America's Boating Course (ABC) On-The-Water Teaching Aid Guide (2012-V2)

Objective: Allow students to actually experience the knowledge they learned in the classroom. This first level of on-water education is the foundation for advancement in skills coincident to participating in the USPS continuum of boating education. By education through example, our instructors demonstrate the skills for the student and encourage participation. Additional on water teaching, presented in USPS advanced courses and seminars, build upon the ABC fundamental skill level. The USPS Boating Operator Certification (BOC) program is an opportunity to recognize continued educational achievements and document boating skills training to proficiency.

Purpose: Outline for instructors and assistants, their preparation to help students experience various aspects of the America's Boating Course curriculum on the water. The training opportunities presented in this guide are all-inclusive of ABC material. Instructors may choose those elements for demonstration from this guide that apply to their local or regional situation. The demonstrations with a group of students should be no longer than 3 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. Factors such as time available, type and size of boat, and class size will influence the scope of the OWT. The instructor should encourage students to be involved as they feel comfortable and can do so safely. It is expected that the student is to operate/handle the boat as is comfortable with both the student and instructor/boat owner. 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 students and boat in mind.

This is an optional part of the America's Boating Course and participation will not affect the credit given for the course. It does not provide any certification or credentials to the student. It is a teaching aid to reinforce classroom education and includes material for Part 1 (8-hour / Chapters 1-4) and Part 2 (12-hour / adding Chapter 5).

This time together with the students on the vessel provides a good environment for sharing the "Boating is FUN...We will show YOU how" part of squadron activities and answers questions about the value of membership in USPS and the squadron. Additional USPS courses and seminars should be encouraged as a way to show how the student can gain additional boating knowledge, skill and confidence, even if they do not become a member. Most will want to continue on to the next USPS course, SEAMANSHIP, and proceed toward attaining the first level of BOC, Inland Navigator Certification.

Feedback comments should be directed to the Basic Public Education Committee Chair to assist in making this Teaching Aid Guide the best possible.

General safety considerations: (Use this section as pre-activity check-off list.)

Weather:

1. The activity should be in good weather with moderate wind and seas.
2. Winds and waves not to exceed the capabilities of the boat and crew.

3. Review wind, tide and current conditions (when/where applicable) affecting boat operations.

4. “Heavy Weather Sailing,” “Handling Under Adverse Conditions,” and similar activities are not authorized.

Navigation Limits:

1. Within range of a cell phone (10 miles) or VHF shore station – no more than 20 miles offshore.

2. Limited to daylight hours.

3. Nighttime activity needs additional justification and approval.

Vessel:

1. The vessel should have a current VSC sticker.

2. The vessel must be insured. USPS insurance becomes primary when the first participate comes on board for the activity. Not moving the boat to the activity location.

3. The vessel should be in good condition with no significant problems (all vessels have problems, but not significant problems).

4. The vessel should have sufficient fuel for the activity.

5. The vessel should have a VHF radio, cell phone, or appropriate communication device.

6. Conduct engine room / bilge visual and sniff check, run engine compartment blower for 4 minutes, sniffing exhaust side for fumes, AND open compartment and sniff again before lighting off. (Not applicable for outboard engines)

7. Allow engine to warm up to operating temperature as a precaution to identifying heating problems.

Knowledge and Expectations:

1. For larger more complicated vessels the boat owners should be aboard even if not participating in the subject Teaching Aid Activity. Not necessary for open runabouts.

2. The squadron teaching aid activity should be approved and documented, preferably in squadron executive committee meeting minutes or in emails, and the documentation saved until no longer needed.

3. <u>It is Mandatory that every person be wearing a LIFE JACKET when entering the dock area and while on board the vessel unless below deck</u>. (If you keep the Life Jacket on all the time you don’t take risk coming up on deck without it.)

4. Participants should be told what to bring and what not to bring.

5. Appropriate clothing should be recommended to participants.

6. USPS float plan issued and check list on float plan completed. (It is a tri-fold in the USPS materials catalog under Public Boating Courses, Miscellaneous - #09-66-111-N/C, or is available for download at http://www.usps.org/o_stuff/fp_form.html).

7. Check for any unusual medical conditions of participants (diabetics, pacemaker, pulmonary emphysema, asthmatics, allergies, etc.)

8. There will be an appropriate safety briefing about the boat, relevant to the activity:

    a. Weather check

    b. Thru-hulls

    c. Battery switches/electrical panel

    d. Engine controls

    e. Head usage

    f. Trash disposal

    g. Location of first aid kit

    h. Warning about sitting down or holding on during maneuvers

    i. Location of throwable devices for MOB

    j. Location of VHF/DSC radio and/or cell phone (conduct radio check w/Sea Tow)

    k. Location of flares and other visual distress signals

    l. Location of fire extinguishers and extinguisher ports to engine compartment (if applicable)

    m. Anything relevant about the particular vessel being used

Teaching Aid Activity:

1. Adding activities within the limits approved which enhance learning is encouraged.

Reminder:

1. **All on-the-water programs must be pre-approved by the Squadron or District and documented in meeting minutes to comply with insurance coverage requirements. Selection of the squadron's proficient boat handlers as instructors for OWT is an important consideration for the success of the event.**

2. **This America's Boating Course On-The-Water Teaching Aid Guide was approved on 12 May 2012 by the Boat Operator Certification and On-The-Water Training Committee and no additional approvals are necessary unless modifications are made to intent and contents.**

ABC3 Part 1, Chapters 1 through 4

Teaching Aid Activities:

Activity	**Topic**	**Detail**	**Instructor Notes**	**Course Reference**
Pre-Departure Discussion at dockside	Briefing by instructor or skipper.	Location of PFDs and throwable devices	Insure proper fit - all students and instructors must be wearing them at all times during this activity	Sections 2 & 8
		Location of fire extinguishers, flares and other VDSs	Check gage on FE and expiration date on flares	Sections 2 & 3
		Rules for overboard discharge and trash	Placards & stickers location pointed out and discussed (no plastic overboard)	Sections 7 & 8
		Location of on-board electronics (GPS, VHF, Radar, Chart plotter, etc.)	Proper use and function discussed and demonstration, if applicable	Section 3
		Weather forecast / tide-current (where applicable refer to tide-current tables)	Discussion and sources (VHF Wx Channels, radio, TV, Internet, phone, newspaper, etc)	Section 3
		Visual tour of engine(s)	Demonstrate proper operating procedures	Section 3
		Float plan	File approved USPS float plan	Section 3

Activity	Topic	Detail	Instructor Notes	Course Reference
		Electrical panel	Demonstrate types of lights and proper switches for operation of all electrical systems	Section 3
		Tour of boat	Location of storage-spare parts, (flares, etc were discussed above) first aid kit (review contents as follow-up to prior discussion above)	Section 3
		Boat and Marina Courtesy –	Discussion of expectations of crew on the boat and proper conduct in marinas	Section 3
		Engine starting procedure	Discussion of proper engine starting procedure. .Stress running engine compartment blower for 4 minutes, sniffing exhaust side for fumes, AND open compartment and sniff again before getting underway	Section 3
		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	Section 3

Activity	Topic	Detail	Instructor Notes	Course Reference
Leaving the dock	Procedure by captain or instructor	Dock lines – bow after spring line – demo knots	Types and uses relating to the boat used and boats in general (bow lines, stern lines, breast lines, spring lines)	Section 3, 16
		Leaving the dock	Demonstration of proper technique for leaving the dock and the effect of wind and current	Section 3
		Fenders	Demonstrate use and stowage	Section 3
Maneuvering underway	Demon-strated by captain or instructor	Vessel trim	Demonstration of proper trim while underway	Section 3
		Controlling trim at higher speeds	Use of devices (motorized/manual) for proper trim of the boat	Section 3
		Wave effects	Discuss effects of waves on trim and handling of vessel.	Sections 3 &11
		Maneuvering with 1 or 2 engines	Demonstration of boat handling characteristics using 1 or 2 engines (inboard, IO or outboard) as available	Section 3

Activity	Topic	Detail	Instructor Notes	Course Reference
		Turning with wind and waves	Demonstration of proper turning into and with the wind and waves if safely possible	Sections 3 & 11
		Encountering other traffic (Rules of the Road)	Both simulation and potential actual demonstration of maneuvering in traffic safely	Section 4
		Pivot turns	Demonstration of proper use and execution of pivot turns	Section 3
Rules of the road	Instructor informal quiz while underway	Lookouts	Set lookouts and discuss their necessity	Section 4
		Safe speed	Demonstrate safe speed for type of vessel used. Cavitation	Section 4
		Collision risk vs. determination	Discuss the dangers of collision and the risks involved if not avoided	Section 4
		Overtaking	Simulate overtaking of another vessel and procedures, sound signals and VHF radio use	Section 4

Activity	Topic	Detail	Instructor Notes	Course Reference
		Head-on	Simulate a head-on meeting and procedure for accomplishing with sound signals, or by simply turning to starboard in time to indicate your intention	Section 4
		Sounds	Demonstrate sounds for each maneuver IAW Inland Rules while underway.	Section 6
		Navigation Lights	Demonstrate the use of lights. Discuss various configurations, particularly those pertinent to the boating area.	Section 6
		Limited visibility	Demonstrate proper vessel safety in limited visibility- lights / sound signals	Section 4
		Right-of-way/ Give way vs. Stand-on	Possible simulation or demonstration	Section 4
		CBDR off starboard and port bow	Possible simulation of a constant bearing decreasing range off starboard bow and off port bow	Section 4
		“Pecking order” of vessels	Discuss and, if possible demonstrate the proper order of importance of vessels	Section 4

Activity	Topic	Detail	Instructor Notes	Course Reference
Anchoring – choose approximately 10 feet depth	Demon-stration by instructor	Types of anchors	Discussion of types with examples on-board	Section 10
		Anchor Rode	Show type of rode used and discussion of rode choice	Section 10
		Appropriate anchorages	Point out good and bad anchorages available and discuss rationale for picking the one the instructor chooses	Section 10
		Prepare to and lower anchor	Demonstrate proper anchor lowering technique with discussion (Instructor/Skipper coordination)	Section 10
		Set anchor	Demonstrate backing down on an anchor and checking to see if it is properly set	Section 10
		Scope (this should be discussed before anchor is lowered)	Discuss and demonstrate proper scope of anchor rode	Section 10
		Weigh anchor	Demonstrate proper technique for weighing anchor using either windlass or by hand	Section 10

Activity	Topic	Detail	Instructor Notes	Course Reference
		Clean/wash and secure anchor	Demonstrate proper technique for cleaning and securing anchor on vessel	Section 10
Emergency Situations	Proper procedures demonstrated by instructor	Man overboard or anytime a person is in the water and near the vessel	Using cushion, gal. milk bottle or other suitable device demonstrate man overboard procedures. Stress the engine is to be turned off and the transmission put in gear to prevent free-wheeling of propeller (being in gear also usually prevents an accidental start-up)	Section 11
		Boat taking on water	Simulate hole in boat either from thru-hull or above and/or below the waterline. Bailing.	Section 11
		Fire	Discuss what will be done in the case of a fire.	Section 11

Activity	Topic	Detail	Instructor Notes	Course Reference
Marlinspike Seamanship	Students to demonstrate their knowledge at dock and convenient times on water.	Use knots and hitches to secure vessel	Students demonstrate the cleat hitch, bowline and throwing / coiling a line	Section 16
Returning to dock	Instructor or captain will perform maneuvers	Docking preparation	Discussion and demonstration of crew responsibilities when docking, boat fenders out, etc.	Section 3
		Checking conditions	Discuss and, if possible demonstrate conditions of wind and current on docking	Section 3
		Handling characteristics	Demonstrate, while on water, handling characteristics of vessel in forward and reverse at slow speed before moving to docking situation	Section 3
		Dock vessel	Captain or instructor demonstrates proper docking technique with students properly manning dock lines keeping in mind safety considerations. The skipper will determine if docking is to be starboard or port side to.	Section 3

Activity	Topic	Detail	Instructor Notes	Course Reference
		Secure vessel at dock	Students and instructor may demonstrate proper dock line techniques for docking the vessel	Section 3 / 16
		Stow PFDs and other safety equipment	Students will stow all safety equipment in proper locations	Section 3
		Conduct post-cruise discussion	Instructor will discuss course elements covered in cruise whether on or off the vessel and thank student for participating	Section 3

ABC3 Part 2, Chapter 5

Teaching Aid Activities:

Activity	**Topic**	**Detail**	**Instructor Notes**	**Course Reference**
Demonstrate Using Piloting Skills	Local Area of operation	Identify marks, hazards, bottom contours, useful stops, scales, colors. Danger bearings.	This activity introduces local charts and safe navigation tracks. Enter way points from chart to GPS unit. Use GPS plotter.	Sections 9, 17, 18
	Safe passage / use of check lists	Lay out track and properly label. Establish danger bearings. Choose an anchorage.	Use common destinations. Plot a typical local voyage. Complement exercise 1-1	Sections 10, 17, 18
	Day voyage using GPS and digital chart plotting.	Conduct voyage as plotted and properly anchor	Plot a local voyage to common location and anchorage. Use GPS, and plot compass fixes, compare to charted depth	Sections 18 & Supp
Using plotting tools	Use digital charting to plan track	Plot then transfer to chart and GPS multiple way-pts	Use digital data but back-up with charts.	Sections 17 & 18
		Develop track with multiple way points then chart compass fixes	Primarily navigate using GPS/chart-plotter. Back-up with compass fixes	Section 18
		Use skills to determine set and drift	Cross check electronic data with compass fixes and fathometer readings T-V-M-D-C	Section 18
Digital Charting	Expand basic skills by changing track	Use digital program to modify track and way points while underway	Demonstrate use of digital program to make change / corrections while on voyage	Section 18 supplement