

Think So You Don't Sink



KEY TERMS

- **Aquatic emergency** – An emergency in the water in which a swimmer is either in distress or drowning.
- **Aquatic environment** – An environment in which recreational water activities are played or performed. A place where aquatic organisms live and grow.
- **Capsize** – To turn a craft upside down in the water.
- **Density** – The mass per unit volume of a substance.
- **Emergency** – A sudden, urgent, usually unforeseen occurrence or occasion requiring immediate action.
- **Exhaustion** – Extremely tired or weak.
- **Hypothermia** – A life-threatening condition in which the body is unable to maintain warmth and the entire body cools.
- **Panic** – A sudden and overwhelming terror that can make you unable to help yourself or others.
- **Sudden immersion** – Being pushed or accidentally falling into the water.

OBJECTIVES

After completing the following activities, students will be able to–

Topic 1: Causes and Prevention of Panic

- Identify panic and ways to stay safe and calm in an aquatic emergency.

Topic 2: Egg Float

- Determine if an object floats better in fresh water or saltwater.

Topic 3: Know How to Rescue Yourself

- Identify safe ways to rescue yourself in an aquatic emergency.

Topic 4: Do or Do Not Water Safety Game

- Identify how to stay safe around water.

Topic 5: Be Careful!

- Define the danger of swimming around currents and dams.

Topic 6: Hypothermia and Exhaustion

- Explain the definition of hypothermia.
- Recognize the potential hazards of being immersed in cold water.
- Recognize the signals of hypothermia.
- Describe how to prevent hypothermia.

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MATERIALS, EQUIPMENT AND SUPPLIES

All Topics

- Think So You Don't Sink poster
- *Longfellow's WHALE Tales* DVD
- DVD player and monitor
- Optional:
 - Think So You Don't Sink stickers (one for each student)

Topic 1: Causes and Prevention of Panic

- [Activity Sheet 4-1: Help Yourself](#) (one for each student)
- [Activity Sheet 4-2: What Should You Do?](#) (one for each student)
- [Activity Sheet 4-3: Don't Panic](#) (one for each student)

Topic 2: Egg Float

- Two large, clear plastic cups
- Salt (kosher or sea salt is recommended)
- Two eggs, with a happy face drawn on one and a sad face drawn on the other
 - (Optional: The eggs may be hard boiled.)

Topic 3: Know How to Rescue Yourself

- [Activity Sheet 4-4: Self-Rescue Quiz](#) (one for each student)
- [Activity Sheet 4-5: Stay Calm](#) (one for each student)

Topic 4: Do or Do Not Water Safety Game

- Pieces of paper with "Do" written on one piece, and "Do Not" written on the other

Topic 5: Be Careful!

- [Fact Sheet: Longfellow's Tips on Currents and Dams](#)

Topic 6: Hypothermia

- [Activity Sheet 4-6: Think So You Don't Sink](#) (one for each student)
- [Fact Sheet: Longfellow's Information on Hypothermia](#)



LEADER'S NOTES

- *Display the Think So You Don't Sink poster at the front of the class To begin a discussion about the poster, point to each scene and ask students questions, such as "What problem is the person thinking about? What could happen if the person did not find a solution to this problem? What solution did the person come up with so he or she does not sink?" Refer to the poster throughout the activities in this topic. As an option, you may use an LCD projector to display the electronic version of the poster from the CD-ROM.*
- *The Longfellow's WHALE Tales DVD segment, "Think So You Don't Sink," can be shown to support this topic.*

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INTRODUCTION

Key Points:

- Most of the world is covered by water.
- Many people love to be in, on and around water.
- Even when you take basic precautions around the water, accidents and emergencies can still happen.
- It is important to stay calm and keep yourself safe when an emergency happens.
- Today we are going to talk about how to keep yourself safe in an aquatic emergency.

TOPIC 1: CAUSES AND PREVENTION OF PANIC

Recommended Grade Levels: K–5

Key Points and Discussion:

- How many of you have ever seen someone in trouble in the water?
Answer: Responses will vary. Allow time for responses.
- How do you think that person felt?
Answer: Responses will vary. Allow time for responses.
- How would you feel if you got into trouble in the water?
Answer: Responses will vary. Allow time for responses.
- What is panic?
Answer: Panic is a sudden and overwhelming terror that can make you unable to help yourself or others.
- What could cause you to panic in the water?
Answer: Responses may vary, but should include leg cramp, exhaustion, weeds, currents, boat capsizes, cold water, being pushed in and swimming out too far.
- What could you do to help yourself?
Answer: Responses may vary but should include call for help, relax, float on your back, hold on to the overturned boat and get out of the cold water.
- How can you prevent emergency situations in the water?
Answer: Responses may vary but should include know your limits, be sure the swimming area is safe and be sure area is supervised by a lifeguard.
- What rule helps us remember what to do in an aquatic emergency?
Answer: Think So You Don't Sink!

Think So You Don't Sink



Activity:

Have students complete the following:

- Activity Sheet 4-1: Help Yourself
- Activity Sheet 4-2: What Should You Do?
- Activity Sheet 4-3: Don't Panic

TOPIC 2: Egg Float

Recommended Grade Levels: K–3

Key Points and Discussion:

- **The ocean covers most of the earth. Because of all this water, it is important to know how to be safe in, on and around the water.**
- **What would you do if you saw a huge wave coming right at you?**

Answers: Responses will vary but could include the following:

- *Do not panic.*
- *Think about the situation.*
- *Stay calm and float.*

Activity:

- Have the class help with an experiment. Hold up an egg with a happy face drawn on it and a cup of water with salt in it.
- Tell students, **“This swimmer is very smart. He is swimming in a supervised area. He has a buddy and he has taken American Red Cross Longfellow’s WHALE Tales.”**



LEADER'S NOTE

As a variation, use a large, clear plastic container with saltwater and include several happy eggs to illustrate swimming with buddies.

- Ask students, **“Do you think this swimmer will float or sink in the water? What is your hypothesis—your best guess as to what will happen and why?”** Wait for responses from students.
- Put the egg in the cup of saltwater.
- Hold up the second egg with a sad face drawn on it and a cup of water with no salt.
- Tell students, **“This egg did not take American Red Cross Longfellow’s WHALE Tales. He is swimming alone. He does not have a buddy. The lifeguard has gone home and it is getting dark.”**
- Ask students, **“Do you think this swimmer will float or sink? What do you think will happen to this swimmer?”** Wait for responses from the students.

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LEADER'S NOTE

Put the egg in the cup of water without salt.

- Ask students, **“Which swimmer are you?”** Wait for responses from the students.
- Tell students, **“Think and use your head, even if you get into trouble. You can float, so Think So You Don't Sink!”**

Variation on the Egg Float Activity:

- Divide the class into small groups.
- Each group will need two large, clear plastic cups with water in them and two eggs (label one of the cups “saltwater”).
- Have students place an egg in each cup.
- Have students dissolve 3 to 4 tablespoons of salt in the cup labeled “saltwater.”
- Have students continue adding salt to the saltwater cup until the egg floats in the middle of the cup.

Key Points and Discussion:

- **What happens to the egg in saltwater?**
Answer: It floats.
- **What happens to the egg in the cup of water that does not have salt?**
Answer: It sinks.
- **Why does the egg float in saltwater?**
Answer: The salt changes the density of the water.
- **Where do you find saltwater?**
Answer: The ocean.
- **Would you float better in the ocean or in a pool? Why?**
Answer: The ocean because objects float better in saltwater.

TOPIC 3: KNOW HOW TO RESCUE YOURSELF

Recommended Grade Levels: K–6

Key Points and Discussion:

- **Can anyone name an aquatic environment?**
Answer: Answers will vary but may include:
 - Beach
 - River
 - Ocean

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- Bay
- Bayou
- Pools
- Waterpark

■ What kinds of emergencies happen in aquatic environments?

Answer: Answers will vary but may include the following:

- Your boat can turn over (capsize).
- You can be pushed by a current or swim too far from shore.
- You could get a cramp or be too tired to swim any more (exhaustion).
- You could get cold and start shivering (hypothermia).

■ What do you THINK you could do to STAY safe in the following situations?

1. Your boat capsizes.

Answer: Stay with your overturned boat. Why?

- Capsized boats trap air, and it will help you stay afloat.
- Boats are bigger and easier to locate than people in the water.

2. You are caught in a river current.

Answer: Roll over onto your back with your life jacket on, go downstream feetfirst and back paddle with the arms. Try to steer away from the main current and toward the shore.

3. You are caught in an ocean current.

Answer: Answers should include the following:

- If a current carries you parallel to the shore, try to swim toward shore while moving along with the current.
- If you are being carried away from shore, swim out of the current, not against, moving parallel to shore. Once you are free, turn and swim toward shore.

4. You are swimming and you start shivering.

Answer: Get out of the water, put on dry clothes and warm up.

Activity:

Have students complete the following:

- Activity Sheet 4-4: Self-Rescue Quiz
- Activity Sheet 4-5: Stay Calm

TOPIC 4: DO OR DO NOT WATER SAFETY GAME

Recommended Grade Levels: K–2

Activity:

- Have students fill in the beginning of your sentence by holding up either a “DO” or “DO NOT” sign.

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LEADER'S NOTE

As an alternative, you can have students stand when the action calls for "DO" and sit when the action calls for "DO NOT."

- **Swim only if there is a lifeguard or if a grown-up gives you permission to swim and is supervising you.**

Answer: DO

- **Eat candy or chew gum while you are swimming.**

Answer: DO NOT

- **Take swim lessons.**

Answer: DO

- **Swim if you are tired.**

Answer: DO NOT

- **Follow water safety rules.**

Answer: DO

- **Swim with a buddy.**

Answer: DO

- **Wade into water feetfirst if you are swimming in a lake, pond or river.**

Answer: DO

- **Dive off piers or rocks.**

Answer: DO NOT

- **Wear a life jacket when you are in a boat.**

Answer: DO

- **Stand up in a boat.**

Answer: DO NOT

- **Get out of the water right away if you hear thunder or see lightning.**

Answer: DO

- **Run on a pool deck or pier.**

Answer: DO NOT

TOPIC 5: BE CAREFUL!

Recommended Grade Levels: 3–5

Activity:

- Act out the following scenario or read the scenario to students:
Two fishermen are having no luck fishing, but they have heard that there are a lot of fish near the dam at the other side of the lake. They decide to

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take their boat to that location to check it out. Their fishing luck increases the closer they get to the dam. They notice there are more fish to catch closer to the dam. The fisherman piloting the boat notices the “no boat” buoys but pays no attention to them because the water looks calm. The other fisherman catches a big one that is a fighter. The fight continues and is nearly over when the fisherman decides to stand up. He loses his balance and falls overboard, but he seems to be safe because he is wearing a life jacket. But wait, the fisherman is pulled under the water and cannot be seen.

- Ask students, “Where did the fisherman go?”

Answer: The fisherman was caught in a hydraulic. Hydraulics are whirlpools that happen as water flows over an object, causing a strong downward force that may trap a swimmer. The water surface may look calm and fool a swimmer because the hydraulic does not show from the surface. If caught in a hydraulic, instead of fighting it, swim to the bottom and swim out with the current until reaching the surface.

- Explain why it is important to obey warning signs and buoys.
- Have students complete Activity Sheet 4-6, Think So You Don't Sink.



LEADER'S NOTE

For more information, see Fact Sheet: Longfellow's Tips on Currents and Dams.

TOPIC 6: HYPOTHERMIA AND EXHAUSTION

Recommended Grade Levels: 3–6

Hypothermia

Key Points and Discussion:

- What is hypothermia?

Answer: Hypothermia is a life-threatening condition in which the body is unable to maintain warmth and the entire body cools.

- What are some signals of hypothermia?

Answer: Signals of hypothermia include the following:

- Shivering
- Numbness
- Glassy stare
- Apathy
- Weakness
- Impaired judgment
- Loss of consciousness (in late stage of hypothermia)

Think So You Don't Sink



LEADER'S NOTE

For more information, see Fact Sheet 8: Longfellow's Information on Hypothermia.

Exhaustion

Key Points and Discussion:

- **What do you do if you are in the water and become too tired to swim?**
Answer: Roll over on your back and float or call for help.
- **What is exhaustion?**
Answer: You no longer have the energy to keep swimming or moving.
- **Has anyone ever had a leg cramp while swimming?**
Answer: Answers will vary. Allow time for responses.
- **What would you do if you got a cramp in your leg while you were swimming?**
Answer: Try to relax the cramped muscle by stopping the activity or changing your swimming stroke. You may need to massage the muscle to make the cramp go away.

WRAP-UP



LEADER'S NOTE

Refer back to the Think So You Don't Sink poster as you review the lesson.

Key Points and Discussion:

- **Why is it important to Think So You Don't Sink?**
Answer: You should think so that you do not panic. Instead, you can consider what your actions should be to keep you safe.
- **Some good actions include calling for help or floating on your back if you become too tired in the water.**
- **Another good action is to always wear a life jacket when around cold water.**
- **Remember to Think So You Don't Sink!**

Longfellow's Tips on Currents and Dams

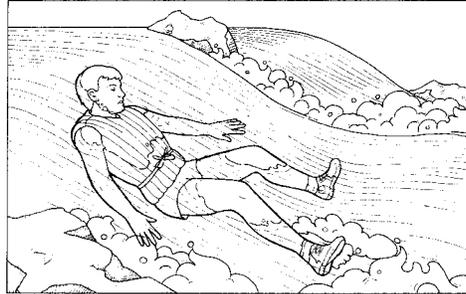


Types of Currents and How to Escape Them

River rapid

What it is: Whitewater, fast-moving water; unpredictable, often changing direction.

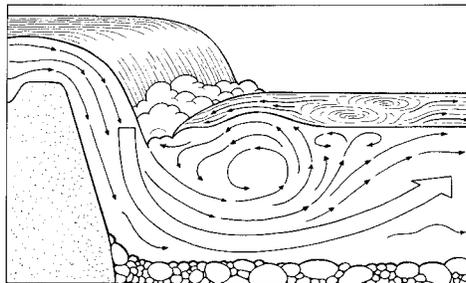
How to escape: Roll over onto your back and go downstream feetfirst to avoid hitting your head. When you are out of the strongest part of the current, swim straight toward the shore. Because of the current, you will actually move downstream at an angle toward the shore.



Hydraulic current

What it is: A strong force created by water flowing downward over an object and then reversing its flow. The reverse flow can trap and hold a person under.

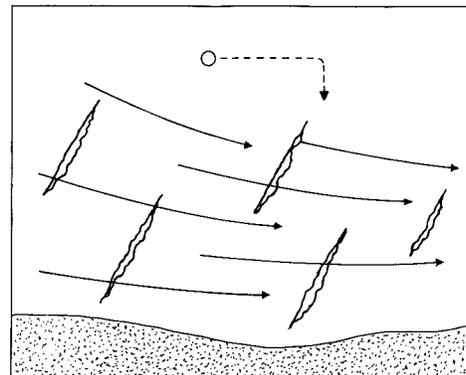
How to escape: Swim to the bottom and then swim out with the current to reach the surface.



Ocean currents

What it is: An **alongshore current** moves parallel to the shore, carrying a swimmer farther down the beach.

How to escape: Try to swim toward shore while moving along with the current. (You will eventually get to shore, although you may be some distance from where you entered the water.)

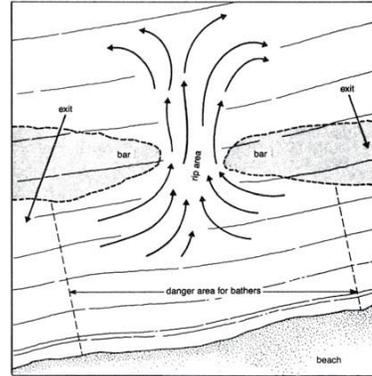


Longfellow's Tips on Currents and Dams



What it is: A **rip current** that moves straight out to sea beyond the breaking waves. Rip currents can carry a swimmer into deep water.

How to escape: Swim parallel to the shore until you are out of the current. Once you are free, turn and swim toward the shore.



Dams

Swimming, fishing and boating near a dam requires special precautions. Be sure to observe the following rules:

- Watch for open floodgates. When floodgates are opened, the water level can rise quickly below the dam and can create a dangerous wall of water.
- Never swim or boat near a dam. If gates open at a hydroelectric power dam, the current can pull swimmers and even boaters who are above the dam into and through the dam.
- Avoid low-head dams on rivers. When water flows over a low-head dam, a hydraulic current is created. Boats and canoes have been caught in such hydraulic currents.
- Always check out rivers and lakes before swimming or boating so you won't find yourself too close to a dam.
- Obey warning signs and warning signals immediately.

Longfellow's Information on Hypothermia



What Is Hypothermia?

Hypothermia is the dangerous lowering of the body's internal temperature to below normal. Hypothermia occurs when the body loses heat faster than it produces heat. When this happens, the heart and lungs can no longer work properly. The brain's ability to think and make rational decisions is also affected. Hypothermia can develop very quickly and is a life-threatening condition.

What Causes Hypothermia?

Hypothermia is brought on by exposure to cold, chilling winds and by getting wet. It progresses quickly in a person whose body does not have enough energy-producing food to act as fuel for warmth and in a person who does not have on adequate clothing. It can happen on land or in the water.

Signals of Hypothermia

Signals of hypothermia include—

- Shivering.
- Numbness.
- Glassy stare.
- Apathy.
- Weakness.
- Impaired judgment.
- Loss of consciousness (in late-stage hypothermia).

How to Prevent Hypothermia

Protect yourself from hypothermia by—

- Always wearing a U.S. Coast Guard-approved life jacket when around cold water.
- Wearing layers of insulated clothes that keep you warm even when wet, such as clothing made of insulating synthetic materials.
- Wearing a hat. Body heat is quickly lost through the head.

What to Do if You Fall Into Cold Water and Are Waiting to Be Rescued

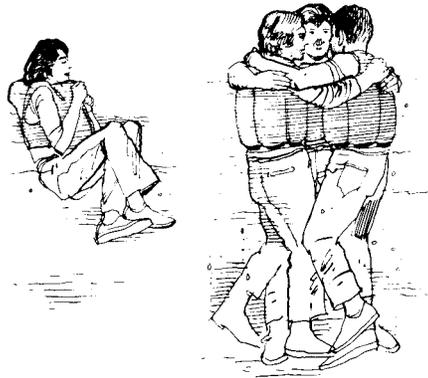
To protect yourself against hypothermia if you fall into cold water, you should—

- Keep your head out of the water.
- Keep your clothes on.
- Get into the HELP position (**H**eat **E**scape **L**essening **P**osture).
- Swim to shore only if it is a short distance or if a current is carrying you toward danger.

Longfellow's Information on Hypothermia



WEAR YOUR LIFE JACKET WHEN YOU ARE AROUND COLD WATER!



How Long Can You Survive in Cold Water?

The length of time you can survive in cold water depends on what you are wearing, your age, your body size and type, your fitness level, the length of exposure in the water and the temperature of the water.

You should remember that—

- Wearing a life jacket increases your survival time.
- Wearing a life jacket gives rescuers more time to find and help you.
- A life jacket helps conserve body heat.
- A life jacket helps keep your face out of the water.

How to Help Someone with Hypothermia

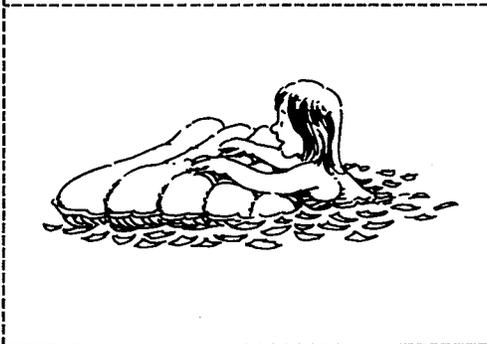
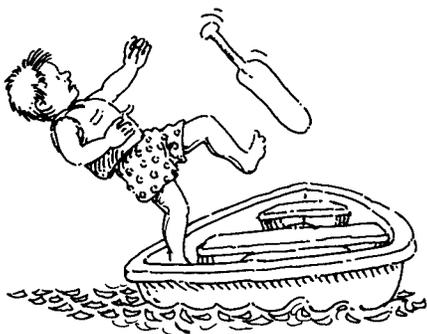
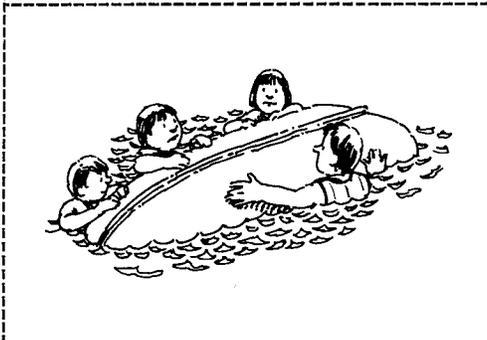
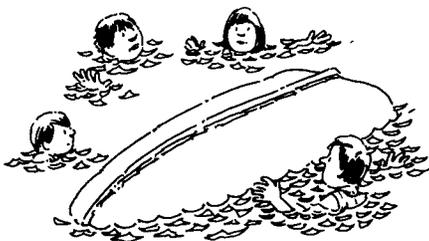
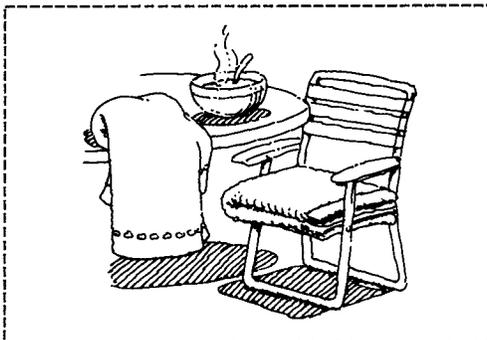
To care for hypothermia—

- CHECK the scene and the victim.
- Send someone to CALL 9-1-1 or the local emergency number.
- Gently move the victim to a warm place.
- Give rescue breathing or CPR if needed.
- Remove any wet clothing and dry the victim.
- Warm the victim SLOWLY by wrapping in blankets or by putting dry clothing on the victim. Hot water bottles and chemical hot packs may be used when first wrapped in a towel or blanket before applying.
- DO NOT WARM THE VICTIM TOO QUICKLY, such as immersing him or her in warm water. Rapid warming can cause dangerous heart rhythms.

Help Yourself



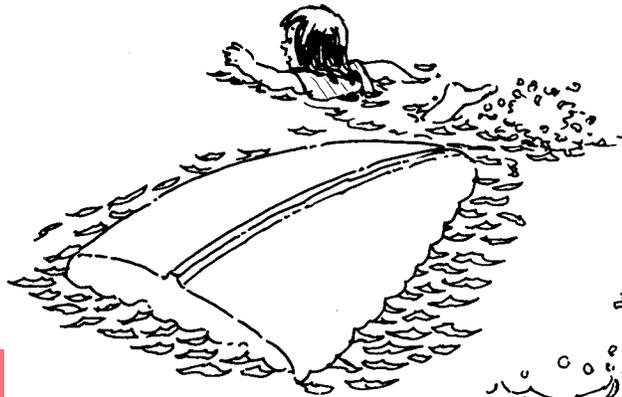
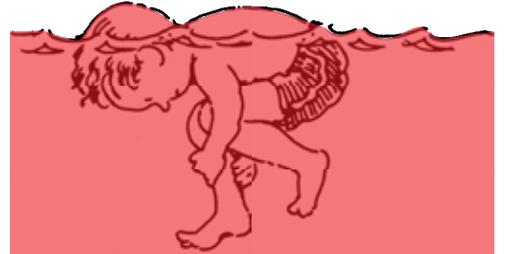
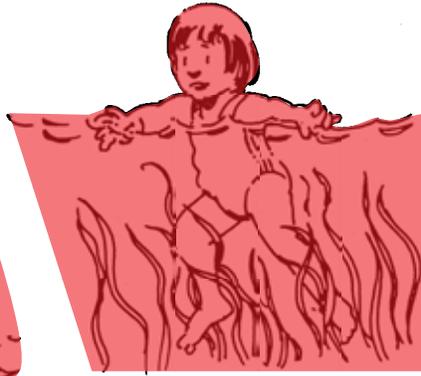
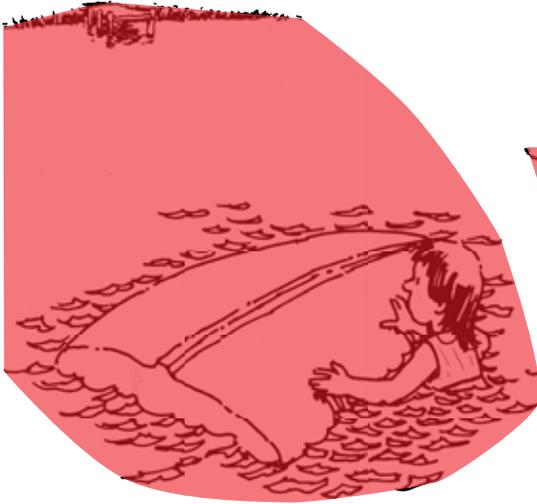
Here are some pictures of things that could happen to you if you are not careful around water. Cut out the self-help pictures and glue them next to the problem they help solve.



What Should You Do?



Color the pictures that show children who are staying calm.



Self-Rescue Quiz



Complete the matching exercise by printing the letter beside the number it most closely matches.

- | | |
|-----------------------------------------------|--------------------------------------------------------|
| <u>K</u> 1. Resting stroke | A. Move to a warm place, remove any wet clothing |
| <u>F</u> 2. Weeds | B. Swim diagonally toward shore |
| <u>L</u> 3. Leg cramp | C. May help turn the person face up in the water |
| <u>G</u> 4. Long-distance swimming | D. Huddle position |
| <u>H</u> 5. Opposite of panic | E. Personal flotation device |
| <u>I</u> 6. Knocked off air mattress | F. Move slowly to escape them |
| <u>A</u> 7. Hypothermia | G. Swim parallel to shore |
| <u>E</u> 8. PFD | H. Stay calm |
| <u>C</u> 9. Life jacket | I. Hang on and kick back to shore |
| <u>B</u> 10. Current | J. HELP position |
| <u>D</u> 11. Four people in cold water | K. Elementary backstroke |
| <u>J</u> 12. One person in cold water | L. Relax, bend over and massage or swim with arms only |

Stay Calm



Find the hidden words listed below. They describe things that could cause even good swimmers to panic if they do not think first. The words can run up, down, backward, forward or diagonally.

I	D	S	S	D	E	E	W	R	E	T	A	W	V	N
G	S	T	N	E	R	R	U	C	N	A	E	C	O	V
C	J	W	J	C	R	E	T	A	W	D	L	O	C	U
S	U	D	D	E	N	I	M	M	E	R	S	I	O	N
A	I	A	Y	D	F	P	B	N	S	M	P	V	M	G
Q	A	Y	H	I	K	D	C	A	N	T	M	P	T	N
U	R	I	V	E	R	C	U	R	R	E	N	T	S	I
A	J	B	T	F	S	M	H	S	C	U	Q	D	J	K
T	H	E	H	D	S	P	M	A	R	C	G	E	L	O
I	M	X	P	R	R	W	O	K	V	R	V	O	W	H
C	B	N	X	H	V	B	B	A	K	K	X	W	X	C
L	Z	A	R	F	S	S	T	E	G	A	X	H	C	O
I	L	P	N	O	I	T	S	U	A	H	X	E	Y	Z
F	R	C	Y	A	B	I	M	B	K	B	Z	W	G	Y
E	S	P	M	A	R	C	H	C	A	M	O	T	S	N

Word List

SUDDEN IMMERSION

RIVER CURRENTS

EXHAUSTION

LEG CRAMPS

OCEAN CURRENTS

AQUATIC LIFE

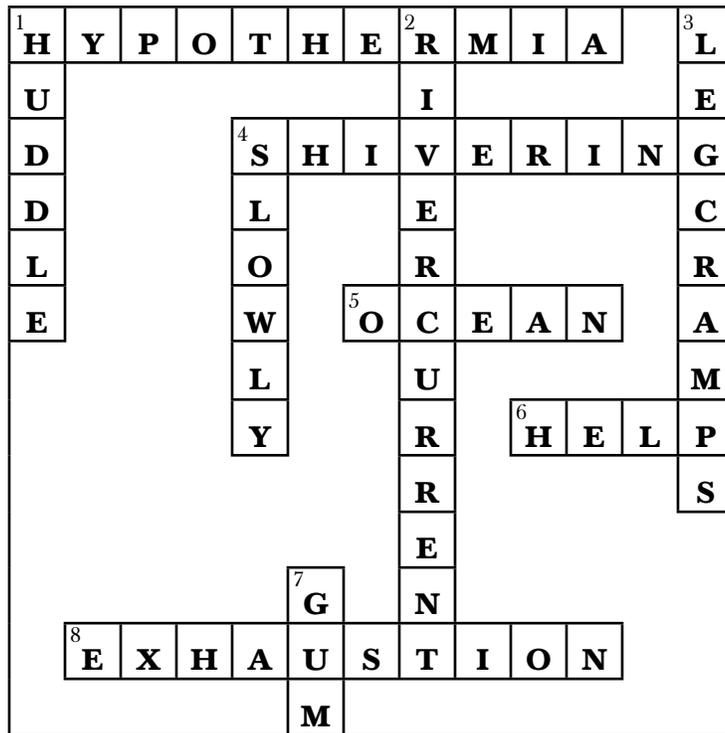
CHOKING

COLD WATER

STOMACH CRAMPS

WATER WEEDS

Think So You Don't Sink



Across

1. This is what it is called when your body begins to get too cold.
4. Do not stay in the water if you feel cold or you start doing this.
5. Always check the warning flags before swimming here.
6. If you are wearing a life jacket and you fall into cold water, get into this position.
8. To prevent this, take frequent rests out of the water.

Down

1. If you end up in cold water and other people are with you, then you can get into this position.
2. If you are caught in this, float downstream feetfirst on your back.
3. If this happens, relax, bend over and massage the muscle.
4. You move this way if caught in water weeds.
7. You can help prevent choking if you do not eat or chew this while swimming.