

Seamanship 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 Seamanship curriculum on the water. Instructors may choose those elements from this guide that apply to their situation and demonstrate them 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—sail or power—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 Seamanship 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.

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 needs additional justification and approval.

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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).
- Check for any medical condition of participants.

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

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

This Seamanship 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.

Teaching Aid Activities:

ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
Pre-Departure Discussion at dockside	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	Chapter 1
		Location of Fire Extinguishers flares and other VDS	Proper operation of available types discussed	Chapter 1
		Location of MSD	Proper use discussed and demonstrated	Chapter1
		Location of VHF radio	Proper use discussed including DSC and AIS if available	Chapter 1
		Rules for overboard discharge and trash	Placards and stickers pointed out and discussed	Chapter 1

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Location of on-board electronics (GPS etc)	Proper use and function discussed and demonstration of interfaces if applicable	Chapter 1
		Weather forecast	Discussion and source (VHF radio, TV, Phone)	Chapter 1
		Float Plan USPS Materials Catalog #09-676-111-N/C or www.usps.org/o_stuff/fp_form.html	File approved USPS float plan	Chapter 1
		Characteristics of fuel	Discussion of fuel used aboard as well as dangers of fuel and fueling	Chapter 1
		Visual tour of engine/engines	Proper operating procedures discussed and, if possible demonstrated. Visual tour should include through-hulls.	Chapter 1
		Demonstration of Electrical panel	Demonstrate types of lights and proper switches for operation of all electrical systems	Chapter 1
		Tour of boat	Location of storage—spare parts, safety equipment i.e. flares, VDS, and First Aid kit.	Chapter 1
		Boat and Marina Courtesy	Discussion of expectations of crew on the boat and proper conduct in Marinas	Chapter 1

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
While at the Dock, on the boat	Demonstrations by instructor	Hull type and composition	Visual inspection and discussion of hull type of demonstration boat	Chapter 2
		Steering	Demonstration of type of steering used on –board (wheel, tiller)	Chapter 2
		Engine starting procedure and engine controls	Discussion of proper engine starting procedure and starting of engine (s) with discussion of and demonstration of controls	Chapter 2
		Forward/reverse characteristics	Demonstration of forward and reverse gearing and characteristics while at dock	Chapter 2
		Stability and loading	Examples of proper loading and effects on stability-done while at dock. Move students around boat to allow them to see how loading of boat affects trim and stability	Chapter 2
Leaving the Dock	Procedure by captain or instructor	Dock lines	Types and uses relating to the boat used and boats in general (bow lines, stern lines, spring lines).	Chapter 3
		Sound signals	Types and examples demonstrated	Chapter 3

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Effects of wind and current on leaving dock	Discussion and practical application of wind and/or current, if applicable	Chapter 3
		Types of departure	From slip, mooring, or seawall and effects of wind and current on each type This will vary with the dock location and type	Chapter 3
		Leaving the dock	Demonstration of proper technique for leaving the particular dock the vessel is tied to	Chapter 3
		Fenders	Proper use and stowage during OTW demonstration	Chapter 3
Slow speed maneuvering while on the water	Demonstrated by captain of instructor	Vessel trim	Demonstration of proper trim while underway	Chapter 4
		Controlling trim	Use of devices, if available for proper trim of boat underway	Chapter 4
		Wind effects	Demonstration of how wind affects the handling of the vessel if appropriate and safely possible	Chapter 4
		Wave effects	Demonstration of wave effects on trim and handling of vessel if appropriate and safely possible	Chapter 4

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Maneuvering with 1 or 2 engines	Demonstration of boat handling characteristics using 1 or 2 engines (inboard or outboard) as available	Chapter 4
		Turning with wind and waves	Demonstration of proper turning into and with the wind and waves if safely possible	Chapter 4
		Prepare for heavy weather	Simulation of preparation for heavy weather passage (jack lines and harnesses)	Chapter 4
		Encountering other traffic	Both simulation and potential actual demonstration of maneuvering in traffic safely	Chapter 4
Rules of the Road	Instructor informal quiz while underway	Lookouts	Set lookouts and discuss their value	Chapter 5
		Safe speed	Demonstrate safe speed for type of vessel used	Chapter 5
		Collision risk vs. determination	Discuss the dangers of collision and the risks involved if not avoided	Chapter 5
		Overtaking	Simulate overtaking of another vessel and procedures and sound signals for maneuver	Chapter 5
		Head-On	Simulate a head-on meeting and procedure for accomplishing with sound signals	Chapter 5

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Sounds	Demonstrate sounds for each maneuver (may be done while underway and in other demonstrations)	Chapter 5
		Lights	Demonstrate the use of lights. Discuss various configurations, particularly those pertinent to the boating area	Chapter 5
		Limited Visibility	Demonstrate proper vessel safety in limited visibility	Chapter 5
		Right-Of-Way/ Give way vs. Stand-on	Possible demonstration or simulation	Chapter 5
		Passing situations	Possible examples or simulations	Chapter 5
		“Pecking order” of vessels	Discuss and, if possible demonstrate the proper order of importance of vessels	Chapter 5
Anchoring	Demonstration by instructor	Types of anchors	Discussion of types with examples on-board, if possible	Chapter 6
		Anchor Rode	Show type of rode used and discussion of choice of rode	Chapter 6
		Appropriate anchorages	Point out good and bad anchorages available and discuss rationale for picking the one the instructor chooses	Chapter 6

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Crew Communication	Demonstrate proper crew communication when lowering and setting anchor	Chapter 6
		Prepare to and lower anchor	Demonstrate proper anchor lowering technique with discussion	Chapter 6
		Set anchor	Demonstrate backing down on an anchor and checking to see if it is properly set	Chapter 6
		Scope	Discuss and demonstrate proper scope of anchor rode	Chapter 6
		Estimating swing	Demonstrate using slow speed engine if necessary, where vessel will swing while at anchor	Chapter 6
		Weigh Anchor	Demonstrate technique for weighing anchor using either windlass or by hand	Chapter 6
		Clean and secure anchor	Demonstrate proper technique for cleaning and securing anchor on vessel	Chapter 6
		Pick Up Mooring	Using milk bottle device or suitable replacement, demonstrate technique for picking up a mooring	Chapter 6

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Leaving a Mooring	Following pick-up of mooring, demonstrate leaving a mooring safely	Chapter 6
Emergency simulations	Proper procedures demonstrated or simulated by instructor	Man Overboard	Using cushion, milk bottle or other suitable device, demonstrate man overboard procedures as outlined in student manual	Chapter 7
		Engine Failure	Simulate engine failure and procedures for dealing with it	Chapter 7
		Leaking Boat	Simulate hole in boat either from thru-hull or above and/or below waterline	Chapter 7
		Fire	Simulate a fire onboard and the responsibilities of crew and discuss dangers associated with fire	Chapter 7
		Electrical Failure	Simulate electrical failure onboard and proper procedures for dealing with failure	Chapter 7
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 8
		Bowline	Students demonstrate	Chapter 8

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Hitches	Students demonstrate clove hitch and cleat hitch	Chapter 8
		Figure 8 Knot	Students may demonstrate	Chapter 8
		Square Knot	Students may demonstrate	Chapter 8
Rigging (Sail)	May be done at dockside	Standing vs. Running rigging	Instructor and students identify standing and running rigging—if applicable aboard vessel	Chapter 8
	May be done at dockside	Blocks and Mechanical Advantage	Instructor and students may demonstrate blocks and mechanical advantage, if applicable	Chapter 8
Returning to Dock	Instructor or Captain will perform maneuvers	Docking Preparation	Discussion and demonstration of crew responsibilities when docking	Chapter 3
		Checking Conditions	Discuss and, if possible, demonstrate conditions of wind and current on docking	Chapter 3
		Handling Characteristics	Demonstrate, while on water, handling characteristics of vessel in forward and reverse at slow speed before moving to docking situation	Chapter 3

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ACTIVITY	TOPIC	DETAIL	INSTRUCTOR NOTES	COURSE REFERENCE
		Dock Vessel	Captain or instructor demonstrates proper docking technique with students properly manning dock lines keeping in mind safety considerations	Chapter 3
		Secure Vessel at Dock	Students and instructor may demonstrate proper dock line techniques for docking the vessel	Chapter 3
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	