

Sea-duced Again Sailing Adventures

www.seaducedagain.com 813-731-9915

Sailing Basics Training

Q. Why do we offer this type of experience when most of our customers just enjoy day-sailing with a captain?

A. Almost a quarter of our group sail and charter sail passengers get bit by the sailing bug and want to learn more. Some want to buy sailboats, others have a boat but no idea how they work. People want to know if they CAN sail and this is a great way to find out if there is a sailor in you.

Q. When we are done, what understanding will I walk away with?

A. You will walk away knowing the following: Why a sailboat goes forward and doesn't just drift with the wind, key parts of a sloop sailboat, very basic sail handling, reading the wind, tacking, points of sail, fundamental chart reading and sailing safety.

Lets get started: Sailing Theory

You don't need to know much about how a piston engine works in order to drive a car. You get in, turn on the engine, shift into gear, step on the gas, and off you go.

On a sailboat, though, you play a far more active role in harnessing the energy that propels you forward. You can get stuck in "neutral," with no wind in your sails, so it's important to have a basic understanding of how a sailboat works.

It's easy to see how a boat can sail when it's going in the same direction as the wind; the sails catch the wind and push the boat forward. But how does a boat make progress sailing across the wind or even toward the wind? Why doesn't a sailboat always get blown along with the wind?

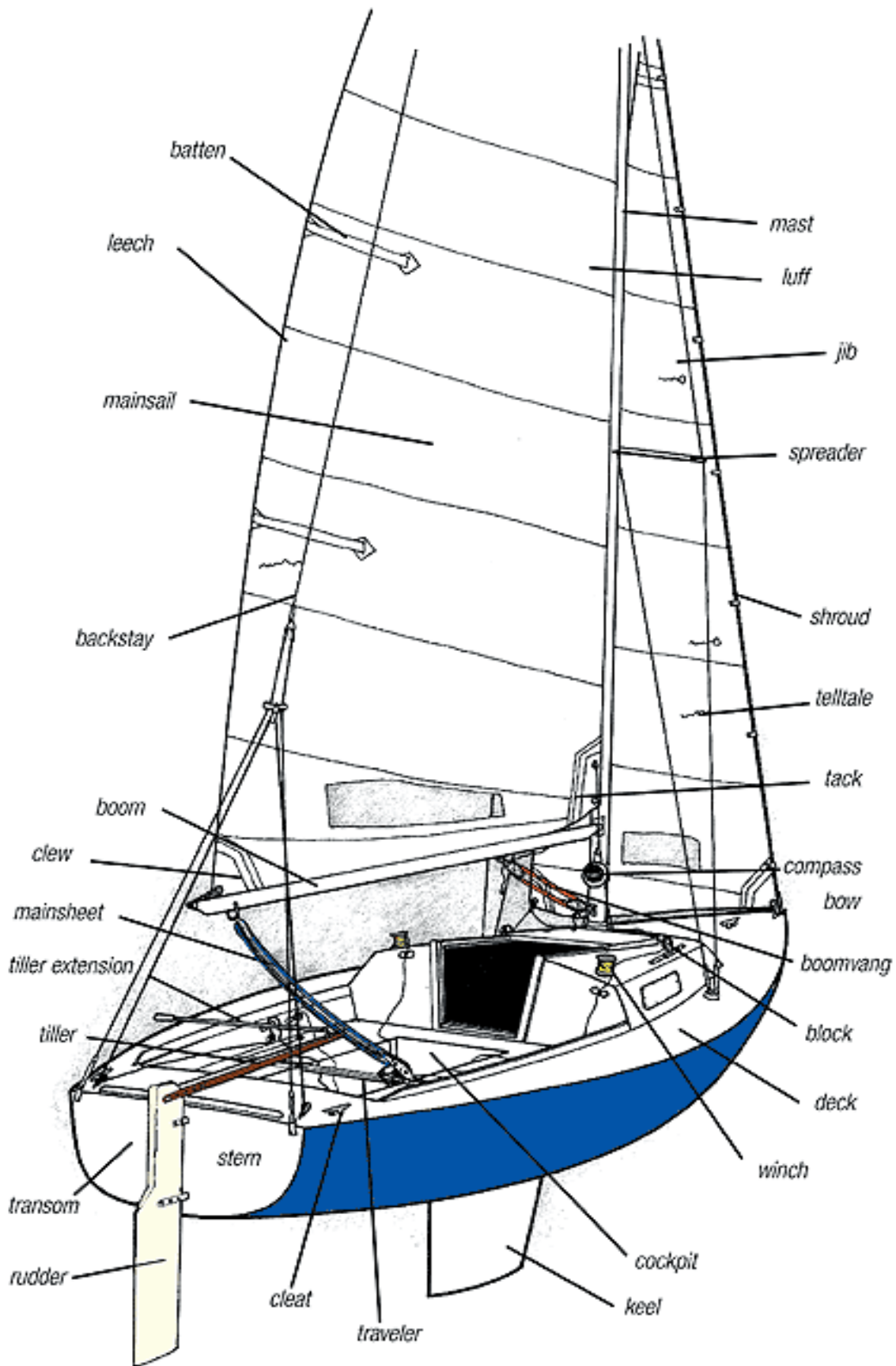
Very simple, the forces of the wind on the sails (aerodynamics) and the water on the underwater parts of the boat (hydrodynamics) combine to propel the boat through the water. The wind blows across the sails, creating aerodynamic lift, like an airplane wing. The lift contains a sideways force and a small forward force. Trimming the sails efficiently produces the most forward force and the least resistance.

A sailboat would slide sideways with the wind if it did not have a centerboard or keel underneath the hull. The flow of water over the underwater surfaces creates lift, too - a sideways force countering the force of the wind. The combination of these forces pushes the boat forward.

Form stability and ballast keep a sailboat from tipping over sideways (capsizing). Keelboats have a heavy concentration of weight, usually lead, in their keels. Seaduced has a fin keel with 3500 lb of lead and Seaduced Again's keel has over 2 tons of lead. As the boat heels, the weight of the keel pulls back down. Since centerboard boats don't have heavy keels, the crew must use their weight to counteract the heeling forces. If you get too far out of position, you risk a capsized.

Discussion on Centerboard vs Keel boats, tiller vs wheel, sloop vs multi hull vs cutter rig vs cat boat vs ketch vs yawl vs schooners

Parts of a Sailboat - Sloop



Terms and parts

ABEAM--Any location either side of the boat, located on a line at right angles to one running from the bow to the stern.

AMIDSHIPS--The portion of a vessel midway between bow and stern; also midway between port and starboard sides.

APPARENT WIND--Wind felt on a moving vessel

ASTERN--Behind or backwards.

BATTENS--Long, thin, narrow strips of wood that are placed in pockets sewn perpendicular to the leech of a sail and are used to hold the leech out.

BEAM--The greatest breadth of a boat.

BEARING OFF/AWAY--Altering course away from the wind on any course from head to wind until the boat begins to gybe.

BEAT--To sail towards the direction from which the wind blows by making a series of tacks while sailing close-hauled.

BEFORE THE WIND, RUN --Sailing with the wind from astern, in the same direction toward which the wind is blowing

BLOCK--A pulley through which a line passes.

BOOM--Pole or spar attached to the mast to which the foot (lower edge) of the sail is fastened.

BOLT ROPE--Rope sewn into the luff and foot of sail for attaching to the mast and boom.

BOOM VANG--A wire or rope running from the boom to or near the bottom of the mast which holds the boom down.

BOW--Forward part of the hull.

BOW PLATE--A plate that fits on the bow of the boat to which the lower end of the forestay is attached.

BROACHING--A sudden swooping around broadside to the wind and waves while running.

BROAD REACH--Sailing with the wind coming from any direction from abeam to on the quarter.

CENTERBOARD--A fiberglass or metal blade projecting through the bottom of the hull in centre which prevents the boat from sliding sideways. It pivots up and back into the centerboard trunk.

CENTREBOARD LINE--A rope or wire attached to the top of the centerboard with which it is raised or lowered.

CENTREBOARD TRUNK--Watertight housing for the centerboard.

CHAIN PLATE--A plate that fits on the side of the boat to which the lower end of a shroud is attached.

CLEAT--A formed fitting in wood or metal to which lines are made fast.

CLEW--The lower after corner of a sail.

CLOSE HAULED--Sailing close to the wind (sails all the way in).

CLOSE REACH--Sailing with sheets eased and the wind forward of the beam (sails out 1/4).

COCKPIT--The box-like well in a boat from which the skipper and crew operate.

COMING ABOUT--Changing tacks by heading up, bow into the wind and past head to wind on the other tack (tacking).

CUNNINGHAM--Line passed through a grommet in the luff of the sail used to flatten the sail by tightening the luff.

DAGGER BOARD--A centerboard that slides up and down in a vertical slot.

DECK--The horizontal top on the hull.

DINGHY--A small handy rowing boat, sometimes rigged with a sail.

DISPLACEMENT--The weight of the water displaced by the vessel.

DOWN HAUL--Line attached to the bottom of the boom used to flatten the sail by pulling the boom down, and thus tightening the luff of the sail.

DOWNWIND--In the direction the wind is going. A boat sailing downwind is running with the wind.

DRAFT--The depth of water to a vessel's keel.

EASE THE SHEET--To let the sail out.

FAIRLEAD - The fitting that guides the jib or genoa sheets.

FENDER--An object used over the side to protect a vessel from chafing when alongside another vessel or wharf.

FOOT--The bottom edge of a sail from Tack to Clew.

FORE AND AFT--In the direction of boat's bow or stern

FORESTAY--A wire running from the upper part of the mast to the bow of the boat.

FREEBOARD--The direction from the waterline to main deck or gunwale.

GENOA--A very large jib that overlaps the mainsail considerably. **We sail with 130 Genoas**

GYBE--To go from one tack to the other when running with the wind coming over the stern.

GOOSENECK--Hinged fitting on the mast which connects the boom to the mast.

GUNWALE--The upper edge of a boat's side.

HALYARD--A line used to raise the sail.

HEAD--Uppermost corner of a sail, or the toilet.

HEADING UP--Turning closer to the wind, up wind.

HEADWAY--Moving ahead.

HEEL--To tip to one side, due to wind pressure on the sail or crew on the side.

HELM--The tiller or wheel

HELMSMAN--The one who steers the boat.

HIKING STRAPS--Straps to hook toes under in cockpit.

IN IRONS--When a tack is not completed and the boat stalls out with the bow pointed directly into the wind.

JIB--A triangular sail at the bow of the boat.

JIB SHEET--The lines that lead from the clew of the jib to the cockpit and are used to control the jib.

KEEL--A fixed centerboard, usually found on larger sailboats.

LEECH--After edge of a sail.

LEEWARD--The direction away from the wind (opposite of WINDWARD).

Knot - 1.15 of a standard mile, Nautical miles are based on 47'3" traveled in 30 seconds

LINE--A rope.

LUFFING--When the forward part of the sail is fluttering.

LUFF UP--To steer the boat more into the wind, thereby causing the sails to flap or luff.

MAINSAIL--The sail set on the mainmast.

MAINSHEET--The line that controls the angle of the mainsail in its relation to the wind.

MAST--The vertical pole or spar that supports the boom and sails.

MASTHEAD--The top of the mast.

MAST SLOT/GROOVE--(also called sail slot) the opening up the back (aft) edge of the mast in which the mainsail luff rope slides when it is hoisted. Some masts have an external sail track.

MAST STEP--The fitting in the bottom of the boat in which the bottom or heel of the mast sits

ON A TACK--A boat is always on one tack or the other; that is the sail is always on one side or the other.

OUTHHAUL--A line used to haul out the clew or after corner of a sail on the boom.

OVERTAKING--Passing another vessel.

PAINTER--A rope secured in the bow of a small boat, used for tying up or towing.

PINCH--To sail too close to the wind so that the sails start to luff.

PORT--The left-hand side of the boat as you face the bow.

PORT TACK--The tack a boat is sailing on when the wind is coming over the port side.

PRIVILEGED VESSEL--One that has the right of way.

PUFF--A sudden burst of wind stronger than what is blowing at the time.

RAKE--The angle of a vessel's masts from the vertical.

REACHING--Sailing across the wind or any course between close-hauled and running (close, beam, broad).

READY ABOUT--An expression used to indicate that the boat is about to tack.

REEF--The rolled up part of a sail, tied with the reef lines, that is used to reduce sail area for heavy winds.

REEF LINES--Short pieces of line fastened to the sail at reef points, used for tying a reef to reduce sail area.

RIGGING--A general term applying to all lines, stays and shrouds necessary for spars and sails.

ROLLER FURLING - A head sail, jib or genoa that rolls around the forestay for easy deployment

RUDDER--A movable flat blade hinged vertically at the transom of a boat as a means of steering. It is controlled by a tiller or wheel.

RUNNING--Sailing with the wind coming from behind the boat with the sail out at right angles to the wind.

RUNNING RIGGING--The part of a ship's rigging which is movable and reeves through blocks, such as halyards, sheets, etc.

SAILING BY THE LEE--Sailing on a run with the wind coming over the stern from the same side as the boom (danger of gybing).

SECURE--To make fast; to make safe.

SHACKLE--A U-shaped piece of iron or steel with eyes in the ends, closed by a shackle pin.

SHEET--A line that controls the angle of the sail in its relation to the wind.

SHROUDS--Wire side stays running from the upper part of the mast to both the starboard and port sides of the boat. The forestay and shrouds form a triangle which supports the mast in an upright position.

SLOT--The gap between the jib and the main sail through which the wind is funneled.

SPREADERS--Poles used to push the shrouds outboard.

SQUALL--A sudden and violent gust of wind often accompanied by rain.

STANDING RIGGING--The part of a ship's rigging which is permanently secured and immovable; e.g. stays, shrouds, etc.

STARBOARD--The right side, facing the bow from aft.

STARBOARD TACK--The tack a boat is sailing on when the wind is coming over the starboard side .

STAYS--Rigging that supports the mast, shrouds.

STERN--The after (back) part of a boat.

STOW--To put in place.

SWAMP--To sink by filling with water.

TACKING--Turning from one tack to the other as the bow passes through head to wind. (Also called coming about)

TELLTALES--Ribbon or yarn strips attached to rigging or sails to indicate wind action or direction.

TILLER--A bar used to control the rudder.

TRANSOM--The portion of the stern to which the rudder is attached.

TRAVELER--Line which runs across the transom, and which the mainsheet travels on.

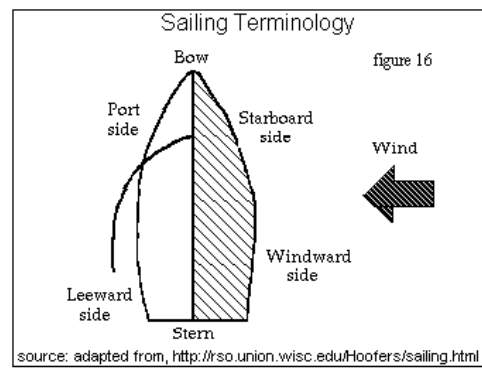
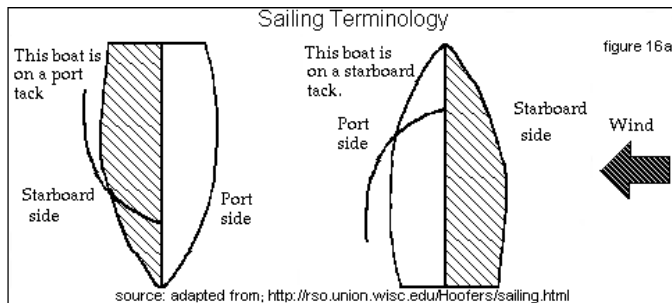
TRIM--To adjust the sail so that the wind catches it perfectly.

TURNBUCKLE--A metal appliance consisting of a thread and screw capable of being set up or slacked back and used for setting up standing rigging.

WEATHER HELM--When the tiller has to be held off the centre line and toward the weather side or wind to keep a boat on its course.

WINDWARD--The direction from which the wind is coming.

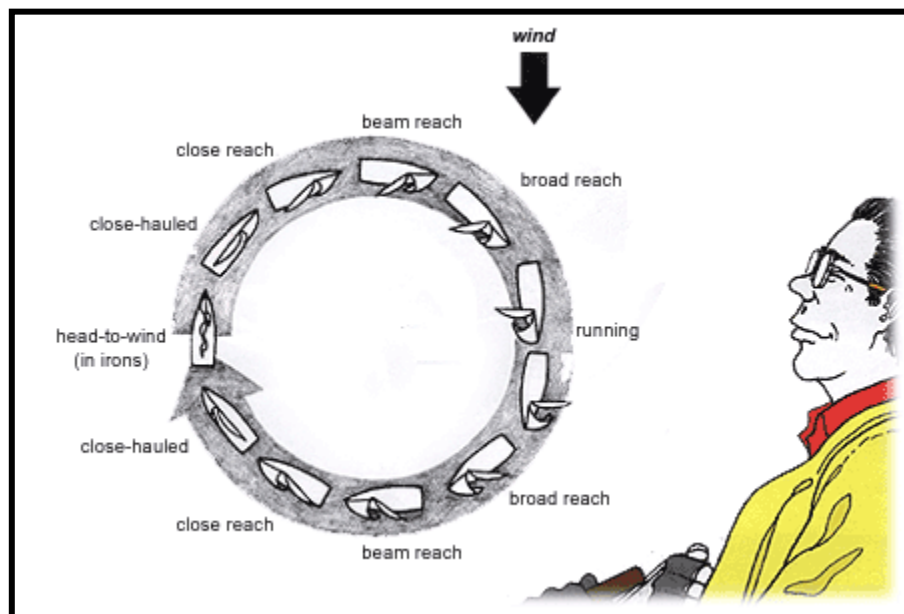
For this class and sail you should look over the term in BLUE.



Points of Sail

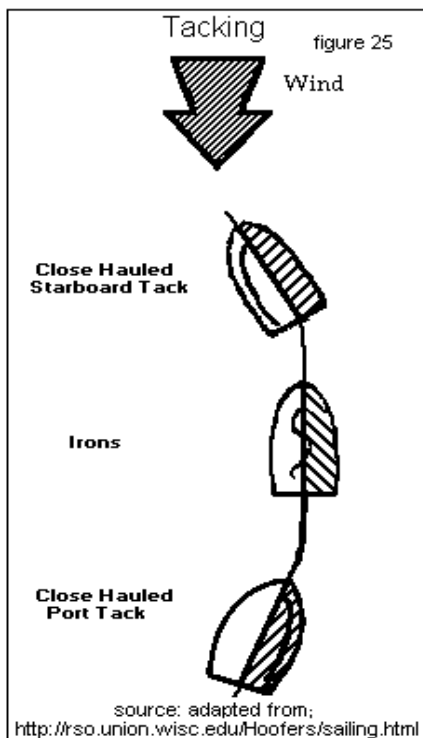
The angle of sail is the difference between the direction your boat is heading and the direction of the wind. Different angles of sail, called points of sail, change as your boat changes course, and the sails must be adjusted to harness the wind as efficiently as possible. When sailing as close to the wind as possible, with the sails trimmed in all the way, you are close-hauled or beating. As you bear off, steering away from the wind, you will ease your sails as you sail onto a close reach, then a beam reach (where the wind is blowing over the side, or beam, of your boat), then a broad reach.

When you are sailing directly away from the wind, you are sailing on a run with your sails eased all the way out. If you continue to turn, you will gybe, so that you are on a run with your sails on the opposite side of the boat. As you gradually head up, turning toward the wind, you will need to trim your sails to keep them from luffing (flapping in the wind) as you sail onto a broad reach, then a beam reach, close reach, and finally back up to close-hauled.



Gybing can be more violent than a standard tack and requires experience and control or you can damage your boat and hurt crew. A gybe happens when the sails switch sides from winds coming from the aft of the boat rather than across the bow.

A gybe can sneak up on you when you are on a run. Whenever you are running down wind, try to keep the wind a few degrees off center. This will have you avoid an accidental gybe.



You need to have some good forward movement to tack or you can get stuck in the irons

The skipper will alert the crew by yelling "READY ABOUT".

The crew will reply READY, when they are ready to tack.

The skipper will then yell "TACKING!" Or "Coming About", and turn the bow into the wind.

The crew will release the jib sheet on the leeward side.

As the boat assumes its position on the opposite tack, they will pull the jib sheet in on the other side.

In a controlled manner, the skipper will use the mainsheet to pull the boom over to the other side.

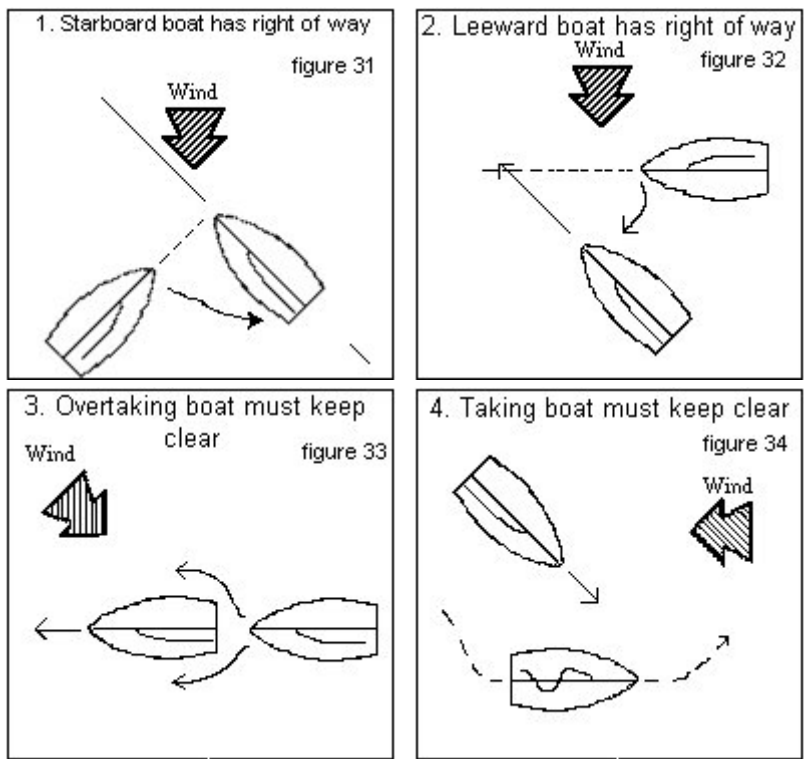
Communication makes a safe boat!!!

Mastering sailing basics means being familiar with essential right-of-way sailing rules.

There are different right-of-way sailing instructions for sailboats as opposed to powerboats. Below are the basic sailing rules, based on the COLREGS

1. Always maintain a proper lookout by sight as well as hearing to avoid colliding with other boats
2. Maintain a safe speed at all times so that you remain in control of your boat. When sailing this is most important in the marina and heavy traffic areas.
3. Use common sense when assessing risk of collision with other boats near and around you
4. Port tack gives way to starboard tack: If two sailboats are approaching each other and the wind is on a different side of each boat, then sailing rules are that the sailboat which has the wind on the port side must always give right of way to the other.
5. Windward gives way to leeward: If two sailboats are approaching each other and the wind is on the same side of each boat, then sailing rules are that the vessel which is to windward must give the right of way to the vessel which is leeward.
6. If you are at risk of colliding with another boat and all else fails, then agreed sailing rules are that whichever boat has the other boat on its starboard side must yield right of way.
7. Any vessel overtaking another should always keep out of the way of the vessel being overtaken.
8. A sailboat should always keep out of the way of any boat that is: a) not under command, b) restricted in its ability to maneuver, and c) engaged in fishing
9. When passing through a narrow channel, sailing instructions are to keep as close to the outer edge as possible.
10. Non-commercial powerboats usually give way to sailboats, unless the sailboat is overtaking it. However, general sailing instructions are also that sailboats should try to stay out of the way of large vessels and ferryboats that may find it harder to slow or change direction—especially in narrow channels.

DO WHATEVER IT TAKES TO KEEP YOUR CREW AND BOAT SAFE!



Scavenger hunt: 1 = Found it! 2 = I think this is it 3 = Didn't find it

___ Traveler

___ Boom Vang

___ Leech

___ Back Stay

___ Transom

___ Port

___ 4.8 kts = mph

___ Jib Sheet

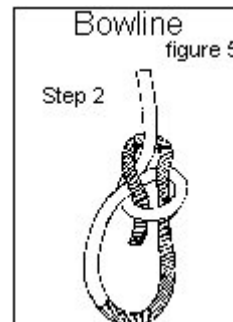
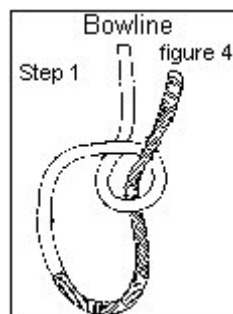
___ Sail Foot

___ Spreader

___ Roller Furling

___ Current wind direction in degrees

The Bowline: The bowline knot produces a loop that will not slip. It is one of the most common sailing knots. This knot will also undo quite easily after placed under considerable strain.



Notes: