

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)
SAFE BOATING PROGRAM FOR KIDS
2010 LESSON PLAN**

SESSION TOPIC: Safe Boating Requirements and Regulations

OBJECTIVES: To become familiar with:

- Age and other requirements for boat operation
- Required and recommended equipment for various types of boats
- Aids to navigation (ATONs)
- Other important boating rules.

TIME: EMS: 27 minutes; CBMM: 35 minutes

LOCATION: SMMS: CBMM; EMS: Gym; D/5 USPS trailer at both locations

INSTRUCTORS: 8 - 10

NUMBER OF STUDENTS: 10-12, divided into 2 groups: 6 to requirements/cardboard boats, and 6 to trailer

EQUIPMENT: D/5 trailer (outfitted w/equipment, etc.), 3 cardboard boats, clip-on tags to simulate equipment (for boats), stand-up ATONs (for boat course), 8-foot table w/posters, Water Smart from the Start software

REFERENCES: USPS, "Boat Smart," 2006 edition; USCG Office of Boating Safety, "Federal Requirements & Safety Tips for Recreational Boats – You're in Command," November 2006; United Safe Boating Institute, "Safe Boating Tips for Anglers, Hunter & Campers," May 2009; Maryland Department of Natural Resources, <http://dnr.maryland.gov/boating/safety/>, Maryland Boating Safety Program; <http://mlis.state.md.us/2010rs/bills/sb/sb0092t.pdf>, Maryland Senate Bill 92; Water Smart from the Start software

Module	Need to Know for Safety	Practice Drill	Equipment Required	Remarks
Introduction	Type equipment depends on type and size of boat		<u>Required items to demo</u> (hold up for all to see at appropriate point during session): PFD (instructor wears one), throwable PFD, fire extinguisher, sound-producing device (e.g., hand-held horn, whistle), visual	Begin with ½ class sitting in bleachers (other ½ in trailer). Explain going on pretend boat ride, perhaps fishing, now returning; therefore, must know regs, safety equipment, ATONs.

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	Summarize/reinforce important points of each module by asking questions and generating discussion, as appropriate		signal (e.g., flares, flashlight). <u>Other items</u> : VHF radio, cell phone, compass, chart, binoculars, boat hook	If more or less than 12 students, adjust teams, as necessary Ask about boating experience.
Boat Operating Requirements	<p>Anyone born after 07/01/72 must have certificate of boating safety education.</p> <p>Anyone under 16 who operates a “numbered vessel” must possess certificate of boating safety education.</p> <p>Some exceptions: e.g., if <16, may operate boat 11 ft. or longer if under supervision of someone at least 18 w/certificate</p> <p>Must be at least 16 to operate PWC</p> <p><u>Q</u>: How old must one be to operate a boat in MD waters? <u>A</u>: No age requirement other than the 2 preceding items.</p> <p>Any vessel used principally in</p>			Validation decal

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	<p>MD that has propulsion must be registered with the State</p> <p><u>Q</u>: Any interest in taking boating safety course?</p> <p><u>A</u>: Available thru MRSPS, DNR, USCG Auxiliary</p>			must be displayed
<p>Required Equipment on All Boats</p>	<p><u>Life jacket (PFD)</u></p> <ul style="list-style-type: none"> • Children under age of 13 MUST WEAR USCG-approved PFD while underway on recreational vessels <21 ft. in length in MD waters • Everyone 13 or older SHOULD wear PFD • Everyone on board PWC <p><u>Visual distress signals.</u> These vessels not required to carry day signals but must carry night signals when operating from sunset to sunrise:</p> <ul style="list-style-type: none"> • Recreational boats <16 ft. • Open sailboats <26 ft w/o propulsion • Manually propelled boats <p><u>Sound-producing devices.</u> Horn</p>			<p>If pyrotechnic devices selected, minimum of 3 required</p> <p>Vessels 12 mtrs or</p>

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	<p>or whistle for vessels <12 mtrs (including PWCs).</p> <p><u>Navigation lights</u>: red for port, green for starboard, white for stern or mast.</p> <p><u>Capacity plate</u>: Most vessels <20 ft.</p> <p><u>Pollution control placards</u>: Vessels 26 ft. and longer.</p> <ul style="list-style-type: none"> • “Discharge of Oil Prohibited” • Placard specifying other discharge restrictions. <p><u>Fire extinguisher</u>: In certain types of boats (e.g., inboard engine)</p> <p><u>Ventilation system</u>: All vessels built after 04/25/40 that use gasoline</p> <p><u>Backfire flame arrestor</u>: All gas engines installed after 04/25/40 (except outboards)</p> <p><u>Other recommended equipment</u>: First aid kit VHF radio</p>	<p>Ask why various of these items should be carried</p>		<p>more must also have bell</p> <p>#People = $\frac{\text{Length} \times \text{Width}}{15}$</p>

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	Binoculars Boat hook Food and water Sunglasses Mirror Cell phone Chart and compass Sunscreen Flashlight Extra clothing Whistle or horn <u>Plus:</u> Spare fuel, anchor and spare, spare propeller, marine hardware, searchlight, ring buoy, alternate propulsion, fuel tanks, fenders, spare parts, tool kit, heaving and mooring lines, spare batteries,			
ATONs	Used to mark safe route/channel; “sign posts” on the water that provide specific information The rule: “Red right returning” Red daymarks are triangular and even-numbered; also, “nuns” are red. Green daymarks are square and odd-numbered; also, “cans” are green		Show examples of red and green ATONs	ATONs set up outside unless there is inclement weather, then set up in gym at EMS

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Other Important Boating Rules	Safety is the primary concern The Captain is responsible Alcohol and boating don't mix Observe the "rules of the road" Check the weather Let someone know your schedule (float plan) Get a vessel safety check (VSC)			
Preparation for Cardboard Boat Ride				Assign 2 students (of the 6) to each of the 3 types of boats. Go thru exercise of "equipping" each type of boat with safety equipment before launch. Hand out each item of simulated equipment as you discuss.
<ul style="list-style-type: none"> • Big Power Boat 	<ul style="list-style-type: none"> • <u>PFD</u> for each occupant • Has motor, therefore requires <u>registration</u> • Since big (>16 ft.), requires throwable PFD • Since likely to be out after 			

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	<p>sunset, requires <u>running lights</u> (green left, red right, white rear); since has motor, another white light above green and red (can combine white lights)</p> <ul style="list-style-type: none"> • <u>Fire extinguisher</u> (boat has motor and galley) • <u>Horn</u> (may be far from other boats) • <u>Flares</u> (may need to call for help) 			
<ul style="list-style-type: none"> • Small Sailboat 	<ul style="list-style-type: none"> • PFD for all occupants • Some type of sound device (whistle on PFD acceptable) • Need some light for “self-defense” at night (flashlight OK) • Not far from land, so no flares needed • No motor – therefore: no registration, no fire extinguishers • <16 ft., so throwable PFD not needed <p><u>Q</u>: What if sailboat is large (16 ft. or longer) and has motor? <u>A</u>: Same requirements as power boat.</p>			No motor, <16 ft.
<ul style="list-style-type: none"> • Jet Ski (PWC) 	<ul style="list-style-type: none"> • PFD for each rider – must be <u>WORN</u>. 			

Module	Need to Know for Safety	Practice Drill	Equipment Required	Remarks
	<ul style="list-style-type: none"> • Has motor – therefore: requires registration and fire extinguisher • Sound device – whistle OK • Lights not needed – may NOT operate after sunset. 			
Cardboard Boat Ride		<p>After simulated equipment is distributed, students are led to the boats. One instructor is assigned as the Captain of each boat. Students affix equipment to boats. When students are ready, Captain directs students to begin negotiating the course; Captain walks alongside. Items to address/point out as boats navigate the course:</p> <ul style="list-style-type: none"> • Red right returning • Color, marking, and shape of ATONs • Requirements for wearing PFDs • Safety equipment required on each type of boat • Other suggested equipment • Emergency procedures – use of distress signals, man overboard, etc. <p>At end of course, students back</p>		

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		<p>boats into slips. Captain answers any questions. When all 3 crews are finished, Co-leader assembles all 6 students and directs them to trailer. Students who have been in trailer arrive to begin Requirements/Regulations segment of instruction.</p> <p><u>If time permits:</u> After Captain accompanies students on boat ride, have students navigate course without Captain. Upon arrival back at dock, Captain critiques performance. KEEP ALERT TO THE TIME!</p>		
Trailer Exhibits	Recognize safety equipment required and recommended to be carried aboard boats.	<p>Identification of safety equipment: Locate equipment in the trailer Record the number of each item listed on your BINGO sheet. Complete as many boxes as you can in 4 minutes. Turn your sheet in and it will be graded immediately</p>		

BINGO for BOATS: Required and Recommended Equipment on Boats

NAME: _____ HOMEROOM TEACHERS: _____

Record the number of each item listed on your BINGO sheet.

Complete as many boxes as you can in 4 minutes.

Turn your sheet in and it will be graded immediately.

B	O	A	T	S
Life Jacket # ____	Compass # ____	Flare # ____	Anchor # ____	Depth Sounder # ____
Paddle # ____	Rope # ____	Binoculars # ____	Portable Gas Tank # ____	Marine Radio # ____
Fire Extinguisher # ____	Water # ____	Noise Maker (Whistle) # ____	Registration Numbers # ____	Global Positioning GPS # ____
First Aid Kit # ____	Bailing Pail # ____	Throwable Floatation Device # ____	Boat Hook # ____	Navigation Lights R/G # ____
Flash Light # ____	Cell Phone # ____	Chart # ____	Operator's Permit # ____	Distress Flag # ____

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ANSWER SHEET**BINGO for BOATS: Required and Recommended Equipment on Boats**

NAME: _____ HOMEROOM TEACHERS: _____

Record the number of each item listed on your BINGO sheet.

Complete as many boxes as you can in 4 minutes.

Turn your sheet in and it will be graded immediately.

B	O	A	T	S
Life Jacket #___ 5	Compass #___ 19	Flare #___ 22	Anchor #___ 24	Depth Sounder #___ 25
Paddle #___ 9	Rope #___ 4	Binoculars #___ 18	Portable Gas Tank #___ 21	Marine Radio #___ 23
Fire Extinguisher #___ 12	Water #___ 8	Noise Maker (Whistle) #___ 3	Registration Numbers #___ 17	Global Positioning GPS #___ 20
First Aid Kit #___ 14	Bailing Pail #___ 11	Throwable Floatation Device #___ 7	Boat Hook #___ 2	Navigation Lights R/G #___ 16
Flash Light #___ 15	Cell Phone #___ 13	Chart #___ 10	Operator's Permit #___ 6	Distress Flag #___ 1

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