

## **BOAT LANGUAGE**

### **Education Module**

#### **Learning Objectives:**

As a result of this session the participant should:

1. Be able to use and understand the special language associated with boats and boating
2. Be familiar with the materials used in boat construction
3. Recognize the various types of boat hulls and styles available in recreational boats
4. Be acquainted with types of power systems that move boats through the water
5. Recognize the various parts of a sailboat's rigging.
6. Understand the factors in boat design that make a boat seaworthy

#### **Resources:**

Boating Skills & Seamanship, Eleventh Edition, U.S. Coast guard Auxiliary, Chapter 1  
The Squadron Boating Course 2001, The United States Power Squadrons, Section 2  
Start Sailing Right!, U.S. Sailing Association/American Red Cross, Chapter 3  
Chapman Piloting Seamanship & Small Boat Handling, 62<sup>nd</sup> Edition, Hearst Marine Books, Chapter 1

#### **Material and Equipment:**

Equipment Items  
Overhead Projector, as required by instructor

Material Items  
Provide one copy for each participant:

Powerboat Terminology Handout  
Sailing Dinghies Handout  
Sailboat Rigs Handout  
Sailing and Boating Terminology Handout

#### **Instructor Qualification:**

U.S. Coast Guard Auxiliary Trainer presence required for USCGAUX Certificate Program  
U.S. Power Squadron Instructor, Council Venturing Trainer or equivalent

**Time Allocation:** 1.5 Hours

#### **Session Plan:**

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**Classroom Session**

1. **Module Introduction.**
  - a. Introduce yourself and each member of the module staff.
  - b. Explain the objectives of this module.
  - c. Distribute the handout package.
  
2. **Basic Boat Terms.**
  - a. Introduce the terms:
    1. Starboard
    2. Port
    3. Bow
    4. Stern
    5. Beam
    6. Transom
    7. Rudder
    8. Tiller
    9. Keel
  
  - b. Explain the terms:
    1. Gunwales
    2. Flare
    3. Freeboard
    4. Draft
    5. Length overall (LOA)
    - 6 Waterline
  
3. **Types of Boats.**
  - a. Introduce Power, Sail, and Manual Types of watercraft:
    1. Powerboat Types
      - (a) center-console
      - (b) sportboats and day cruisers
      - (c) express and sedan (convertible) cruisers
      - (d) pontoon and houseboats
      - (e) personal watercraft.
  
    2. Sailboat Types
      - (a) sloop and cutter
      - (b) ketch and yawl
      - (c) schooner
      - (d) catboat
      - (e) catamaran and trimaran

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3. Manual Types
  - (a) canoes and kayaks
  - (b) rowboats and shells
  
4. **Hull Designs.**
  - a. Describe
    1. Flat bottom
    2. Round bottom
    3. Deep-V hull
    4. Cathedral hull
  
  - b. Explain
    1. Displacement hulls
    2. Planing hulls
    3. Semi-displacement hulls
    4. V hulls.
  
5. **Sailboat Hull Designs.**
  - a. Introduce
    1. Mono hull design
    2. Multi-hull design
  
  - b. Explain
    1. Centerboard design
    2. Daggerboard design
    3. Keel hull design
  
6. **Boat Construction.**
  - a. Introduce construction materials
    1. Steel
    2. Aluminum
    3. Wood
    4. Fiberglass
  
  - b. Explain the fiberglass construction processes
    1. Hand-Layup
    2. Chopped-Strand
    3. Matched Die
    4. Sandwich.
  
7. **Types of Propulsion.**
  - a. Introduce the propulsion systems
    1. Outboard
    2. Inboard/Outboard (Stern Drive)
    3. Inboard

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4. Tunnel Drive
  5. Jet Drive.
- b. Briefly mention the unit structure of a Stern Drive (Engine and Lower or Outdrive).
8. **Sailboat Rigging Parts.**
- a. Introduce the terms;
    1. Mast
    2. Boom
    3. Mailsail
    4. Jib, and rigging.
    5. Standing Rigging
      - (a) Shroud
      - (b) Forestay
      - (c) Backstay.
    6. Running Rigging
      - (a) Mainsheet
      - (b) Jibsheet
      - (c) Outhaul
      - (d) Halyard
      - (e) Cunningham
      - (f) Boom vang
      - (g) winch
      - (h) Cleats (cam, clam, and horn)
9. **Factors Influencing Seaworthiness.**
- a. Explain that Size, Design, and Construction Materials are most important factors affecting the seaworthiness of a vessel.

## Sailing and Boating Terminology Handout

**Abeam.** A direction off the side of a boat, at right angles to a line from bow to stern

**Aft.** 1. The direction toward, or near the back end of a boat, 2. The direction behind the stern of a boat

**Afterguard.** 1. The owner, skipper, navigator and others aboard a sailboat who are stationed aft 2. Crew members whose duties are to attend the aftergear

**Amidships.** The middle section of a boat

**Anchoring.** Stationary positioning of a boat in the water by a weighted object connected to the boat by a rope and/or chain

**Anemometer.** A device used to indicate wind speed

**Apparent Wind.** The wind that flows over a moving boat, which is the result of the “true wind” affected by the movement of the boat.

**Appendage.** An underwater fin, such as a centerboard, daggerboard, leeboard, keel, or rudder

**Astern.** See Aft

**Athwartships.** A sideways direction on a boat that is at a right angle to the line from bow to stern

**Back.** To push a sail out against the wind to help turn the boat, slow it, or move it backward

**Backstay.** The standing rigging running from the stern to the top of the mast, keeping the mast from falling forward

**Backwind.** The wind flowing off the trailing edge of a jib or mainsail

**Bailers.** Openings in the bottom or transom of a boat to remove water when sailing

**Ballast.** Weight used to give a boat stability. On large boats, ballast in the keel (usually lead) provides stability. On smaller boats, stability is usually provided by the weight of the sailors

**Barometer.** A device used to indicate atmospheric pressure

**Batten.** A thin wooden or plastic stiffener inserted into a pocket on the back part (leech) of a sail

**Beam.** The width of a boat

**Beam Reach.** Sailing at approximately 90 degrees to the wind source with the wind coming from abeam and the sails let out about halfway (One of the points of sail.)

**Bear Away, Bear Off.** See Head Down

**Bear Up.** See Head Up

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**Beating.** Sailing toward the wind source, or against the wind, with the sails pulled in all-the-way, tacking as you go, to reach a destination upwind

**Bilge.** The lowest part of a boat inside the hull

**Block.** The nautical term for a pulley. It can have one or more sheaves, or wheels

**Bolt Rope.** The rope sewn into the forward (luff) and bottom (foot) edges of the mainsail

**Boom.** A spar used to hold out or anchor the bottom of a sail

**Boom Vang.** A control line, usually a multi-purchase tackle, secured to the boom to prevent it from lifting when wind hits the sail (vang)

**Bow.** The forward end of a boat

**Breeze.** Wind

**Broad Reach.** Sailing with the wind coming over the rear corner of a boat, or with the bow approximately 135 degrees to the wind source (One of the points of sail)

**By the Lee.** Sailing downwind with the wind blowing over the leeward side of the boat, increasing the possibility of an unexpected jibe

**Capsize.** A boat turned over on its side or upside down

**Cast Off.** To untie a line and let it go, or to remove a line from a cleat and let it go

**Cat.** See Catamaran.

**Catamaran.** A boat with two parallel hulls

**Catboat.** A boat that has only a mainsail, with the mast located at the bow

**Centerboard.** A pivoting plate of wood, fiberglass, or metal, projecting below the bottom of a sailboat to help prevent the boat from sliding sideways

**Centerline.** An imaginary line that runs down the center of the boat from the bow to the stem

**Chart.** A nautical map showing water depths, obstructions, restricted areas, markers and buoys

**C-Jibe.** A course steered through a downwind turn (jibe) which results in the mainsail suddenly crossing from one side to the other side uncontrolled. The path of the boat makes a "C" (Slam Jibe, Flying Jibe)

**Class.** A category into which boats of similar design are grouped

**Cleat.** A wooden, plastic, or metal device which is used to hold or secure lines

**Clew.** The lower back corner of a mainsail or jib

**Close-Hauled.** Describes a boat sailing as close to the wind as possible with its sails pulled in all the way - On the Wind, Sailing to Weather, Sailing to Windward, Sailing Upwind – (One of the points of sail)

**Close Reach.** Sailing with the wind just forward of abeam, or with the bow approximately 70 degrees to the wind source (One of the points of sail)

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**Cockpit.** The open well in a boat where the helmsman and/or crew sit or put their feet

**Come About.** To turn the bow of a sailboat through the wind, or no-go zone, so that the sails fill on the opposite side (Tack)

**Come Down.** See Head Down

**Come Up.** See Head Up

**Coming About.** See Tacking and “Hard a-Lee”

**Compass.** An instrument used to determine the direction that a boat is headed, or to take a bearing (sight) on an object

**Constant Angle to the Wind.** The correct angle of the wind to a sail, which remains the same for all points of sail when the sail is correctly trimmed (positioned), except when the wind is blowing from behind the stern

**Control Line.** A rope used to adjust and trim a sail, such as a sheet, outhaul, downhaul, cunningham, or boom vang (Running Rigging, Sail Controls)

**Control Signals.** Hand signs used between instructors and sailors to communicate while on the water

**Course.** The direction that a boat is steered to reach a destination

**Crabbing (to Weather).** See Feathering

**Crew.** The people who help the helmsman sail a boat

**Cunningham.** A control line that tensions the forward edge (luff) of a sail

**Cunningham Hole.** A hole in the tack of a sail through which the cunningham line runs to tension the forward edge (luff) of the sail

**Current.** The horizontal moving of water caused by tides, wind, or change in elevation

**Daggerboard.** A movable plate of wood, fiberglass, or metal let down below the bottom of a boat to help prevent the boat from sliding sideways. Similar to the centerboard, except it is raised and lowered vertically rather than pivoted

**Dead Downwind.** See Run

**Deck.** The top (horizontal) surface of the hull

**De-Rigging.** Removing a boat’s mast, boom and equipment

**Displacement.** The weight of water displaced by a floating boat. The weight of water is equal to the weight of the boat; therefore, a boat’s weight is often called its displacement

**Dolphin Striker.** A metal compression rod positioned on the underside of a multihull’s forward crossbeam, directly underneath the mast

**Downhaul.** A control line that adjusts and tensions the luff of a sail by moving the end of the boom at the mast, the movable fitting joining the mast and boom is called the “gooseneck”

**Downwind.** In the opposite direction from the wind source, or where the wind is blowing to (Leeward)

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**Downwind Sailing.** Sailing away from the wind source with the sails let out (Broad Reach, Run, With the Wind)

**Downwind Side.** See Leeward Side

**Draft.** The depth of the hull from the waterline to the lowest point of the keel

**Ease.** To let out a line or sail, the opposite of pull (Let Off, Sheet Out)

**Electrical Hazards.** Overhead power lines, electrical cables, electrical power tools and equipment used near the water, or near launching and boat storage areas

**Environmental Awareness.** The continuous monitoring of wind, weather, sea conditions, current, and distance from the shore

**Fairlead.** A fitting, such as a ring, eye, block or loop which guides a rope in the direction required

**Fail Off.** See Head Down

**Feathering.** Sailing upwind so close to the wind that the forward edge of the sail is staffing or luffing, reducing the power generated by the sail and the angle of heel (Crabbing (to Weather), High, Light, Pinching, Sailing Thin)

**Flare.** The upward and outward curvature of a hull above the waterline

**Fly.** See Telltales

**Flying Jibe.** See C-Jibe

**Foot.** The bottom edge of a sail

**Fore.** Toward, near, or at the bow

**Fore and Aft.** Toward, near, or at both ends of a boat

**Fore-and-Aft Line.** An imaginary line that runs lengthwise on a boat

**Forestay.** A support wire connecting the mast to the bow (Part of the standing rigging)

**Freeboard.** The vertical distance from the waterline to the rail or gunwale

**Give-way Vessel.** The vessel required to give way to another boat when they may be on a collision course

**Glide Zone.** The distance a sailboat takes to coast to a stop after turning into the no-go zone or letting out the sails

**Go Up.** See Head Up

**Gooseneck.** The joint fitting that connects the boom to the mast

**Gunwale.** (GUN-nle) The edge of a sailboat where the deck and hull meet

**Gust.** See Puff

**Gybe.** See Jibe

**Gybing.** See Jibing

**Halyard.** A line used to raise or lower a sail

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**“Hard a-Lee.”** A command made by the helmsman when the tiller is moved to leeward to tack a sailboat ( “Coming About,” “Helm’s a- Lee,” ‘Tacking”)

**Harden Up.** See Head Up

**Head.** The top corner of a sail where the halyard is attached

**Head Down.** To turn the boat away from the wind (Bear Away, Bear Off, Come Down, Fall Off, Head Off)

**Head Off.** See Head Down

**Head Up.** To turn the boat toward the wind (Bear Up, Come Up, Go Up, Harden Up, Luff Up)

**Heading.** The direction in which a boat is pointing

**Head-to-Wind.** When the bow of a boat is pointing directly into the wind, or in the middle of the no-go zone

**Heave-to.** A position with the sails and rudder countering each other as the boat slowly drifts downwind and forward

**Heel.** 1. When a boat leans over or tips to one side 2. The lower end of the mast

**Helm.** 1. The tiller or wheel of a boat, 2. The tendency of a sailboat to turn toward or away from the wind on its own. If the boat wants to turn toward the wind (to weather), it has a weather helm. If it wants to turn away from the wind (to leeward), it has a lee helm

**“Helm’s a-Lee.”** See “Hard a-Lee”

**Helmsman.** The person who steers or drives a boat (Skipper)

**High Pressure.** Higher atmospheric pressure generally associated with fair skies and good weather

**High Side.** The side of a sailboat nearest to the wind source (Weather Side, Windward Side, Upwind Side)

**Hiking.** When a person leans over the side of a boat to counteract heel

**Hiking Stick.** See Tiller Extension

**Hole (in the Wind).** See Lull

**Hull.** The body of a boat, excluding rig and sails

**Hull Speed.** The maximum speed that a boat can achieve without planing

**In Irons.** When a boat is pointed into the wind and has stopped or is moving backward through the water, and is temporarily unable to turn onto either tack (In Stays)

**In Stays.** See In Irons

**In the Groove.** When a sailboat is moving well with proper balance and sail trim, and is steered so the sails are working at their best with the telltales flowing properly

**Jet Stream.** A snake-like river of air at about 35,000 feet in the atmosphere which affects the position and movement of high and low pressure systems

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**Jib.** The smaller triangular sail in front of the mast

**Jibe.** Changing from one tack to the other when sailing downwind. The mainsail swings across the boat, which can be a controlled maneuver or can happen unexpectedly as the wind crosses the stern (Gybe, Jibing, Gybing)

**“Jibe Ho.”** A command made by the helmsman as he or she starts to jibe (“Jibing”)

**Jibing.** 1. The maneuver of changing from one tack to the other when sailing downwind (Gybing, Jibe, Gybe) 2. A command made by the helmsman as he or she starts to jibe (“Jibe Ho.”)

**Jury Rig.** A temporary fix to damaged equipment enabling a boat to be sailed

**Keel.** The fixed underwater fin on a sailboat hull which helps provide stability and prevents the boat from slipping sideways

**Knot.** One nautical mile per hour (1 knot equals 1.15 miles per hour)

**Land Breeze.** See Offshore Wind

**Leeboards.** A pair of pivoted boards that are lowered through trunks in the bilges to improve lateral resistance on small sailboats

**Leech.** The back edge of a sail (between the head and clew) where the battens are located

**Leeward.** In the opposite direction from the wind source, or where the wind is blowing to (Downwind)

**Leeward Side.** The side of a sailboat or sail away from the wind source (Downwind Side, Low Side)

**Leeway.** The distance a boat is pushed to leeward of its course by the action of the wind or current

**Length overall (LOA).** The length between the forward most and after most points on the hull of a boat

**Lift.** 1. The aerodynamic or hydrodynamic force that results from air passing by a sail, or water flowing past a centerboard or rudder, 2. A change in wind direction which lets the boat head up

**Light.** When only the forward edge of a sail is stalling or luffing (Feathering, High, Luffing, Pinching, Soft) 2. Description for low wind speed (Soft)

**Line.** A rope used for a function on a boat, such as a sheet, halyard, cunningham or painter

**Low Pressure.** Lower atmospheric pressure generally associated with clouds, rain, and inclement weather.

**Low Side.** The side of a sailboat away from the wind source (Downwind Side, Leeward Side)

**Luff** 1. The forward edge of a sail, 2. To stall or flap the sail at its forward edge, or over the entire sail

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**Luff Rope.** The rope sewn into the forward edge (luff) of the mainsail, which is usually attached to the groove or track on the mast (Bolt Rope)

**Luff Up.** See Head Up

**Luffing.** When the sail is stalling or flapping at its forward edge, or the entire sail is flapping (Feathering, High, Light, Pinching, Soft)

**Lull.** A decrease in wind speed for a short duration (Hole)

**Main.** See Mainsail

**Mainsail.** The sail which is attached to the mast and boom (Main)

**Mast.** A spar placed vertically in a boat to hold up the sails

**Masthead.** The top of a mast

**Masthead Fly.** A wind direction indicator at the top of the mast

**Monohull.** A boat with only one hull

**Moor.** To fasten a boat to a mooring

**Mooring.** A permanent anchor connected to a buoy by a rope and/or chain, to which a boat may be fastened

**Multihull.** A boat with more than one hull, such as a catamaran or trimaran

**Navigation Rules.** Laws establishing right-of-way in different situations that are intended to prevent collisions on the water (“ColRegs,” Collision Rules)

**No-Go Zone.** The area into the wind where a sailboat cannot sail, even with the sails pulled in all-the-way. The zone covers the direction pointing directly into the wind source and extending to about 45 degrees on either side of it (No-Sail Zone. No-Sail Zone. See No-Go Zone)

**Off the Wind.** Any of the points of sail, except sailing upwind

**Offshore.** Away from the shore

**Offshore Wind.** Wind blowing away from the shore to the water (Land Breeze)

**On the Beam.** See Abeam

**On the Wind.** See Close-hauled

**One-Design.** Any boat built to conform to rules so that it is identical to all others in the same class

**Onshore.** Toward the shore

**Onshore Wind.** Wind blowing from the water to the shore (Sea Breeze)

**Outhaul.** A control line that is attached to the clew of the mainsail that adjusts tension along the bottom (foot) of the sail

**Painter.** A rope attached to the bow of a small boat, which is used to fasten the boat to a dock or mooring

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**PFD.** A personal flotation device (Life Jacket, Life Vest)

**Pinching.** See Feathering

**Planing.** When a boat accelerates enough to break loose from its bow wave and ride on top of the water

**Points of Sail.** The headings of a sailboat in relation to the wind, i.e., close-hauled, close reach, reach, broad reach, run

**Port.** The left side of a boat (when looking forward)

**“Prepare to Tack.”** See “Ready About”

**Puff.** A sudden increase in wind speed

**Push-Pull Principle.** The way a sail generates power to propel a boat through the water. The wind acts to either push or pull the boat

**Reach.** Sailing with the wind coming over the side, or abeam (One of the points of sail.)

**“Ready About.”** A command made before tacking to ensure everyone is ready to tack. (“Prepare to Tack,” “Ready to Tack.”)

**“Ready To Tack.”** See “Ready About.”

**Reef.** To reduce the area of a sail

**Rig.** 1. The spars, standing rigging, sails, or their configuration, which determines the type of sailboat, such as a catboat, sloop, yawl or schooner 2. To prepare the boat for sailing

**Right-of-Way.** A right of the stand-on vessel to maintain its course

**Roller Furling.** A way of stowing a sail by rolling it up around its front edge (luff), like a window shade

**Rudder.** An appendage in the water, which is used to steer or scull the boat

**Run.** Sailing away from the wind source with the sails let out all-the-way - Downwind, With the Wind - (One of the points of sail.)

**Running Rigging.** The lines and associated fittings used to adjust and trim the sails, such as halyards, sheets, outhaul, downhaul, cunningham or boom vang (Control Line, Sail Controls)

**Safety Position.** When a boat is stopped with the sails eased and flapping with the wind coming from the side

**Sail Controls.** Ropes used to adjust and trim the sails, such as sheets, outhaul, downhaul, cunningham, boom vang (Control Lines, Running Rigging)

**Sail Trim.** The positioning and shape of the sails to the wind (Set)

**Sailor’s Code.** Standards of behavior and courtesy demonstrated by sailors to other boaters

**Scoop Recovery Method.** The method of righting a capsized boat while “scooping” a person into the cockpit as the boat rights.

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**Scope.** The ratio of the length of anchor rope let out to the depth of the water

**Scull.** 1. To propel a sailboat forward by moving the rudder and tiller side to side repeatedly 2. To propel a boat forward by using an oar or paddle in a figure eight motion at the stern of the boat

**Sea Breeze.** Wind resulting from cooler air over the water moving in to replace the warm air that rises over the land (Onshore Wind)

**Sea Conditions.** The size, shape, and frequency of the waves

**Secure.** Fasten, put away or stow

**Self-Bailers.** See Bailers

**Self-Bailing.** The automatic draining of water from a boat through openings in the bottom or transom when sailing

**Self-Reliance.** The ability to sail and react to changing conditions by oneself without needing outside assistance.

**Self-Rescue.** 1. The maneuver of righting a capsized boat and removing any water quickly without outside assistance 2. An important design characteristic of a sailboat which allows it to be righted and bailed out quickly after capsizing without outside assistance

**Set.** 1. To raise and trim a sail 2. The direction in which a current flows

**Shackle.** A U-shaped fitting closed with a pin and used to secure sails to lines or fittings, and lines to fittings

**Sheet.** 1. The rope which pulls in or lets out a sail (Line) 2. To adjust a sail by using the sheet (Set, Trim, Sheet In, Pull In, Take In)

**Sheet Out.** To let out a sail (Ease, Let Off)

**Sheeting.** Pulling in or letting out the sail (Setting, Trimming)

**Shrouds.** Wires supporting the mast on either side (Standing Rigging)

**Side-to-Side Balance.** Using body weight to achieve proper angle of heel for the boat

**S-Jibe.** A method of jibing a sailboat resulting in the mainsail crossing the boat under control, the path of the boat makes an "S"

**Skipper.** See Helmsman

**Slam Jibe.** See C-Jibe

**Soft.** See Light

**Spar.** A wooden or metal pole used to support a sail, such as a mast or boom

**Spinnaker.** A lightweight, three-cornered balloon type sail used when sailing downwind

**Spreader.** A support strut extending athwartships from the mast, used to support the mast and guide the shrouds from the top of the mast to the chainplates

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**Squall.** A strong wind of short duration, usually appearing suddenly and accompanied by rain

**Stand-on Vessel.** The vessel or boat with the right-of-way

**Standing Rigging.** The fixed wires and associated fittings used to support the mast

**Starboard.** The right side of a boat (when looking forward)

**Stays.** Wires which support the mast fore and aft

**Stern.** The back end of a boat

**Stowing.** Putting away and securing sails and equipment

**Tack.** 1. To turn the bow of a sailboat through the wind or no-go zone so that the sails fill on the opposite side (Come About) 2. When the wind is blowing on a side of a sailboat on any of the points of sail (does not include the no-go zone), i.e., starboard tack, port tack 3. The forward lower corner of a sail

**Tacking.** 1. The maneuver of turning a sailboat through the no-go zone so the sails fill on the opposite tack (Coming About) 2. A command made by the helmsman when the tiller is moved to leeward to tack the boat (“Coming About,” “Hard a-Lee,” “Helm’s a-Lee”)

**Telltails.** 1. Short pieces of yarn, ribbon, thread, or tape attached to the sail which are used to show the air flow over the sail 2. Short pieces of yarn, ribbon, thread, or tape attached to the shrouds to indicate the apparent wind direction (Fly)

**Tidal Current.** The horizontal movement of water caused by tides

**Tide.** The vertical rise and fall of water caused by the gravitational forces of the moon and sun

**Tiller.** The stick or tube which is attached to the top of a rudder that is used to turn it

**Tiller Extension.** A stick or tube which is attached to the tiller that allows the helmsman to sit further out on the side of the boat (Hiking Stick)

**To Weather.** See Upwind

**Topsides.** The sides of the hull above the waterline

**Towing.** Pulling a boat with a another boat

**Transom.** The back end of a boat which is vertical to the water

**Traveler.** A track or bridle that controls sideways (athwartships) movement of the boom and mainsail

**Trim.** To adjust a sail by using the sheet (Sheet, Set)

**Trimaran.** A boat with three parallel hulls, the center hull usually being the longest

**True Wind.** The actual speed and direction of the wind felt when standing still

**Turnbuckle.** A fitting used to adjust the length and tension of a shroud or stay

**Turtling.** A capsize position with the boat turned upside down with the mast pointing down to the sea bottom

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**Unrig.** Removing and/or stowing sails as well as securing halyards and sheets

**Upwind.** In the direction of the wind source or where the wind is blowing from.  
(Windward, To Weather)

**Upwind Sailing.** Sailing toward the wind source, or against the wind, with the sails pulled in (Close-Hauled, Close Reach, On the Wind, Sailing to Weather, Sailing to Windward)

**Upwind Side.** See Windward Side

**Vang.** See Boom Vang

**Walkover Recovery Method.** A capsize recovery method where the helmsman climbs over the windward gunwale when re-righting the boat

**Water Reading.** Observing and assessing the wind blowing on the water surface

**Waterline.** The line where the water surface meets the hull when the boat is floating at rest

**Weather Helm.** The natural tendency of a sailboat to turn toward the wind (to weather), which the helmsman feels as the tiller tries to turn to leeward

**Weather Side.** See Windward Side

**Winch.** A deck-mounted drum with a handle offering mechanical advantage used to trim sheets or halyards

**Wind Sensing.** Determining wind direction and velocity using feel, sight, and hearing

**Windward.** In the direction toward the wind source, or where the wind is blowing from.  
(To Weather, Upwind)

**Windward Side.** The side of the sailboat or sail toward the wind source (High Side, Weather Side, Upwind Side)

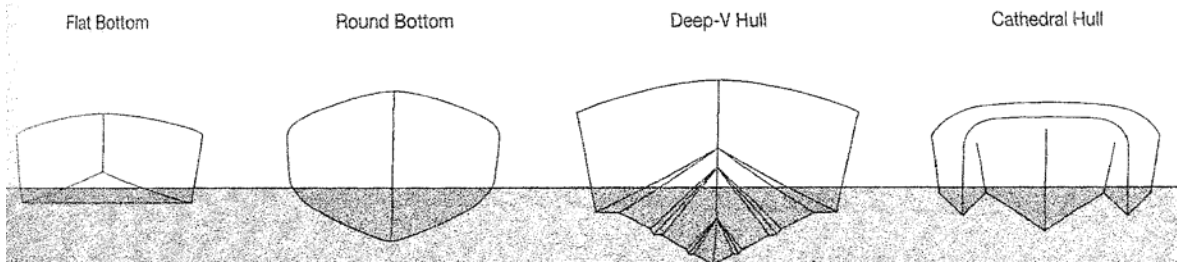
**Wing and Wing.** Sailing directly downwind with the jib and mainsail set on opposite sides of the boat to capture more wind

**With the Wind.** See Run

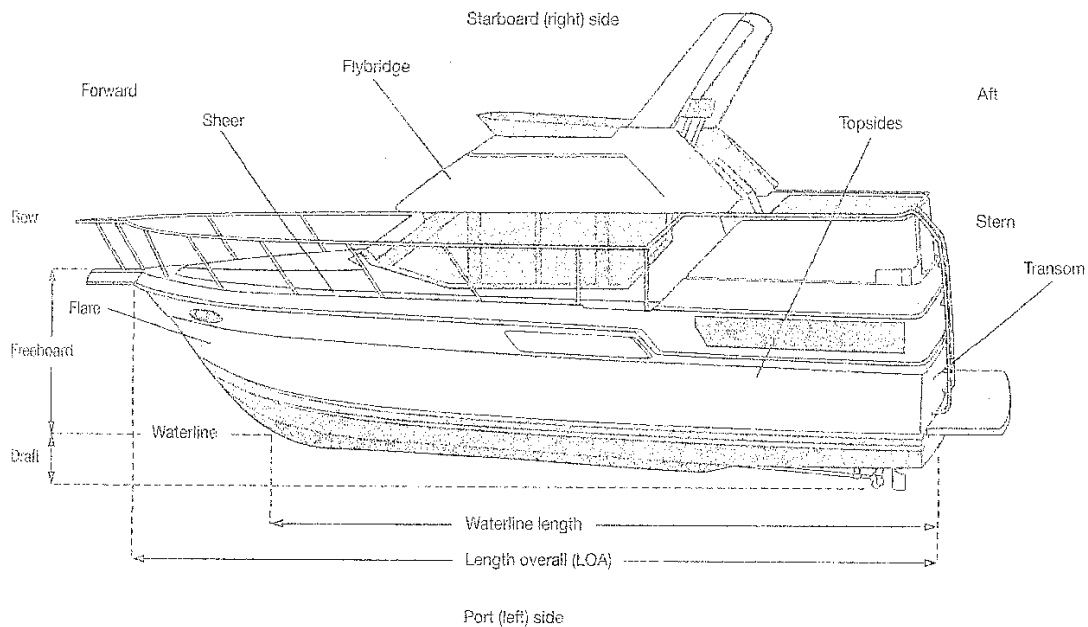
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## POWERBOAT NOMENCLATURE HANDOUT

### TYPES OF HULLS



### POWERBOAT HULL DEFINITIONS



These terms relate to the hull, and directions on board a boat. Note that port and starboard sides remain the same, no matter which way one is facing, and that LOA is figured similarly for sailboats.

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## SAILING DINGHIES HANDOUT

### Examples of Sailing Dinghies

#### Definitions:

**Length** — The maximum length of hull, not including rudder.

**Beam** — Width at widest point.

**Draft** — The depth of the boat below the water's surface, measured with the centerboard and rudder in the down position.

**Centerboard** — An underwater appendage in the middle of the boat that pivots as it is raised and lowered.

**Daggerboard** — An underwater appendage in the middle of the boat that is raised and lowered vertically.

**Leeboard** — A pivoting underwater appendage that is attached to one side of the boat.

**Weight** — The total weight of the boat, including rig and sails.

**Self-Rescuing** — Design features that allow a capsized boat to be easily re-righted, bailed out and sailed away without outside assistance.

**Sailors** — Suggested number of people (adult or youth) for optimum performance.



**Blue Jay**  
Length: 13'6" Board Type: centerboard  
Beam: 5'2" Weight: 275 lbs.  
Draft: 3'9" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**Butterfly**



Length: 12'2" Board Type: daggerboard  
Beam: 4'6" Weight: 170 lbs.  
Draft: 2'6" Self Rescuing: yes  
Sailors: 1 adult or 1-2 youths

**Coronado 15**



Length: 15'4" Board Type: centerboard  
Beam: 5'8" Weight: 385 lbs.  
Draft: 3'6" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**Flying Junior**



Length: 13'3" Board Type: centerboard  
Beam: 5'3" Weight: 209 lbs.  
Draft: 2'6" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**420**



Length: 13'9" Board Type: centerboard  
Beam: 5'5" Weight: 220 lbs.  
Draft: 3'2" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**Hobie 16**



Length: 16'7" Board Type: no board  
Beam: 7'11" Weight: 320 lbs.  
Draft: 6" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

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**Examples of  
Sailing Dinghies**

**Holder Hawk**



Length: 9'0" Board Type: centerboard  
Beam: 3'10 1/2" Weight: 95 lbs.  
Draft: 2'3 1/2" Self Rescuing: yes  
Sailors: 1 adult or 1-2 youth

**International  
Optimist**



Length: 7'6" Board Type: daggerboard  
Beam: 3'8" Weight: 92 lbs.  
Draft: 2'8" Self Rescuing: yes  
Sailors: 1 youth

**Laser &  
Laser Radial**



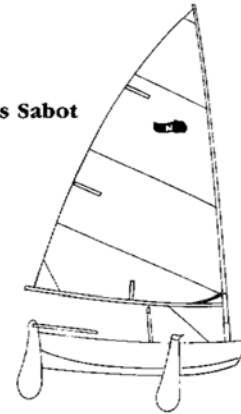
Length: 13'10 1/2" Board Type: daggerboard  
Beam: 4'6" Weight: 130 lbs.  
Draft: 2'6" Self Rescuing: yes  
Sailors: 1 adult or 1-2 youths

**Lido 14**



Length: 14'0" Board Type: centerboard  
Beam: 6'0" Weight: 310 lbs.  
Draft: 4'0 1/2" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**Naples Sabot**



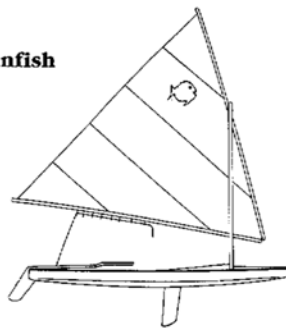
Length: 7'11" Board Type: leeboard  
Beam: 3'10" Weight: 105 lbs.  
Draft: 1'6" Self Rescuing: no  
Sailors: 1 youth

**Puffer**



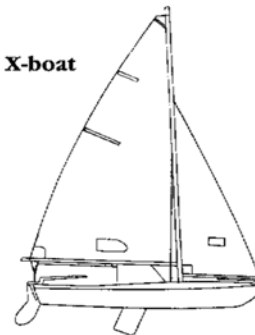
Length: 12'6" Board Type: daggerboard  
Beam: 4'10" Weight: 160 lbs.  
Draft: 2'8 1/2" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

**Sunfish**



Length: 13'10" Board Type: daggerboard  
Beam: 4'1" Weight: 129 lbs.  
Draft: 2'7" Self Rescuing: yes  
Sailors: 1 adult or 1-2 youths

**X-boat**



Length: 16'0" Board Type: centerboard  
Beam: 6'1" Weight: 500 lbs.  
Draft: 1'3" Self Rescuing: yes  
Sailors: 2 adults or 2-3 youths

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## Sailboat Rigs Handout

### Types of Sailboat Rigs

**Sloop-Rigged  
Dinghy**

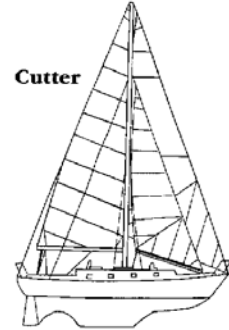


**Gaff-Rigged Catboat**

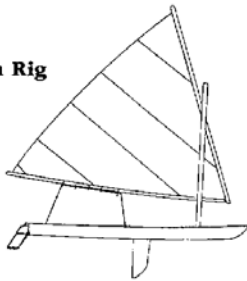
**Sloop-Rigged  
Auxiliary**



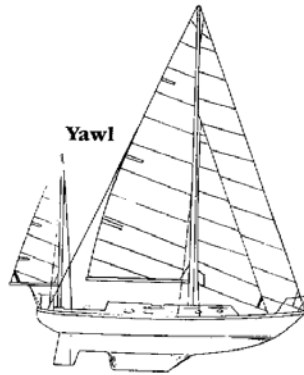
**Cutter**



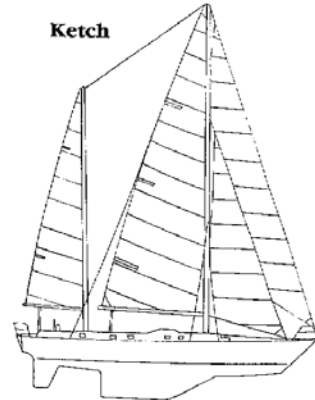
**Lateen Rig**



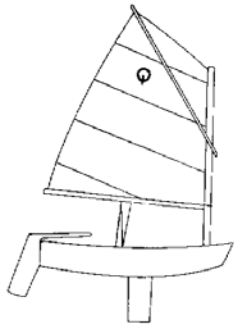
**Yawl**



**Ketch**

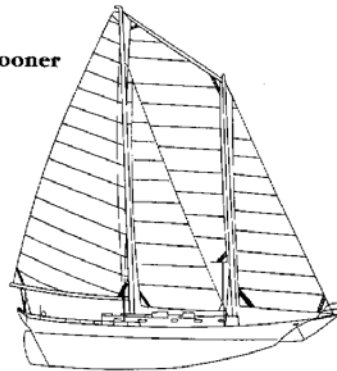


**Cat-Rigged  
Dinghy**



**Sprit-Rigged Pram**

**Schooner**



**Sloop-Rigged  
Catamaran**



**Wishbone-  
Rigged  
Catboat**

