

MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
SAFE BOATING PROGRAM FOR KIDS  
2010 LESON PLAN  
SESSION TOPIC: COLD WATER SURVIVAL (1)

**OBJECTIVES: HOW TO SURVIVE IN COLD WATER**

**TIME:30 MINUTES**

**LOCATION: CBMM - LIGHT HOUSE; EMS - GYM**

**NUMBER OF STUDENTS: 10-12**

**NUMBER OF INSTRUCTORS: 2 at each station**

**EQUIPMENT: Bucket, water thermometer, 5 ga1- ice chests, 5lbs ice, 2 easels**

| CONTENT     | NEED TO KNOW FOR SAFETY   | PRACTICE DRILL  | REFERENCE   |
|-------------|---|---|---|
| Hypothermia | <p><b>50-50-50-50 Rule</b></p> <p><b>Cold water kills;</b><br/><b>As body temp drops:</b><br/><b>Muscle control is lessened, speech slurs,</b><br/><b>Vital organs slow down and stop. Death!!</b></p> <p><b>Prevention:</b><br/><b>Avoid exposure to cold;</b><br/><b>Stay dry and avoid wind;</b><br/><b>Put on rain gear before getting wet;</b><br/><b>Wear PFD on or around water in cold</b><br/><b>Weather</b></p> | <p><b>50/50 chance of surviving a 50yd swim in 50 deg water.</b></p> <p><b>Take the pulse of one student</b></p> <p><b>Immerse students arm into ice water to elbow two to an ice chest for 90 seconds</b></p> <p><b>Pick up pennies or marbles and put into empty container. Repeat process. Was it easier or harder to pick up objects the longer you stayed in the water? Retake the pulse of student taken at the start of the exercise. Observe redness of skin exposed to ice water, Grip upper arm and observe white marks. Redness is evidence of blood rushing to warm the skin.</b></p> | <p><b>USPS, <u>Boating Safety for Kids Pg. 9</u></b></p> <p><b>USPS, <u>Boating safety for Kids Pgs. 23-28</u></b></p> <p><b>Safe Boating tips for Anglers Pub. United Safe Boating Institute</b></p> |

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
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**SESSION TOPIC: Cold Water Survival (2)**

**OBJECTIVES:** Understand response of the body to cold water

**TIME:** 5 minutes

**LOCATION:** CBMM - LIGHT HOUSE; EMS - GYM

**NUMBER OF STUDENTS:** 12

**EQUIPMENT:**

| <b>CONTENT</b> | <b>NEED TO KNOW FOR SAFETY</b>  | <b>PRACTICE DRILL</b>  | <b>REFERENCE</b> |
|----------------|---|--|------------------|
| (Torso Reflex  | <p>Torso reflex is involuntary, uncontrollable<br/>Can happen to anyone and is often fatal<br/>Body has an involuntary gasp when immersed in cold water, but instead of getting air, you are choking on a large influx of cold water, instead of coming to the surface you go straight down. Lungs full of water.</p> <p>What can you do? Wear a PFD. Life jacket will bring you to the surface after torso reflex.</p> | <p>Have everyone gasp. What is gasp reflex?<br/>Torso reflex?<br/>What happens when person has torso reflex under water? Lungs fill with water<br/>Is torso reflex something you can control? No<br/>What happens when lungs fill with water? You sink to the bottom.</p> <p>Ask if torso reflex is controllable.<br/>Make point by jabbing at one of the students in front of their eyes. Ask class if they saw the student jerk back. Point out that action was uncontrollable because it is an automatic nervous system response. The body is programmed to protect itself. Torso response is the same thing.</p> |                  |

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
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**SESSION TOPIC: Cold Water survival (3)**

**OBJECTIVES:** Learn how to preserve body heat when in cold water

**TIME:** 5 minutes

**LOCATION:** CBMM - LIGHT HOUSE; EMS - GYM

**NUMBER OF STUDENTS:** 10-12

**EQUIPMENT:** chair or bench

| <b>CONTENT</b>   | <b>NEED TO KNOW FOR SAFETY</b>  | <b>PRACTICE DRILL</b>   | <b>REFERENCE</b>                                       |
|--|---|---|--|
| <b>H.E.L.P.<br/>POSITION<br/>HEAT<br/>ESCAPE<br/>LESSENING<br/>POSTURE</b> | <b>Hypothermia can occur in 70 deg. Water and in the northern climates begin killing in minutes. This is in the water protection against hypothermia.</b> | <b>Have the students sit and pull their knees up into their chest. This enables the body to retain heat and will help you remain in upright position. Needless to say it helps to be wearing a PFD.</b> | <b>USPS, <u>Boating Safety for Kids</u> Pgs. 21,22</b> |

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
SAFE BOATING PROGRAM FOR KIDS  
2010 LESSON PLAN  
SESSION TOPIC: The Environment (4)**

**OBJECTIVES:** Effects of Oil on Water  
Practice oil spill clean-up

**TIME:** 10 Minutes

**LOCATION:** CBMM - LIGHT HOUSE; EMS - GYM

**NUMBER OF STUDENTS:** 10-12

**NUMBER OF INSTRUCTORS:** 2

**EQUIPMENT:** Aquarium, Styrofoam strip, sand, dish detergent, eye dropper, stapler, oil absorbent pads,  
Motor oil qt. btl.

| <b>CONTENT</b> | <b>NEED TO KNOW FOR SAFETY</b>  | <b>PRACTICE DRILL</b>   | <b>REFERENCE</b>                                |
|----------------|---|---|---|
| Oil on Water   | <p>Protection of the aquatic and marine environment is everyone's responsibility. Every year thousands of oil spills occur in the United States alone. Some can be huge. Such as a tanker spill, and some as small as 1 qt. Oil on water kills fish, ducks Swans, Geese, underwater grasses which protects crabs.</p> <p>Demonstrate different methods of spill Clean-up Put several drops in container</p> | <p>Hold up qt container of oil and ask how much area 1 qt of oil spilled in the water would cover. It would spread over two acres, about the size of two football fields.</p> <p>Method 1: Containment: have students Use strip of Styrofoam (ends stapled together) to contain the spill. Good for Large spills</p> <p>Method 2 Recovery: use eye dropper to Suction the oil. Good for moderate to large spills.</p> | <p>USPS <u>Boating Safety For Kids</u> pgs.</p> |

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|--|--|---|--|
|  |  | <p><b>Method 3 Sinking: Sprinkle sand on oil drops. Watch it sink, but does not clean up. Oil eventually resurfaces</b></p> <p><b>Method 4 Dispersal: Put several drops of dish detergent on oil. Oil breaks up, But is not cleaned up. Just spreads the problem.</b></p> <p><b>Method 5 Burning: Not demonstrated, Could have other effects on wildlife and Environment.</b></p> <p><b>Method 6 Absorption Use oil absorbing pad to clean-up oil Best for small spills</b></p> <p><b>Discuss results</b></p> |  |
|--|--|---|--|



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

**SESSION TOPIC: Alcohol Use/Hazard (6)**

**OBJECTIVES: Boating and substance abuse do not mix;**

**Understand effects of environmental factors and alcohol on judgment and ability to react to emergencies.**

**TIME:10 Minutes**

**LOCATION: CBMM - LIGHT HOUSE; EMS - GYM**

**NUMBER OF STUDENTS: 10- 12**

**NUMBER OF INSTRUCTORS: 2**

**EQUIPMENT: Boating awareness survey; 1 easel; boating accident pictures**

| <b>CONTENT</b>                  | <b>NEED TO KNOW FOR SAFETY</b>   | <b>PRACTICE DRILL</b>   | <b>REFERENCE</b>   |
|---------------------------------|--|---|--|
| <b>Boating awareness survey</b> | <b>One out of every ten people who drink become an alcoholic. One out of every 16 high school seniors drink alcoholic beverages. About 70% of deaths on the water are alcohol related.</b> | <b>Read and discuss the eight questions on the alcohol/boating awareness survey. Ask for an answer and why they gave it. Look for second opinion. Read answer and the reasons for it.</b>       | <b><u>USPS Boating Safety For Kids pg 99-102&amp;108</u></b> |
| <b>Four Stressors</b>           | <b>List four main stressors and their effects<br/>On the body<br/>Stress how drinking alcohol dulls the senses<br/>And makes you less attentive to your surroundings.</b>                  | <b>Sun: sunburn, overheating, glare on the water.<br/>Wind: tiredness, windburn.<br/>Noise: Can't hear other boats or anyone calling for help.<br/>Waves: Unstable in boat, loss of balance</b> |  |

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
SAFE BOATING PROGRAM FOR KIDS  
2010 LESSON PLAN  
SESSION TOPIC: Alcohol & Boating Awareness (7)**

**OBJECTIVES:** Simulate alcoholic state

**TIME:** 5 Minutes

**LOCATION:** CBMM - LIGHT HOUSE; EMS - GYM

**NUMBER OF STUDENTS:** 10-12

**NUMBER OF INSTRUCTORS:** 2

**EQUIPMENT:** Base ball bat, pair of sun glasses, Vaseline.

| <b>CONTENT</b>      | <b>NEED TO KNOW FOR SAFETY</b>  | <b>PRACTICE DRILL</b>  | <b>REFERENCE</b>                            |
|---------------------|---|--|---|
| Simulation exercise | Explain since we don't want students to drink to get the effect of being under the influence of alcohol, we are going to do an exercise that will give the feeling of what it's like. | Take the sun glasses and smear some Vaseline on the lenses Have the student put them on, give him/her the bat , put one end on the ground and place their forehead on the other end. Then walk around the bat five times. Stand up and immediately walk to the instructor. Repeat with all students<br>When all students have completed ask what they felt? Were they in control? Could they ride a bike? Could they operate a boat? | <b><u>MRSPS Boating Safety For Kids</u></b> |

**MILES RIVER SAIL & POWER SQUADRON (MRSPS)  
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**SESSION TOPIC: Effects of Heat/Sun (8)**

**OBJECTIVES:** What to do when the weather turns hot & humid

**TIME:** 10 Minutes

**LOCATION:** CBMM - LIGHT HOUSE; EMS - GYM

**NUMBER OF STUDENTS:** 12

**NUMBER OF INSTRUCTORS:** 2

**EQUIPMENT:** Lap Top, Projector/Screen, sunglasses, sun block, Gatoraide or similar drink, hat

| <b>CONTENT</b>  | <b>NEED TO KNOW FOR SAFETY</b>  | <b>PRACTICE DRILL</b> | <b>REFERENCE</b>   |
|---|---|-----------------------|--|
| <p><b>Interactive discussion on effects of heat and sun</b></p> | <p><b>Extreme heat can force the body into overdrive. The body tries to stay cool through perspiration and evaporation on the skin.</b></p> <p><b>Over exposure to the sun can be bad ranging from mild sunburn to skin cancer. (This could occur 20 yrs down the road as a result of yearly sunburn and deep tanning)</b></p> <p><b>It is not about how hot it is but the UV index, which is the highest from June to September. Wear sunglasses to protect the eyes from glare, especially on the water.</b></p> <p><b>Hot days drink plenty of fluids (not alcohol which dehydrates the body) Avoid sun during the hottest part of the day (11AM-3PM) If you have to be out seek shade whenever possible. Use sun screen or sun block. Wear hat and light weight and light color clothing. Re-apply sun screen liberally during the day.</b></p> <p><b>Check weather forecast for thunderstorms before going out on the water. Lightening can be very dangerous on the water, as you</b></p> |                       | <p><b>BBC internet website</b><br/><b><u>Hot weather risks</u></b></p> |

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|--|--|---|--|
|  | <p>or your boat may be the highest object in that area.</p> <p><b>Dehydration</b> The loss of water from the body and important blood salts like sodium and potassium, which play a vital role in the function of your kidneys, brain and heart.</p> | <p>Using laptop show video and the effects of dehydration on the body from BBC website.</p> |  |
|--|--|---|--|

NOTE: Multiple instructors at each station provide instructor relief in these fast moving and repetitious sessions.