

# Youth Programs Boating Safety Information and Activities



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The material contained in this manual was developed by the National Safe Boating Council in conjunction with Boat U.S. Foundation for Boating Safety.

The Peninsula Yacht Club's Fleet Committee extends appreciation to these esteemed organizations for providing this information, without distribution restriction, to benefit PYC's Boating Information program.

Compiled by: David M. Goodman May, 2015



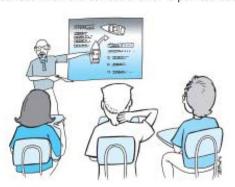
**EDUCATION AND FUN WITH A PURPOSE** 

### **BOAT SMART**-Education is the key.

#### Activity:

This activity involves a group of participants gathered together for a boating quiz. The instructor uses a written quiz and, if possible, a Powerpoint™ or overhead presentation with a multiple-choice quiz. The quiz may emphasize state specific regulations, rules of the road, required equipment, safety procedures and nomenclature.

In phase one, participants complete a written "pretest" answering what they know. Multiple choice is preferred so if an incorrect answer is chosen there's a stronger, more literal association why it is incorrect when the correct answer is pointed out.



Phase two is a duplicate quiz in Powerpoint™ or an overhead presentation. This is conducted after phase one. An option with this second quiz is to use the pretest question as a starting point for a more detailed question within the same topic. For example, a pretest question might be, "When overtaking (passing) another boat, which boat is the qive-way vessel and which is the stand-on vessel?"

This follow-up second quiz would contain the answer with a question such as "What are the boat operator's responsibilities as the give-way vessel?" This two-step process gives the participant a chance to see what they know and the opportunity to know more. The pretest in phase one should be geared

towards the anticipated skill level of the group whether it's beginner, intermediate or advanced.

#### Purpose:

Quiz participants on their boating knowledge, applaud what they know and point out what they don't know. Use this as an opportunity to point out there's a lot to know about boating safety education—mandatory or not it's a necessity of safe boating because everyone should "BOAT SMART."

Additional purpose: To show that what you may already know about safe boating makes it easier to learn more. This is meant to be an introduction to boating education as an eventual lead to taking a NASBLA-approved course. The following is a list of some of the online courses:

#### ONLINE BOATING COURSES

www.boatus.com/onlinecourses/ www.boat-ed.com www.boatsafe.com www.boater101.com

A certificate ready to issue to the participants is available at the Campaign's website at: www.SafeBoatingCampaign.com. Even though it appears as a full-color certificate, it can be pro-

duced on a black and white laser printer with paper of your choice. It's a pdf file with text fields the instructor can fill in. Remind the participants that this is no substitute for any state-issued boating education certificate, but is an acknowledgement of their completion of this primer.



CAMPAIGN WEBSITE: www.SafeBoatingCampaign.com

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**EDUCATION AND FUN WITH A PURPOSE** 

BOAT SAFE-Do your job so they can do theirs.

#### Activity:

Use the supplied boat cutouts (available online at <a href="www.SafeBoatingCampaign.com">www.SafeBoatingCampaign.com</a>) to instruct participants on the "rules of the road." The instructor uses cutouts on a table in a large room. Using a piece of string or yarn attached to one of the boats, demonstrate the required distance another boat must remain away from a naval vessel. The length of string or yarn should be in approximate scale to the length of the boat. Recreational boating is fun, but along with the fun comes responsibility—a responsibility to operate your boat in a safe manner while overseeing the safety of your passengers.



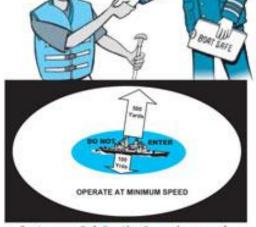


#### Purpose:

This activity emphasizes "rules of the road" and crucial aspects/observances of our nation's homeland security efforts. Boaters have a responsibility to themselves and the nation to boat safely. Safe

and observant boaters help keep safety forces focused on our nation's homeland security needs. Instead of looking for a missing boater who had no boating education or responding to a boat accident due to unsafe boating practices, forces can continue to protect our waters and our nation. So "BOAT SAFE" for everyone's security.





Go to www.SafeBoatingCampaign.com for a downloadable pdf file of the USCG Naval Protection Zone information flyer.

#### Activity:

Print out or write on 3" x 5" cards the following words (one per card):

BE	SECURITY
OBSERVANT	AFFORDS
AND	FREEDOM
TEACH,	EVERYDAY

Hand the cards (one per participant) to each participant without disclosing the phrase "BOAT

**SAFE.**" Ask them to, as a team, assemble the words so that each first letter forms a safe boating message.

#### Purpose:

To get the participants to think beyond the phrase "BOAT SAFE" in a more literal way.

CAMPAIGN WEBSITE: www.SafeBoatingCampaign.com

**EDUCATION AND FUN WITH A PURPOSE** 



#### **Activity:**

Participants are seated in a row with life jackets placed under their chairs. They are instructed that at the sound of the whistle they will have one minute to properly put on their life jacket while seated in the chair and then step outside a dotted line that has been put on the floor. The chairs represent the boat and the dotted line represents immersion in the water. When the instructor sounds the whistle, he uses a stopwatch to begin timing the activity. The winner(s) are those who properly put on and secure their life jackets and move beyond the dotted line within one minute. The level of difficulty can increase by grouping, tangling or buckling the life jackets together and each participant drawing a card that identifies which life jacket they are to choose.

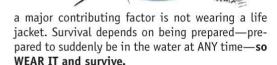


#### Purpose:

The purpose is to show the amount of time, pos-

sible confusion and delay that passes while putting on a life jacket instead of wearing it at all times while boating. Participants are reminded that in the split-second it takes to fall overboard, it's difficult to grab a life jacket and even more difficult to put on one while in the water. Capsizing is the leading cause of drowning deaths, and





### WEAR IT, PROPERLY.

#### **Activity:**

Use the same life jackets used in the previous activity. Preferably have a variety of sizes and types or styles on-hand. Each participant is asked to choose the life jacket they think is the right size for them. Once all participants have selected and put on a life jacket, the instructor asks them to raise both arms straight overhead. The instructor then grasps the upper portions of each shoulder of a participant's life jacket and explains that for a it to work, it needs to fit properly. It's further explained that once you're in the water, if the jacket is loose or too big the flotation properties of the jacket will push the life jacket up over your face. If the jacket is too small, there may not be enough flotation to keep the participant's body afloat.

#### Purpose:

Participants are urged to "WEAR IT!" and also to wear it properly. While it's important to wear a life jacket at all times while on the water, don't wait till you're in the water to know if it will work.

CAMPAIGN WEBSITE: www.SafeBoatingCampaign.com

# **OUT-OF-WATER ACTIVITIES**

LIFE JACKETS: FUN WITH A PURPOSE.

#### Out-of-water activity #1 Life Jacket Relay

Sally and Ben are having fun with this relay and also learning an important boating safety lesson.

Activity: Divide the participants into two or more groups having at least six members each. Each group will have at least one life jacket. On the "go" signal, the first participant of each group will put on a properly-fitted life jacket and run or walk from the starting line to a traffic cone, marker, or other point and back. As the first person from each group returns, they take off the life jacket and help put it on the next participant who runs or walks to the marker and returns. Continue this until all the participants have completed the event. An option for the younger participants is to have them pretend they are performing some type of swimming stroke as they walk to the markers.

**Purpose:** Having fun while becoming familiar with life jacket usage comes together in this activity. Stress the importance of everyone in a boat having and wearing a life jacket because in the event you and others are thrown overboard

and into the water, there's no way to effectively share a life jacket. If the participants emulate swimming strokes, reinforce the aspect that being a capable swimmer is no substitute for a life jacket.

Out-of-water activity #2
TITANIC—
Not the Movie

Ahoy knows that if his craft sinks his first element of preparation is the fact he is already wearing his life jacket.

Activity: Set four chairs in two rows to represent seating inside a boat. Choose four participants to be boat passengers, and sit them in the chairs. Place a life jacket under each seat. To make the demonstration more realistic, turn the life jackets inside-out and have the straps tangled. At your signal, the "boat" starts to sink, and the participants should try to see how quickly they can correctly put on their life jackets. At the end of 60 seconds, determine which of them have their life jackets on and which may be

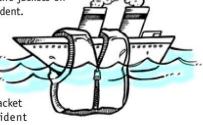
struggling if they were in the water. Repeat the activity a second time after the devices are all untangled and properly adjusted. Encourage the participants to get them on in less than 30 seconds. As a last round of this demon-

stration, have all the volunteers leave their devices on and properly adjusted. As the boat starts to sink the third time, the point is made that the occupants are already

"drown-proofed" by having their life jackets on prior to the accident.

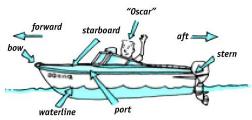
**Purpose:** This activity helps participants realize that it is best to be wearing a life

is best to be wearing a life jacket before an accident happens.



# Out-of-water activity #3 Egg Carton Craft or a "Poultry Pontoon"

Oscar knows that his Mom's boat uses flotation and buoyancy to stay afloat in water. Similarly flotation in the form of a life jacket is what keeps you from sinking.



Activity: Instruct each participant on how to make their own "egg carton craft." Here's what you need:

- one dozen egg cartons (preferably foam-base cartons)
- black markers
- tape
- scissors
- tub of water
- hard-boiled eggs
- red and green markers (optional)

Each carton's lid should be cut to expose the center four egg holders in the carton (see diagram). Use tape to secure the two portions of the remaining lid to the carton base. This is your craft. Using a marker, draw a windshield in front of one end of the opening to help identify the bow of the boat. Again use the marker to identify the bow, port, starboard and stern directions of the boat. As an option, use the green and red markers to emulate the boating lights on the bow (front) of the boat.

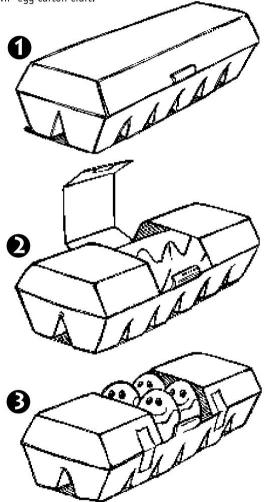
Creativity and fun come together when as an option, you let the participants use the markers to identify their operators and passengers (hard-boiled eggs). The egg carton craft is then used in water to show the importance of flotation and buoyancy. Balance and loading of passengers can also be underscored with this example.

With each boat's directions identified, "rules of the road" can also be depicted with this craft. Proper approaches for situations such as meeting head-on, crossing and overtaking (passing) can easily be shown with two or more craft.

As a learning tool, the egg carton craft is only limited by the extent of your activity's curriculum.



**Purpose:** This activity demonstrates the elements of flotation and that just as one must wear a life jacket as a flotation aid in water, a boat (or craft) works on very much the same principles. In addition, boating is about having fun, but understanding that safe fun is achieved through knowledge about the waters you plan to boat and the boats in which you plan to have fun.





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# IN-WATER ACTIVITIES

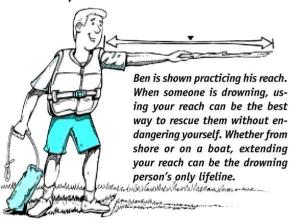
#### **BOATING SAFETY: FUN WITH A PURPOSE.**

The following in-water activities can be adapted for different situations with different age groups. Use your imagination to modify the activities and make up others. Permit the group to get comfortable in the water before starting the activity. The focus of these activi-

ties is boating safety through rescue, knowing what an anchor does and knowing what buoy markers mean.

As a safety precaution, you should always be in a position to observe everyone in the pool (and be a lifequard), or you may assign others to be safety observers.

# In-water activity #1 Reach, Throw and Rescue



Activity: For this activity gather together throw line bags or a substitute such as an empty bleach bottle with a line attached or a line with a bean bag attached. Position three or more participants in the water at different distances from the person with the throw line bag at poolside. Assign varying point values for each person and instruct the thrower they have five throws to accumulate the highest point value possible. Each throw must come within arm's reach of those in the water to count for

With successive tries, experience becomes a good teacher and increasing the degree of difficulty is only limited by your imagination.

that point value.

**Purpose:** To demonstrate that rescue can be achieved by increasing your reach and being prepared with a throw line bag or safe throwable, floatable items.

# In-water activity #2 Current and Anchor Tug '0' War

Megan and Ahoy aren't just playing a game of tug 'o' war; they're learning the importance of anchoring your boat.

Activity: While in the water, two teams hang onto opposite ends of a rope and try to pull each other across a marker or a float. One team is identified as the water's current and the other team is the boat's anchor. If the "current" wins, the boat is lost. If the "anchor" wins, the boat is saved. Do NOT wrap the line around the hand, arm, waist, or attach it in any way to any part of the body. This game should be played in deeper water.



After a period of activity, there can be a discussion and instruction on the need for the appropriate anchor, setting the anchor and types of bottoms.

**Purpose:** To emulate the power and unpredictably of water currents and the need to maintain boat position on the water with a suitable anchor.



#### In-water activity #3 **Traffic Control: Know Your Markers**

Ahoy now knows the importance of reading waterway markers (buoys) and you should too! Similar to highway traffic signs, waterway markers help ensure safe boat traffic as well as identifying water hazards such as shoals and dams.

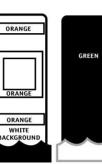
Activity: This activity challenges participants one at a time to know markers and navigate themselves in the water. Brief the participants on the following marker descriptions and use as the "code" for marker interpretation:















**DIVER** DOWN FLAG indicates diver is in area BLUE

**BOATS KEEP** OUT!

DANGER! (wording inside diamond denotes origin of danger warning)

AREA (wording inside circle can denote speed limits and limits of availability)

CONTROLLED INFORMATION (wording inside square can denote directions. distances and other nonregulatory information)

GREEN CHANNEL MARKER indicating port (left) side of channel facing upstream

CHANNEL MARKER (boats can pass on either side of marker)

RED CHANNEL MARKER indicating starboard (right) side of channel facing upstream

CODE FLAG ALPHA indicates diver

These are by no means all the markers in use, but will minimize the learning curve for those exposed to this "code" for the first time. Whether using handouts via desktop publishing or handwritten codes on 5" x 3" index cards, offering the above table as a primer should provide the elements of knowledge to perform this activity. All that is needed are signs which again can be computer-originated or handdrawn to emulate the markers. Color recognition is an apparent necessity for green and red markers but can be achieved with the words "green" and "red" when using black and white printing.

Shuffle and place all the marker cards face down for the participants to select one per individual. Acting as a team, the group of participants (all but one) huddle to formulate the layout of the waterway they are defining. One participant is selected to be the boat which navigates its way among the markers. Once the team has positioned themselves, the boat proceeds to direct its course through the

water. Correct navigation around markers are awarded "plus" point values and incorrect decisions are awarded "negative" point values. As additional reinforcement, the highest negative point values are awarded to "DANGER" and "BOATS KEEP OUT!" markers. At the completion of each boat's navigation, a new boat (participant) is selected and the team huddles to formulate a new waterway. Understandably 8-10 participants is recommended in order to cover the different types of markers and to provide a variety of challenges for the boats.

Purpose: To demonstrate the need for traffic control among boaters and importance of each boater's ability to recognize this "code" in order to ensure safe boating.

> www.safeboatingcouncil.org www.boatingsidekicks.com

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# **OUT-OF-WATER ACTIVITIES**

#### BOATING SAFETY: FUN WITH A PURPOSE.

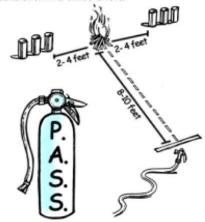
# Out-of-water activity #1 Timed Garden Hose P.A.S.S.



Sally, her dad and Ben are enjoying a great day of fishing. Knowledge is the basic means of preparedness--whether knowing about fish, bait and lures if you're fishing, or knowing the importance of having a fire extinguisher aboard especially in a powered boat.

Activity: You'll need a water (garden) hose with a trigger nozzle (with adequate water pressure), four to six soda cans and some pebbles or sand. Depending on your water pressure, fill the soda cans one quarter to one third with the pebbles or sand and position in

two locations six to eight feet apart. Mark with chalk an "X" (or place an immovable object) in the center point between the two groups of soda cans. This becomes the source of your fire. Mark a chalk line 8 to 10 feet back from the centerpoint (perpendicular to the soda cans). This is the point from where each participant is to put out the fire. Each participant is to proceed to the hose while at the same time stating the P.A.S.S. (Pull pin, Aim, Squeeze the handle and Sweep from side to side at the base) acronym. The sweep portion is emphasized by knocking all the soda cans over in a timed effort.



**Purpose:** This activity demonstrates the importance of effectively using a fire extinguisher with the aid of the easy-to-remember acronym **P.A.S.S.** 

# Out-of-water activity #2 Boat Lights: Ships that Pass in the Night

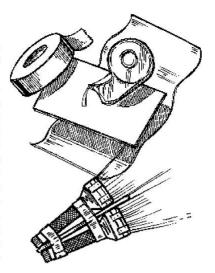
Seth knows that knowledge of boat lights is the first measure in avoiding a collision when boating at night.

Activity: This activity requires an indoor setting where lighting can be eliminated or as a outdoor nighttime activity. Use two sets of three flash lights to emulate red, green and white boat lights on two boats. Tape red clear film over the end of one flashlight and green clear film over another flashlight. Position the two side-by-side and use a medium-sized piece of cardboard to separate the two. Using duct tape, tape the ensemble together as shown



in the diagram. Proceed to produce another set of lights, and you'll be ready for the activity.

After a brief primer on the positioning of lights on a boat and the "rules of the road" pertaining to crossing, meeting head-on and overtaking (passing), select two participants to be the nighttime boats. Instruct one participant to be the identifier of what is taking place and what direction (bow, starboard, port or stern) is facing them. Each participant holds the taped pair of red and green lights (red to the port side and green to the star-



board side) out in front of them and holds the white light behind them.

An option to this activity is to have the rest of the group participate as the identifiers of the situations that are taking place between the two boats at night.

**Purpose:** To demonstrate that all you can rely on to identify another boat's course at night is their boat lights. The instructor's goal is to have a group of participants who become the teachers by correcting each other as they identify each boat light situation as a group.

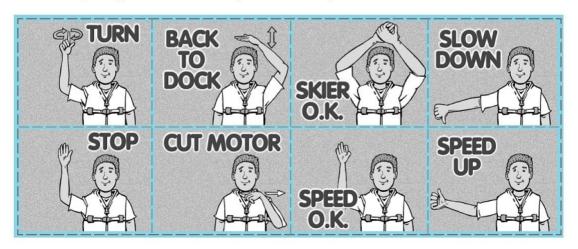
#### Out-of-water activity #3 Timed Water-ski Hand Signals

Activity: Similar to a mime or charades, the instructor or presenter shows the hand signals one at a time to a panel of three participants from the group. Each participant uses a whistle to sound when they know the answer. Five points are given to the fastest correct answer and five points deducted for every wrong answer. To better involve more people, another option is to cut the diagrams

below into eight squares and hand out to eight participants. One or more contestants are selected to verbalize the signals demonstrated by each member of the group.

Purpose: To familiarize and demonstrate the signals used in water-skiing and that communication whether it's hand signals or sound signals is an important safety tool when conveying one's intentions on the water. With the use of the whistle as a precursor to the answer, this is also an opportunity to discuss the merits of sound-producing devices.

Ben is showing the different water-ski hand signals and what they mean.



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#### **EDUCATION AND FUN WITH A PURPOSE**

#### Activity:

A checklist of recommended equipment for boating is established. Each item is assigned a point value based on its bulk or size. The larger the item, the higher the point value. Suggested equipment for this relay is as follows:

- extra line or throw bag
- ✓ bailer or bucket
- first aid kit
- paddles or oars
- flashlight
- sunscreen and sunglasses
- ✓ whistle
- compass, charts and maps
- cellular phone
- ✓ spare fuses or bulbs
- extra food and water
- anchors
- small mirror for signaling
- garbage bags for rain ponchos
- ✓ blanket

#### "CHECKLIST RELAY"

Life jackets while enforced as minimum required equipment are not part of this list of recommended equipment since every participant will be wearing a life jacket. The aspect of a life jacket for every person onboard as minimum required equipment should be emphasized.

Similar to other relays, at least two teams with two equal sets of recommended equipment are established. Whether the relay is conducted across the length of a pool or on a playground, it can be a timed event with total point values determining the winners or once all items in the set are relayed to their destination. Destinations for items can be from one team participant to another, to a fixed point for all items or different destinations for each item. Other equipment (water-skis, fishing rods, diving gear etc.) can be included and mixed with the recommended equipment. The objective with this mixture of equipment is for recommended equipment only to be selected. Minus point values are given for non-recommended equipment transferred during the relay.

#### Purpose:

To create and awareness for what equipment is recommended for safe boating and knowing what to bring is the first step to being prepared.



#### SURVIVOR—NOT THE T.V. SERIES

Sally shows the H.E.L.P. (Heat Escape Lessening Posture) used in the event you are thrown overboard. When thrown overboard, the first rule is to try to get back in the boat or in the event the boat capsizes, stay with the boat. In the event neither one of these is possible, keep all your clothing on and assume the H.E.L.P. position.

#### Activity:

The activity is to find out who the "survivor" is when in the water. One participant using the H.E.L.P. position wears a life jacket and another participant uses the H.E.L.P. position without a life jacket. At the sound of the whistle a third participant keeps time with a stopwatch. As the activity continues, the participants are paired up and given the choice to wear or not to wear a life jacket. After the initial matchup, most will agree that in order to be a "survivor," one must wear a life jacket.

#### Purpose:

To show and have the participants experience the difficulties of flotation without a life jacket and demonstrate the necessity to wear a life jacket at all times in order to be a survivor.

#### **EDUCATION AND FUN WITH A PURPOSE**

#### "REMEMBER, I'M GOING BOATING"

#### Activity:

This activity takes place in a circle and everyone's memory counts. Each participant in the circle will receive a blank float plan (at right). This float plan can be modified to age and/or boating experience level of the participants.

One participant in the circle will start the game off by saying, "I'm going boating and I'm leaving from location." The next person will have to repeat what the person next to him said and then add something new from the blank plan. ("I'm going boating and I'm leaving from location at 9:00 a.m.") You keep this going around the circle until one person cannot remember the float plan details already stated. That person is out and you see if the next person can complete the float plan phrase.

#### Purpose:

This activity demonstrates the importance of completing a float plan before going boating and leaving it with someone who can be depended upon to notify the Coast Guard or other rescue organization, should you not return as scheduled. As evident with this activity, telling someone you're leaving and relying on their recollection is a poor substitute for a written and detailed float plan.

#### **FLOAT PLAN**

- 1. NAMES AND ADDRESSES OF PERSONS ON BOARD:
- 2. DATE LEAVING:
- 3. DEPARTURE TIME:
- 4. DATE OF RETURN:
- 5. ARRIVAL TIME:
- 6. DESTINATION(S):
- OF RETURN NOTIFY THE FOLLOWING:

STATE BOATING AGENCY:

OTHER:

**U.S. COAST GUARD:** 

- 11. MAKE: 12. COLOR:
- 13. OTHER:

10. LENGTH:

7. IF NOT BACK BY DATE 14. VEHICLE LOCATION (PARKING):

8. DESCRIPTION OF

9. REGISTRATION

NUMBER:

BOAT:

- 15. VEHICLE **DESCRIPTION:**
- 16. VEHICLE LICENSE:



Seth shows what our next in-water activity is about—putting a life jacket on in water isn't easy. Aside from wet clothing interfering with one's dexterity, putting on a life jacket in water wastes precious time and energy when rescue and survival are most important.



#### "HOUDINI IN REVERSE"

#### Activity:

With plenty of safety observers and participants with competent swimming abilities, select only two participants at a time. After the participants are in the water, instruct them that they are in a race for their lives. They've just fallen overboard and were not wearing life jackets. At the sound of a whistle, life jackets are thrown three to five feet in front of the participants. Each participant must first, get the life jacket; second, put it on; and third, have it properly buckled. To promote a level playing field, it's recommended each participant have the same type and same fasteners on their life jackets. The challenge continues with pairs of contestants and their posted times. The participant with the lowest time is crowned "Houdini of the Pool."

The follow-up to this crowning is the lesson that as a matter of survival when thrown or falling overboard, trying to put a life jacket on in water is a tremendous waste of time, energy and not something everyone is athletically-inclined to accomplish.

#### Purpose:

To show that an integral part of boating safety is to...BOAT SMART from the start and ALWAYS wear your life jacket.

#### **EDUCATION AND FUN WITH A PURPOSE**

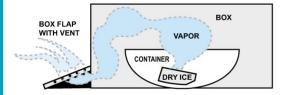
#### CARBON MONOXIDE(CO)- "THE CREEPER OF THE TEAK"

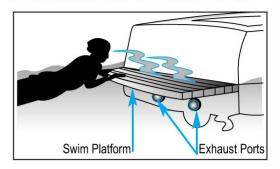
#### Activity:

Opening question/statement: What's colorless, odorless, tasteless and can kill you even while you wear a life iacket? The answer is carbon monoxide.

Discuss the dangers of CO poisoning with the participants. Show the participants the graphic (at right, person teak surfing) to show them the causes, effects and invisibility of carbon monoxide. This graphic is also available as a full-color downloadable file from the Campaign's website. Additional information about CO poisoning is also available in a brochure available from the Campaign as a"resource to order" publication. The order form is available within the Campaign kit.

This activity involves a demonstration of the action and properties of carbon monoxide. The demonstration involves using dry ice placed in a container. Dry ice (frozen carbon dioxide, CO<sub>2</sub>), due to its extreme cold must be handled with caution-gloves and safety glasses should be worn. Never place dry ice in a sealed container such as a soda bottle. Use a small block or a few pellets of dry ice. The container is placed on a table in front of the participants. A box with four flaps is required. Three of





the four flaps are cut flush with the sides of the box (as shown in diagram) and the remaining flap is folded back. To emmulate the open spaces between the swim platform of most boats, cut a few horizontal openings in the flap. Lift the box and pour a small amount of warm water into the container. Place the box back over the container. The contact of the box edge to the table top should provide an effective seal on three sides so most of the dry ice vapor accumulates and works its way to the artificial vent created by the remaining box flap. The dry ice container is identified as the boat's inboard motor, the box flap as the swim platform and the visible dry ice vapor as the carbon monoxide.

#### Purpose:

To show how carbon monoxide can creep and kill while people "teak surf" from swim platforms.

### **IMPORTANT**

When presenting an activity on life jackets and boating safety, one basic goal is to promote awareness of the importance of wearing a life jacket while involved in boating and water-related sports. They must know how to use them correctly and feel comfortable with their use. If a person feels comfortable in the life jacket and is familiar with what it can do, chances of survival increase. Remember, particularly with in-water activities, a life jacket should NOT be considered a substitute for swimming ability. A life jacket is an aid to buoyancy. Swimming skills are still the basic ingredient to water safety.

These activities can be adapted for different situations with different age groups. Permit the group to get comfortable in the water before starting the activity. You should always be in a position to observe everyone in the pool, or you may assign others to be safety observers.

Safety, when in the water, using boating equipment or participating in demonstrations (such as the carbon monoxide activity) is of the utmost importance. Precautions for selected activities and participants are the responsibility of the presenter.

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#### **EDUCATION AND FUN WITH A PURPOSE**

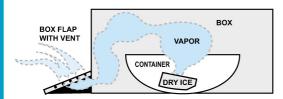
#### CARBON MONOXIDE(CO)- "THE CREEPER OF THE TEAK"

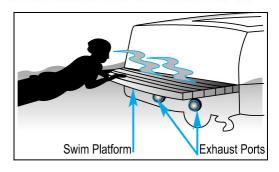
#### Activity:

Opening question/statement: What's colorless, odorless, tasteless and can kill you even while you wear a life iacket? The answer is carbon monoxide.

Discuss the dangers of CO poisoning with the participants. Show the participants the graphic (at right, person teak surfing) to show them the causes, effects and invisibility of carbon monoxide. This graphic is also available as a full-color downloadable file from the Campaign's website. Additional information about CO poisoning is also available in a brochure available from the Campaign as a"resource to order" publication. The order form is available within the Campaign kit.

This activity involves a demonstration of the action and properties of carbon monoxide. The demonstration involves using dry ice placed in a container. Dry ice (frozen carbon dioxide, CO<sub>2</sub>), due to its extreme cold must be handled with caution-gloves and safety glasses should be worn. Never place dry ice in a sealed container such as a soda bottle. Use a small block or a few pellets of dry ice. The container is placed on a table in front of the participants. A box with four flaps is required. Three of





the four flaps are cut flush with the sides of the box (as shown in diagram) and the remaining flap is folded back. To emmulate the open spaces between the swim platform of most boats, cut a few horizontal openings in the flap. Lift the box and pour a small amount of warm water into the container. Place the box back over the container. The contact of the box edge to the table top should provide an effective seal on three sides so most of the dry ice vapor accumulates and works its way to the artificial vent created by the remaining box flap. The dry ice container is identified as the boat's inboard motor, the box flap as the swim platform and the visible dry ice vapor as the carbon monoxide.

#### Purpose:

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