

## Sail On-The-Water Teaching Aid Guide

The purpose of this guide is to outline, for Course Instructors and Assistants, their preparation to help students experience various aspects of the Sail curriculum on the water. The Sail course lends itself particularly well to the use of teaching aids that explain and demonstrate many of the elements in this OTW teaching guide. Also, examples of many of these elements are usually available if the boat is in a marina. Both in-the-water and “on-the-hard” examples can be used. Instructors may choose those elements from this guide that apply to their situation and previous demonstrations in the classroom and pick those elements that will work with a group of students in a time frame normally lasting not longer than 4 hours. This includes both “on-the-dock” and “on-the-water” demonstrations and discussions. Obviously, the type of boat and locale available will have an effect on the elements used and the method of instruction. Depending on the type of boat and size of the boat and size of class, some of the elements may be combined as is logical, or some may, of necessity, be omitted. The instructor should encourage students to be involved as they feel comfortable and can do it safely. While underway, other situations may arise that the student will experience beyond those tabulated in this guide. The instructor should acknowledge those unique opportunities with the best responses possible. Always keep the safety of the boat and the students in mind.

This is an optional part of the Sail Course and participation will not affect the credit given for the course. It does not provide any certification or credential to the student. The USPS Boat Operator Certification program does provide several elements for certification of skills via hands-on training and completion documentation is provided from their program.

This time together with the students on the vessel provides a good environment for sharing the “Boating is FUN...We’ll show YOU how” part of USPS and answers questions about the value of membership in the Squadron and organization. Other courses and seminars should be shared as a way to show how the student can gain additional boating knowledge and skill even if they do not become a member.

For general safety considerations:

Weather:

- The activity should be in good weather with moderate seas.
- Winds and waves not to exceed the capabilities of the boat and crew.
- Review wind, tide, and current conditions affecting boat operation.
- At this time we are not doing “Heavy Weather Sailing” or “Handling Under Adverse Conditions” or similar activities.

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### Navigation Limits:

- Within range of a cell phone (10 miles) or VHF shore station—not further than 20 miles offshore.
- Limited to daylight hours
- Nighttime activity is not to be included in this OTW experience. Additional justification and approval are needed for a USPS instructor to conduct Sail OTW between evening and morning twilight hours.

### Vessel:

- The vessel should have a current VSC sticker
- The vessel must be insured. USPS insurance becomes primary when the first participant comes on board for the activity. Not moving the boat to the activity location.
- The vessel should be in good condition with no significant problems (all vessels have problems, but not significant ones).
- The vessel should have sufficient fuel for the activity.
- The vessel should have a VHF radio, cell phone, or appropriate communication device.
- Conduct engine room/bilge visual and sniff check before lighting off.
- Allow engine to warm up to operating temperature as precaution to heating problems.

### Knowledge and Expectations:

- For larger more complicated vessels the boat owners should be aboard even if not participating in the subject Teaching Aid Activity. (Not necessary for runabouts).
- The squadron teaching aid activity should be documented. Preferably in squadron executive committee meeting minutes or in e-mails saved until no longer needed.
- It is Mandatory that every person must be wearing a PFD when entering the dock area and while on board the vessel unless below deck. (If the PFD is kept on at all times there is not a concern about coming up on deck without it).
- Participants should be told what to bring and what not to bring.
- Appropriate clothing should be recommended to participants.
- USPS float plan issued and check list on float plan completed. (It is a tri-fold in the USPS materials catalog #09-676-111-N/C or [http://www.usps.org/o\\_stuff/fp\\_form.html](http://www.usps.org/o_stuff/fp_form.html)).
- Check for any medical condition of participants.

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There is to be an appropriate safety briefing about the boat, relevant to the activity:

1. Weather check
2. Thru-hulls
3. Battery switches/electrical panel
4. Engine controls
5. Head usage
6. Trash disposal
7. Location of First Aid kit
8. Warning about sitting down or holding on during maneuvers
9. Location of throwable devices for MOB
10. Location of VHF/DSC radio and usage
11. Location of flares and other visual distress signals
12. Location of fire extinguishers and extinguisher ports to engine compartment (if applicable)
13. Anything relevant about the particular vessel being used

**REMINDER: All OTW programs must be pre-approved by the Squadron or District to comply with insurance coverage requirements.**

**This Sail On-The-Water Teaching Aid Guide has been approved by the Boat Operator Certification and On-The-Water Training Committee as required and no additional approvals are necessary unless modifications are made to intent and contents.**

**Feedback comments should be directed to the Boat Handling Committee Chair to assist in making this Teaching Aid Guide the best possible.**

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### Teaching Aid Activities:

ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
Pre-Departure Discussion at dockside ( <u>should apply to all OTW lessons</u> )	Briefing by instructor and skipper (if different person)	Location of Life Jackets (PFDS) and throwable devices for MOB	Insure proper fit. All students and instructors must be wearing them at all times	
		Location of Fire Extinguishers flares and other VDS	Proper operation of available types discussed	
		Location of MSD	Proper use discussed and demonstrated	
		Location of VHF radio	Proper use discussed including DSC and AIS if available	
		Rules for overboard discharge and trash	Placards and stickers pointed out and discussed	
		Location of on-board electronics (GPS etc)	Proper use and function discussed and demonstration of interfaces if applicable	
		Weather forecast	Discussion and source (VHF radio, TV, Phone)	
		Float Plan USPS Materials Catalog #09-676-111-N/C or <a href="http://www.usps.org/o_stuff/fp_form.html">www.usps.org/o_stuff/fp_form.html</a>	File approved USPS float plan	
		Characteristics of fuel	Discussion of fuel used aboard as well as dangers of fuel and fueling	
		Visual tour of engine/engines	Proper operating procedures discussed and, if possible demonstrated. Visual tour should include through-hulls.	

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		Demonstration of Electrical panel	Demonstrate types of lights and proper switches for operation of all electrical systems	
		Tour of boat	Location of storage—spare parts, safety equipment i.e. flares, VDS, and First Aid kit.	
		Boat and Marina Courtesy	Discussion of expectations of crew on the boat and proper conduct in Marinas	
<u>While at the Dock</u> , on the boat, or off	Demonstrations by instructor	Type of Rig (sloop, cutter, yawl, etc.)	Visual inspection and discussion of rig type with discussion of other types if possible and available	Chapter 1
		Sail Plans	Show sail plan of boat being used and discuss other types, if possible showing them to students at the marina	Chapter 2
		Boat Design and Hull Types	Indicate type of hull on demo boat and, if possible, show other types-if available	Chapter 3
		Freeboard and Sheer	Show example of freeboard and sheer on demo boat as well as other boats-if available	Chapter 3
		Keels and Centerboards	Show examples of each type-if out of water and available. Explain which type is on the demonstration boat	Chapter 3
		Rudder-Tiller	Show type of rudder or tiller on demo boat and point out other type(s) if available	Chapter 3

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	The Rig	Masthead or Fractional Rig	Types and examples demonstrated	Chapter 4
		Spreaders	Discussion of purpose and examples of spreaders	Chapter 4
		Shrouds and Stays	Show each type and discuss their function	Chapter 4
		Bergstrom and Ridder Rig	If available, discuss this type of rig and how it differs from other types as well as rationale for its use.	Chapter 4
		Roller Furling and Reefing	Demonstrate jib and main roller furling -if possible	Chapter 5
		Genoas and Spinnakers	If available, show each type of sail and explain its use	Chapter 5
Best done while at the dock	Captain or instructor	Bending on sails	Demonstrate proper technique, if possible for bending on the main and jib	Chapter 11
		Folding Sails	If possible demonstrate proper method of folding sails	Chapter 11
		Tuning the Rig	Show how to tune the rig and reasons for mast bend and specific tightness of stays and shrouds	Chapter 12
		Control and Trim	Demonstrate methods used to control all sails and show proper trim for each	Chapter 10
		Cunningham	Explain purpose and demonstrate	Chapter 6
		Outhaul	Explain purpose and demonstrate	Chapter 6
		Boom Downhaul	Show how it functions	Chapter 6

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		Topping Lift	Explain purpose, demonstrate	Chapter 6
		Lazy Jacks, stack packs, Dutchman, or other means of sail flaking control	Cover different methods of sail flaking and, if possible point them out on different boats	Chapter 6
		Deck layout including fittings, winches, genoa cars, etc.	Show each fitting and winch, explain their purpose, and in the case of the winch- demonstrate its use	Chapter 6
While on the water	Captain or Instructor	Steering	Whether tiller or wheel, demonstrate operation of steering system	Chapter 13
		Holding a course, getting a feel for the helm	Instructor explains and allows students to safely practice	Chapter 13
		Pinching and Stalling	Show what happens when pinching or stalling	Chapter 13
		In Irons	Explain what the term means and demonstrate. Show how to recover from that maneuver	Chapter 13
		Telltails	Explain purpose and show how they function at different sail trims	Chapter 13
Sailing	Sailing Upwind	Close-Hauled, Close Reach	Demonstrate the best method of upwind sailing and discuss sail trim	Chapter 14
		Coming About	Demonstrate the maneuver as a tack (wind and weather permitting)	Chapter 14
	Sailing Downwind	Beam Reach, Broad Reach, Running	Demonstrate each of these points of sail	Chapter 15

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		Jibing	Either discuss, or if weather permits, demonstrate a jibe (remember safety of boat and crew)	Chapter 15
	Spinnaker Handling Captain or instructor	Rigging, Setting, Trimming, Dousing	If the demo boat is equipped with a spinnaker, either tri-radial or asymmetrical, and the weather and wind are of a safe enough speed, demonstrate the use of a spinnaker. Discuss its value and reasons for use.	Chapter 16
	Heavy Weather Sailing Captain or instructor	Shorten sail	Demonstrate the reefing of a mainsail and jib, simulating heavy weather sailing.	Chapter 17
	Storm Conditions Captain or instructor	Heaving to	Demonstrate the technique	Chapter 18
		Lying Ahull	Demonstrate the technique	Chapter 18
		Sea Anchors or Drogues	Discuss the reasons for use. If the boat is equipped, demonstrate	Chapter 18
	Emergency simulations Proper procedures demonstrated or simulated by instructor	Man Overboard	Using cushion or milk bottle or other suitable device, demonstrate man overboard procedures	Chapter 21
		Stranding	Discuss the problems associated with stranding a sailboat.	Chapter 21
		Kedging Off	Demonstrate, if possible, the method of kedging off after having been stranded	Chapter 21



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	Marlinspike Seamanship Students will demonstrate their knowledge at convenient times on water or at the dock	Bends	Students demonstrate sheet bend and anchor bend	Chapter 20
		Bowline	Students demonstrate	Chapter 20
		Hitches	Students demonstrate clove hitch and cleat hitch	Chapter 20
		Figure 8 Knot	Students may demonstrate	Chapter 20
		Square Knot	Students may demonstrate	Chapter 20
		Heaving a Line	Students demonstrate the proper method	Chapter 20
		Anchoring	Demonstrate the method of setting an anchor	Chapter 19
		Bow and Stern Anchors	If available, demonstrate the method for using a bow and stern anchor	Chapter 19
		Hoisting the Anchor	Demonstrate the method particular to the demo boat for raising the anchor.	Chapter 19
		Picking up a Mooring	If possible, using either a teaching aid (float etc.) or an available mooring, demonstrate the technique of picking up a mooring	Chapter 19

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		Navigation Rules including overtaking, meeting head on, crossing lighting, warning signals, danger and distress signals, and steering and sailing rules	Many of the navigation rules applied to sailing can be taught in the classroom, however, if the situation presents itself, demonstration can also be done on the water	Chapter 22
Return to Dock	Captain or instructor	Docking under Sail Only	If safe and practical, demonstrate the method of docking while under sail	Chapter 19
		Docking under Power	Demonstrate the proper method of docking while under power	Chapter 19
Post-Cruise Wrap-up At dockside	Captain or Instructor will conduct post-cruise procedures	Secure deck	Students may demonstrate proper techniques for securing deck equipment	
		Stow lifejackets and other safety equipment	Students will stow all safety equipment in proper locations	
		Conduct post-cruise discussion	Instructor will discuss course elements covered in cruise whether on or off the vessel and thank students for participating	