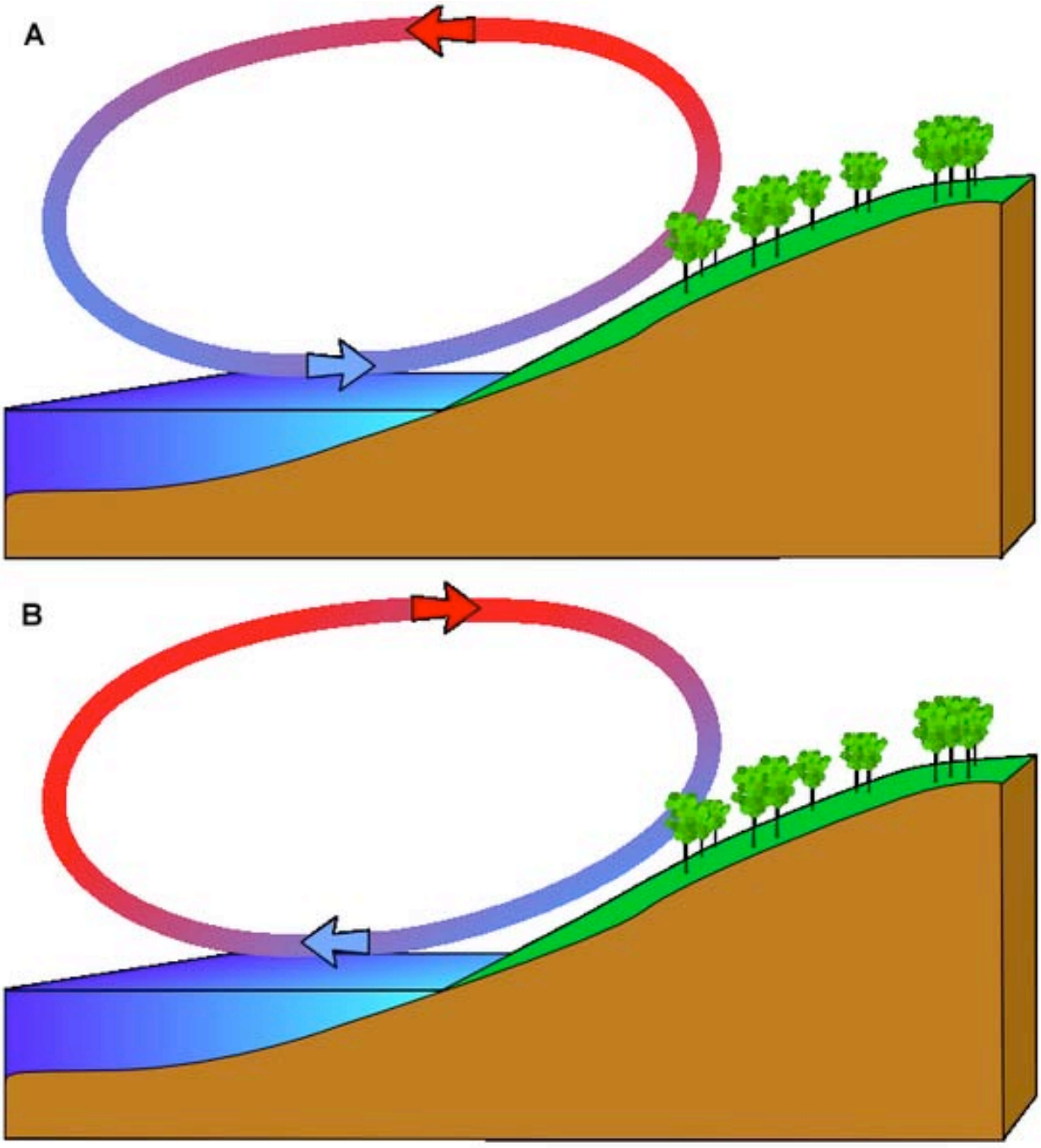
[3] http://www.weatherquestions.com/What_causes_low_pressure.htm

What causes a Southerly in the afternoons on Long Island Sound.[4]

The Southerly on Long Island Sound is a **sea-breeze** that develops between Long Island and the Atlantic Ocean. The temperature of the Atlantic remains fairly constant all day whereas the land mass of the Island heats up quickly on hot sunny days, especially on calm days with little prevailing wind. This temperature differential causes a sea-breeze front.

A **sea-breeze** (or **onshore breeze**) is a wind from the sea that develops over land near coasts. It is formed by increasing temperature differences between the land and water which create a pressure minimum over the land due to its relative warmth and forces higher pressure, cooler air from the sea to move inland.

[4] http://en.wikipedia.org/wiki/Sea_breeze

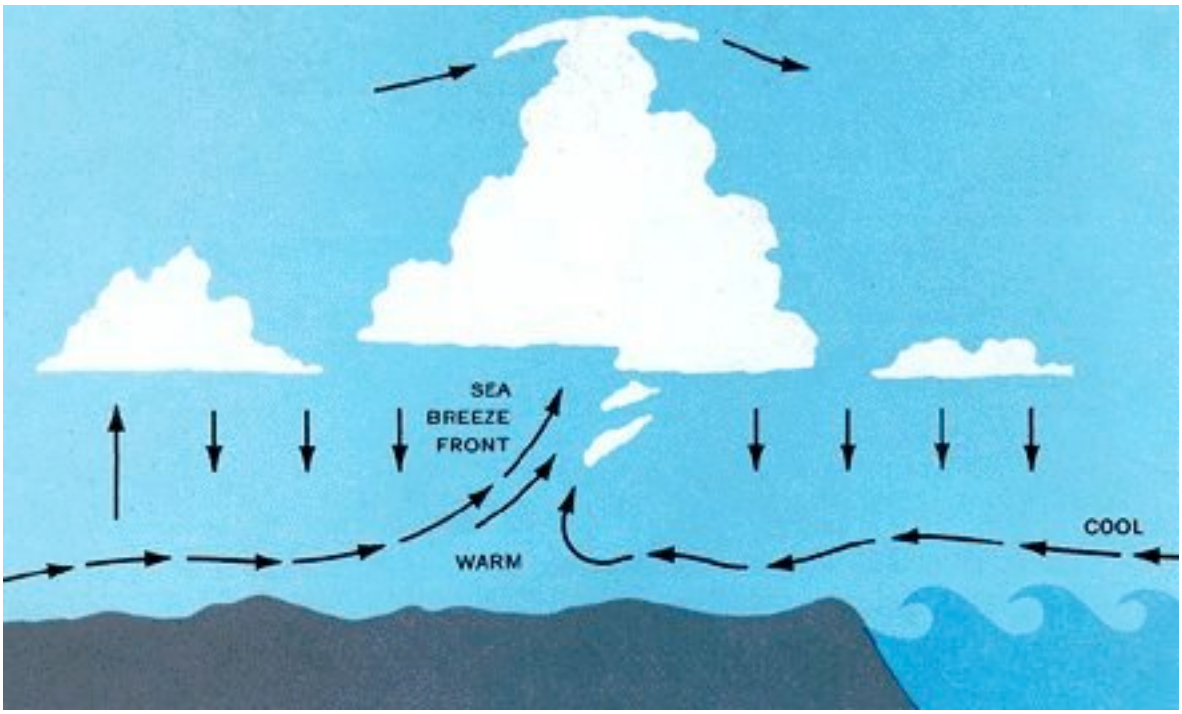


Main cause

The sea is warmed by the sun to a greater depth than the land due to its greater specific heat.[1] The sea therefore has a greater capacity for absorbing heat than does the land and so the surface of the sea warms up

more slowly than the land's surface. As the temperature of the surface of the land rises, the land heats the air above it. The warm air is less dense and so it rises. This rising air over the land lowers the sea level pressure by about 0.2%. The cooler air above the sea, now with relatively higher sea level pressure, flows towards the land into the lower pressure, creating a cooler breeze near the coast. The strength of the sea breeze is directly proportional to the temperature difference between the land and the sea. If the environmental wind field is greater than 8 knots and opposing the direction of a possible sea breeze, the sea breeze is not likely to develop.[2]

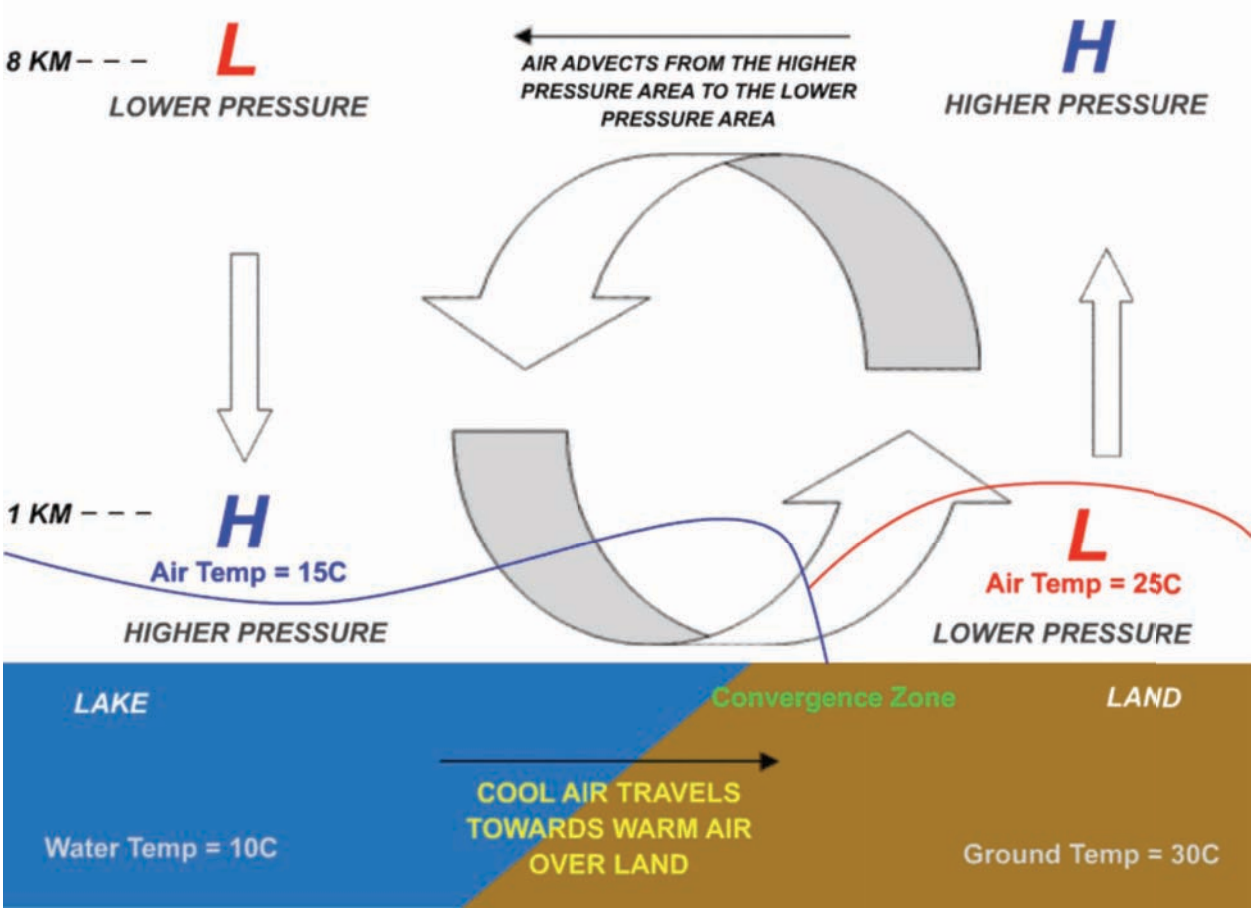
Effects



Schematic cross section through a sea breeze front. If the air inland is moist, cumulus often marks the front.

A **sea-breeze front** is a weather front created by a sea-breeze, also known as a convergence zone. The cold air from the sea meets the warmer air from the land and creates a boundary like a shallow cold front. When powerful this front creates cumulus clouds, and if the air is humid and unstable, cumulonimbus clouds, the front can sometimes trigger thunderstorms. If the

flow aloft is aligned with the direction of the sea breeze, places experiencing the sea breeze frontal passage will be benign, or fair, weather for the remainder of the day. At the front warm air continues to flow upward and cold air continually moves in to replace it and so the front moves progressively inland. Its speed depends on whether it is assisted or hampered by the prevailing wind, and the strength of the thermal contrast between land and sea. At night, the sea-breeze usually vanishes.



Beginning Opti	Intermediate Opti
WEEK 1: Program and club rules / Rule 1 (Safety) Sportsmanship - team sport - working together Safety whistle Swim tests Health - exercise - protection from sun - safety consciousness Comfortable in boat and on water Avoid collisions (with all boats) Rig and de-rig with no instructor help 8-knot, square knot, cleat knot Basic parts of boat - mainsheet, tiller, sail, sprit pole, tiller extension, dagger board, rudder, mast, boom Wind and its direction Safety position Capsize and recovery Towing and towing rules Steering….. tow w/o mast Leaving the dock Where and how to sit Basic boat care - proper and neat stowing and securing Parts of boat cont. - starboard/port, bow/stern, mast preventer, mast step, thwart, hull, pins and gudgeons Half-hitch and Bowline Reaching - What it is and how to do it Tacking - What it is and how to do it Running - What it is and how to do it Returning to the dock Sail a figure eight Using the paddle while steering Recovering from irons Squall/storm drill	**WEEK 1:** Program rules - Rules of the road Health - exercise - protection from sun Parts of Boat….. all Find where wind is coming from Bowline, 8-knot, cleat knot Avoiding contact (Rule 14) Proper rigging and de-rigging Checking mast preventer Where, when, and how to sit Safety position Swim tests Capsize and Recovery Towing and towing rules Leaving and returning to dock Sailing simple courses….use for assessment and make them fun! - figure eight - upwind/downwind and reach - triangle - wacky courses….use your imagination - Sportsmanship - team sport - working together - safety consciousness (Rule 1) Identifying points of sail Square knot, clove hitch Coiling and throwing a line Boat care - proper and neat stowing and securing - washing boats - checking sail for ties - tying ties Getting out of irons Refitting sprit pole on the water Upwind sailing - close-hauled - steering a straight course…..paying attention - watching for speed and balloon in luff - telltales Tacking Squall/Storm Drill

Beginning Opti	Intermediate Opti
WEEK 2: Sailing upwind More work on getting out of irons Sailing a triangle and a square How and what a gybe is How wind moves a boat Coil and throw a line Master the bowline Simple navigation - North, South, East, West - recognizing landmarks - navigation buoys - water depth Wind puffs and lulls - how to know when they are coming Current & Tides Tying sail ties and fixing sail Upwind sailing skills Using telltales Undo sprit pole and refit on water Sailing as a way to get somewhere Sitting position for different conditions Stopping/Starting	**WEEK 2:** Port/Starboard (Rule 10) How a sail works - pushing - pulling Sail Controls - outhaul - boom vang - gooseneck More upwind sailing - hiking Downwind sailing - sail trim dictated by where wind is - body position and placement - steering Gybing (i.e. the controlled gybe) - S gybe as apposed to C gybe - pull in sail and center tiller Stopping and Starting - heading into wind - backwind sail to stop - pull in and head off to start - Same tack, overlapped (Rule 11) Review knots Navigation - North, South, East, West - using landmarks - using a compass - water depth - reading a chart - navigation buoys Current Weather - simple weathers systems - clouds and what they mean - wind and weather - weather reports - barometric pressure Sailing as a way to get somewhere - using navigation skills - long distance sail

Beginning Opti	Intermediate Opti
WEEK 3: Intro to rules Starboard/Port…. Right of way (Rule 10) How a sail works - pulling - pushing Anchoring Rowing Daggerboard positions Balance - how body placement and movement affects boat Execute a 360 Windward/Leeward…. Right of way Sprit pole adjustment Sail controls - outhaul - downhaul - boom vang Intro to big boat sailing Intro to racing (kid dependent) Sportsmanship in racing Starting sequence Mark rounding Clear air	**WEEK 3:** Racing…..make it fun and not too competitive! Starting sequence Where to be at the start…basics - clear air Mark rounding - the mechanics of it - the rules of it (Rule 18), but be basic Finishing Executing a 360 when foul occurs Rules in Racing - review and use rules learned - introduce the protest Sportsmanship in racing - responsibility - fair sailing Assessing wind on a course Avoiding La-La land (i.e. sailing up the middle) Tacking rules (Rule 13) Learn the finer points of boathandling and sail control Daggerboard positions Sprit pole adjustment More on sail controls Sail shape - for different weather conditions - for different points of sail Balance and weight placement - steering with weight - how body placement and movement affects the boat - for different weather conditions - for different points of sail Backwards sailing Intro to regattas Same tack, not overlapped (Rule 12) Actual vs. Apparent wind Anchoring Intro to big boat sailing - relate the Opti to a big boat - MOB drill - navigation - sailing as a way to get somewhere Sailing by the lee Changing Course (Rule 16) More Racing Wind Puffs and Lulls - what to do when racing Adjusting sail controls on different legs Adjusting weight for speed

Racing Opti	Racing Laser
WEEK 1: Program and club rules Safety whistle Sportsmanship - team sport - working together - safety consciousness (Rule 1) Health - exercise - sun protection Proper rigging and de-rigging Bowline, 8 – knot, cleat knot, clove hitch, square knot Coil and throw a line Where, when, and how to sit Leaving and returning to the dock Towing and towing rules Swim tests Capsize and Recovery Squall/Storm drill Stopping and Starting - head to wind & backwind - safety position Mini races with no finish to assess racing skills Drills to assess boathandling Review racing rules Organization for regattas and competition Terminology - points of sail - all parts of boat Port/Starboard (Rule 10) Boat tuning Tying sail to spars - different adjustment for different conditions - sail position on mast Boat maintenance - minor repairs - jury rigging Mast rake Daggerboard position Mark rounding - “Seamanlike rounding” - wide and tight - the mechanics of it - tactics - advanced applications of Rule 18 and 18.2a Tacking - mechanics - rolling - While tacking (Rule 13) - tacking in waves Gybing - mechanics - s gybe as apposed to c gybe - rolling - gibing in waves Refitting sprit pole on water	**WEEK 1:** Program rules Safety whistle Sportsmanship - team sport - working together - safety consciousness (Rule 1) Health - exercise / - sun protection Proper rigging and de-rigging Bowline, 8 – knot, cleat knot, clove hitch, square knot Coil and throw a line Where, when, and how to sit Leaving and returning to the dock Towing and towing rules Swim tests Capsize and Recovery Stopping and Starting - head to wind & backwind - safety position Terminology - points of sail / - all parts of boat Drills to assess and introduce boathandling Possible drills to assess racing skills The body and the Laser - weight placement - movement Review racing rules More on where and how to sit - for different wind conditions - for different water conditions - for different points of sail Boat tuning - maximize benefit of rigging - dry out the boat Boat maintenance - minor repairs - jury rigging Daggerboard position Walk-over capsizes Tacking - mechanics - rolling - rules (Rule 13) - tacking in waves Upwind sailing - sail trim - telltales - finding and holding the groove - tactics in racing - awareness - sailing over waves - windward/leeward (Rule 11) - hiking!!! Squall/Storm drill

Racing Opti	Racing Laser
WEEK 2: Current and tides - tide charts / - current indicators Weather - simple weather systems - clouds and what they mean - wind and weather - weather reports - barometric pressure More on where and how to sit - for different wind conditions - for different water conditions - for different points of sail Upwind sailing - sail trim / - telltales - finding and holding the groove - tactics in racing - awareness - sailing over waves - Same tack, overlapped (Rule 11) - hiking Starting - mechanics / - favored end - current - line sight - strategies - timing (watches vs. mind) - rules and things to watch for How a sail works - pushing / - pulling - daggerboard as a foil Same tack, not overlapped (Rule 12) Vang brake - adjusting luff tension / - controlling draft position Boom Vang - downwind leach tension Outhaul - adjusting foot tension - controlling depth of sail (power) Mainsheet - control of pointing and speed Sprit pole tension - control of shape Sail controls and you - different points of sail - different wind conditions - different water conditions Weather and sailing - racing…. Finding the wind! - safety Downwind sailing - sail trim - sail controls - weight placement and use - tactics - awareness - pumping on crests - steering waves	**WEEK 2:** Current and tides - tide charts - current indicators - current and racing How a sail works - pushing - pulling - daggerboard as a foil Gybing - mechanics - rolling - gibing in waves Downwind sailing - sail trim - sail controls - weight placement and use - tactics - awareness - pumping on crests - steering waves Mark rounding - “Seamanlike rounding” - wide and tight - the mechanics of it - tactics - advanced applications of Rule 18 and 18.2a - Clear ahead – Clear astern (Rule 12) Starting - mechanics - favored end - current - line sight - strategies - timing (watches vs. mind) Sail Controls Cunningham - adjusting luff tension - controlling draft position Boom Vang - downwind leach tension Outhaul - adjusting foot tension - controlling depth of sail (power) Mainsheet - control of pointing and speed Sail controls and you - different points of sail - different wind conditions - different water conditions

Racing Opti	Racing Laser
WEEK 3: Changing course (Rule 16) Wind - Actual vs. apparent wind Puffs and lulls - how to spot - what to do Balance and weight placement - challenging the body on the boat - quiet and gentle movement - steering with weight - for different wind and water conditions Doing penalty turns Backwards sailing Finishing - dueling tactics - sportsmanship in finishing Protests and Arbitration - knowing the rules - knowing who to ask - sportsmanship and hearing - mock protests and scenarios Wind shifts - headers - lifts - what action to take when racing Long distance sail Advanced starting techniques - what spot do you want or do you just want to take what's left - how to make that selection - carving out the spot you want - closing the door on the competition Rowing Navigation - North, South, East, West - using landmarks - using a compass - water depth - reading a chart - navigation buoys - instruments Intro to big boat sailing - relating the Opti to a big boat - MOB drill - anchoring - sailing as a way to get somewhere - using navigation	**WEEK 3:** Weather - simple weather systems - local weather factors - clouds and what they mean - wind and weather - weather reports - barometric pressure Weather and sailing - racing…. Finding the wind! - safety Putting things together on the race course Advanced starting techniques: - what spot do you want or do you just want to take what's left - how to make that selection - carving out the spot you want - closing the door on the competition Changing course (Rule 16) More on balance and weight placement - challenging the body on the boat - windsurfer tacks - quiet and gentle movement - more on steering with weight - for different wind and water conditions Backwards sailing Finishing - dueling tactics - sportsmanship in finishing Doing penalty turns Navigation - North, South, East, West - using landmarks - using a compass - water depth - reading a chart - navigation buoys Protests and Arbitration - knowing the rules - knowing who to ask - sportsmanship and hearing - mock protests and scenarios Wind Actual vs. apparent wind Puffs and lulls: - how to spot / - what to do Wind shifts: - headers / - lifts - what action to take when racing Intro to big boat sailing - MOB drill / - anchoring - sailing as a way to get somewhere - using navigation Long distance sail Communication - sailors run a drill - sailors run reviews of skills Big Boat Racing

Daily Lesson Planner - Beginning Opti		
Attendance (*sailor*)	Date:	Instructor(s):
1		
2	Lesson plan:	
3		
4	Goal:	
5		
6		
7	Weather:	
8		
9	Equipment:	
10		
11	Evaluation (Self & Student):	
12		
13		
14	Notes / Problems:	
15		

Daily Lesson Planner - Intermediate Opti		
Attendance (*sailor*)	Date:	Instructor(s):
1		
2	Lesson plan:	
3		
4	Goal:	
5		
6		
7	Weather:	
8		
9	Equipment:	
10		
11	Evaluation (Self & Student):	
12		
13		
14	Notes / Problems:	
15		

Daily Lesson Planner - Racing Opti		
Attendance (*sailor*)	Date:	Instructor(s):
1		
2	Lesson plan:	
3		
4	Goal:	
5		
6		
7	Weather:	
8		
9	Equipment:	
10		
11	Evaluation (Self & Student):	
12		
13		
14	Notes / Problems:	
15		

Daily Lesson Planner - Racing Laser		
Attendance (*sailor*)	Date:	Instructor(s):
1		
2	Lesson plan:	
3		
4	Goal:	
5		
6		
7	Weather:	
8		
9	Equipment:	
10		
11	Evaluation (Self & Student):	
12		
13		
14	Notes / Problems:	
15		

Beginner Opti Skill Evaluation Sheet

Beginner Opti	Sailor's Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Safety	Program/club rules																
	Safety consciousness																
	Stay protected from sun																
	Use of safety whistle																
	Avoiding collisions																
	PFD on and off in water																
	Tread water for 2 min.																
	Safety position																
	Capsize and recover																
	Squall/storm drill																
Seamanship	Comfortable alone in boat																
	8, square, cleat, bowline																
	Half hitch, clove hitch																
	Coil and throw line																
	Rig and de-rig																
	Name parts of Opti																
	Know wind direction																
	Stowing and securing boat																
	Washing boat																
	Paddle while steering																
	Steer safely on tow																
	Stay out of no-go zone																
	Recover from irons																
	Leave the dock																
	Return to the dock																
	Proper body position																
Boathandling	Hold of tiller & main sheet																
	Gybe																
	Tack																
	Reach																
	Run																
	Sail upwind																
	Sail a figure eight																
	Sail a triangle																
	Sail a square																
Sportsmanship																	
	Respect others																
	See sailing as team sport																
	Rig and work in a team																
Rules	Rule 1 (Safety)																
	Rule 10 (Port/Starboard)																

Intermediate Opti Skill Evaluation Sheet

Intermediate Opti	Sailor's Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Safety	Program/club rules																
	Safety consciousness																
	Stay protected from sun																
	Avoiding collisions (rule 14)																
	Capsize and recover																
	PFD on and off in water																
	Tread water for 2 min.																
	Squall/storm drill																
	Towing and tow rules																
	Clearly identify wind direction																
Seamanship	Name parts of Opti																
	8, square, cleat, bowline																
	Half hitch, clove hitch																
	Coil and throw line																
	Rig and de-rig																
	Know wind direction																
	Stowing and securing boat																
	Washing boat																
	Paddle while steering																
	Steer safely on tow																
	Sail backwards																
	Recover from irons																
	Leave the dock																
	Return to the dock																
	Proper body position																
Boathandling	Hold of tiller & main sheet																
	Sail upwind																
	Tack																
	Reach																
	Sail a figure eight																
	Sail a triangle																
	Sail a square																
	Downwind sailing																
	Gybe																
	Run																
	Mark rounding																
	Use of all sail Controls																
Sportsmanship	Respect others																
	See sailing as team sport																
	Rig and work in a team																
Rules	Rule 1 (Safety)																
	Rule 10 (Port/Starboard)																
	Rule 11 (Same tack, overlapped)																
	Rule 12 (Same tack, not overlapped)																
	Rule 13 (While tacking)																
	Rule 16 (When changing course)																
	Rule 18 (Mark roundings)																

Racing Opti Skill Evaluation Sheet

Racing Opti	Sailor's Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operations	Rig boat																
	Launch Boat																
	Trailer Boat																
Turns	Roll Tack																
	Roll Gybe																
Weather	Wind																
	Water																
	Shifts-headers & Lifts																
	Storms																
Marks	Windward Mark																
	Leeward Mark																
	Gybe Mark																
	"Seamanlike" rounding																
	"Tactical" rounding																
Starts	Close to line																
	Clear air																
	Self time																
	No barging																
Rules	Rule 1 (Safety)																
	Rule 10 (Port/Starboard)																
	Rule 11 (Same tack, overlapped)																
	Rule 12 (Same tack, not overlapped)																
	Rule 14 (Avoiding Contact)																
	Rule 13 (While tacking)																
	Rule 16 (When changing course)																
	Rule 18 (Mark roundings)																
Knots	Bowline																
	Figure Eight Knot																
	Clove Hitch																
	Square Knot																
Controlls	Sheet																
	Hike																
	Vang																
	Daggerboard																
	Outhaul tension																
	Halyard / Sprit Tension																
Points of Sail	Head to Wind																
	Close Hauled																
	Close Reach																
	Beam Reach																
	Broad Reach																
	Running																
Finish	Dueling Tactics																
	Shooting the line																
	Sportsmanship																
Safety	Capsize & right boat																
	define self rescueing																
	Throw line																
	MOB dril																
Protests	Filling out a Form																
	Mock protests																
	Scenarios																
	Redress																

Racing LaserSkill Evaluation Sheet

Racing Laser	Sailor's Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Operations	Rig boat																
	Launch Boat																
	Trailer Boat																
Turns	Roll Tack																
	Roll Gybe																
Weather	Wind																
	Water																
	Shifts-headers & Lifts																
	Storms																
Marks	Windward Mark																
	Leeward Mark																
	Gybe Mark																
	"Seamanlike" rounding																
	"Tactical" rounding																
Starts	Close to line																
	Clear air																
	Self time																
	No barging																
Rules	Rule 1 (Safety)																
	Rule 10 (Port/Starboard)																
	Rule 11 (Same tack, overlapped)																
	Rule 12 (Same tack, not overlapped)																
	Rule 14 (Avoiding Contact)																
	Rule 13 (While tacking)																
	Rule 16 (When changing course)																
	Rule 18 (Mark roundings)																
Knots	Bowline																
	Figure Eight Knot																
	Clove Hitch																
	Square Knot																
Controlls	Sheet																
	Hike																
	Vang																
	Daggerboard																
	Outhaul tension																
	Cunningham tension																
Points of Sail	Head to Wind																
	Close Hauled																
	Close Reach																
	Beam Reach																
	Broad Reach																
	Running																
Finish	Dueling Tactics																
	Shooting the line																
	Sportsmanship																
Safety	Capsize & right boat																
	Bail																
	Throw line																
	MOB dril																
Protests	Filling out a Form																
	Mock protests																
	Scenarios																
	Redress																