Dear Student or Facilitator:
This book contains the fundamentals of safe boating. Each page has a picture that is related to the key messages (Waypoints*) shown on that page. The picture can be used as a master for a transparency. We invite you to use your imagination to make a verbal or pictorial presentation of the topic on a page. We have also supplied an activity for each page. Have fun with it!

For best results:
☐ Read the material on a page, paying special attention to words in bold.
☐ Answer the One Minute Mysteries.
☐ Check answers on the inside back cover (Page 14).
☐ Complete the crossword puzzle on Page 13. If you can correctly complete the crossword puzzle (without looking up the answers), you are ready to take a boating course that is offered in your state and to be a safe boater!

*Waypoints are selected stopping points on a cruise which define the legs of the voyage. In this book, Waypoints are selected points in boating education which define the segments of this course.

Layout, design and illustrations by Kathleen Fosbinder Bullock

NOTE: This book is based on Federal requirements. Owners/operators of watercraft should also consult appropriate authorities in the states where their boats are registered and operated to learn additional regulations.
It is important that you use the correct terminology when talking with other boaters. If you are facing forward while positioned near the center of the boat, the bow is the front end. The helm is the place from which to steer.

The stern is the rear portion of the boat. The transom is the very back board of the boat and, if the power for the boat is an outboard engine, that outboard engine will be mounted on the transom.

As you face forward, the left side of the boat is called the port side and the right side is called the starboard side. The bottom and sides, as a unit, are called the hull. The hull doesn’t include the seats or the floor, if there is a separate floor on which to walk.

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**Waypoints**

- Like to teach kids about safe boating? Become an official instructor for the United States Coast Guard Auxiliary. Call 1-800-368-5647.

- The U.S. Army Corps of Engineers invites you to lend a helping hand; a variety of opportunities await your call. Contact the Volunteer Hotline at 1-800-865-8337.

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**Parts of a Boat**

Write the correct term for each part of the boat by the numbers below:

1. ___________________________  5. ___________________________
2. ___________________________  6. ___________________________
3. ___________________________  7. ___________________________
4. ___________________________  **Answers on Page 14**
Kathy was wearing her PFD and skiing along happily behind Lindy’s boat when she suddenly took a fall. Kathy tumbled about and, because her PFD came up over her eyes, lost track of which way was up. What was wrong that gave Kathy this problem?

One wearable Type I, II, III, or V readily accessible personal flotation device (also called a life-jacket or PFD) must be carried for each person aboard a boat. On boats 16 ft. or longer, one Type IV must also be carried. Each PFD must be U.S. Coast Guard approved. Each wearable PFD must fit the intended user.

**Type I** is for offshore use. It will turn an unconscious person face up. **Type II** is for near shore use. It will sometimes turn an unconscious person face up. **Type III** is a flotation aid, designed for calm water and comfort, but won’t keep the wearer’s face out of water. Some are approved for use by water-skiers or with personal watercraft (check the manufacturer’s label).

**Type IV** is a cushion, ring buoy or horseshoe buoy. It is designed to be thrown to a person in the water but not to be worn. **Tie a line to it.** **Type V** “devices” are for special purposes and must be used in accordance with the approval condition on the label. Varieties include boardsailing vests, deck suits, pullover vests, work vests, swimwear, etc.

**Waypoints**

- Carry one wearable Type I, II, III, or V “readily accessible” PFD for each person aboard a boat. On boats 16 ft or longer, also carry one Type IV.
Before leaving home, leave a float plan with your family or a friend. It should, at minimum, tell where you will be and when you will return.

For a safe and good ride, the people and equipment should be placed so that the boat is trimmed (balanced in all directions). The capacity plate tells the allowed maximum number of people, maximum weight of people in pounds, maximum weight of people and equipment in pounds, as well as maximum horsepower for the engine.

Federal law requires that you carry a certain set of equipment when underway in order to operate your boat legally and safely. Descriptions of the items and the circumstances for carrying them are shown on the following pages.

Find These Words in the Puzzle
Equipment You Are Required to Carry
DISTRESS (and) FLAG
FIRE (and) EXTINGUISHER
HORN
LIFE JACKET (one per person)

Equipment Recommended to Carry
ANCHOR
FIRST AID KIT
PADDLE
SUNGLASSES
SUNSCREEN

Waypoints
- File a float plan.
- Trim your boat.
- Obey your capacity plate.
- Carry the proper equipment.

Fill out a Float or Trip Plan (like the one above) before you go out in your boat. Leave it with family or friends. Be sure to let them know when you return!
On waters more than two miles wide along the coast or connected to them, you must carry U.S. Coast Guard approved distress signals; a flag or orange smoke for day and flares at night. Boats 16 ft. or over always must carry day and night signals. Smaller boats are required only to carry night signals if operating between sunset and sunrise. The universal distress signal is to wave both arms up and down!

U.S. Coast Guard approved fire extinguishers are required on boats where a fire hazard could be expected from the motors or fuel systems. Type A puts out wood/paper fires; Type B (required on a boat!) puts out gasoline and oil fires; Type C extinguishes electrical fires. Carry Type B or BC on board; your boat’s length determines the size and number to carry. The boat’s design and power determines whether a fire extinguisher is required.

A sound-producing device is required. A whistle or horn is most often used.

Waypoints
※ Certain Federally required equipment must be carried on a boat underway. Other equipment may be required by your state.
Navigation lights must be shown on boats operating between sunset and sunrise or in other periods of reduced visibility. Sailboats and motorboats both must have a red sidelight on port and a green sidelight on starboard as well as a white stern light facing rear. In addition, motorboats must have a white light facing forward (masthead light) above the sidelights. In small motor boats, the manufacturer often combines all the white light needs into one “all-around white light” at the stern.

**NOTE:** A sailboat, while using an engine, is considered a motorboat and must be lighted as a motorboat.

A very small boat propelled only by sail or by oars can carry a lantern light (as its only light) to be used when another boat is near.

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**Waypoints**

- Federal law requires navigation lights to be shown on boats operating between sunset and sunrise or in reduced visibility. The pattern is determined by boat length and type of propulsion.
Personal watercraft, short boats with jet engines (sometimes called Jet Skis® or Wave Runners®), don’t need navigation lights when operated between sunrise and sunset. All aboard should wear U.S. Coast Guard approved PFDs carrying a label with a statement of approval for use with PWC or 50 mph dynamic testing. Many Type III PFDs are approved for use by water-skiers or with personal watercraft (check the manufacturer’s label).

Personal watercraft (PWC) must carry a sound-producing device, fire extinguisher, and the “kill-switch” lanyard (if provided) must be attached to the operator. Without throttle, there is no steering since a jet of water both propels and steers the boat.

Some states have age limits for operating PWC. Check your state’s requirements.

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Waypoints

- Personal watercraft must carry safety equipment like other boats.
- All who ride or operate a PWC should wear U.S. Coast Guard approved PFDs with labels indicating approval for use with PWC.
- A PWC can not be steered with throttle off.

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One Minute Mystery

The first day Mattie and Carlos were riding their PWC together, a boat came by which made a great wake. They crossed it on the fly! In the process, they nearly collided with another PWC! What went wrong?

Answer on Page 14
Good steering is most needed in narrow places or near other boats. With cars, we speak of one car having “right of way.” With motorboats we speak of one boat being “stand-on” and the other being “give-way.” “Stand-on” means that the motorboat will keep going in the same direction with the same speed as before the other motorboat came near. “Give-way” means that the motorboat will change direction and also change speed so that it can stay clear or behind the other motorboat.

**Meeting:** Each motorboat turns away from the other, usually to starboard (right), unless there is an obstacle. **Passing:** The motorboat doing the passing is “give-way,” the one being passed is “stand-on.” The motorboat doing the passing can see the other motorboat the best. The one being passed might not even know that the other motorboat is near. **Crossing:** The “stand-on” motorboat is to the right of the other (and sees a green sidelight). The light which the “give-way” motorboat can see is red.

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**Waypoints**

- The law designates motorboats as “stand-on” or “give-way” by their relative position. Each has a responsibility.
Red (nun) and green (can) buoys are navigational aids on the water which mark sides of a channel (lane where water is deep for boats). The saying “red, right, returning” helps to remember that red buoys are to starboard when returning “from sea” (meaning from open water). Red/white vertically striped buoys mark safe water.

White buoys with orange markings give information or regulate where boats may go. Diamond means danger; diamond with cross means keep out; circles mark controlled areas and squares contain information.

Safe water (mid-channel) markers are vertically striped in red and white.

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**Waypoints**

- Red and green buoys indicate sides of channels.
- Regulatory markers are white with orange markings and must be obeyed.
- Mid-channel markers are red and white vertically striped.
Learn to swim! It's fun, healthy and safe! Always swim with a buddy and where there is adult supervision. Even if you swim well, do not swim to rescue a friend who appears to be in trouble. This has caused a lot of “extra” drownings. Only trained lifeguards know how to rescue a person successfully while swimming!

If someone near you needs to be rescued, hold on to something so you won’t be pulled in, then reach to the person with a shirt, rod, or other object. If you can’t reach, throw a line, life jacket or anything that floats. Tie a rope to it before you throw it! If you can’t throw something to the person, find some one to row out to make the rescue. Don’t go in the water to rescue anyone unless you are a trained lifeguard!

Waypoints
- Learn to swim.
- Swim with a buddy under adult supervision in designated areas.
- To rescue someone in trouble
  Reach, Throw, Row, Don’t go!

Michelle and her five-year old brother, Austin, were standing on the dock watching a distant boat when suddenly Michelle heard a splash! She looked around to see Austin splashing about in water over his head. On the dock with her were an oar, a ring buoy and the family canoe. How could Michelle best help Austin?

Answer on Page 14
When water is cold, falling overboard or having your boat capsize are life-threatening situations because of **hypothermia** (the situation where the body core temperature drops below normal). Wear your PFD for activities around cold water.

If your **boat capsizes**, try to **get up on the boat, out of the water** since water takes heat from you 25 times as fast as air does. If alone, **place your arms across your chest and draw your knees up to your chest** to conserve body heat. This is called the **HELP** (heat escape lessening position). If several people are in the water, **huddle together** to share body heat.

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**Waypoints**

- To help avoid hypothermia in cold water, cross arms over chest and pull legs up to chest when alone or huddle when in a group.

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Wearing his PFD, Russ took his labrador retriever hunting on a beautiful October day in his small flatbottom boat. He shot a duck and sent his lab to retrieve it, not realizing that when the dog jumped from the boat it would capsize. Russ is in water over his head wondering what to do and you are in a nearby ski boat. How could you help him?  
*Answer on Page 14*
Statistics show that a very few bad habits cause a lot of accidents. One exceptionally bad habit is drinking alcoholic beverages while operating a boat. It takes very little alcohol (blood alcohol level equal to or greater than 0.1%) to make a person less watchful and have slower reflexes when reacting to situations like crossing boat traffic. It also results in poorer judgement. Just as it is illegal to drive a car “while under the influence” of alcohol, it is also illegal to operate a boat “while under the influence” of alcohol.

Watching for people, boats and other obstacles in the water is very important! This is called keeping a proper lookout. Most boating collisions are caused by inattention.

**Waypoints**
- Operating a boat while drinking alcohol causes a lot of accidents because alcohol slows reflexes and makes for poor judgement.
- Operating a boat “while under the influence” of alcohol is illegal.
- Keep a proper lookout.

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Dan was out boating with friends. The helmsman had had a few beers and didn’t notice a downed water-skier in the water. Dan saved the day when he yelled at the helmsman to turn the boat. What problem did the helmsman likely have? What was Dan doing so that he knew he should turn the boat? What should Dan do next?

Answers on Page 14
Across
1. Where an outboard engine is attached to a boat
2. The steering area of a boat where the helmsman (boat operator) sits
3. The type of light that faces forward and is found on a motorboat but not on a boat under sail
4. A deep lane of water between red and green buoys
5. A nighttime distress-signaling device
6. The sides and bottom of a boat, attached to its ribs
7. Government agency that must give approval on PFDs and fire extinguishers
8. The right side of the boat as seen when facing forward
9. Boat turned upside down
10. The forward part of a boat
11. Two boats in each other’s paths at right angles (as cars at an intersection)
12. The lowering of the core body temperature below normal
13. Means that a boat is required to stay clear of and go behind another boat
14. To place people and equipment in a boat so that it is balanced in every direction
15. The color of a sidelight found on the port side of a boat
16. “_______ plate” tells maximum load to be carried in a boat
17. Personal flotation device, life jacket
18. Type of fire extinguisher that puts out gasoline and oil fires
19. Red buoy marking channel on right when returning from sea (two words)
20. Green buoy floating aid to navigation marking left side of channel when returning from sea (two words)
21. The left side of the boat as seen when facing forward
22. Means that a boat should continue with same speed and direction
23. Always learn to do this if you will be playing near or in water or if you will be boating
24. “_____ watercraft” are small boats which cannot be steered when power is off

Down
1. “_____ watercraft” are small boats which cannot be steered when power is off
2. A device to make noise when on a boat
3. One is to “keep a proper ______” when operating a boat so as not to hit anything
4. ________ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
5. ________ plate” tells maximum load to be carried in a boat
6. A nighttime distress signaling device
7. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
8. A distress _______ is orange with a black circle and square, used for daytime distress signal
9. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
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14. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
15. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
16. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
17. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
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21. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
22. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
23. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
24. _______ to rescue a person who is in distress in the water (so long as you can keep from being pulled in)
When a boat passes another, the passing boat is always the “give-way” boat. However, if an accident is likely, a boat that is supposed to be “stand-on” should become “give-way”. Tom did the right thing!

The boat should go between the red and green buoys because they mark the edges of the channel where the helmsman can be sure the water will be deep enough for the boat. Any white marker with orange markings should be looked at carefully, it may warn of danger or tell the boat operator what to do.

Since he is close to the dock, reach to him with the oar or throw the ring buoy to him. Don’t swim to him and don’t go to him in the canoe.

Have Russ climb up on his boat to get out of the cold water. Come along the transom of his capsized boat with your boat and bring him into your boat. The two of you can bring in the dog across the transom of your boat.

The helmsman was probably under the influence of alcohol so that his judgement was poor and reflexes slowed. Dan was keeping a proper lookout so he knew they were likely to hit the skier. After they stop the boat, Dan (who had not been drinking) should take the helm.

For fun and additional information, visit these Internet web sites:
http://www.uscgboating.org
http://www.cgaux.org
http://www.boatus.com
http://www.usps.org
http://www.dbw.ca.gov
http://www.boatsafe.com/kids/index.htm

The PARTNERS listed below offer a variety of boating courses for children and adults. Call Boat/U.S. at 1-800-336-BOAT (2628) to learn more about such courses.

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