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ABSTRACT

These lessons contain information that applies to almost every emergency situation involving water. Each lesson has three main components: depiction of an emergency situation, descriptions of actions that will avoid or remedy the emergency situation, and review and discussion questions with suggested answers. Part 1 has lessons on rescuing oneself in a water emergency and rescuing others. The lessons in part 2 describe situations that can occur on the ocean beach, and at other water areas, including swimming pools. The seven lessons in part 3 are based on boating accidents, including rafting accidents, boats turning over, rescuing other boaters, collisions, waterskiing accidents, boat fires, and falling overboard. A glossary and selected references are also included. (JD)

Not in Safe

Water and Boating Safety Grades 4—6

CALIFORNIA STATE DEPARTMENT OF EDUCATION
Bill Honig, Superintendent of Public Instruction
Sacramento, 1984

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Wet 'n' Safe

Water and Boating Safety Grades 4—6

Prepared by
California State Department of Education
in cooperation with
California State Department of Boating and Waterways

Publishing Information

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A list of other publications available from the Department may be found on page 63.

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Preface

To the Teacher

Wet 'n' Safe was created primarily to help prevent tragedies that occur around water. Water-related accidents are the third leading cause of accidental death in all age groups and the second leading cause among young persons ages four through nineteen. For that reason alone, you are encouraged to review the material in *Wet 'n' Safe* and make water safety a part of your curriculum.

Safety education in general and water safety in particular have not been stressed in schools in recent years. The State Department of Education and the State Department of Boating and Waterways, in jointly sponsoring this publication, hope that it will spark interest in water safety education in addition to providing the means for that education. The primary motivation for the conception and development of this book is the belief that all students should receive at least basic water survival instruction.

You can use *Wet 'n' Safe* as a whole; you can use the lessons separately; or you can incorporate sections into other instructional areas—for example, reading, language arts, and health. Each lesson has three main components:

- Depiction of an emergency situation
- Descriptions of actions that will avoid or remedy the emergency situation
- Review and discussion questions with suggested answers

The lessons are addressed directly to the student. The text incorporates the idea of the reader as "hero" to stimulate the student's personal involvement.

By no means does this book begin to cover all the possible hazards around water. The intent is to teach about the most commonly occurring situations and the most basic application of precautions and remedies. However, once the student masters the lessons in this book, she or he should be able to transfer the skills to real-life situations. The lessons can be used in the classroom in several ways:

- Teacher-directed reading of the material
- Independent reading of the material
- Group discussion
- Role playing
- Enhancement of water-related field trips

The American Red Cross, the Y.M.C.A., the Y.W.C.A., the U.S. Coast Guard Auxiliary, the U.S. Power Squadrons, parks and recreation departments, and scouting groups can usually assist you with information or speakers to supplement the lessons in *Wet 'n' Safe.*

Acknowledgments

The State Department of Education and the State Department of Boating and Waterways acknowledge the contributions that the following individuals made in the development and production of *Wet 'n' Safe: Water and Boating Safety, Grades 4—6:* Project Coordinator Christopher A. Lewis and Ben Benites of the Department of Boating and Waterways, for directing the overall effort; Shirley Lyon, for submitting a manuscript that provided the basic shape of the final product; Sam Haynes and Ed Hensley, of the Department of Education's Bureau of Publications, for writing and editing the final manuscript; Paul Lee, of the Bureau of Publications, for the layout and the artwork; Theodore R. Smith, Editor-in-Chief, and the staff of the Bureau of Publications, for carrying out the production of the publication; and the staff and students of Sierra View Elementary School in North Highlands, for field-testing some of the concepts in the book.

This book could not be possible without the previous work and the assistance of the following organizations:

- The American National Red Cross
- The American Red Cross, Sacramento
- The Y.W.C.A. and Y.M.C.A.
- The U.S. Coast Guard
- The U.S. Coast Guard Auxiliary
- The U.S. Lifesaving Association
- The U.S. Power Squadrons

Introduction

At lakes, rivers, the ocean, and swimming pools, you can have a great deal of fun in and around water. With boats, water skis, air mattresses, surfboards, and other equipment, you can also have fun *on* the water.

But water can be dangerous if you do not know what to look out for—especially if you do not know what to do if an accident happens. The lessons in *Wet 'n' Safe* will introduce you to some of the hazards of water and teach you some things you can do to keep common water accidents from becoming more serious.

Part One covers the two basic water situations:

- Saving yourself
- Saving someone else

These two lessons contain information that applies to almost every emergency situation involving water. Study these lessons carefully.

The lessons in Part Two describe situations that can occur at four typical places:

- The ocean
- A pond in the country
- A swimming pool

In the first lesson of this part, for example, you will learn what an undertow is. You need to know about undertows if you are going to swim in the ocean. You may not be planning to swim in the ocean very soon. If you learn what to do if you are caught by an undertow, you will be ready the next time you are at the ocean.

That is the reason for learning the lessons in *Wet 'n' Safe*—to be prepared for emergencies if they ever happen to you or someone you are with.

The seven lessons in Part Three are based on boating accidents. When you finish this part, you will have a basic understanding about:

- What to do if you fall into a river
- What to do when a boat you are in turns over
- How to rescue others when their boat turns over or sinks
- "Traffic laws" for boats
- Rules for waterskiing
- What to do when a fire starts on a boat
- How to rescue someone who falls overboard

Remember: the best way to deal with an accident is to learn what to do *before* it happens. It may be a long time before you are in a boat, or it may be as soon as tomorrow. But if you learn how and when to use the rescue and first-aid methods described in this book, you will know the best thing to do in case an accident happens. And that knowledge could save somebody's life.

Part One

Basic Rescues

A book like this is necessary for one very important reason: water is *not* the natural element of human beings. You can stay in it safely for a fairly long time:

- If the water is not too hot or too cold
- If you can control yourself in the water

  and
- If you are able to breathe

Otherwise, you are in danger and need to get out of the water to be safe.

In Part One of this book, you will learn some of the most important things you will need to know about water. Part One contains two sections, and each section starts with a story about an emergency. You will be a participant in these emergencies and will be asked what you should do in each one.

After each story is a discussion of what happened in the story. In the discussion you will learn what to do in emergencies like the one in the story. The first section is about keeping yourself alive in the water if you are alone and cannot get out by yourself. You will learn about treading water, survival floating, and using your clothes to keep afloat.

The second section is about what you can do to help someone else who is in trouble in the water. You will learn the four steps to follow in rescuing someone, and the importance of following these steps in order. The information in this chapter is especially important because it applies to almost every rescue situation involving water.

While you are reading, imagine yourself in the stories. Imagine that they are happening at a place where you swim or play. Think of what you would do. Read the discussions carefully so that you will know the best way to act in a water emergency.

Emergency Number 1

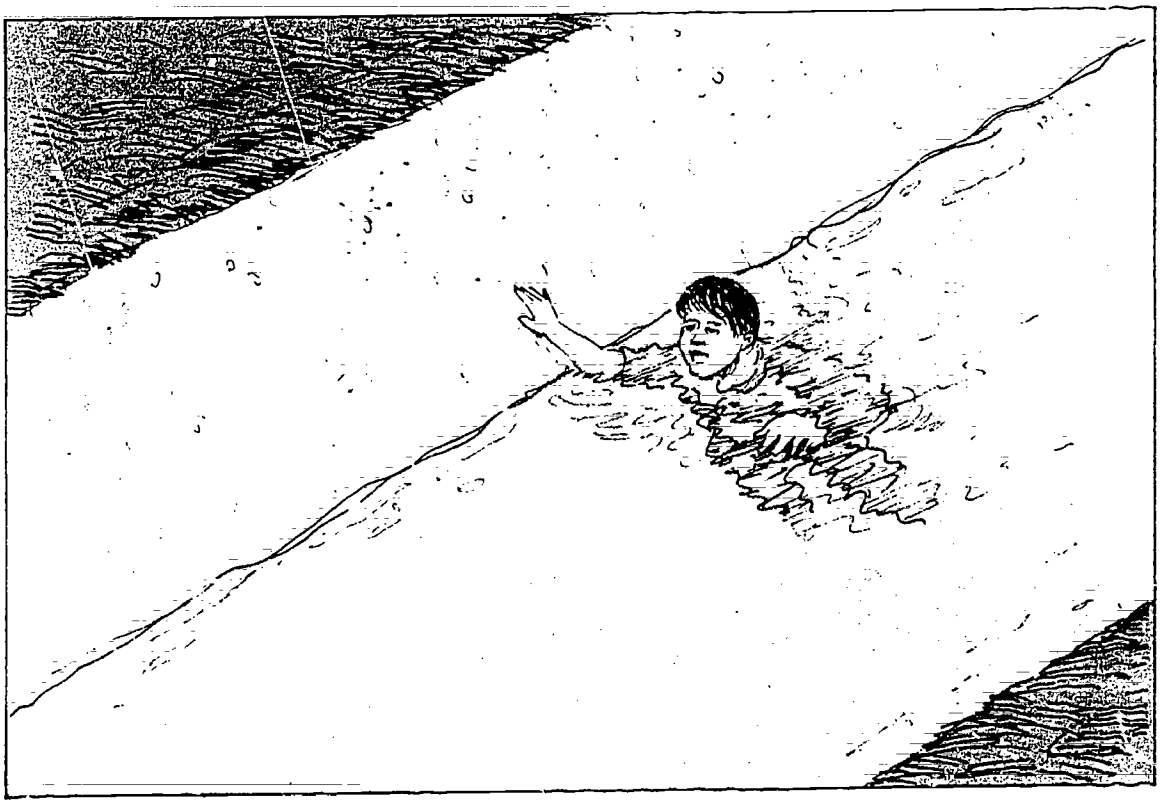
Rescuing Yourself

- ☐ Staying Calm
- ☐ Treading Water
- ☐ Floating for Survival
- ☐ Using Clothes to Float

You tell your parents where you are going and take your dogs for a run along the irrigation canal near the ranch where you live. Your dogs love to retrieve, and you are busy tossing them sticks. You wind up for a long throw, lose your footing, and fall into the canal.

You cannot swim, and there is no one around to help you. Even though the water is not moving very much, it is over your head, and the concrete sides of the canal are too slippery for you to climb out.

What can you do to save yourself?



Staying Calm

First of all, stay calm. If you panic, your body will stiffen, and you will not be able to move or breathe easily. Many people who are afraid in water wave their arms wildly. If you do this, you will become tired and may swallow water or faint. If you swallow water, you will not be able to breathe in enough air to fill your lungs and keep you afloat. When you swallow water or faint, you will sink.

Staying calm helps you to breathe and stay afloat. Staying calm also gives you a chance to think of what to do to save yourself. You can float for hours as long as you are calm, keep your lungs filled with air, and practice what you learn here.

The two ways to keep yourself afloat are treading water and survival floating. If you learn both methods, you can change from one to the other in the water while you wait for help to arrive. Treading water and floating are the best ways to save energy, and they give you time to think about what else you can do to save yourself.

Treading Water

Treading water is a simple way to keep your head above the water while you stay afloat. When you know how to tread water, you can stay in the same place and use only a little energy. That is why you can tread water for a long time without becoming tired. You head stays above the water, so you can see around you and do these other things if you need to:

- **You can signal for help by moving your arm back and forth over your head.**
- **You can watch for help.**
- **You can take off your clothes or shoes if you have to.**
- **You can blow air into your shirt or pants to help you float.**

When you are learning to tread water, it is easier to practice the arm and leg strokes separately. After you learn each stroke well, you can put them together. You can practice the leg stroke in the pool while you hold on to the edge of the pool. On land you can practice the leg stroke while lying on a bench or table with your legs hanging over the end. Practice the arm stroke while you are in the water up to your shoulders. At home practice the arm stroke in front of a mirror to see whether you are practicing correctly.

Treading water

Here are the steps to practice to learn the arm stroke for treading water:

- **Put your arms in front of you.**
- **Bend your elbows a little, palms down.**
- **Move your hands away from each other, turning your palms out as you move.**
- **Bring your hands together again in a smooth motion, turning your palms in.**
- **Continue this back-and-forth movement slowly and steadily.**

You have to use your legs at the same time as you move your arms in treading water. There are two ways you can move your legs. You should practice both ways; then use the leg stroke that is easier for you. The first is the forward-and-backward kick; it is almost like walking slowly in water:

- **Put one leg back and one to the front.**
- **Move your legs slowly from your hips and reverse the positions of your legs.**
- **Continue in a slow, steady motion.**

The other way to do the leg stroke is like the forward-and-backward kick, except that your legs are out to the side:

- **Open your legs out to the side.**
- **Move your legs slowly from the hips and bring them together.**
- **Continue in a slow, steady motion.**

When you are ready to try the arm and leg movements together in the water, first use the leg kick and one arm. Hold on to something with the other arm. Then let go and use both arms. Practice until treading water is easy for you.

Remember that your leg and arm movements together will keep your head above water. You will be able to breathe air into your lungs so your lungs can help float you. Holding your breath in will help keep you afloat, but do not hold your breath too long. Doing that will make you "out of breath" and make you tired more quickly. Remember to stay relaxed while you breathe and tread water.

☐ Floating for Survival

Learning to float with very little effort will help you stay alive in the water for a long time in an emergency. You can learn to float with your face in the water or out of the water. Each way of floating will be described.

Whichever way feels most comfortable to you is the one you should practice and use during an emergency.

Floating face down. Holding your breath underwater is the first thing to learn before you try floating face down. Practice these steps:

- **Pinch your nostrils closed.**
- **Take a breath through your mouth.**
- **Close your eyes and put your head underwater.**
- **Let your breath out through your mouth while you are underwater.**
- **Practice staying underwater for a little longer each time by counting.**
- **Rest.**

Repeat these steps without pinching your nose and with your eyes open, but still holding your breath. Then try letting your breath out slowly through your mouth while you are underwater. You should be able to see the bubbles rise. Come to the surface after you let your breath out.

When you can hold your breath comfortably underwater, you are ready to try floating face down. Your face is underwater most of the time while you are floating face down. Practice floating face down in water that is only up to your shoulders.

Rest. Start with your lungs full of air. Hold your breath and let your arms and legs dangle. Keep your face down. Rest and float in this position for a few seconds.

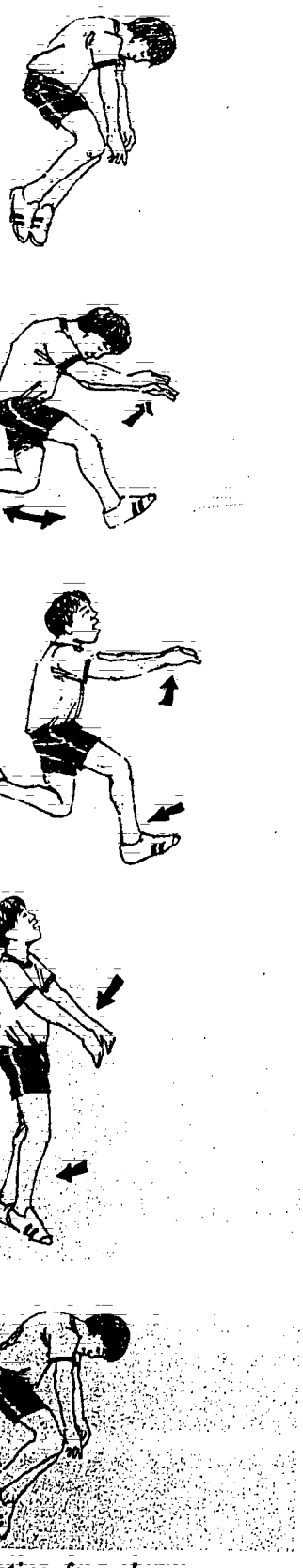
Prepare to breathe out. While you hold the rest of your body in the resting position, slowly lift your arms to about shoulder height. At the same time slowly separate your legs and bring them together gently. These actions will bring your head to the surface.

Breathe out. Tilt your head back just enough to raise your mouth out of the water. Breathe out. Open your eyes so that you can see where you are.

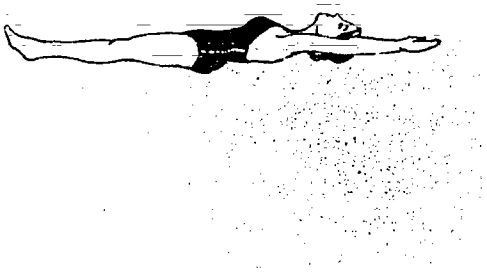
Breathe in. With your head still out of the water, press your hands and arms downward and bring your legs together. This action will give you enough time to breathe in through your mouth. Remember that all you need out of the water is your mouth.

Rest. Slowly let your arms and legs dangle again, and relax with your face in the water.

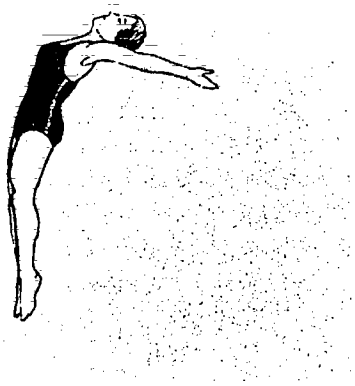
Keep repeating these steps until you can float face down confidently.



Floating face down



Horizontal back float



Vertical back float

Back floating. To get an idea of what back floating is like, practice on the land. Lie flat on your back. Keep your legs close together. Separate your arms so that they are straight out to your sides. Tuck your chin against your chest. That is what you should feel like when you float in the water. Now try one of the back floating methods—the horizontal float or the vertical float. In both of these floats, your face stays out of the water, so breathing should be easy.

Horizontal back float. The horizontal back float is the most comfortable floating position. When you do it, you must lie on your back in the water. To practice it in water, have someone hold up your head as you lean back in the water. When you are lying flat in the water, your friend can hold up your legs and hips. When you are ready, have your friend let go so that you will float free. Keep air in your lungs by holding your breath as much as you can. When you breathe, breathe out and back in quickly. Try different positions for your arms to see which one is most comfortable and helps you to float best.

Vertical back float. When you do the vertical back float, your entire body does not float on the surface as it does in the horizontal float. Your body is underwater except for your face and upper chest. Your arms are extended straight out to your sides.

Practice these floating positions with help until you feel comfortable and relaxed in them. When you can float, your chances of staying alive in water are much better—even if you cannot swim.

☐ Using Clothes to Float

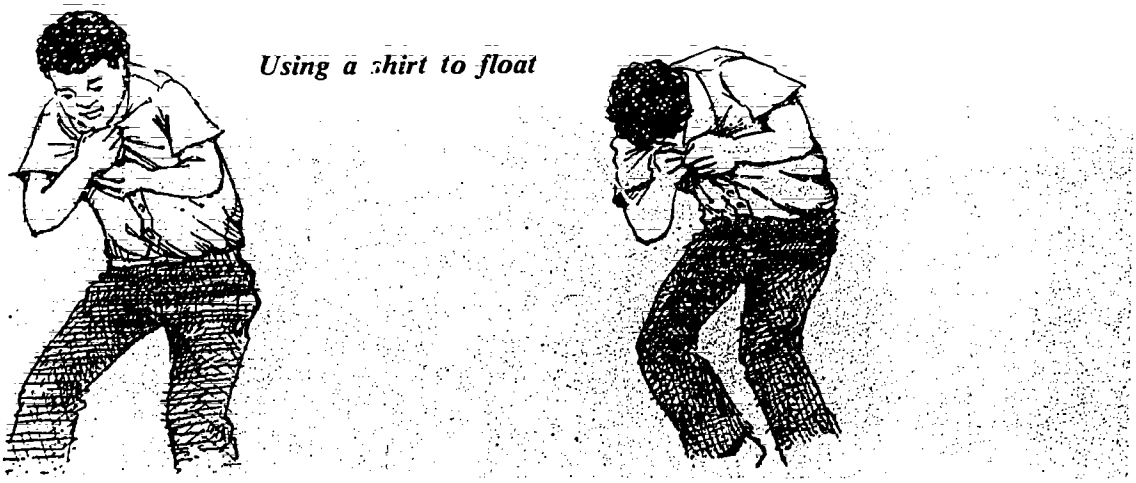
If you fall into water and have nothing to hold on to, you can sometimes use a shirt that buttons or a pair of pants to help you float. If you learn to use your clothes to help you float, you will be able to rest in the water and save your energy. In cold water you should keep your clothes on to help you stay warm. Even in cold water, though, you should take off your shoes so that you can swim and float more easily. Now you will learn how to make a life preserver if you are wearing a shirt that buttons or a pair of pants.

Shirt. While your shirt is on, button it at the collar and hold it tight at the neck. Take a deep breath, bend your head forward, pull the front of the shirt up to your face, and blow air between the second and third buttons. The air will stay inside the shirt and form a bubble at your

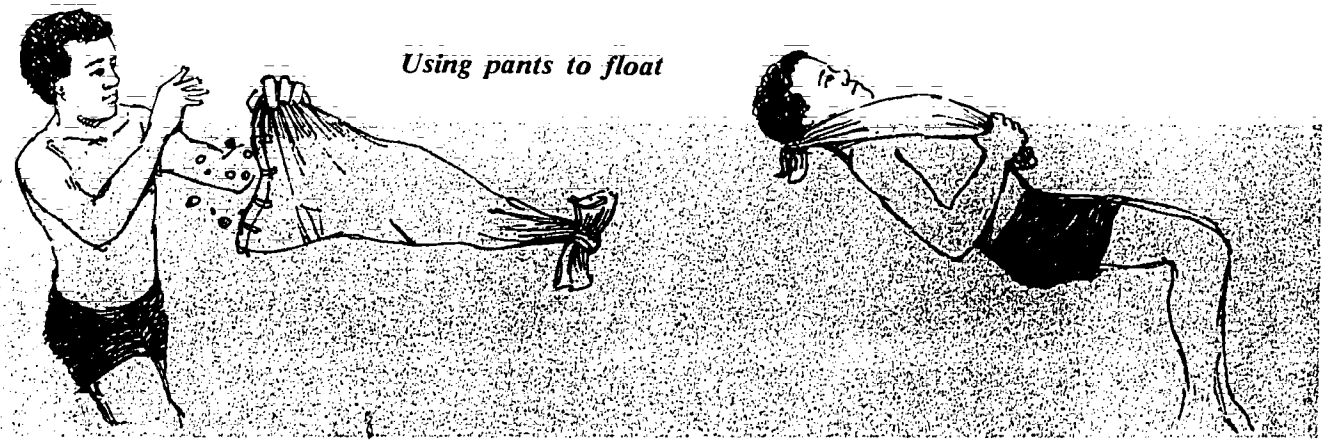
back to help you float. You will probably have to hold the collar tightly to keep the air inside.

Another way to inflate a shirt is to splash air into your shirt with the palm of your hand. First, do a vertical back float and hold the front of your shirttail with one hand, keeping it just under the surface. Swing your free hand down from above the surface to carry air bubbles into your shirt. Continue splashing air into your shirt until the air keeps you afloat.

Pants. To use your pants to float, take them off, close the zipper, tie a knot in each leg or tie the legs together, and splash water and air bubbles into the open end. While doing this, you must keep yourself afloat by treading water with your legs. Remember to hold the waist of the pants underwater so that air does not get out. If air does leak out, add more by splashing more air into the pants. Practice these ways of saving yourself until you are sure you can use them in an emergency.



Using a shirt to float



Using pants to float

Questions for Review and Discussion

1. Why is it important to relax and not to panic if you fall in the water?
2. Do you have any way of knowing when help might arrive?
3. How could you have avoided this accident?
4. Should you remove your clothes in the water?
5. How can your clothes help you to float?

Suggested Answers

1. If you panic, you will tire quickly; you can swallow water; you will find it harder to breathe; and you may faint. If you stay relaxed, you can keep your lungs full of air, save your energy, and watch for help.
2. When you plan to be near water, it is always a good idea to take along a friend. If you cannot, you should at least tell someone where you will be and when you will be back. If you told your family where you were going, someone should come looking for you when you are not back home soon.
3. Avoid accidents like this by keeping a safe distance from the water's edge whether you are playing or walking.
4. In cold water do not take off any clothing except your shoes. In warm water take off your outer clothing and your shoes. Shoes and soaked clothing make swimming and floating harder.
5. A shirt or pants can be filled with air and used to help you float. See the directions earlier in this section.

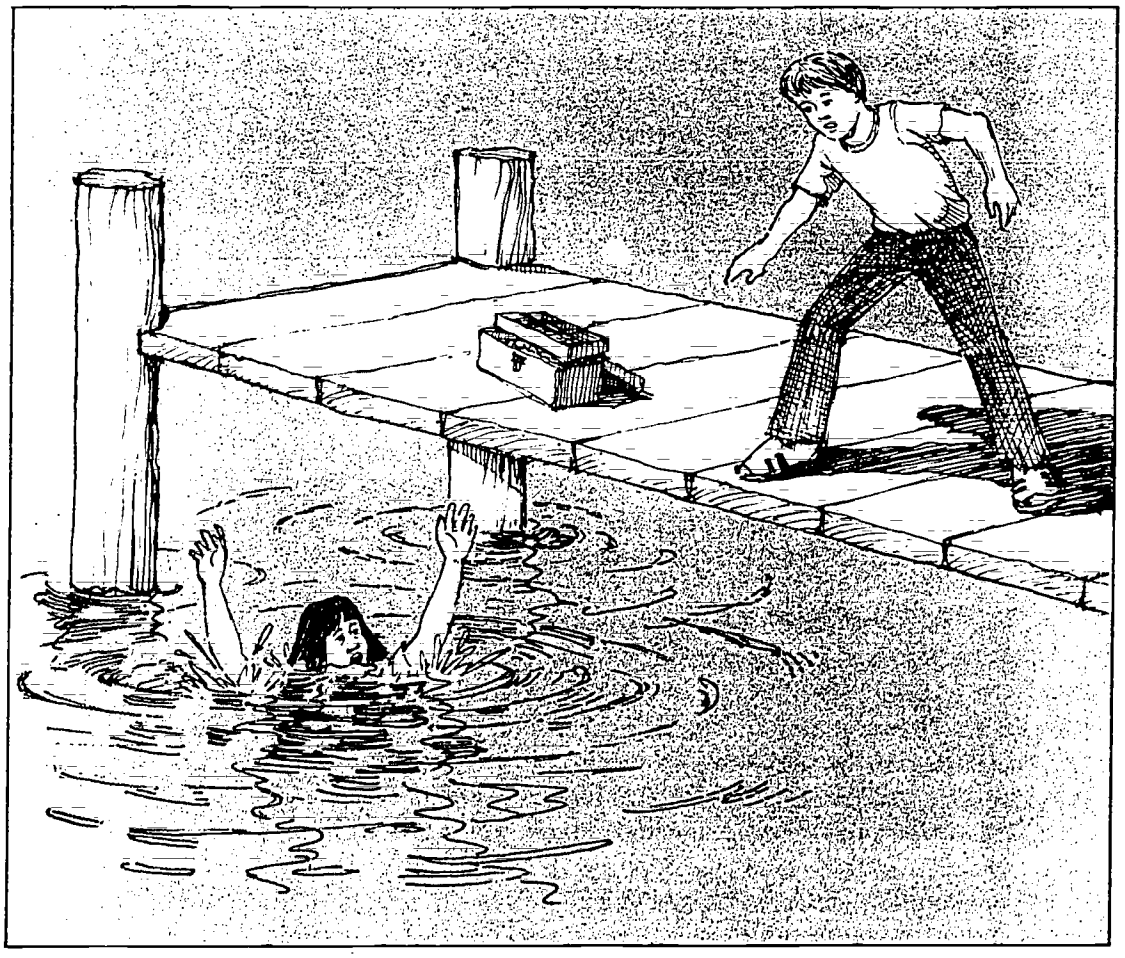
Emergency Number 2

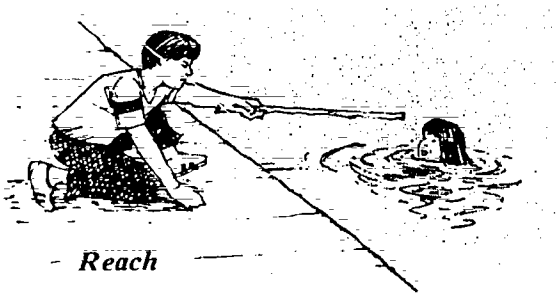
Rescuing Someone Else

- ☐ **Talk to the Person**
- ☐ **Reach**
- ☐ **Throw**
- ☐ **Row**
- ☐ **Go**

You and Jeanie are fishing from the dock. Jeanie gets a bite. In her excitement as she reels in her fish, she falls off the dock into water that is over her head. She cannot swim, and there is no one to help her but you.

What can you do to help her?





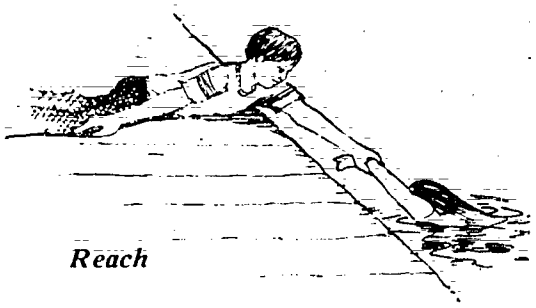
Reach

☐ Talk to the Person

If there is enough time, the first thing to do when someone falls into the water is to talk to the person to keep her or him calm. While you are talking, decide what to do to help the person get out of the water. When you are trying to rescue someone, remember these words to remind you of the order you should do things:

Reach . . .Throw . . .Row . . .Go

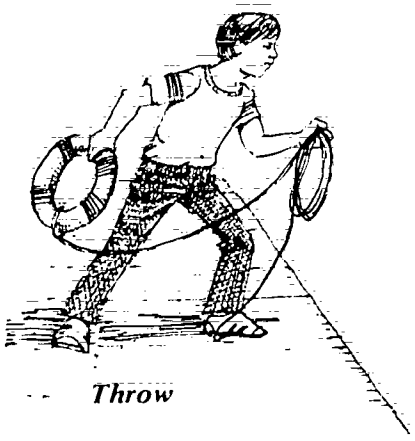
Follow the four basic steps in order. Do not try the next step until you are sure that the step before will not work.



Reach

☐ Reach

The first thing to try to do is reach to Jeanie. Use your hand, a stick, a branch, a rope, an oar, your fishing pole, or anything else she can hold on to. You could try something you are wearing—a jacket, a shirt, or a belt. After she grabs what you hold out, pull her back to the water's edge, and help her out of the water.



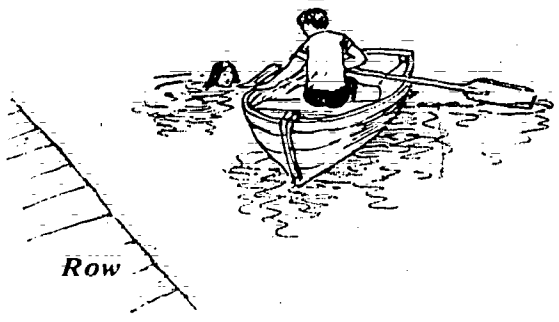
Throw

☐ Throw

If you cannot reach Jeanie in the water with your hand or some object, throw something that floats to her. Throw everything you can find until she holds on to something and is safe. Try to get the object as close to Jeanie as possible without hitting her. Some things that you could throw are:

Life ring	**Life jacket**
Plastic beach toys	**Piece of wood**
Plastic bottle	**Picnic cooler**
Thermos	**Inflated air mattress**
Football, basketball, volleyball	**Spare tire**

After Jeanie is holding on to something that floats, she should rest for a short time. Then tell her to kick in the water to push herself toward the shore. If she cannot reach shore alone, find a rope to throw, get help, or use a small boat to go out and help her.



Row

☐ Row

If there is nothing nearby to reach or throw to Jeanie, look for something to row out to her. You could use a log, an air mattress, a surfboard, a small boat, a raft, or anything else that you can row. Use oars, a paddle, or your hands to move whatever you find. If you get to Jeanie in a boat, help her climb in over the back to get in. If you cannot pull her in or if you use something other than a boat, have her just hold on while you paddle back to shore.

☐ Go

The final step to try is to go out yourself to tow Jeanie to shore. *Do that only if you are a very good swimmer.* If you are the only one there to help and you are not a good swimmer, you should not go. Even if you want to help, remember that even good swimmers sometimes drown trying to help others in the water. You should not try to go into the water to save someone unless you have had special training in lifesaving.

Whenever someone else needs help, always remember one important rule: *You* are that person's best hope of being rescued. If you put yourself in danger, you are also endangering the other person. Try to think of a way to help without risking yourself. That way, if the first thing you try does not work, you will still be able to try something else—or go for help. Risk yourself only if nothing else can be done and if you honestly believe there is a good chance of rescuing the person.

Questions for Review and Discussion

1. What can you do to help Jeanie stay calm while she is in the water? Why is it important for her to keep calm?
2. What should you try to do first to get Jeanie out of the water? What things could you use?
3. If reaching to her does not work, what things can you throw to Jeanie and how would you throw them?
4. How could you use a surfboard or an air mattress to help Jeanie?
5. If you have no oars or paddles, how could you move a boat if one was nearby?
6. How would you tell Jeanie to climb into a rowboat from the water?
7. If you cannot swim, when should you go into the water to rescue someone? Why?
8. What are some unsafe places to fish? Why are they unsafe?
9. How would knowing how to tread water or float help Jeanie?

Suggested Answers

1. Keep talking to her. Tell her help is on the way. Tell her if there is something that she can float on near her. Keep telling her to relax. If she panics, she can use all her energy waving her arms; she can swallow water and not be able to breathe.
2. First you should try to reach out to her. Think of what might be nearby that you could hold out to

someone—things like a stick, a tree branch, an oar, a paddle, a rope, a jacket, or a belt.

3. Throw anything that floats, but be careful not to hit her. If you are not sure something floats, drop it in the water first and see.
4. You could paddle a surfboard or an air mattress to Jeanie and then help her back to shore.
5. You can paddle with your hands. If you know how to start a motorboat, you could drive it out to Jeanie (remember to turn off the motor when you get near her). If you cannot start it, you could paddle or row it out. If only a sailboat is nearby, you could also paddle it out. Sailing would probably be too slow. It is better to paddle a sailboat to the person.
6. Always climb into any small boat (except a canoe or a kayak) from the back. It takes training and practice to climb into a canoe from the water. If you use a canoe or a kayak, it would be easier to tell Jeanie to hold on to it while you paddle back to shore.
7. You should go into the water only when you are sure that you can stand on the bottom. Do not even do that unless you have to. It is too dangerous for nonswimmers to go into the water to help other people.
8. Under a waterfall, in the ocean surf, on rocks, on a fallen tree or log, and on loose ground at the water's edge are some of the unsafe places to fish. These places are unsafe because you could slip easily and fall into the water.
9. If she can stay afloat, you have more time to find a way to help her.

Part Two

Swimming Emergencies

In this part you will look at three situations in which young people have gone to the water to have fun. In each case someone is suddenly in danger because of ignorance or carelessness around water. There are, of course, more than three situations in which young people can get into trouble because of water. But the lessons to be learned will apply almost anytime you go to a body of water to have a good time.

In Emergency Number 3, "At the Ocean," you will learn about three kinds of dangers at the ocean—undertows, tides, and sea creatures. You will also learn about cramps. Cramps can happen to your body when you get tired in the water or go into the water too soon after you eat.

Emergency Number 4 contains a story about the importance of checking ponds, rivers, and other bodies of water to make sure there are no dangers that you cannot see right away. Emergency Number 4 will also introduce you to first aid and to the buddy system. Over the years both of these have saved many lives.

Emergency Number 5 contains a story about some of the things that can happen at a neighborhood swimming pool when youngsters get careless about the fun they are having. You will also be shown some rescue techniques to use when trouble happens.

Emergency Number 3

At the Ocean

- ☐ Undertow
- ☐ Cramps
- ☐ Tides
- ☐ Sea Animals

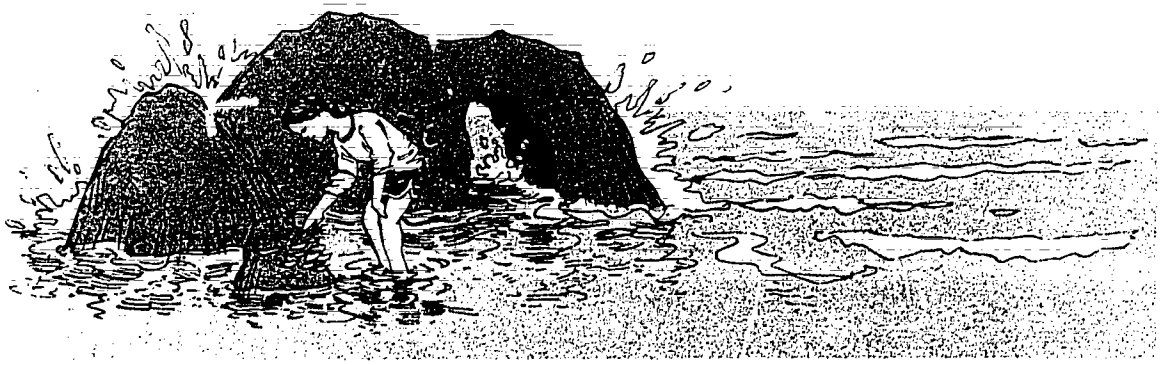
Your class is spending a day at the ocean to celebrate the end of the school year. Most of your friends have never been swimming at the ocean. Because you and your classmates live inland, you know more about swimming in pools, rivers, and lakes.

After the food and towels are laid out on the beach, you and Quan go to test the water. Suddenly, a big wave knocks you both off your feet. You get up and scramble back to the beach, but Quan is carried into the ocean by the undertow. Because Quan struggles to swim against the undertow, one of his legs begins to cramp. What should he do? What can you do?

Later, Sharon finds a small cove with several tide pools. She is so busy looking at the plants and animals in the pools that she does not notice the tide coming in.

When she looks up, the ocean is up, and she is surrounded by water. She panics and starts running. As she runs through a tide pool, she feels a sting on her foot. She swims around the mouth of the cove and scrambles up on the beach and lies there, gasping for air. Her face is white, and she is clutching her foot, which is very painful now.

What can you do for Sharon? What should she have done?

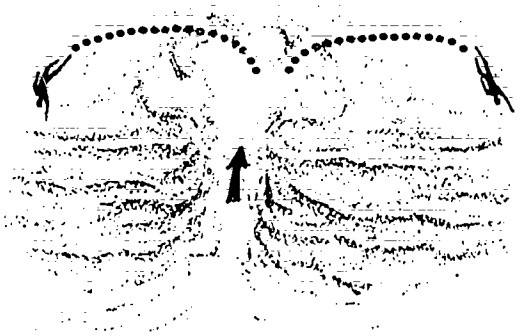


☐ Undertow

After waves come onto shore, they cause a current when they return to the ocean. This current is called undertow, because it happens under the next wave coming to shore, and it can have a very strong pull. Most beaches where undertows are common have signs that read "Unsafe Swimming—Dangerous Undertow."

Higher waves cause stronger undertows. You should watch the waves so that you are not caught off guard. If you are knocked off your feet by a wave, you could be caught by an undertow.

If you are caught, do not fight the undertow. Let the current carry you away from the beach. It will not take you very far. When it weakens, do not try to swim back the same way. Swimming against the undertow is very hard – like trying to swim up a river. Instead, swim up or down the beach a little way, until you can swim back in to shore.



Escaping undertow

☐ Cramps

Cramps are painful tightening of muscles. If you swim too soon after eating, you can get stomach cramps. If you swim too long, you can get cramps in your arms or legs because they are tired. In either kind of cramps, the pain and tightness will make swimming very hard. If you get cramps:

- **Relax as much as you can.**
- **Call for someone to help you.**
- **Change your swimming stroke or float to rest the arm or leg with the cramp.**
- **Stretch and rub the cramped muscle to relax the tightness.**

When the cramp goes away, swim to shore.

☐ Tides

The water level in the ocean rises and falls slowly in addition to the action of the waves. This rising and falling is called the tide. **Low tide** is when the water is the lowest during the day. **High tide** is when it is highest.

The tides change twice a day. In other words, there are two high tides and two low tides every day. If you go exploring at low tide, remember that the water will rise, so do not get stranded on an island or trapped in a low area.

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g at the beaches.
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develop over the
during the after-
ening hours. Little
emperature is ex-
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ECAST

BAY REGION
ast Thursday, be-
tly sunny. Lows in
ghs in the 60s and
ncisco: 60 and 56;
and 58; Redwood
59.

LARA VALLEY
Wednesday morn-
by mostly sunny
afternoon. Patchy
morning clouds
night becoming
y by noon. San
60; Mountain View

mid 60s. Highs in the upper 70s

SUN, MOON, TIDES

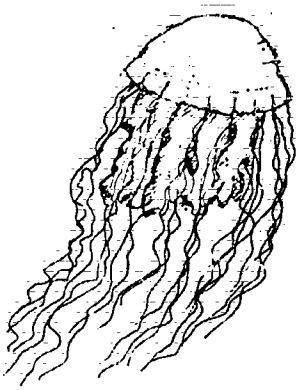
Thursday, June 9
Sunrise 05:47 Sunset 20:32
Moonrise 04:43 Moonset 1:A08

MOON PHASES
Last Quarter June 3, 13:12
New Moon June 10, 06:18
First Quarter June 17, 19:56
Full Moon June 25, 16:27

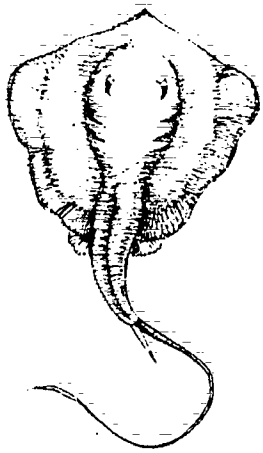
TIMES AND HEIGHTS
OF TIDES

	HIGH		LOW	
June 9	12:01	4.3	04:48	0.1
	23:44	6.3	16:55	2.1
June 10	12:56	4.3	05:30	1.3
	23:57	6.5	17:12	2.5
June 11	13:46	4.5	06:10	1.4
	17:38	2.8	———	———
June 12	07:01	1.6	00:13	6.5
	14:49	2.8	14:2	4.9

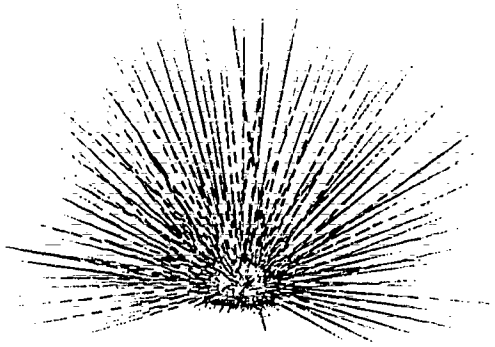
Tide table



Jellyfish



Stingray



Sea urchin

If you do get trapped or stranded, call for help if someone is near enough to hear you. Otherwise, look for a place to cross the water safely to a higher area. Sometimes the moving water caused by the tide will make a strong current, maybe too strong to wade through. You may have to wait for the tide to go out before you can leave.

Before you go to the beach, you can find out about the tides by checking a newspaper for a **tide table.** The tide table will tell you when the water will be highest and when it will be lowest. It will usually also tell you how high the water will rise.

☐ Sea Animals

Most animals that live near the ocean shore cannot hurt you. A few can hurt you, but they will not bother you if you do not bother them. Sharon might have been stung by a sea urchin, a stingray, or a jellyfish that she stepped on.

Sea urchins have sharp spines that contain poison and can break off in the skin. Stingrays have a poisonous stinger on their tails. Jellyfish have poisonous tentacles.

When Sharon reaches the beach, the sting should be treated right away. Wash the sting with sea water and try to remove any piece of sea urchin spine or stingray stinger that is broken off in the skin. Then suck out as much poison as you can and spit it out.

If the sting is from a jellyfish, the skin will not be broken. Instead, it will probably be red and swollen. The first thing to do is to wipe off any pieces of the jellyfish that are sticking to the skin. Gently use a towel or a handful of sand to wipe off the pieces of jellyfish. Try not to spread them over the skin, and be careful not to touch them.

Next, clean the skin with diluted ammonia or with a mixture of water and baking soda. If you do not have those, use wet sand and rinse with fresh water. Then, use olive oil, rubbing alcohol, or lotion to help soothe the painful area. Keep the sore area cool with ice or with a clean towel soaked in cool water.

Sharon is probably frightened and tired after her ordeal. If she is, you should also watch her for signs of shock:

- **Pale, cold skin**
- **Weak and rapid pulse**
- **Quick, shallow, or irregular breathing**
- **Weakness**
- **Confusion**

If Sharon shows any of these signs of shock, keep her quiet and warm. (See Emergency Number 8 for more about shock.) As soon as you can, take her to a doctor.

Questions for Review and Discussion

1. How can you avoid being knocked off your feet by a wave?
2. After being caught by the undertow, how can Quan get back to shore?
3. What is the tide? How do you find out when it will be high or low?
4. How can you avoid being trapped by the rising tide?
5. What could Quan have done to avoid getting cramps?
6. What can Quan do to get rid of muscle cramps?
7. How can treading water or survival floating help Quan?
8. How can you use the "Reach, Throw, Row, Go" rule from Emergency Number 2 to help Quan or Sharon?
9. What other hazards at the ocean can you think of? How can you avoid them?

Suggested Answers

1. You should know when the tide is supposed to rise and always keep an eye on the waves if you are near the water's edge.
2. The best thing for Quan to do is not to fight the undertow. He should let it carry him away from shore until he can swim away from it and back to shore.
3. The tide is the rise and fall of the level of the ocean. Check the tide tables printed in the newspaper.
4. Watch the water level. When it starts to rise, go to a safe place.
5. Swimming when you are tired can give you cramps in your arms and legs. Swimming too soon after you eat can give you stomach cramps. To avoid cramps, Quan should have stopped swimming when he was tired or waited at least an hour after he ate.
6. Rest and massage the muscle.
7. He should use them to relax and stay afloat until he can escape the current.
8. Look again at the rule in Emergency Number 2 to see how you could apply it to help Quan or Sharon.
9. Use your imagination and discuss this question with your classmates and your teacher.

Emergency Number 4

Look Before You Leap

- ☐ **Steep Banks**
- ☐ **Underwater Dangers**
- ☐ **First Aid**
- ☐ **Buddy System**

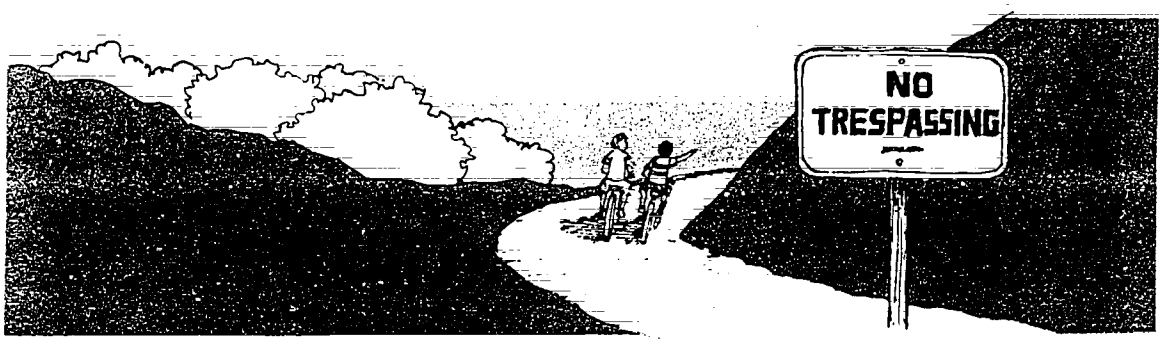
On a hot summer day, you and Mike are riding your bikes on a road outside town. Mike suddenly says, "Follow me," and swerves off onto a small dirt road. You catch up to him as he gets off his bike and begins to walk it along a path through some trees.

"Where are you going?" you ask. Mike tells you he has heard of a great place to swim. Because you are hot and dusty, you are beginning to savor the idea of jumping into some cool water. Then you see the "No Trespassing" sign.

"Forget that sign," Mike says. "I heard that people swim here all the time." Through the trees you come to a ledge overlooking a pond. The water is about four feet below you, but the bank is steep rock because the pond used to be a quarry. The far side is even higher and just as steep.

Before you are finished looking around, Mike removes his shirt and shoes. He steps to the edge and jumps into the water. You wait for him to surface and tell you how the water is. As soon as you see his face, though, you know something is wrong.

Mike is in pain. He is bobbing in the water, struggling to stay afloat. He seems to be using only one arm and one leg. When you see some blood in the water, you know he must have cut his other arm or leg badly. What should you do to help Mike?



☐ Steep Banks

Before he jumped in, Mike should have looked around the pond to make sure that he could get out easily. In quarries and other places, you have to watch for banks that are too steep for climbing. If you cannot climb the bank, do not go into the water.

The first thing you have to do is to get Mike out of the water. If there is a place where you can walk right to the water's edge, get Mike to swim there if he can. If he cannot swim, use a branch, your shirt, or anything else to pull him to where you can help him out of the water.

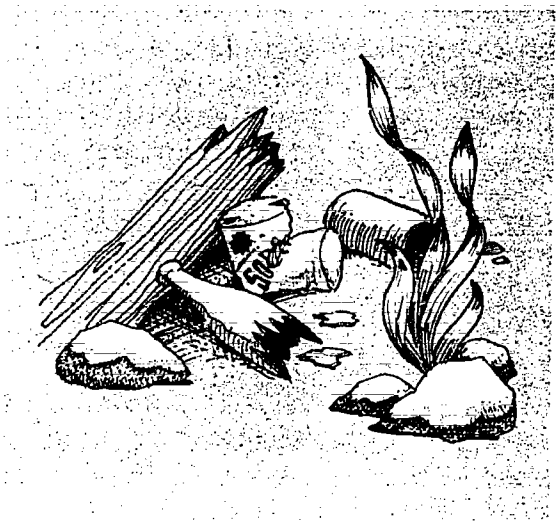
If there is no easy place to get out of the water, try to find a place with a foothold for him to use. You can help him climb out by reaching to him. Use anything that is around to help Mike out of the water. You could use your shirt, Mike's shirt, a pair of pants, a backpack, or the cable or chain you use to lock your bicycle.

☐ Underwater Dangers

Besides steep banks, Mike should have looked to see whether anything dangerous was in the water. Because quarries are where rock is cut, the ponds inside old quarries can contain sharp rocks. But any pond can contain other hazards. Old ponds were sometimes used as dumps. They can contain broken glass, rusty cans, garbage, and even old cars and other machinery. Some of these things can not only cut a swimmer badly but also cause dangerous infections in the cuts.

Another danger in a pond is pollution. Pollution can be caused by things that were dumped into the pond—things like chemicals or some kinds of building materials. Pollution can also be caused by accident. Sewage lines or septic tanks can leak into a pond. If a dump is nearby, rain water can carry pollutants from the dump into the pond.

Your nose will sometimes tell you that water is polluted. Some polluted water will just not smell fresh and clean. Some will just plain stink. That is not true all the time. Some chemicals and some germs do not smell at all, but they can still cause burns, irritation, or disease. Do not go into water that you are not sure of.



Some underwater dangers

☐ First Aid

When Mike is on land, the first thing you should do is to treat his injuries. Treating injuries as soon as possible after they happen is called first aid. The purposes of first

aid are to save a person's life and to keep the injury from getting worse. Start first aid by cleaning the injury. If you have clean drinking water with you, wash out the cuts as much as possible. If a cut is bleeding heavily, you must do something to stop the bleeding. Use a towel or a shirt to make a bandage. Press it against the cut and hold it there with enough pressure to stop the flow of blood.

Keep Mike lying down. Raise the arm or leg that is cut above the rest of his body. That decreases the amount of blood flowing to the arm or leg.

Next, you need to get Mike to a doctor. Standing water in smaller ponds could be polluted by trash or sewage. So even if you stop Mike's bleeding, a doctor should make sure that the cuts are not infected.

To get help, go to the road and flag down a car. Ask the driver to take you and Mike to the hospital. If Mike cannot walk, if he is unconscious, or if he is pale and weak, keep him warm and quiet. (See Emergency Number 8 to learn about how to recognize shock and what to do about it.) Send the driver to telephone for help. You should stay with Mike.

☐ Buddy System

Mike is lucky that you were with him. Whenever you go into or near the water, you should go with someone else. That is called the buddy system; it is when you and a buddy go to the water together. Like Mike, you might need help someday. If so, you will be very glad to have a friend along.

Without you, Mike might not have been able to climb out of the pond. He might not have been able to stop the bleeding from his cuts. And he might have been too weak to walk back to the road. It is much safer to use the buddy system. Besides, you can have more fun doing things with a friend.

Questions for Review and Discussion

1. Why might the owner have put up a "No Trespassing" sign besides just to keep people off the land?
2. Is there any way of knowing whether water is polluted?
3. How does the old saying "Look before you leap" apply here?
4. How does the Reach-Throw-Row-Go rescue plan apply to this situation?
5. Why is the buddy system important to Mike in this situation?

Suggested Answers

1. The owner might have put up the sign to keep people away from the pond because it is polluted or otherwise dangerous to swim in.
2. You can sometimes tell when water is polluted, but not always. Some polluted water looks murky or smells bad. But that is not always true. Water can be polluted and still look and smell all right. Avoid unfamiliar or unchecked water.
3. Before he *leaped,* Mike should have *looked* at the sides of the pond and made sure that there was an easy and safe place to get out of the water. He should also have made sure that there were no rocks or other things underwater where he jumped in. If the water is clear enough, he could have walked into the water at a safe place and swum to the jumping place to see what was on the bottom.
4. At a quarry you might not have anything to throw to someone in trouble. Otherwise, you should follow the instructions in Emergency Number 2 for rescuing someone.
5. The buddy system means always going to the water or into the water with a friend. In this story you used the buddy system because there were two of you. If you were not there, Mike might not be able to get out of the quarry, or he might not be able to get to the road for help.

Emergency Number 5

At the Swimming Pool

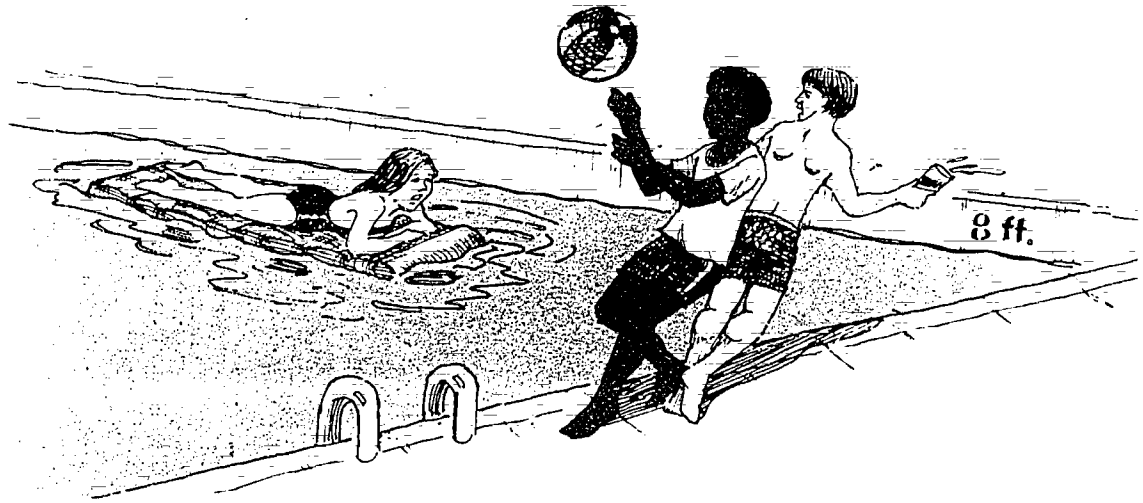
- ☐ **Swimming Pool Rescue**
- ☐ **Reviving Someone**
- ☐ **Rescuing a Struggling Person**
- ☐ **Obeying Basic Pool Rules**

You and some friends are celebrating Bobby's birthday with a swimming party at Bobby's house. The barbecue is going; music is playing. Some people are dancing; some are swimming; and some are eating.

Susan is lying on a small raft in the pool. Several boys and girls are beginning to play keep-away with a beach ball. Another group is playing volleyball on the lawn.

The game of keep-away moves close to the pool. The players are running and leaping for the ball. They do not realize how close they are getting to the pool. One of them turns to run with the ball and crashes into Paul, knocking him into the deep end of the pool.

Meanwhile, Susan has drifted to the deep end of the pool. When Paul falls in, Susan is so surprised that she slips off the raft. Susan comes up waving wildly and gasping for air because she cannot swim. Paul is not coming up. It looks as if he hit his head on the side of the pool. What can you do to save them?



☐ Swimming Pool Rescue

You should know immediately that Paul is in more danger than Susan. Make sure that someone reaches something or throws something to Susan while you prepare to help Paul. If you cannot swim, you must begin by using something that is long enough to reach Paul. Pools should have a pole, called a **shepherd's crook,** to use in rescues.

Brace yourself on the edge of the pool and try to hook Paul by his clothing or under his arm. When you do, pull him up gently, and have the others help you pull him out of the water.

If there is no shepherd's crook or something else long enough to reach Paul, you may have to go in and get him. If you can swim, dive into the water down to Paul. If he is not moving, grasp him by the waist or under the arms and come up to the surface with him as fast as you can. If he is moving, you will have to be very careful. He could grab you and hold you down, too.

When you get Paul on land, you must immediately lay him on his back. Turn his head to one side and press on his stomach to push out extra air and water. If Paul is conscious, reassure him that he is all right and keep him warm and comfortable until a doctor sees him.

If Paul is unconscious, check to see whether he is breathing. If he is, keep him warm and call an ambulance. Do not move him. If he is not breathing, use mouth-to-mouth rescue breathing to get air into his lungs.

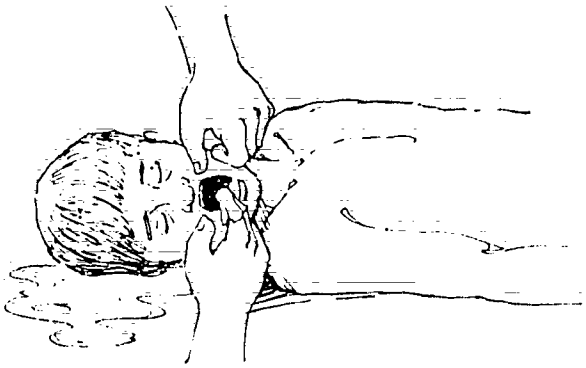
Using a shepherd's crook

☐ Reviving Someone

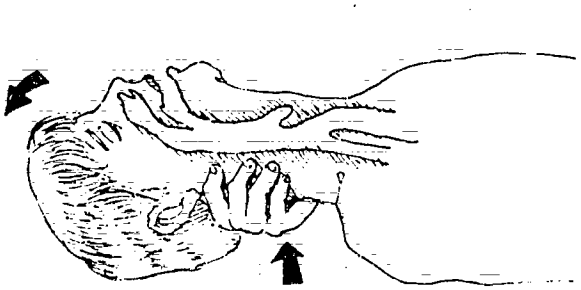
Do not try to get water out of his lungs. You cannot. Instead, you must force air into his lungs through the water. Here is how to do **rescue breathing**:

- **Tilt his head back so that his chin is pointing straight up. (That gets his tongue out of the way.)**
- **Make sure nothing is blocking his throat.**
- **Hold his nose closed, put your mouth over his, and blow until you see his chest rise.**
- **Take your mouth away and let the air come out. Then blow air into his lungs again.**
- **Keep repeating these steps quickly but smoothly until he revives or medical help arrives.**

Do not stop breathing for him—no matter how long you have to do it. People have been revived after hours of

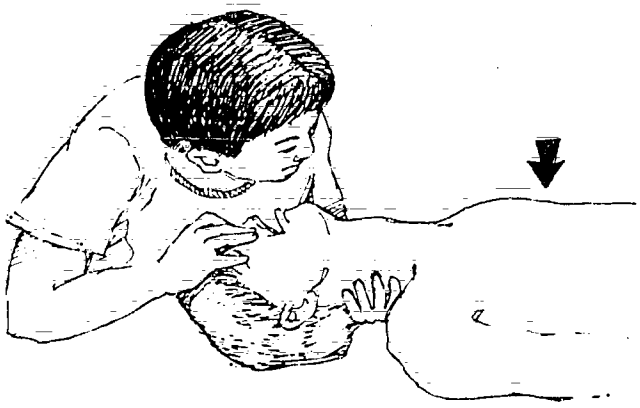


1. Clear mouth



2. Lift chin

3. Blow air in



4. Watch for chest to rise

Rescue breathing

rescue breathing. When you revive him, do not let him walk. Keep him warm and lying flat until an ambulance or a doctor arrives.

☐ Rescuing a Struggling Person

The best way to rescue Susan is to reach to her with something or to throw her something to float on (see Emergency Number 2). Use your hand, a shepherd's crook, a rope whatever you can reach her with.

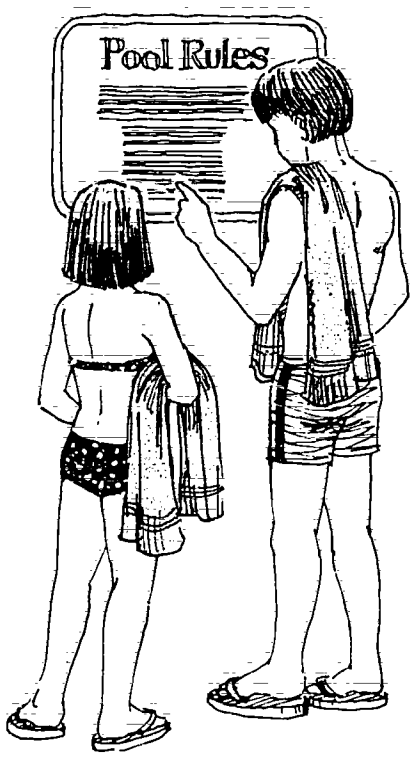
If you cannot reach her, throw anything that floats. Use the floating ring on a rope if there is one at the pool. If not, push her raft to her, throw an empty ice chest, or even large empty soda bottles with the caps on. Keep throwing things to her until she grabs one and is safe.

You should *not* go in after her unless you have no other choice. A frightened person who is thrashing in the water can be dangerous. When you swim close, she will try to grab you. If you are grabbed around the neck, your air could be cut off, and you might not be able to swim.

☐ Obeying Basic Pool Rules

Now you know why most pools have a list of "Pool Rules" posted next to them. Following those rules helps prevent accidents like this one.

In addition to these basic rules, you should always swim with someone else. Remember the buddy system? (See Emergency Number 4.) The person you swim with should be an adult or someone who knows how to swim or rescue someone else in trouble in the water.



Obey pool rules.

Questions for Review and Discussion

1. How could these accidents be avoided?
2. If you were the only person there besides Paul and Susan, what would you do first? Why?
3. What things besides those mentioned already could you reach with or throw to Susan?
4. If you had a swimming pool, what rules would you put up at your pool? How would you make sure that people obeyed those rules?
5. What should you do for a person who is struggling in the water? What should you *not* do? Why?

Suggested Answers

1. Obeying the basic pool safety rules would have prevented these accidents. One of the rules is not to run near the pool. Another is "No horseplay." Also, Susan should not have allowed herself to drift into the deep end if she could not swim.
2. You have to decide who is in greater danger. In this case Paul would be, because he is underwater. Susan is still breathing and on top of the water. If something that floats is nearby, though, you could throw it to Susan as you are diving in to help Paul.
3. Some things to help you reach her are: pants, towel, blanket, belt, broom, tree branch, lounge chair, shirt, baseball bat.
   Some things to throw to her are: inflated ball (football, volleyball, basketball, soccer ball), inner

tube, piece of furniture that floats, beer or soft drink keg, firewood log, balloons.

4. Discuss this with your classmates, your teacher, and your parents.
5. You should reach or throw something to the person. You should not go in after the person if you can avoid it. A struggling person can grab you and pull you underwater, too.

Part Three

Boating Emergencies

The last part of this book is about boating. Boats make it possible to leave the land behind and have fun on the water. But you must remember that being out on the water, far from land, can also be dangerous. If something happens to you or the boat out on the water, you could be in real trouble! This last part describes some of the things that can happen while boating and what to do to take care of yourself or someone else if these things happen.

Whenever you or your family or friends are planning a trip on a boat, be sure to pay careful attention to these conditions:

- *The weather.* Whenever there is stormy weather, there is almost always wind, and wind can be dangerous to people on boats. Wind causes waves, and waves can cause small boats to turn over or fill up with water. Waves can also make it very difficult for people in the water to be seen and rescued.
- *Temperature.* It is more difficult to do things right on a boat when you are cold, and making mistakes can cause accidents. Always try to dress for the weather whenever you are going out on a boat. And remember to take along an extra sweater or jacket if you are going to be out for very long. It will usually be colder at the end of the day, when you are getting ready to go home. You will be affected by the cold even more if you are tired. That extra piece of clothing will come in handy.
- *Your companions.* Ask the people you are with whether they have experience with boats and know the place where you are going. If they do not, you should pay careful attention to what is happening so that no one gets into danger. If someone is doing something that you think will create a dangerous situation, it is your duty to say something about it to the person doing it or to the person in charge. You do not have to be the oldest person on the boat to know that someone is doing something that could be dangerous.
- *The boat.* It does not take very much to cause a small boat to turn over or sink, especially if it is carrying too many people or too much weight. If you think there may be a danger because the boat is small, you should tell the people you are with and discuss with them what to do to prevent any accident.

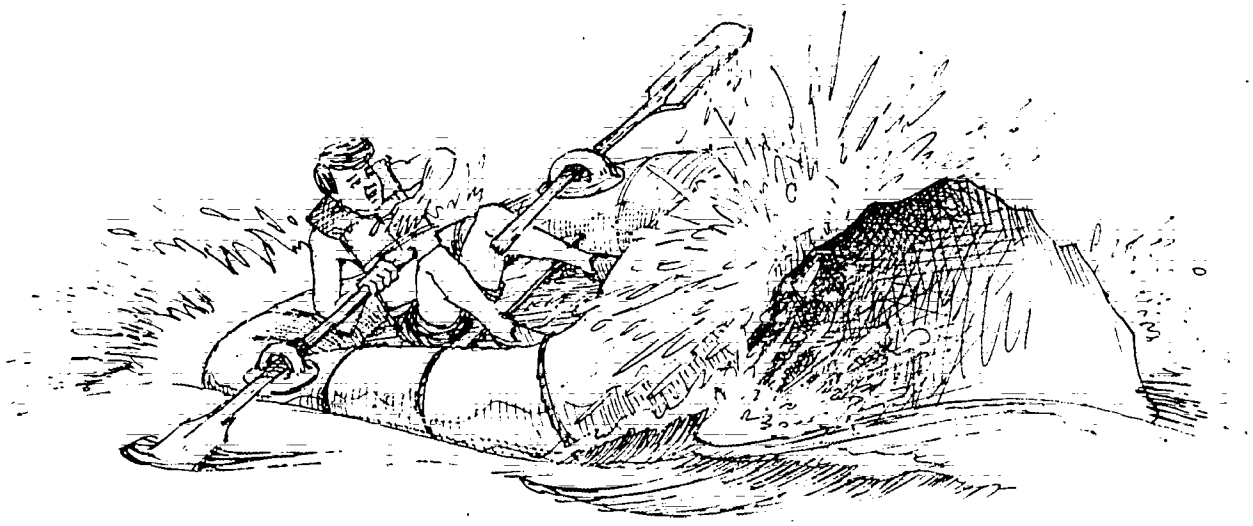
Emergency Number 6

A Rafting Accident

- ☐ **Controlling Your Body in a Current**
- ☐ **Avoiding Rocks and Trees**
- ☐ **Scouting a River**
- ☐ **Leaving a "Float Plan"**

On the first day of summer vacation, you and your family are camping at the river. The campsite is ready. Tents are set up; an area is cleared for a campfire; and the raft is inflated. While the rest of your family is hiking and gathering firewood, you decide to go rafting. You remember the swimming hole not too far downstream. Before you leave, you pin a note to the tent to let your family know where you are going and when you will be back. You put on your life jacket and push the raft into the river.

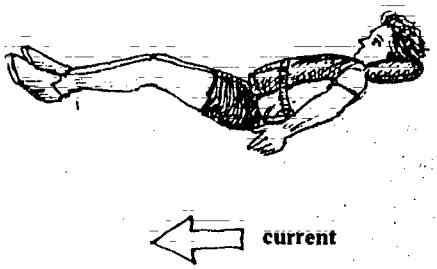
The water is flowing faster than it did last summer. Before you can paddle back to shore, the current sweeps you and the raft downstream toward some large rocks and some rapids. You are traveling too fast to control the raft. Suddenly, the raft hits a large rock, and you are thrown into the water. The raft is out of reach. How can you get out of the river and avoid injury?



☐ Controlling Your Body in a Current

It is a good thing you are wearing your life jacket. It will help you float, help keep your body warm, and cushion your body if you hit rocks. When you are being carried down a river, you should lie on your back and keep your feet pointing downstream. This position lets you use your feet to push yourself away from rocks. It also lets you see where you are going and use your hands to paddle toward the shore.

A current can be a powerful force. Never try to swim against a current. Swim with it or sideways to it. Swimming against the current will tire you very quickly, and you probably will not be able to get anywhere.



Floating in a current

☐ Avoiding Rocks and Trees

Fallen trees and brush in the river can trap you. The swift current could press you into the branches so that you could not escape. You could also be caught between or under rocks, or you could be slammed into the rocks by the current. Use your hands and legs to guide yourself away from rocks, trees, and brush. Practice steering yourself in a gentle current so that you will know how to control your body if you are caught in a strong one.

Dams, bridges, and storm drains can be dangerous, too. You could be pulled over a dam. You could be pulled under by an undertow caused when water flows by a bridge or other large object. Water current also changes when the river flows over a deep hole. You should scout a river for dangerous places before you go into it.

☐ Scouting a River

Always scout a river for hazards before you go into it. If you cannot see downstream clearly from the point where you are going into the water, walk to where you can see downstream clearly. Make sure you know where problems might be. Watch out for rocks and trees above and below the surface, backward currents or undertows, dangerous rapids, waterfalls, and any obstacles that people built in the river (like little dams, bridges, and docks).

The water level can rise just a little and cover rocks and trees. You will not see them from a raft, but they can still catch you or throw you out of control. The water level can also go down and uncover rocks and trees that were underwater before. Just because you knew a river a month

ago or a year ago does not mean that you know it now. A river can change in as short a time as one day.

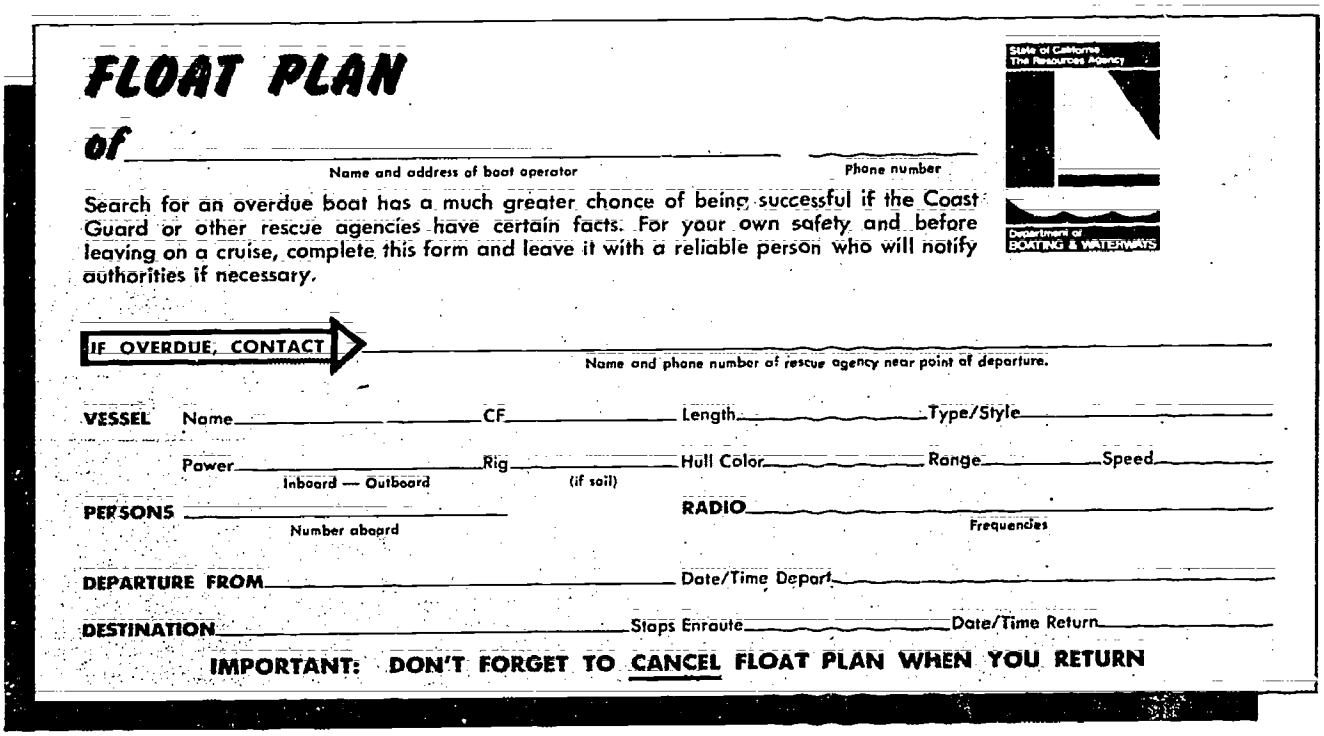
☐ Leaving a "Float Plan"

The written plan for a trip on the water is a "float plan." It tells someone where you are going, when you left, when you will return, who is with you, and what boat you are using. If you get into trouble, someone will know from your float plan where to start looking for you. The float plan can be just a note (like the one you left on the tent).

A float plan should be used on any trip with any type of boat. An easy way to remind yourself of what you should say in a float plan is to remember the five *W*s:

- **When you are leaving**
- **Where you are going**
- **What boat you are using**
- **Who is going with you**
- **When you will be back**

When you get back, remember to tell the people you left the note for.



FLOAT PLAN

State of California
The Resources Agency

Department of
BOATING & WATERWAYS

of _____ _____
Name and address of boat operator — Phone number

Search for an overdue boat has a much greater chance of being successful if the Coast Guard or other rescue agencies have certain facts. For your own safety and before leaving on a cruise, complete this form and leave it with a reliable person who will notify authorities if necessary.

IF OVERDUE, CONTACT _____
Name and phone number of rescue agency near point of departure.

VESSEL Name _____ CF _____ Length _____ Type/Style _____

Power _____ Rig _____ Hull Color _____ Range _____ Speed _____
Inboard — Outboard (if sail)

PERSONS _____ RADIO _____
Number aboard Frequencies

DEPARTURE FROM _____ Date/Time Depart _____

DESTINATION _____ Stops Enroute _____ Date/Time Return _____

IMPORTANT: DON'T FORGET TO CANCEL FLOAT PLAN WHEN YOU RETURN

Float plan

Questions for Review and Discussion

1. Why is your life jacket important in the river?
2. When you are not in a raft or boat, how should you float down a river? Why?
3. What are some things to watch out for in a river?
4. How could you know what to expect in the river just past the next turn?
5. What is a float plan? What are the five *W*s? Why is a float plan important?

Suggested Answers

1. Your life jacket is important in a river because it will help you float, keep your body warm, and cushion your body if you hit rocks.
2. When not in a raft or boat, you should lie on your back and keep your feet pointing downstream to protect yourself from hitting rocks, to steer yourself away from other dangers, and to see better where you are going.
3. Watch for fallen trees, logs, brush, and rocks, bridges, and storm drains.
4. You could know what to expect in a river just past the next turn by scouting downstream. Look downstream for hazards before entering the water. If you are in the water and cannot see downstream, go to the shore and walk to where you can see downstream.
5. A float plan is a written plan for a trip on the water. The five *W*s are: *W*hen you are leaving, *W*here you are going, *W*hat boat you are using, *W*ho is going with you, and *W*hen you will be back. The float plan lets someone know where you are. In case you get in trouble, someone can find you and help you.

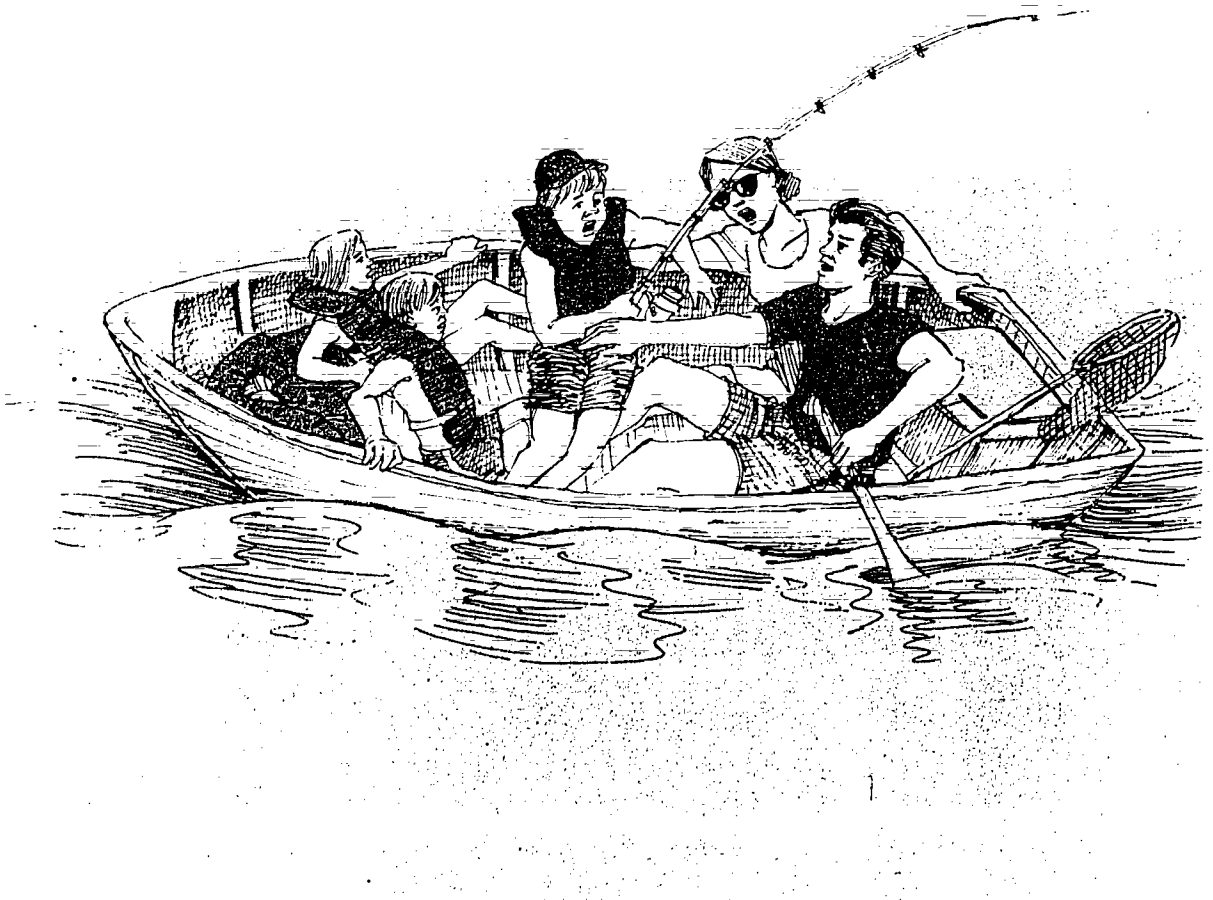
Emergency Number 7

Your Boat Turns Over

- ☐ Wearing Life Jackets
- ☐ Capsizing
- ☐ Overloading
- ☐ Using Flotation Devices

Your family is fishing in a small rowboat on a lake. There are five people in the boat. Your brother, sister, and you are wearing life jackets. Life jackets for your parents are lying in the bottom of the boat.

Suddenly there is a shout from your sister Claudia. Something is pulling at her fishing line. In her excitement she stands up and loses her balance, causing the boat to tip over. All five of you are suddenly in the water. What should you do?



☐ Wearing Life Jackets

The first thing to do is to get the life jackets and help your parents put them on. Life jackets are much easier to put on out of the water than in it. Your parents should have put theirs on before you left the shore, but they can put them on in the water if necessary. Life jackets are important not only because they help keep people afloat, but also because they keep them warm in the water. Brightly colored life jackets also make it possible for someone in the water to be seen more easily by someone in a boat or on the shore.

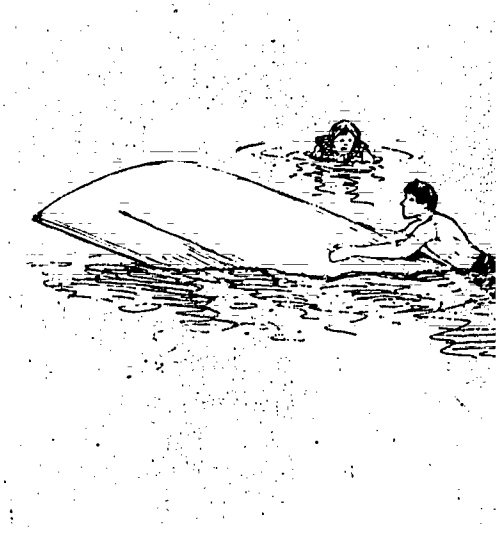
Next try to turn the boat right side up. Some small boats can be turned right side up easily. Others, like small motorboats, are very difficult to turn back over. If you are able to turn the boat back over, use your hands, buckets, or anything else that is handy to remove as much water from the boat as possible before anyone tries to climb in. Once everyone is back in the boat, and you have removed enough water to make it safe to move, you should head for shore as quickly as possible.

If you are not able to turn the boat right side up, you and your family should stay with the boat—unless it is drifting into danger (for example, rocks, rapids, surf, or a pier). Most boats will stay afloat when they are upside down. Other boaters will be able to see the boat more easily than they could see people floating in the water. If possible, you and your family should climb onto the upside-down boat. This will make you more visible to others and keep you warmer, and it may even be possible for you to paddle toward shore with your hands.

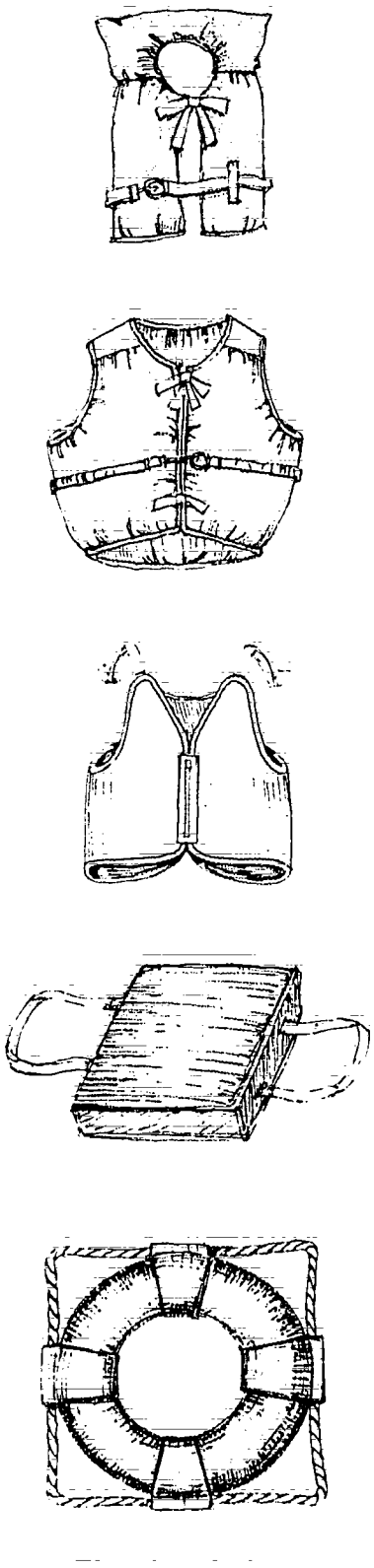
Usually, it is *not* a good idea to try to swim to shore. The shore always looks closer than it is. A life jacket is difficult to swim in. And someone who leaves the group may be difficult for rescuers to find.

☐ Capsizing

A boat turning upside down in water is called capsizing. Capsizing can be caused by wind, waves, or too much weight on one side of the boat. To reduce the chance of capsizing, keep heavy objects as near to the center and the bottom of the boat as possible. Stay near the center of the boat and stay low. Move slowly and move as little as possible. Do not carry more weight in the boat than it is supposed to carry.



Staying with a capsized boat



Flotation devices

☐ Overloading

Boats are built to carry people and objects. Each boat is built to carry a certain amount of additional weight safely. If there is too much weight, the boat is said to be overloaded.

If the boat is overloaded, the tops of the sides will be dangerously close to the surface of the water. Only a slight tip of the boat will let water spill in and could make the boat sink. Overloading also causes most boats to tip easily, especially if most of the weight is not on the bottom of the boat. Overloading also makes the boat slow and hard to turn.

Most boats have a small sign that tells you the largest amount of weight the boat can carry without making the boat unsafe. This amount is usually printed near where the person who is steering the boat sits. Always look for this number as soon as you get on the boat, and make sure that the boat does not leave shore carrying more than this amount.

☐ Using Flotation Devices

A flotation device is an object designed to keep a person floating on the surface of the water. If a flotation device is used properly, the person using it can float safely for several hours.

There are three kinds of flotation devices: life jackets, floating cushions, and life rings. Life jackets come in three types. The three types are designed differently and contain different amounts of the material that makes them float. The other two types of flotation devices are designed to be thrown to someone in the water for that person to hold on to.

Life jackets are much better than floating cushions or life rings for keeping people afloat for a long time. The cushions and life rings are difficult to hold on to for very long. A life jacket holds on to *you*. Children and nonswimmers should always wear life jackets whenever they are on or near the water.

The law requires all boats to carry flotation devices. If the boat is shorter than 16 feet, there must be a flotation device for every person on board. If the boat is 16 feet or longer, there must be a wearable flotation device for every person on board *and* at least one throwable flotation device. If the boat is pulling a water skier, and the skier is not wearing a life jacket, there must be some kind of flotation device in the boat for the skier.

Questions for Review and Discussion

1. When should you wear a life jacket?
2. What can cause a boat to capsize?
3. What is an overloaded boat? What should you do about it?
4. Why should you stay with a boat that has been turned upside down?
5. How might floating or treading water be helpful if you fell into the water from a capsized boat?

Suggested Answers

1. You should wear a life jacket whenever you are working or playing on or near the water. It will help keep you warm in and out of the water. It will help you float if you fall into the water. You should wear it all the time, because it is much harder to put on after you fall into the water.
2. A boat can be caused to capsize by waves, wind, or too much weight on one side of the boat.
3. A boat with too many people or too much weight in it is overloaded. Always look for the sign that shows the largest amount of weight the boat can hold.
4. You will be easier to see by other boaters or by someone looking for you. You can also hold on to the boat to stay afloat
5. If you were not wearing a life jacket, floating or treading water would allow you to keep your head above water until someone came to help you.

Emergency Number 8

Rescuing Other Boaters

- ☐ Safe Boating Rescue
- ☐ Shock and First Aid
- ☐ Buddy System
- ☐ Safety Equipment

You and your friend John are taking a ride in his family's 20-foot cabin cruiser. As you are watching the activity on the water, something in the distance catches your eye. Looking closely, you see an overturned boat with people in the water around it.

You tell John, and he heads toward the overturned boat. When he gets near the people in the water, John slows down and turns off the motor. Four people are in the water. Three of them appear to be all right, but the fourth person, a boy, is splashing wildly. What should you do?

☐ Safe Boating Rescue

John did the correct thing by slowing the boat and turning off the motor. If the motor is not turned off, a boat propeller will cut anyone it touches. If the boat is going fast and hits someone in the water, it could knock the person out or otherwise cause serious injury.

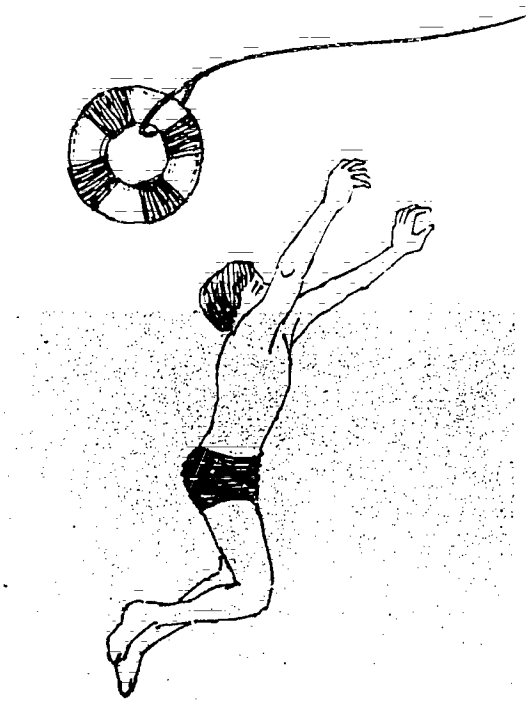
If possible, first talk to the people in the water. Reassure them you are there to rescue them and find out if anyone is injured. Anyone with a serious injury should be rescued first. If no one has an injury that might place her life or his life in immediate danger, you should first rescue the boy who is splashing wildly.

Attach a rope to the floating cushion or the life ring that is required by law to be on board any boat over 16 feet long (see Emergency Number 7 for more about flotation devices). If there are extra flotation devices on board—besides the ones that you and John are wearing and the one attached to the rope—throw them to the people in the water to help them stay afloat until you can get them on board.

Then John or you should throw the flotation device just beyond the boy so that he will be able to grab the rope. The one who does not do the throwing should hold on to the other end of the rope. The two of you should pull the boy next to the boat as soon as he has a good hold on the cushion. If the boat has a ladder, put it in place, show the boy where it is, and help him climb into the boat. If there is no ladder, John and you can pull him into the boat.

You may have to go into the water to help one of the persons in the water. If you go into the water, you should wear a life jacket with a rope attached to it so that John can pull you back to the boat once you are holding the person. This leaves only John to help get the person on board. In some cases you may have to climb back on board and help get each person into the boat before going to rescue the next person.

As soon as all four people are safely on the boat, John should start the motor and head for shore. You should do whatever you can to help the victims get dry and warm. You should also do what you can to treat any injuries or signs of shock.



Rescue with a life ring and rope

☐ Shock and First Aid

Shock is the name for what sometimes happens to people who have been injured or exposed to too much

heat or cold. Shock can be very dangerous to the person. People can even die from shock.

Some of the signs that a person is in shock are:

- **Pale, cold skin**
- **Weak and rapid pulse**
- **Quick, shallow, or irregular breathing**
- **Weakness**
- **Confusion**

If you think a person is in shock, act quickly. Quick action can reduce or stop the effects of shock. Keep the person warm and lying down. If the head is not injured, raise the feet. Above all, get the person to a doctor as quickly as possible.

First aid is the name for the first treatment a person should receive after she or he is injured. The purpose of first aid is to keep the injury from becoming more serious. In many cases, first aid may be the only treatment needed for an injury. But in some cases first aid should be followed as soon as possible by treatment from a doctor or hospital. First aid for major injuries should be done by someone who has been trained to give first aid.

You can provide first aid for cuts, scrapes, and burns by keeping them clean, dry, and covered with a bandage. Larger wounds should be cleaned with fresh water, blotted dry with a clean, soft cloth, and covered with a clean bandage. Blisters should not be broken.

☐ Buddy System

No one should ever go boating or swimming alone. Using the buddy system means that whenever you go boating or swimming, you have someone else along. That way if anything happens to you when you are in or on the water, or if you need help, someone is there to help. It would probably be very difficult for John to rescue the four people in the water by himself, but you and John together could do it far more easily. People can get into dangerous situations on or around water very quickly. If no one else is around to help someone could be hurt or even killed.

☐ Safety Equipment

The law requires all boats to carry safety equipment. Usually, the bigger the boat, the more safety equipment the law requires. All required equipment must meet safety standards set by the United States Coast Guard.

The most important pieces of safety equipment are the flotation devices that are discussed in Emergency Number 7. Here is some other required equipment:

- **Lights**—for boating at night
- **A horn or whistle**—for making signals
- **Flares or smoke signals**—for getting help
- **A fire extinguisher**—for fighting fires

Some kinds of safety equipment are not required by law but should be kept on board in case of emergency:

- **Paddles**—to move the boat if the motor stops running or on a sailboat if the wind stops blowing
- **Rope**—for all kinds of uses
- **An anchor**—to keep a boat from floating into danger or away from a given location
- **A first-aid kit**—to treat injuries
- **Spare parts and tools**—to repair worn or broken boat parts
- **A bucket or cup**—to remove water from a boat
- **A flashlight**—to signal for help at night
- **Maps and charts**—to help you find your way on the water

A boat should carry almost everything that might be needed in an emergency. It is better to be safe than sorry.

Safety equipment

Questions for Review and Discussion

1. When is a boat propeller dangerous?
2. What would you use a life ring with a line attached for?
3. If you have to, what should you wear if you go into the water to help someone?
4. What should you do for a person you think is in shock?
5. What safety equipment is a boat required by law to carry?
6. Why is the buddy system important in boating?

Suggested Answers

1. A boat propeller is dangerous whenever it is turning. The propeller turns when the engine is running and when the boat is moving through the water.
2. A life ring could be used to pull the people in the water back to the boat.
3. If you have to go into the water to help someone, you should always wear a life jacket. It is best to attach a rope to the life jacket and then tie it to the boat or have someone in the boat hold it. The rope can be

used to pull you and the person being rescued back to the boat.

4. Keep the person warm and lying down, with the feet raised—but only if the person's head is not injured. Get the person to a doctor as soon as possible.
5. A boat must have flotation devices for everyone on board, lights, a horn or whistle, flares or smoke signals, and a fire extinguisher.
6. You should never go boating alone. In an emergency another person can help people into the boat, throw a life ring, or hold on to the end of a rope and pull you back to the boat. If the operator of a boat gets injured, the other person could get the boat back to land and to help.

Emergency Number 9

Collision

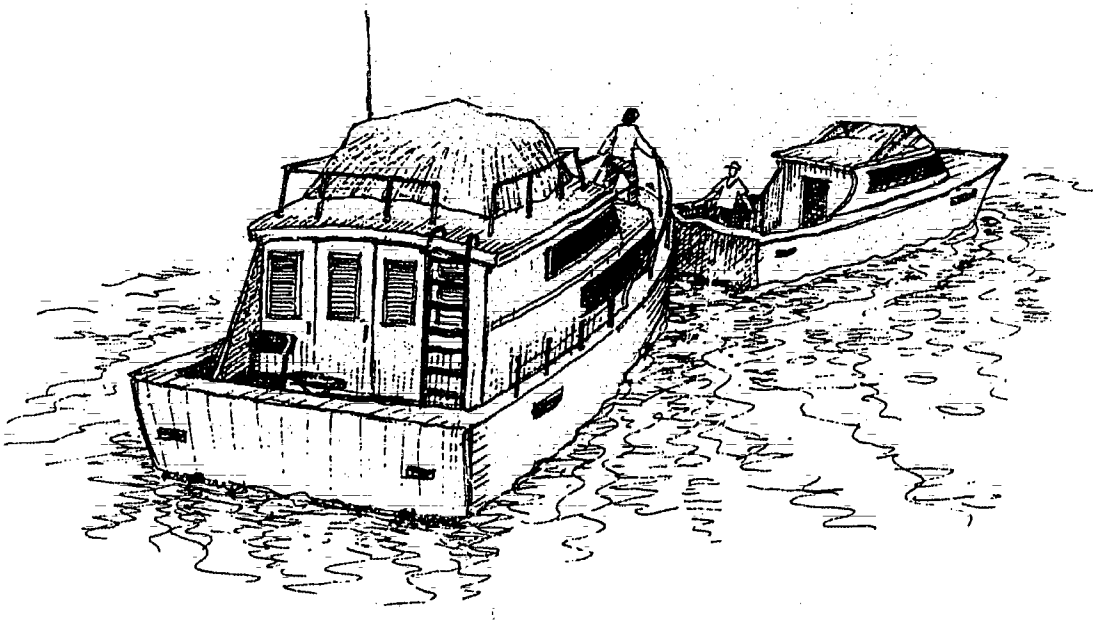
- ☐ **Weather**
- ☐ **Rules of the Road**
- ☐ **Waterway Markers**

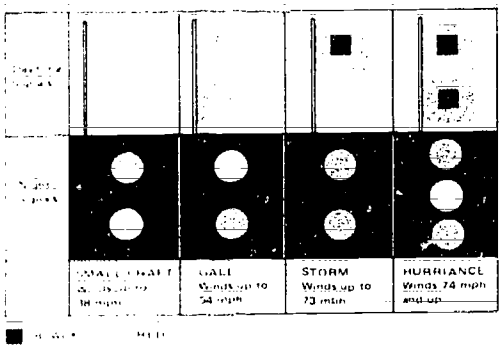
You and your family have spent the day picnicking on your favorite island in the bay. Late in the afternoon, fog starts to roll in. By the time you get the boat packed and start for home, the fog is so thick it is very hard to see.

Your mother drives the boat very slowly, while everyone keeps watch for other boats and anything else dangerous in the water. All of a sudden there is a boat in front of you, traveling slowly in the same direction.

To let the other boat know she wants to pass, your mother signals with one short toot on the boat's horn. The other boat does not answer. Instead, as you are starting to pass, it turns in front of your boat, and the two boats collide.

How could this accident have been avoided?





Wind warning signals

☐ Weather

It is important to watch for changes in the weather whenever you are out in a boat. Wind, darkness, rain, snow, fog, and hail can make boating uncomfortable, difficult, and even dangerous.

Whenever a boat is traveling in bad weather, the speed of the boat should be slow. Driving a boat too fast when you cannot see well is inviting trouble.

When fog or some other weather condition makes it difficult to see, all boats are required to make a signal that others can hear. The signal for a boat motoring in such conditions is a toot of the horn that lasts four to six seconds. This signal should be made every two minutes.

To avoid getting caught in bad weather, always check the weather forecast before going boating. You can learn the weather forecasts from the radio, television, a newspaper, a special weather radio station, or by telephoning the National Weather Service in your area.

Some boat harbors put up weather warning flags by day and lights at night. These weather warnings tell boaters of changes in the weather and how these changes are expected to affect boating conditions. You should know these signals.

☐ Rules of the Road

In some ways driving a boat is like driving a car, even though there are no stop signs or dividing lines on the water. The only way to avoid collisions with other boats is to follow a set of guidelines known as the rules of the road. These rules say what a boater must do when another boat is close. They apply to *all* boats, no matter what size or kind (motorboat, sailboat, rowboat, or other kinds). Anyone who operates a boat on a lake, a river, or in coastal waters where other boats and ships are present should first learn the rules of the road.

According to those rules, a short toot means "I want to go to my right." It is a statement that your mother intended to turn her boat to the right and pass on the right-hand side of the other boat. The person operating the other boat should have answered with the same signal, to show that your mother's signal was understood. Then the other boat should have continued in the same direction. If the other person wanted to do something different, she or he should have replied to your mother's signal with five short toots. This signal says, "Danger." It tells other boaters nearby to stop.

Your mother should have waited for a signal from the other boat before she turned right and started to pass. Her

decision to pass before she knew the operator of the other boat understood what she wanted to do was the cause of the collision.

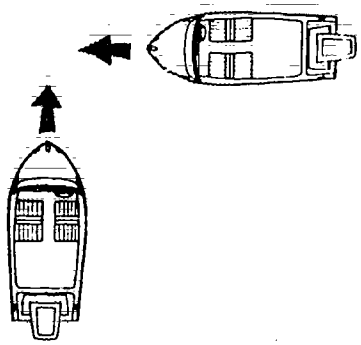
There are three situations that can cause collisions: meeting, crossing, and passing. **Meeting** is when two boats are heading toward each other from opposite directions. The rules of the road say that when two boats meet, each boat is supposed to change direction a little to the right so that the boats will pass each other safely.

If you have a horn or whistle, you can tell the other boat what you want to do. One short toot (one second long) means "I want to go to my right." Two short toots mean "I want to go to my left." If the other boater does not agree or understand, that person should signal "Danger" by sounding five short toots. After the danger signal, both boats should come to a stop as soon as possible.

Meeting

Crossing is when two boats will collide if they do not change direction or speed. If a boat is on your right side and crossing ahead of you, the rules of the road state that that boat has the **right of way.**

This means that you must change your boat's speed or direction — or both — to avoid hitting or getting in the way of the other boat. The horn and whistle signals that apply to meeting situations also apply to crossing situations. Use the horn signals to tell the other boat what you want to do.

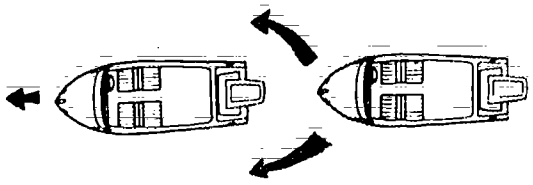


Crossing

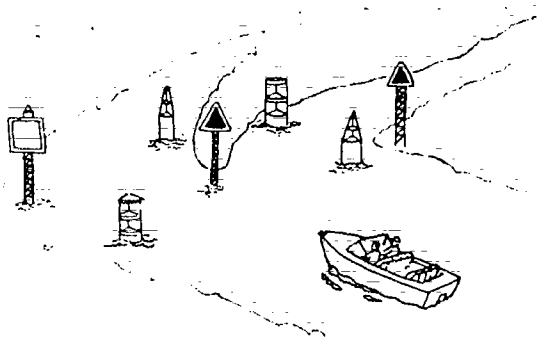
Passing is when two boats are traveling in the same direction, and one wants to pass the other. The operator of the passing boat should signal to the boat ahead. One short toot means "I want to pass you on the right." Two short toots mean "I want to pass you on the left."

The operator of the boat wanting to pass should wait for the boat ahead to repeat the signal before starting to pass. If you are being passed, do *not* change direction or speed until the other boat passes you.

The rules of the road also contain other guidelines for the movement of boats and ships. For example, a motorboat must let a sailboat have the right of way. This means that a motorboat is required to change speed or direction or both to avoid hitting or getting in the way of a sailboat. The reason for this is that most of the time a motorboat can change speed and direction far more easily than a sailboat can. This is also the reason a large ship has the right of way over all other boats in a narrow channel.



Passing



Waterway markers

The rules of the road are not the same for all waterways. The rules for ocean waters along the coast, for example, are different from the rules for most lakes and rivers.

It is important for you to know and obey the rules of the road wherever you are operating a boat among other boats. You should be especially aware of the rules about who has the right of way. But even if the law says that you have the right of way, stop or steer away from another boat if you think there will be a collision. If you are operating a boat, you are responsible for the safety of the boat and the people on board.

☐ Waterway Markers

Waterway markers are placed on land and water for the purpose of helping boaters move safely on the water. The most common kinds of waterway markers are **buoys.** Buoys are floating markers that are held in place by cables or ropes attached to the bottoms of rivers, lakes, and coastal waters. Their purpose is to mark safe channels, underwater dangers, slow speed zones, swimming areas (no boats allowed), no waterskiing zones, and other restricted areas.

As a boater, you need to know the difference between channel buoys, which show where the safe boating water is, and special purpose buoys, which usually mark dangerous places.

Learn what each type of buoy means. You should be able to "read" them the way you read road signs. Like road signs, they will help you avoid trouble and travel safely and happily. Remember that it is against the law to tie a boat to a buoy.

Also learn to "read" the other kinds of waterway markers. Lights, signs on posts, or any other warning or guiding signs are designed to let you know about the waterway so you can avoid trouble and danger.

Questions for Review and Discussion

1. What should you do if fog or another weather condition makes it difficult to see when you are operating a boat?
2. How can you find out what the weather is expected to be on the day you go boating?
3. What are the three kinds of situations that can cause collisions?

4. What is the horn or whistle signal for wanting to turn right? For wanting to turn left? What is the danger signal?
5. What is the purpose of waterway markers?

Suggested Answers

1. You should slow down. In fog you should toot your horn or blow your whistle every two minutes.
2. You can find out what the weather is probably going to be by checking a weather forecast on the radio, on television, in a newspaper, on special radio stations, or by phoning the National Weather Service.
3. The three situations that can cause collisions are meeting, crossing, and passing.
4. The horn or whistle signal for wanting to turn right is one short toot. For wanting to turn left, the signal is two short toots. The danger signal is five short toots.
5. Waterway markers are for helping boaters move safely from place to place on the water.

Emergency Number 10

A Waterskiing Accident

- ☐ **Rescue Breathing**
- ☐ **Waterskiing Teamwork**
- ☐ **Waterskiing Signals**
- ☐ **Life Jackets for Waterskiing**

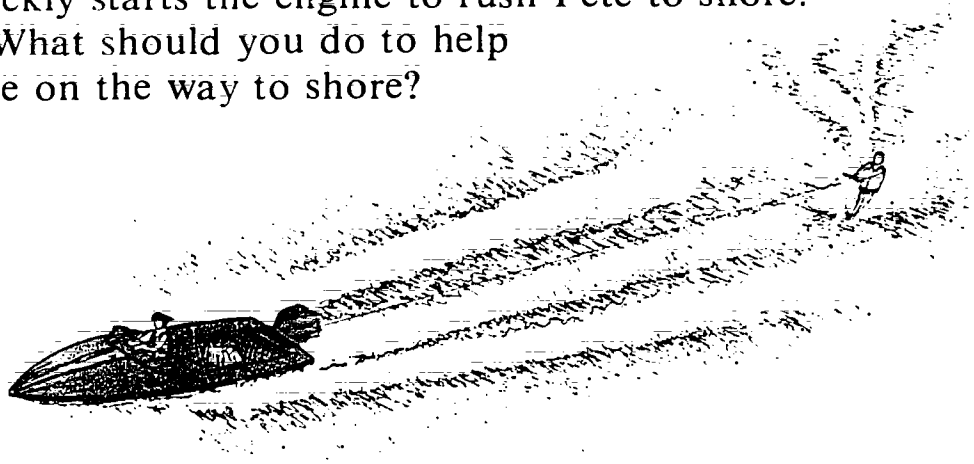
Your brother Pete is practicing waterskiing tricks while your mom is operating the speedboat on the river. Because you are at least twelve years old, you may be an observer on a waterskiing boat. Your job is to watch Pete.

Just as Pete starts to give you the "speed okay" signal, you see him tossed into the air, his skis flying off as he flips over. You shout, "Skier down!" to your mom and hold up a red flag so that the drivers of other boats will know a skier is in the water. Your mom checks for other boats. Then she turns the boat around and heads for Pete. Before reaching him she slows down the boat. It is at this point that you see the large log, mostly underwater, that Pete hit.

Pete is floating because he is wearing a waterskiing belt. But his head is in the water, and he is not moving. Your mom turns off the engine and jumps into the water wearing her life jacket with a rope attached. She reaches Pete, holds his head up, and you pull them to the boat with the rope.

Your mom lifts Pete, and you pull him aboard and lay him in the bottom of the boat. Mom climbs the boarding ladder and quickly starts the engine to rush Pete to shore.

What should you do to help Pete on the way to shore?



☐ Rescue Breathing

Your job is to give Pete whatever first aid he needs (see Emergency Number 8 and Emergency Number 4 to find out more about first aid). If Pete is not breathing, the first thing he needs is rescue breathing.

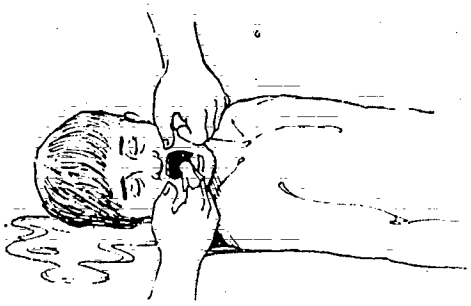
Rescue breathing is breathing air into another person's mouth to get that person breathing again without help. Even four or five minutes without air can cause brain damage or death, so getting air into Pete's lungs quickly is very important. To do rescue breathing for Pete, follow these steps:

- **Place Pete on his back.**
- **Use your finger to clear his mouth of any objects (for example, chewing gum).**
- **Tilt Pete's head back with the chin up. Keep his head in this position to keep his tongue from blocking his air passage.**
- **Keep one hand under his neck. Rest your other hand on his forehead and pinch his nose shut with your thumb and index finger.**
- **Open your mouth and take a deep breath.**
- **Seal your mouth tightly over Pete's mouth.**
- **Breathe into his mouth until his chest rises. Stop. Watch to see that his chest falls. Listen for air to rush out of his mouth.**
- **Count 1-2-3-4 slowly and take another deep breath.**
- **Blow into his mouth again.**

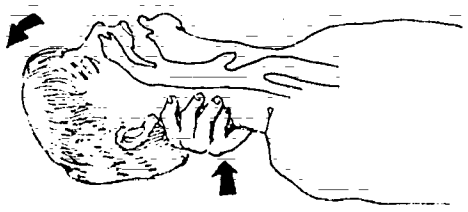
Keep repeating steps 6, 7, and 8. ***Do not stop!*** You must keep breathing for Pete as long as you can or until emergency help arrives.

If Pete's chest does not rise when you breathe into his mouth, something in his mouth or throat may be blocking the passage. If so, roll Pete onto one side and hit him hard four times between the shoulder blades to loosen whatever is in his throat.

When Pete wakes up, be ready to treat him for shock (see Emergency Number 8). Anyone who was unconscious or had to have rescue breathing should see doctor. If the boat has a radio, call ahead and ask to have a doctor or an ambulance waiting when you arrive.

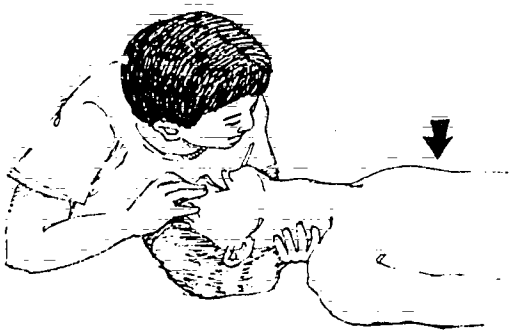


1. Clear mouth



2. Lift chin

3. Blow air in



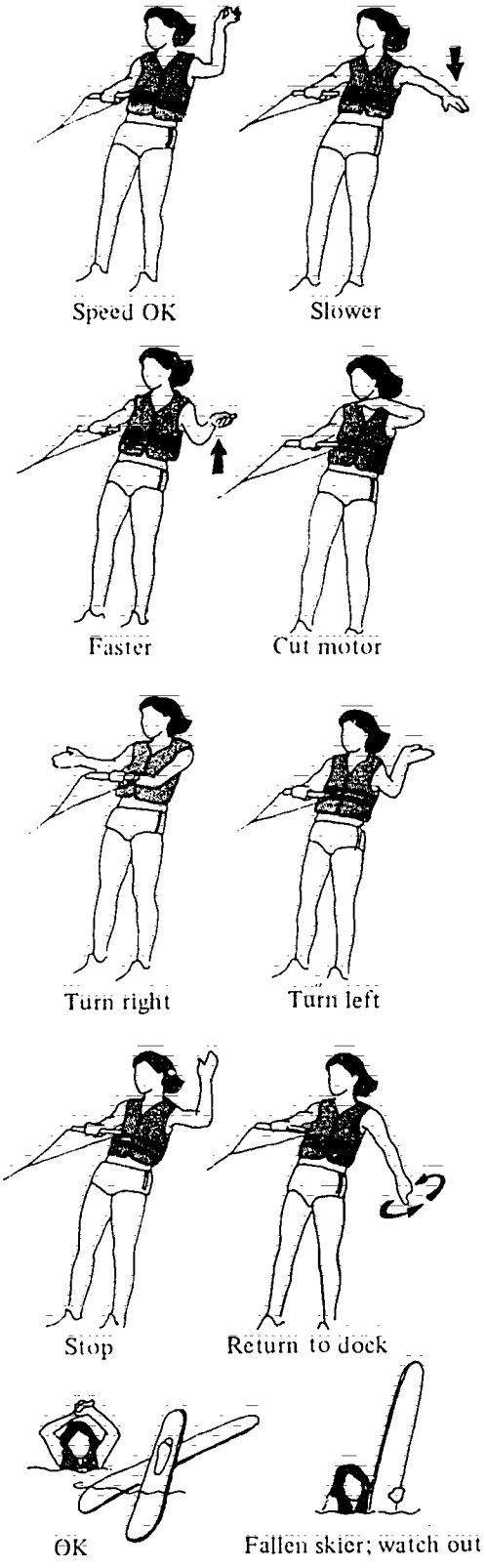
4. Watch for chest to rise

Rescue breathing

☐ Waterskiing Teamwork

Waterskiing is a team effort. Three persons must work together to make waterskiing enjoyable and safe.

The **boat driver** must know how to operate the boat safely and must be on the look-out for other boats or hazards.



Waterskiing signals

The **observer** is required by California law to be at least twelve years old. She or he watches the skier and tells the driver what the skier wants. The observer also signals to tell the skier when the driver is going to speed up, slow down, turn, or stop. The observer should always be watching the skier, even after the skier falls into the water. The observer should always hold up a red flag when the skier is in the water to let other boats know that a skier is in the water nearby.

The **skier** must not get close to swimmers and other boats. The skier must know the signals to use to tell the observer what she or he wants to do.

☐ Waterskiing Signals

It is very difficult to talk to someone who is waterskiing because of noise from the engine, the water, and the wind. A special set of signals has been created to enable waterskiers and people in the boat or on shore to communicate. If the driver has to turn, for example, the observer in the boat will signal to the skier the way the boat will turn. A skier who wants to go faster or slower can signal the observer to tell the driver to go faster or slower. There are also signals for "Stop" if the skier wants to stop and "I'm OK" for when the skier falls.

☐ Life Jackets for Waterskiing

Special life jackets have been made to cushion skiers from falls and to float a fallen skier in a head-up position. These are the only flotation devices that the United States Coast Guard approves for waterskiing. Ski belts, like the one Pete was wearing, can be dangerous. When skiers fall, sometimes the belts slide down and cause the skiers to float with their feet up and their heads down in the water. That is probably what happened to Pete.

Questions for Review and Discussion

1. What is mouth-to-mouth resuscitation?
2. How long should you give a person mouth-to-mouth resuscitation?
3. As an observer, how can you talk to a skier?
4. How many people does it take to go waterskiing properly?
5. Why should ski belts not be used as flotation devices when you are waterskiing?
6. What color is a waterskiing flag, and how do you use it?

Suggested Answers

1. Mouth-to-mouth resuscitation is the correct first aid for a person who has stopped breathing. It means that you blow air into that person's mouth.
2. You must give a person mouth-to-mouth resuscitation as long as you can or until emergency help arrives. Do not stop until you are told you can by a doctor or some other medical person.
3. An observer can talk to a skier by using waterskiing signals.
4. Waterskiing properly takes three people: an observer, a skier, and a boat driver.
5. Ski belts can slip down to your knees and cause you to float feet up and head down.
6. The waterskiing flag is red. It is used to tell other boaters that a skier is in the water.

Emergency Number 11

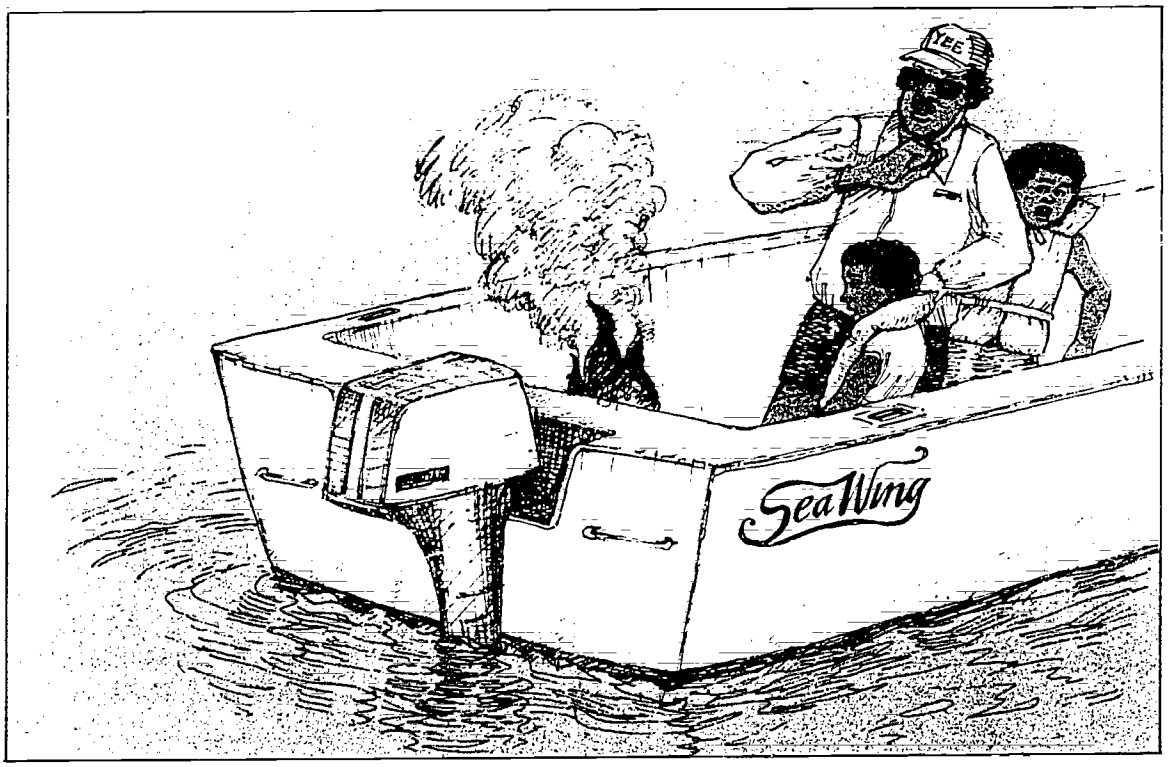
Your Boat Catches Fire

- ☐ **Fighting Boat Fires**
- ☐ **Using Fire Extinguishers**
- ☐ **Fueling**
- ☐ **Boarding and Loading**

Your family is preparing for a day on the water. Your mother and father check to see that the boat is tied securely to the dock. Then your dad starts filling the gasoline tanks. You, your mom, and your sister Cindy load the boat.

While Cindy is handing you the life jackets, your brother Carl runs down the dock and jumps into the boat, causing it to rock from side to side. The rocking makes your dad drop the fuel pump hose and spill gasoline in the boat. Your father finishes fueling the boat; then he tries to wipe up the spilled gasoline.

As he starts the engine, a spark causes the spilled gasoline that he did not wipe up to catch fire. What should you do?



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☐ Fighting Boat Fires

Someone has to try to put out the fire. Everyone else should get off the boat and onto the dock. Whoever stays on board to fight the fire-- probably your mother or your father -- should remove the fire extinguisher from its holder, pull the safety pin, point the nozzle at the bottom of the flames, and pull the trigger.

A fire on a boat that is tied to a dock can be a threat to other boats and people in the area. If possible, ask your mother or father whether you should notify someone else about the fire. But if they are too busy fighting the fire, you may have to decide yourself. If you think that your parents need help or that the fire might spread, go tell someone else immediately.

A fire on a boat is always serious. If it happens while the boat is tied to the dock, there is less danger to the people on board because they can usually get to safety on the dock. It is even possible to fight the fire from the dock. But if the boat is on the water, the people on the boat are in greater danger, because they must either stay on the boat to fight the fire or give up fighting the fire and jump into the water.

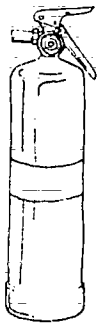
If a fire starts on a boat that is on the water, first make sure that everyone on board has a life jacket on. Then try to put out the fire.

If the fire is too big for the people on board to put out or the gasoline tank is going to burn, everyone on board should jump into the water and get away from the boat. A burning gasoline tank can explode and send burning gasoline a long way in every direction.

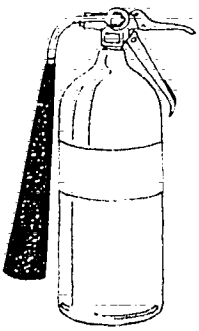
The best way to avoid a boat fire is to be very careful with boat fuel and other things that can burn easily. It is especially important to be very careful when you are fueling the boat. Clean up any spilled fuel immediately and completely. If possible, throw away the rags that you use to clean up the spilled fuel in a garbage can on the dock. Do not keep them on the boat if you can help it. Paper or rags that are soaked with gasoline can catch fire very easily, and the gasoline can soak into anything that you put the paper or rags on. A clean boat is far less likely to have a fire than a boat that is not kept clean.

☐ Using Fire Extinguishers

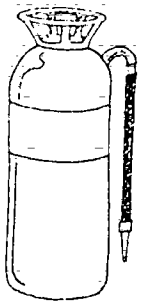
If there is a fire, you must know what is burning before you try to put it out. There are three types of fires:



Dry chemical



Gas



Foam

Types of fire extinguishers

- **Wood and paper fires**
- **Gasoline fires**
- **Electrical fires**

You have to put out each kind in a different way.

The best way to put out wood and paper fires is with water, but water should never be used on gasoline and electrical fires. Water will just spread a gasoline fire, because gasoline floats on water. Water will also cause burning gasoline to splatter. Water conducts electricity, so water on electrical fires can cause you to be shocked or badly burned.

The best way to put out a gasoline or electrical fire is with a fire extinguisher that sprays a dry chemical or a gas (carbon dioxide and freon are commonly used in fire extinguishers). Here are the main types of fire extinguishers:

- **Dry chemical**—a powder under pressure that will put out a fire by keeping air from getting to it. The dry chemical fire extinguisher is good for all three kinds of fires.
- **Gas (carbon dioxide, freon, or other gas)**—a compressed gas that also keeps the air from the fire. Good for small areas. This type of extinguisher also works on all three kinds of fires.
- **Foam**—a mixture of water and foam that also cuts off air from the fire. Good for gasoline and wood and paper fires, but because it contains water, it must not be used for electrical fires.

If your boat has a motor, you should carry a fire extinguisher in the boat. And you should know how to use the fire extinguisher. There are three basic steps to using any fire extinguisher:

- **Pull the safety pin.**
- **Point the nozzle at the bottom of the flames.**
- **Pull the trigger**

You cannot practice using a fire extinguisher, but you can teach yourself how to use it. Read the instructions for using it. You will not want to waste time reading instructions when a fire is burning. You can also lift the fire extinguisher and pretend to use it so you will know how it feels and where the different parts are.

☐ Fueling

To fuel a boat safely, follow these simple steps:

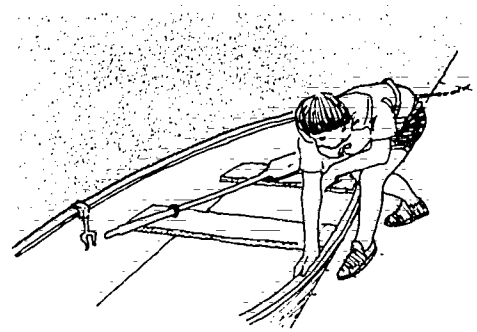
- **Fill portable gasoline tanks on the dock.**
- **Close all doors and windows on the boat (to keep the gasoline fumes from collecting in the cabin).**
- **Turn off the engine and all heaters, stoves, pilot lights, and other sources of spark, heat, and flame during fueling.**
- **Everyone but those doing the fueling should be off the boat.**
- **Always keep the gasoline hoze nozzle inside the fuel tank opening.**
- **Wipe up all spilled gasoline and put the dirty rag in a garbage can on the dock.**
- **Open all doors and windows to air out the boat for five minutes, so the fumes from the gasoline will get out of the boat.**
- **If the boat has a blower, use it for at least five minutes. This will put fresh air in the boat and force gasoline fumes out of the engine compartment.**
- **Use your nose to check for gasoline fumes. If you smell fumes, air out the boat some more before you start the engine.**

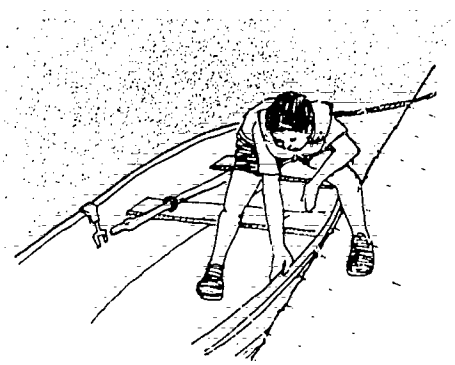
☐ Boarding and Loading

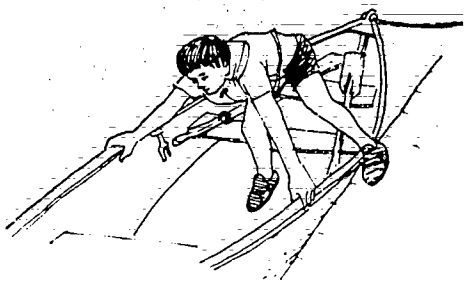
It is very important to enter (called boarding) and leave a boat tied to a dock as carefully as possible, especially if the boat is small. Stepping onto the side of a small boat (or pushing off the side when leaving) can cause the boat to rock or even turn over.

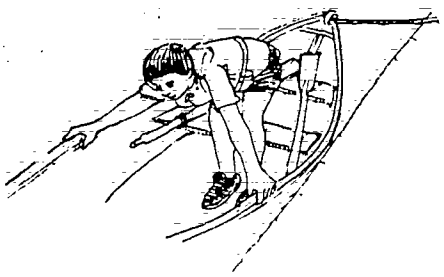
If the boat is not properly tied to the dock, stepping on the side of the boat could push the boat away from the dock and make you or someone else fall into the water. To tie a boat to a dock properly, always use two ropes. Use one rope to tie the front of the boat to one end of the dock. Use the other rope to tie the back of the boat to the other end of the dock.

The best way to enter a small boat is to step carefully into the boat so that your first step makes your weight land as close to the center of the boat as possible. *Never* jump into a small boat. When you leave a small boat, try to stand as close to the center of the boat as you can, and take a long step completely out of the boat and onto the dock. If you push too hard with your back foot, you

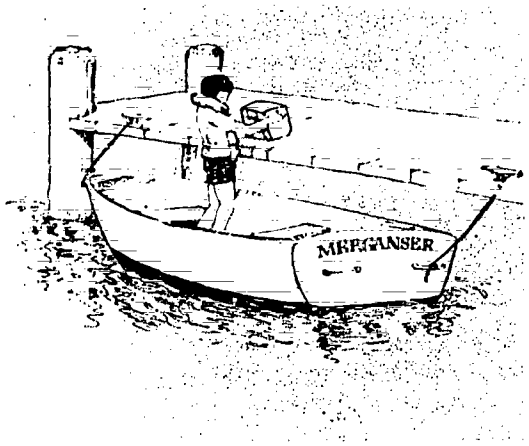








Boarding



Loading

may push the boat away from the dock and cause yourself or someone else to fall into the water.

The best way to load and unload a boat is for one person to stand in the boat and another person to stand on the dock. One person should hand the load to the other person. If you must load and unload by yourself, first put the load on the dock next to the boat; then carefully board the boat, reach over to the dock, and bring the load on board. When unloading, stand in the boat and place the load on the dock; then step off the boat and pick up the load.

Questions for Review and Discussion

1. Can all fires be put out with water?
2. What is the first thing boaters should do when a boat fire happens at a dock? What if a fire happens when the boat is on the water away from the dock?
3. What are the three main types of fire extinguishers?
4. What are the steps in using a fire extinguisher?
5. How many ropes should you use to tie a boat to a dock? Where should they be tied on the boat?
6. Why should you never jump onto a boat?
7. What is the best way to load a boat? How should you load a boat if you are by yourself?

Suggested Answers

1. No. Only wood and paper fires can be put out with water. Gasoline and electrical fires should be put out with an extinguisher that does not contain water.
2. At the dock everybody should get off the boat except those fighting the fire. On the water everyone should first put on a life jacket and then try to put out the fire.
3. The three main types of fire extinguishers are dry chemical, gas, and foam.
4. a. Pull the safety pin.
   b. Point the nozzle at the bottom of the flames.
   c. Pull the trigger.
5. Use two ropes to tie a boat to a dock, one for the front and one for the back.
6. Jumping into a boat can cause it to tip or turn over.
7. The best way is to load with another person. The one on the dock hands the load to the one on the boat. If you are by yourself, first put your load on the dock. Then get on board, reach over, pick up the load, and bring it on board.

Emergency Number 12

Someone Falls Overboard

- ☐ **Rescuing a Person Who Falls Overboard**
- ☐ **Canoeing**

You and your friends Ellen and Nancy are cruising on the lake in your family's 18-foot motorboat. It is a beautiful spring day, and you are all in bathing suits. No one is wearing a life jacket. Ellen and Nancy are lying on the forward part of the boat soaking up the sun. You are watching a boat pulling a water-skier.

Without warning your boat is suddenly bouncing up and down. A powerful speedboat has whizzed by on the left, and its wake has caused your boat to bob like a piece of wood in the surf. Just then you hear Nancy shout, "Help! Ellen has fallen overboard!"

What should you do?

☐ Rescuing a Person Who Falls Overboard

The first thing to do is to stop the engine. Tell Nancy not to lose sight of Ellen, and find out from her where Ellen is so that you can turn the boat toward her. Do not start the engine until you know Ellen is not in danger of being cut by the engine's propellers.

When you get close enough to Ellen to be able to throw her a life ring or floating cushion, have Nancy throw one to her. This will not only make it easier to keep track of where Ellen is, it will also keep Ellen from using up all her strength trying to stay afloat.

Turn the boat slowly in a circle around Ellen until you get to where you can aim the boat directly toward her *and* have the boat heading directly into the wind. This will allow you to use the wind to help stop the boat when you are ready to rescue Ellen.

By this time you should have a clear enough view of Ellen. Have Nancy put the boarding ladder in place if it is not already in place. (Up to this point the most important thing for Nancy to do is to keep Ellen in sight. This is especially important in rough water. When there are lots of waves and the boat is tossing around, it can be very hard to find a person in the water.)

Once the ladder is in place, pull alongside Ellen and turn off the engine so that she will not be cut by the propeller. Then you and Nancy can help Ellen get to the ladder and climb into the boat. Once Ellen is on board, she should be kept warm and dry. Give her first aid if necessary, and treat her for shock if she seems dazed (see Emergency Number 8 for more about first aid and shock).

Falling off a boat is a common accident. Most of the time, conditions are peaceful enough for those still on the boat to have time to turn around and look for the person in the water without worrying about doing it quickly. It is very important that the person be found and rescued as quickly as possible in the following conditions:

- **If the person falls overboard in a storm**
- **If it is difficult to see or move the boat**
- **If the person overboard is a small child or does not know how to swim**

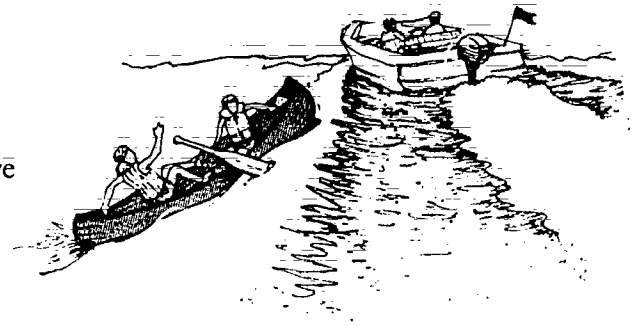
Because you cannot always know when these conditions might occur, you must know what to do if a person falls overboard, and you must practice rescuing someone at least every few weeks during the boating season. Your life and the lives of your family and friends may someday depend on how well you and the people you go boating with know how to rescue someone in the water.

We have talked about the way to rescue somebody who falls off a motorboat. If you are on a sailboat, you also have to watch for the person and try to get a flotation device to her or him. The procedure for getting the boat alongside the person in the water is slightly different for a sailboat than it is for a motorboat. The sailboat operator has to use the wind to move the boat into the right place to make a rescue. If you or your family or friends spend time on a sailboat, it is important for you to learn and practice how to rescue someone who falls into the water so that you will know what to do if you ever need to rescue someone who falls off a sailboat.

☐ Canoeing

Rescuing someone who falls out of a canoe is basically the same as other rescues. In the case of a canoe, though, you have to know how to move and steer it, and you have to know how to enter it and move in it. The important thing to remember about a canoe is that it is very easy to tip over. Tipping can be caused by a large wave, by not paddling correctly, by running into something in the water, by the current of a river or stream, by the wake from a motorboat, or by putting weight in the wrong part of the canoe.

Most people enjoy canoeing much more after they are taught how to canoe correctly. You can get lessons on canoeing and safety from your local Red Cross, park and recreation department, YWCA, YMCA, or scouting program.



Canoeing trouble

Questions for Review and Discussion

1. When someone falls overboard, what is the main thing a person who is not operating the boat should do?
2. What should you try to throw to the person in the water? Why?
3. How should the person driving the boat aim the boat before coming alongside the person in the water? Why?
4. Why is it important to practice rescuing someone who falls overboard?
5. Name at least three things that can tip over a canoe.

Suggested Answers

1. The main thing the passenger on the boat should do is keep track of where the person in the water is at all times.

2. You should try to throw the person some kind of flotation device. It will make the person easier to keep track of, and it will help the person keep afloat without getting tired.
3. The person driving the boat should aim it directly in the direction the wind is coming from before coming alongside the person in the water. The wind will help the boat stop when the motor is turned off.
4. It is important to practice how to rescue someone who falls overboard because if a person ever does fall overboard, it may not be possible to rescue the person at all if she or he is not rescued quickly.
5. A canoe can be tipped over by a large wave, by not paddling correctly, by running into something in the water, by the current of a river or stream, by the wake of a motorboat, or by putting weight in the wrong part of the canoe.

Glossary

Aft. At or toward the back of a boat
Artificial respiration. The same as **Rescue breathing**
Bow. The front of a boat
Buoy. A waterway marker that floats in the water
Capsizing. A boat's turning upside down in the water
Cramp. A sharp tightening and pain in a muscle
Current. The movement of or inside of a body of water
Emergency. Something that happens suddenly and calls for quick action to save the lives of the people involved
First aid. Immediate treatment of an injury so that the injured person is safe and comfortable until medical help arrives
Float plan. A description of a boating trip that you leave with your family or with friends so that they know where you are going and when you should be back
Flotation device. A life jacket, a life vest, a life ring, a floating cushion, or other things for keeping people afloat
Gunwale. The upper edge of the side of a boat
Hazard. Something that can injure a person
Hypothermia. A sickness caused by being so cold that your body cannot keep itself warm
Jellyfish. A sea animal with a soft body that looks like jelly and is shaped like an umbrella
Lee (leeward). The side of a boat or land sheltered from the wind
Life jacket. A jacket that will keep a person afloat for a long time in case of an accident on water
Mouth-to-mouth-resuscitation. The same as **Rescue breathing**
Navigate. To plan where a boat will go and to steer it there
Paddle. A short oar with a flat blade used to move and steer a canoe or other small boat
PFD. Personal flotation device (See **Flotation device.**)
Port (portside). The left side of a boat when you are facing the front of the boat
Propeller. Blades like the ones on the front of airplanes (However, the blades are shorter on a boat's propeller, and a boat's propeller is in the back. It pushes the water to move the boat forward.)
Quarry. A pit where stone was removed to be used in building or decoration; often filled with water
Rapids. A part of a river's water that is fast and shallow
Rescue breathing. A way of breathing into the mouth or nose of someone who has stopped breathing to help that person start breathing again or to keep that person alive until medical help comes (See Emergency Number 5 and Emergency Number 10.)
Resuscitation. (See **Rescue breathing.**)
Sea urchin. A sea animal with tiny spines on its skin that are sharp and brittle
Shepherd's crook. A long pole with a large hook on one end for rescuing someone from a swimming pool
Starboard (starboard side). The right side of the boat when you are facing the front
Stern. The back of the boat
Stingray. A flat sea animal with a long sharp tail that can cut or sting
Surf. The ocean waves that break on the shore

Survive. To stay alive
Tide. The regular rise and fall of the oceans
Undertow. A current below the surface of the water moving in the opposite direction of the current on top of the water
Wake. The waves, ripples, or foam left in the water after a boat moves through it
Waterline. The line where the surface of the water touches a boat
Water-ski. To glide over the surface of the water on water skis while being pulled by a rope attached to a boat
Wave. A curving or rippling movement on the surface of the water
Windward. On the side toward the wind

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Other Publications Available from the Department of Education

Wet 'n' Safe: Water and Boating Safety, Grades 4—6 is one of approximately 500 publications that are available from the California State Department of Education. Some of the more recent publications or those most widely used are the following:

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