

Admiral Farragut Academy

Waterfront Manual



Basic Sailing Procedures, Parts of the Boat,
Cadet Notetaking Guide, Waterfront
Regulations and Safety Precautions

December 2006

INTRODUCTION

The purpose of Admiral Farragut Academy's Waterfront Program is to stimulate interest in seamanship and to acquaint cadets with small craft and sailing. Sailing is a challenging sport that builds confidence and teamwork. Most of all, sailing is fun and safe, when conducted properly.

The Senior Naval Science Officer is in charge of all waterfront activities. The other Naval Science Instructors and Cadet Waterfront Instructors assist him. A Naval Science Officer must be on hand to supervise sailing. Normally the waterfront is open after school from 1500-1700 Monday through Thursday. The waterfront may be open on weekends, if instructors are available. Waterfront hours and opening days will be posted outside the Naval Science Office.

The waterfront is available for use by all cadets in Upper and Middle School. Successful completion of the basic sailing qualification is a promotion and graduation requirement. Cadets should not wait until their senior year to earn their qualification. Prior to sailing at the waterfront, cadets are required to successfully pass a basic swim test, attend sailing ground school and pass the written exams. Cadets are strongly encouraged to utilize Qualified Boat Handler (QBH) Completion Record (enclosure 2) to document completion of the QBH requirements.

The following are specific requirements to achieve sailing qualifications:

QBH – Qualified Boat Handler

- (1) Swim Test (See enclosure 1)
- (2) Ground School attendance including completion of note taking guide
- (3) Successful completion of the combined Parts of the Boat, Sailing Basics, Rules of the Road, Knots, Waterfront Regulations, and Emergency Procedures test.
- (4) Knots (bowline, square knot, figure 8, clove hitch, sheet bend, cleat knot).
- (5) Sailing Demonstration (initial sailing with instructor then demonstration of ability to sail without instructor). Sailing demonstration can be in any boat capable of carrying two people. Following items will be demonstrated: Properly rig boat, launch from beach, tack and jibe, points of sail, pinching or feathering, luffing, safety position, capsizing and capsize recovery, return to beach and properly clean and stow gear. Midway through demonstration, instructor should be positioned on bow of boat and talking student through the maneuvers. More than one session may be required to achieve proficiency.

QM3 – Quartermaster Third Class

- (1) Rules of the Road Exam
- (2) Individual Sailing Demonstration including the following skills:
 - a. Rig Boat – daggerboard, rudder, sails, battens, halyards, sheets, etc.
 - b. Basic Knots – Bowline, figure 8, and cleat hitch.
 - c. Leaving dock, mooring or beach – determining direction and speed of wind and currents, raising sails, sail trim, maneuvering, tacks and jibes, boathandling and course rules.
 - d. Tacking and Jibing – steering, course control, sail trim, body movement.
 - e. Man Overboard – maneuvers, boathandling, pickup approach, stopping boat, bring man aboard.
 - f. Capsize recovery – maneuvers, safety procedures.
 - g. Returning to dock, mooring or beach – approach plan, boathandling, sail trim, tacks and jibes, use of glide zone, lowering sail.
 - h. De-rig boat – lower sails, clean and stow boat and equipment.

QM2 – Quartermaster Second Class

- (1) Completion of Florida Boating Safety Course
- (2) Powerboat Demonstration – pre-launch check-list, starting procedures, leaving dock, maneuvers, anchoring, man overboard procedures, return to dock, tying up, post-launch checklist, securing boat.
- (3) Sailing Demonstration (ability to properly rig and sail all Academy boats).

QM1 – Quartermaster First Class (Instructor)

- (1) All of the above
- (2) Sailing Demonstration (ability to show maturity, experience, knowledge and skills to instruct other sailors.) QM1s are designated by the Naval Science Instructors only.

Initial sailing demonstrations can be conducted in any of the sailboats. Individual sailing should be conducted in boats that best suit the strength and weight of the cadet. For example, initial sailing demonstrations may first be done with several cadets in a 420 then individual sailing in an Optimist, Laser Radial, Laser Full Rig, or Sunfish based on size of the cadet.

Instructor Responsibilities:

Waterfront Instructors, led by the Cadet Waterfront Officer will be assigned specific duty days to assist in teaching cadets the basics of sailing. To avoid conflicts in scheduling, each company should have instructors assigned who are responsible for administering sailing tests to members of their company. Company Commanders are responsible for ensuring all members of their company have achieved at least basic qualification.

Part One: The Basics of Sailing

HOW A SAILBOAT SAILS

Sails have been used to “power” boats for thousands of years, but many people still have trouble understanding how a sailboat works. A sailboat has four basic parts: the *hull*, *sail(s)*, *centerboard (or daggerboard)*, and *rudder*. The hull is designed to carry the crew, support the mast and rigging, and move through the water easily. The sails provide the motive force for the sailboat. The centerboard keeps the boat from being pushed sideways by the wind. The rudder is used to steer the boat.

Although it is easy to see how a sailboat is pushed downwind, it is more difficult to understand how a sailboat sails across the wind or partially into the wind. When sailing across the wind (*reaching*) or into the wind (*beating*), the sail creates a motive force much like the wing on an airplane. The motive force created by the sail acts perpendicular to the sail. Part of this force pushes the sailboat forward, and part of the force pushes the sailboat sideways (*leeway*).

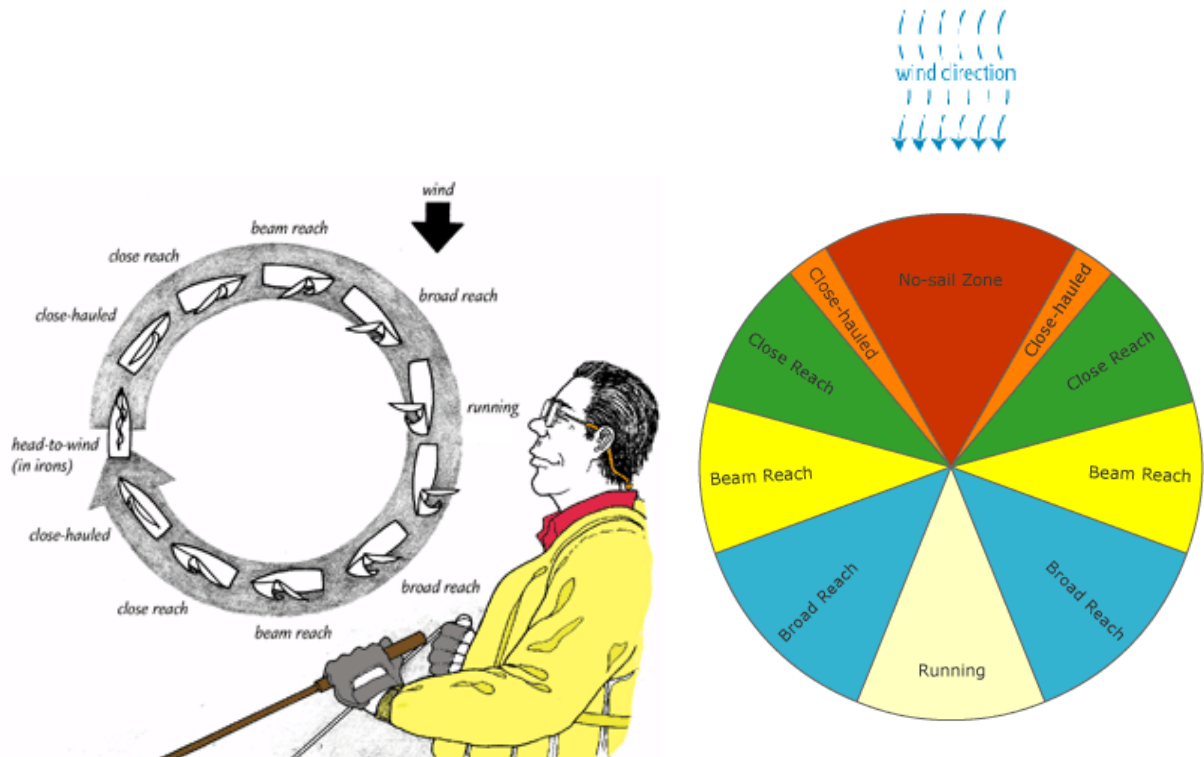
On the next page, the illustration, How a Sailboat Works, shows the motive force and its two components, one providing forward motion and the other pushing the boat sideways (leeway). Without a centerboard or keel the sailboat would have considerable sideways motion through the water. The addition of a centerboard or keel reduces the leeway and allows the boat to track nearly straight ahead.

To set the sail properly, let out the sail until it starts to shake (*luff*) and then bring it back in until the luffing stops and the sail is smooth. When sailing downwind, the sail will be all the way out. As you turn to crosswind (*reach*), the sail will be about halfway in, and as you turn into the wind, the sail will need to be as close to the center line (*close hauled*) as possible.

Although you cannot sail directly into the wind, you can reach a point directly upwind by using a series of zigzag maneuvers called *tacking*. Start by sailing as close to the wind as possible, with the sails all the way in, and just starting to luff. Since you only can sail within about 45 degrees of the wind, when you change course, you will need to call “*ready about*” to alert the crew, and then “*helms alee*.” At that time you will turn the bow through the wind to your new course. If you have more than one sail, you may have to adjust the sails on the new course. Continue tacking until you reach the desired point upwind.

Turning the boat so the stern passes through the wind is called *jibing*. This can be a hazardous maneuver since the *boom* on the sail will travel across the boat from all the way out on one side to all the way out on the other side. Make sure you control the boom so it will not hit anyone in the head or knock them overboard. In stronger winds, the boom should be hauled in and then slowly eased out to prevent problems.

Points of Sail



CAPSIZING

When sailing a small boat, just as when paddling a canoe in whitewater, the skill of the crew is a great factor in the boat's stability. Plan and prepare for capsizing---it happens to even the best sailors and is not an emergency. Your advance preparation will determine whether a capsizing is an inconvenience or a disaster.

To start with, always wear your Personal Floatation Device (PFD). This will not only add to your safety, but it will make it easier to right your boat and continue on. Learn the basic sailing maneuvers from an experienced sailor and get the feel of the boat. Be particularly aware of the wind and the weather.

The crew shifting their weight to counteract the force of the wind and sails provides a small sailboat's stability. When traveling downwind, the sail produces little force to tip the boat, but when sailing close to the wind, with the sails all the way in, the force of the wind *heels* the boat (pushes it over). To counteract the heeling, the crew must place their weight on the *upwind gunwale*. As the wind gets stronger, the crew may have to *hike-out* (this is done by placing your feet in the straps and leaning over the side).

When sailing in strong or gusty winds, you may not be able to prevent capsizing even by hiking-out. You may have to reduce the force of the wind on the sail by

coming up slightly into the wind or letting the sail out. In both cases the sail will luff and the tendency to capsize is reduced.

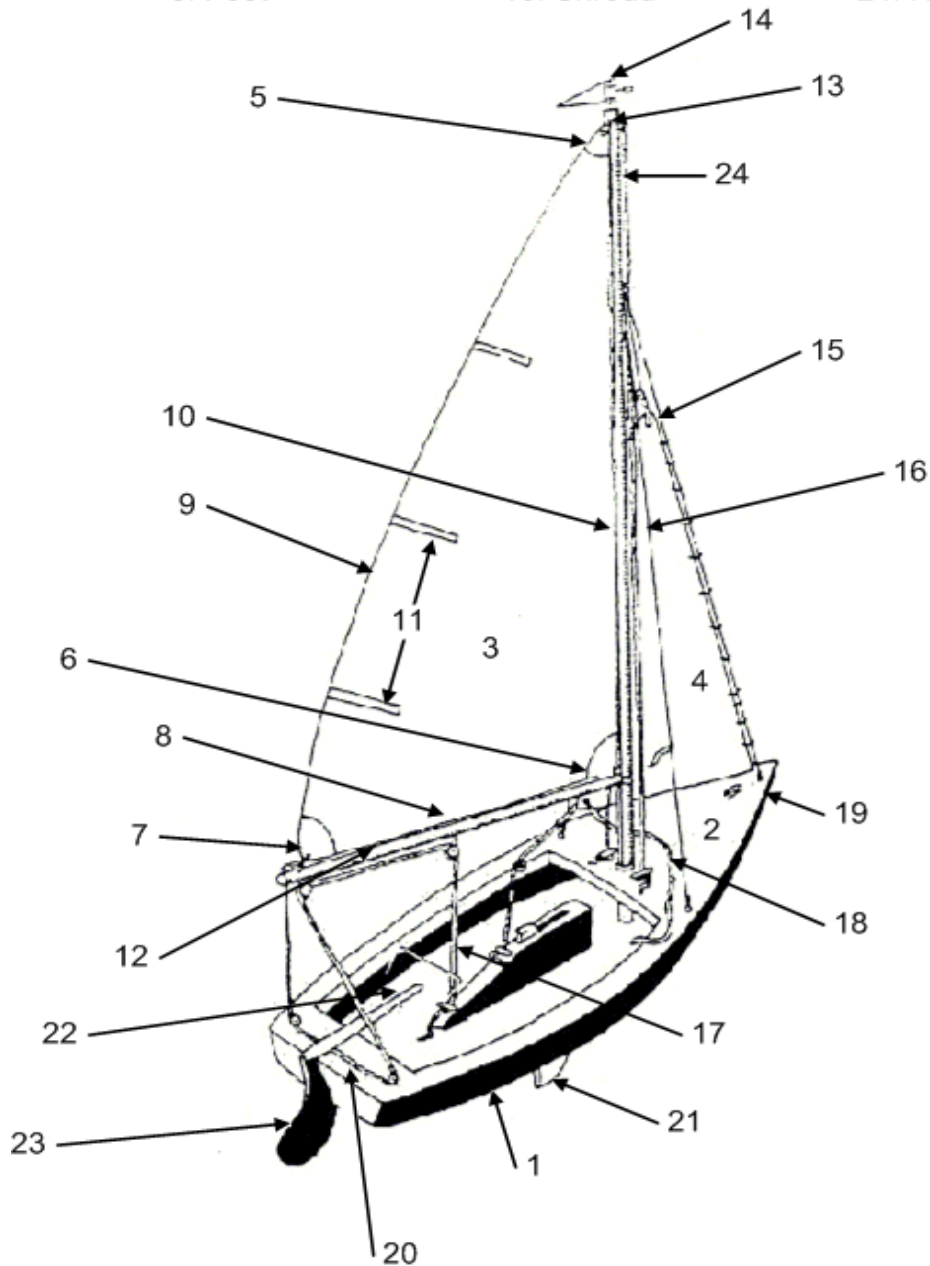
If it looks like you are going to capsize, let the sail all the way out and get to the high side of the boat. If that doesn't prevent a capsizing and you do go over, first check to make sure everyone is all right. Face the boat into the wind, and swim to the bottom side of the boat. Grab the centerboard and use your weight to right the boat. It will probably come up slowly to start with, as the sail will be under water. Once righted, get in, bail out the water and continue sailing. Many sailboats have built in floatation and large *scuppers* (drain holes) and will drain water out by themselves when righted.

Sailing is fun, safe and challenging when you know the basics and follow the safety precautions.

Note: *Italicized* words above are sailing terms that should be learned by all cadets.

Part Two: Parts of the Boat

- | | | |
|-----------------|------------------|-----------------|
| 1. Hull | 9. Leech | 17. Mainsheet |
| 2. Deck | 10. Luff | 18. Jib Sheet |
| 3. Mainsail | 11. Battens | 19. Bow |
| 4. Jib | 12. Boom | 20. Stern |
| 5. Head or Peak | 13. Masthead | 21. Centerboard |
| 6. Tac | 14. Masthead Fly | 22. Tiller |
| 7. Clew | 15. Forestay | 23. Rudder |
| 8. Foot | 16. Shroud | 24. Halyard |



Part Three: Cadet Note Taking Guide

This guide follows the NJROTC Sailing CD-ROM used in QBH Ground School. All cadets must complete this guide prior to taking the written exam.

PARTS OF A SAILBOAT

Hull components

1. The front part of a boat is the _____, and the back part is the_____.
2. The left side of a boat is called the _____ side, and the right side is called the _____ side.
3. The middle of a boat is called the _____.
4. Anything running across a boat is said to be _____.
5. The body of a boat is called the _____.
6. Primarily used for preventing sailing vessels from slipping sideways (preventing leeway) in the water, but also providing a measure of stability is an object that protrudes from the bottom of the hull. On larger sailing vessels this object is quite heavy and is called a _____. Smaller vessels have a retractable _____, which pivots on a pin, or a _____, which slides up and down, through a slot in the bottom of the boat.
7. The _____ is a means for controlling the boat's course and usually projects down from the hull aft (or behind) the keel or centerboard or on the stern. The lever that is attached to the upper end of the rudder (or rudder linkage) for steering is called the _____.
8. The back wall of a boat is called the _____.
9. If the rudder is attached to the transom, it is usually attached using two pieces of hardware (fittings). The pins are called _____, and these go through eyes called _____.
10. The large open area of a boat where the crew sits is the _____.
11. Many sailing vessels have a top covering area referred to as a _____. A deck over the bow is called a _____. In a small daysailer type vessel that has no cabin, the area under the foredeck is called a _____.

Rigging components

12. A spar is a pole to which sails are attached (or "bent on"). The vertical pole or spar on a sailing vessel is a _____. The horizontal spar is called a _____.

_____. The boom attaches to the mast with a hinged fitting called a _____.

13. The mast is seated in a mast step, but in most sailing vessels is further supported by cables called _____. These are occasionally “tuned” but are otherwise left standing and not adjusted or moved.

14. There are two types of standing rigging: (1) the wires that support the mast fore and aft are called _____. (2) The wires that provide sideways support are called _____.

15. The stay that goes from the bow to the front of the mast is called a _____ or a _____.

16. The shroud that goes from the mast to the right side of the boat is the _____ shroud. The shroud that goes to the left side is the _____ shroud.

17. Most sailboats have small spars that spread the shrouds out from either side of the mast. These small spars are called _____.

18. The shrouds carry heavy stress loads so they are attached to the hull using reinforced metal strips bolted to the hull. These metal strips on the hull to which the shrouds are attached are called _____.

19. The fittings used to increase or decrease tension (“tune”) the stays and shrouds are called _____.

20. The lines (rope when onboard ship is referred to as “line”) used to control the sails are referred to as _____.

21. Two types of running rigging are _____ and _____.

22. Halyards go up through a block (the nautical term for a pulley is a “block”) at or near the top of the mast and back down. Halyards are used to _____ the sails. There is a _____ halyard to hoist the mainsail, and a separate halyard called a _____ halyard to hoist the jib.

23. Sheets are lines used to _____, or adjust the angle of the sails.

24. There are two sheets attached to the jib. One trims the jib on the starboard side and is called the _____. The other trims the jib on the port side and is called the _____.

25. The sheet used to trim the mainsail is called the _____.

26. To control or change the direction of sheets, the sheets are passed through _____. These fairleads are usually either fairlead _____ (without a pulley) or are fairlead _____ where a pulley is used.

27. Main sheets for the mainsail usually have a series of _____ to reduce the load of pressure while trimming the mainsail.
28. Anchor lines and mooring lines are often fed through open eye fairleads called _____. These keep the lines from chaffing or rubbing and keep them at the correct angle as they lead from the boat to the anchor or dock.
29. The fittings used to secure halyards, sheets and mooring lines to the boat are called _____.
30. The standard cleat has horns and the line is secured to the cleat with a round turn and a figure eight. This means go around it _____ then form a figure _____. If the line is to be "locked" on the cleat, then the last loop of the figure eight is _____. This is called a cleat knot or a cleat hitch.
31. A modern, quick acting cleat commonly used is a _____, which has two spring-loaded jaws (cams) that clamp tight on the line. The line can be pulled in through these but will not slide out unless you pull in and _____ simultaneously to release the line.
32. One other item of running rigging that is used to keep the boom from rising when the sail is full is called a _____. It passes through blocks usually attached to the boom, about two feet out from the gooseneck and to the mast about 2 to 4 feet below the gooseneck.

TYPES OF SAILBOATS

33. The type of sailboat with the mast stepped well forward carrying only a mainsail is called a _____ or _____. If the sailboat mast is stepped a little further aft than a cat-rigged boat and is capable of carrying a jib forward of the mast as well as a mainsail, then it is said to be _____-rigged and is called a _____.
34. The mainsails on most modern sailboats are triangular in shape. A triangular shaped mainsail is called _____-rigged. If the mainsail has two spars, a gaff holding the top part of the sail and a boom at the bottom, it is said to be _____-rigged.

PARTS OF A SAIL

35. Each side and each corner of a sail has a name. On standard Marconi rigged sailboats with triangle shaped sails, the bottom of the sail is called the _____, the leading edge the _____, and the trailing edge the _____.
36. The three corners of a triangle sail are named as follows: the top corner is the _____; the bottom forward corner is the _____; and the bottom aft corner is the _____.

37. Sloop rigged sailing vessels have a headsail forward of the mast usually referred to as a _____.
38. Most mainsails and some jibs have thin pieces of wood or fiberglass inserted into the trailing edge or leech of the sail to reduce flapping in this area and to help hold the shape of the sail. These are called _____ and are held in the sail in _____.
39. The sails are bent onto spars in several ways. On some mainsails, a rope is sewn along the edge of the sail called a _____. The boltrope is fed into a channel in the mast or boom to hold it in place.
40. Some sails have small plastic or metal fittings that are fed into the channel called _____.
41. One of the most common ways to attach the jib to the forestay is by using small snap shackles called _____. High performance modern racing boats tend to have an aerodynamic slot attached to the forestay. A boltrope on the luff of the jib is fed into the slot.
42. The fittings frequently used to attach lines to sails, or lines to anchors or to other parts of the boat are called _____. These are usually stainless steel, or brass or galvanized and are "U" shaped with a screw or locking type pin to close the open end of the "U".
43. Quick acting shackles with a spring-loaded pin are called _____.
44. A line that attaches to the clew of the mainsail and used to pull the sail out to the end of the boom is called an _____.
45. A line used to pull the boom down the mast, attached just below the gooseneck, is a _____ or boom _____.
46. Using the _____ a sailor is able to adjust the tension of the mainsail along the foot of the sail. Using the _____ the tension along the luff of the mainsail can be adjusted.

THEORY OF SAILING

47. To understand the interaction between a sailboat and the wind, it is helpful to know the difference between true wind and apparent wind. _____ is the wind speed and direction of a stationary position like a flag flying in the breeze.
48. _____ wind is the true wind altered by the motion of the boat. An example would be if you were riding a motorbike, and if the wind were calm before you started riding, the true wind would be zero miles per hour. But you would feel the _____ wind on your face when the bike began moving.

49. Sails are always sheeted or set to the _____ wind direction. Therefore it's very important to know the direction of the apparent wind.
50. This is done by observance of _____ attached to the shrouds of the sailboat. Usually these are just strips of light cotton line about 6" long.
51. Another place to determine the apparent wind direction is at the top of the mast. This wind-sensing device is called the _____.
52. The side of the boat the wind is on is the _____ side. The side of the boat that is away from the wind is called the _____ side.
53. No sailboat can sail directly into the wind, but sailing vessels with fore and aft sails can generally sail within _____ degrees of the wind line.
54. The sails produce lift by using the rounded shape of the sails like the wings of an airplane. The lift that these vertical airfoils produce is through the application of _____.
55. Applying only Bernoulli's Principle, however, would make the boat go sideways as well as forward. So to prevent the boat from going sideways, sailboats use a _____, _____, or _____.
56. Combining the effect of _____ and the resistance provided by a _____, _____, or _____ enables a sailing vessel to sail upwind within _____ degrees of the wind line.
57. Sloop rigged sailing vessels not only gain more lift from the _____ in addition to the mainsail, but also obtain extra lift through the interaction of the jib and the mainsail when sailing _____.
58. Wind that is picked up between the jib and the mast is channeled aft (back) through a narrow _____ formed between the trailing edge of the jib and the curve of the mainsail.
59. Wind forced through a narrow opening tends to accelerate (speed up), thus the slot between the jib and the mainsail causes the wind passing over the backside of the _____ to accelerate.

POINTS OF SAILING

60. When the wind is coming across the starboard side of the sailboat (with the boom on the port side), the boat is said to be on a _____.
61. When the wind is coming across the port side of the boat (the boom is on the starboard side), the sailboat is said to be on a _____.
62. The highest point of sail, where the sailboat is pointed as high into the wind as possible and still has the sails full is called _____,

_____, or _____. In this situation, the sails are trimmed _____ as close as possible.

63. The next highest point of sail is called a _____.

64. When the wind is coming over the beam or middle of the boat, this point of sailing is called _____.

65. When the wind is abaft (behind) the beam and coming in over the starboard or port quarter, then the boat is on a _____.

66. When the wind is coming directly over the stern (from directly behind), this is called a _____, as the boat is "running before the wind".

67. On the broad reach or run the boat is mainly being _____ along ("the barn door principle").

68. The least efficient and slowest point of sailing is the _____ because very little lift is being generated. This is also the most _____ point of sailing because of the risk of an accidental jibe.

69. The safest and fastest point of sailing for most sailing vessels is the _____ because lift (Bernoulli's effect) and the pushing (barn door effect) are combined to the maximum extent possible.

70. If you attempt to sail directly into the wind (well inside 45 degrees to the wind line), all headway or speed will be lost. A sailboat with no speed cannot be steered. A sailboat with no speed and likely starting to go backwards is said to be _____.

71. The terms used when you are sailing to windward a little too close are called _____ or _____. This means that you are still sailing to windward but losing speed. Experienced sailors use this method of sailing to depower the boat in windy conditions.

72. When a sailboat changes heading while remaining on the same tack (Port tack or Starboard tack) it is heading _____ when it heads higher into the wind line, or heading _____ when it turns away or _____ from the wind line.

73. When a sailboat makes a large change in heading (at least 90 degrees) using its momentum to turn the bow through the wind line, it goes from a port tack to a starboard tack or vice versa and is performing a maneuver called _____ or _____.

74. When a sailboat with wind coming over the stern changes from port tack to starboard tack or vice versa, causing the boom to cross over to the other side of the boat, the maneuver is called a _____.

75. When sailing downwind, the skipper must be careful and alert so as not to mistakenly allow an _____ to occur.

76. An accidental jibe can be extremely dangerous because the boom swings rapidly to the other side of the boat when not expected and if a crewmember gets hit on the head by the boom it can cause _____ or even _____ if the boom is a large one on a large vessel.

77. Two methods are used to stop a sailboat. The first method is to simply turn the boat into the _____ area. The sails will luff and all power will be lost. The other method is to _____. By easing the jib and mainsheets the boat will lose power and coast to a stop.

MAN OVERBOARD (MOB) / CAPSIZE PROCEDURES

78. The greatest cause of man overboard is _____ error.

79. The key to recovering a MOB is to maneuver the boat as quickly and safely as possible into a _____ position of the MOB then plan your approach the same way you would approach a _____ or _____. This means you need to have the boat under control and be able to _____ it on the leeward side of the MOB. By having the MOB on the windward side, the sails can _____ to leeward and be out of the way during the recovery.

80. _____ around to pick up a MOB should only be done when the winds are light and there is no chance of broaching or capsizing.

81. The first rule of boating safety, which is especially true in the event of capsize is, _____, because the boat provides floatation, visibility, and protection.

82. Should the boat capsize, the procedures to follow are: (1) _____ with the boat, (2) _____ for the crew, (3) put on _____ if they are not already on, and climb on the _____ for leverage in righting the boat.

83. You must move quickly in righting the boat because if you are too slow, the boat may turn completely _____ (“turn turtle”), which could result in damaging the boat or mast.

RIGHT OF WAY RULES

84. When two sailing vessels are in a crossing situation and one sailboat has its mainsail boom on the port side (is on a starboard tack) and the other has its mainsail boom on the starboard side (is on a port tack) the _____ boat has the right of way. The other boat is expected to give way and is called the _____ boat.

85. When two crossing sailboats are on opposite tacks the _____
_____ Rule applies.

86. When two sailing vessels are in a crossing situation and both boats are on the same tack (mainsail booms are on the same side) the boat to _____
(is further downwind) has the right of way. The windward boat is the _____
_____ vessel.

87. If any vessel overtakes another, the one going faster (catching up from behind) must _____
_____ of the slower vessel when the _____ rule is applied.

88. Generally power vessels must give way to sailing vessels except when a large or deep draft vessel (like a ship) is _____
to a channel or when a power vessel is limited in _____ such as a fishing vessel with extended _____, _____, or _____.

89. A vessel that has right of way (is a stand-on vessel) is expected to hold _____
and _____ until it is obvious that the _____
_____ is not doing enough to avoid collision. At that point, the stand on vessel is also expected to maneuver so as to avoid collision.

Part Four: Knots

Cadets are required to know the following knots in order to properly rig and sail a boat:

Bowline



Forms a secure loop of any size that will not jam. It is easy to both tie and untie even after being under load.

Cleat Hitch



Used to secure a line (rope) to a cleat on the boat or on a dock.

Clove Hitch



Useful for tying a line to a post, even when the end of the line is not available. However, it is not totally secure and can slip under pressure or if jiggled.

Figure Eight



Useful as a stopper knot. It is often used to keep sheets from running through the fairleads.

Sheet Bend



Useful for tying two lines together.

Square Knot



This common knot should only be used for non-critical items as it is not secure. Also called a Reef Knot.

Part Five: Waterfront Regulations and Safety Precautions

Waterfront Uniform: Cadets participating in waterfront activities shall wear the athletic uniform or swimwear. Shoes shall be worn at all times to prevent cuts and abrasions from broken glass, oyster shells, and splinters or from sand burrs. Old running shoes or aqua socks are acceptable. Sandals or open toed shoes are prohibited.

Sailing Area: The boating limits are posted in the boathouse. Three day markers running south to north mark the westerly limit: markers #17, #19 and #21. The southern limit extends from the boat basin to marker #17. The northern limit runs parallel to the southern limit and extends from marker #21 to the shore. Cadets must know the limits and stay within the boundaries. Water depths vary greatly outside the limits, particularly to the south where the motorboat may not be able to reach a boat in shallow water. Stay at least 100 feet clear of all docks and piers on the east side of the area. Stay well clear of the western boundary to avoid powerboats passing through the inter-coastal waterway.

Authority to Check Out Boats: Cadets must complete QBH Ground School and their swim test prior to participating in waterfront activities. Qualified Boat Handlers (QBH) may check out any boat without a jib (dependent on size and weight of the cadet). QM3 and above may check out boats with jibs.

Weather: Bad weather may cause cancellation of waterfront activities. Boating will be restricted if there are small craft warnings, heavy rain, cold temperatures, lightning in the area, or if extremely low tide hinders the ability to launch/recover boats or operate the safety boat.

Emergencies: In the case of an emergency, take immediate action to save life and property. The coxswain (the person in charge of the vessel) shall give necessary distress signals (lowering sails, waving arms). All hands stay with the boat and do not attempt to swim to shore. All AFA boats float even when overturned. When help arrives assist with rigging the boat for towing, if necessary.

Damage to Vessels: The coxswain is responsible for all damage sustained to the boat. In the case of willful damage or gross negligence, the cost of repair will be charged to the cadet or cadets responsible. Any damage to a vessel must be reported to a Naval Science Instructor.

Crossing the Street: The intersection of Park Street North and 9th Avenue is a dangerous area. Cars routinely run red lights and do not pay proper attention to pedestrians. **Everyone crossing the street will do so only at the crosswalk after they push the buttons to change the traffic light.** Wait and look both ways after the light changes to ensure no car is running the light, then quickly

walk across. Middle School cadets are not permitted to cross without an Upper School cadet or an adult present.

Check Out Procedures: Boats are checked out on a first come first served basis, unless reserved in advance with the Naval Science Instructor on duty. Boats must be inspected for damage prior to and after use. Boats and dollies must be left secure and clean. Equipment must be secured in its proper spot.

Conduct: Skylarking or swimming from the boats, beach or docks is prohibited. Failure to obey the rules will result in dismissal or suspension from the waterfront.

Personal Floatation Devices (PFDs): PFDs shall be worn at all times in both sailboats and powerboats. Choose a PFD that is your proper size and ensure the straps are adjusted so the PFD fits snugly around your chest and does not ride up in the water.

Capsizing: Capsizing a boat is not an emergency. It can occur at any time in any wind conditions if you are not properly controlling the boat or balancing the weight. Capsizing and capsize recovery is taught in QBH sailing. Capsizing has the potential to damage equipment; therefore intentional capsizing outside of training activities is prohibited.

Expense: Sailboats are expensive items. Fitting, sails, daggerboards and rudders are expensive to replace. Treat the Academy boats as if they are your own. With proper care the boats should last for a long time and bring enjoyment to thousands of Admiral Farragut cadets.

Part Six: QM3 Rules of the Road

1. Rules for Power Vessels

a. When two power-driven vessels are meeting on reciprocal (head-on) or nearly reciprocal courses so as to involve risk of collision, each shall alter her course to starboard so that each shall pass on the port side of the other. When a vessel is in doubt as to whether such a situation exists she shall assume that it does exist and act accordingly.

b. When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way and shall, if the circumstances of the case permit, avoid crossing ahead of the other vessel.

c. Any vessel overtaking any other shall keep out of the way of the vessel being overtaken.

2. Responsibilities Between Vessels

A power-driven vessel underway shall keep out of the way of:

- a. a vessel not under command;
- b. a vessel restricted in her ability to maneuver;
- c. a vessel engaged in fishing;
- d. a sailing vessel.

3. Definitions

a. **VESSEL:** Includes every description of water craft, including non-displacement craft and seaplanes.

b. **POWER-DRIVEN VESSEL:** Any vessel propelled by machinery.

c. **SAILING VESSEL:** Any vessel under sail provided that propelling machinery, if fitted, is not being used.

d. **VESSEL ENGAGED IN FISHING:** Any vessel fishing with lines, nets, trawls or other apparatus, but does not include a vessel fishing with trolling lines which do not restrict maneuverability.

e. **VESSEL NOT UNDER COMMAND:** A vessel which through some exceptional circumstance is unable to maneuver as required by these rules and is therefore unable to keep out of the way of another vessel.

f. VESSEL RESTRICTED IN HER ABILITY TO MANEUVER: A vessel which from the nature of her work is unable to keep out of the way of another vessel.

g. UNDERWAY: When a vessel is not at anchor, or made fast to the shore, or aground.

h. RESTRICTED VISIBILITY: Any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other similar causes.

i. HORN SIGNALS:

- (1) Short blast – one second
- (2) Prolonged blast – four to six seconds
- (3) One prolonged followed by one short – open drawbridge
- (4) One short blast – I am altering course to starboard
- (5) Two short blasts – I am altering course to port
- (6) Three short blasts – Engines are in reverse
- (7) Five (or more) short blasts – Danger, emergency
- (8) One prolonged blast – approaching blind bend or leaving a dock

j. DISTRESS SIGNALS

- (1) SOS . . . - - - . . .
- (2) Red flares
- (3) Waving arms
- (4) Dye markers (any color)
- (5) Smoke signal (orange)
- (6) Open flames
- (7) Upside down American flag
- (8) Orange background flag with black ball and square



ADMIRAL FARRAGUT ACADEMY

SWIMMING AND WATER SAFETY QUALIFICATION RECORD

Each cadet at this academy is required to complete the prescribed water safety and swimmer qualification course prior to entering any boat, for any reason, while under academy control.

Must demonstrate the following within a single 45 minute time limit:

1. Swim the academy pool, using the following strokes:

- A. Breast Stroke = 1 length of the pool
- B. Side Stroke = 1 length of the pool
- C. Back Stroke = 1 length of the pool

2. Swim the entire length of the pool underwater.

- A. Authorized to surface as many times as necessary, but forward movement can only be done underwater.

3. Tread water, using the following guidelines with no artificial support:

- A. Deep end of the pool
- B. 5 minutes, dead man float or back float

Cadet name: _____ Date: _____

Swim instructor signature: _____



ADMIRAL FARRAGUT ACADEMY

QUALIFIED BOAT HANDLER (QBH)

COMPLETION RECORD

QBH requirements should be completed in the order listed:

1. Swimming and Water Safety Test:

(Instructor signature and date)

2. Sailing Ground School and completion of note taking guide:

(Instructor signature and date)

3. QBH written test:

(Instructor signature and date)

4. Knots test (bowline, square knot, figure-8, clove hitch, sheet bend, and cleat knot).

(Instructor signature and date)

5. Sailing demonstration including:

- Properly rig and launch boat.
- Ability to tack and jibe.
- Capsize procedures and recovery.
- Return to beach, clean, and properly stow gear.

(Instructor signature and date)

Completion and final QBH designation: _____

Senior Naval Science Instructor