

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.

Buoyancy: The ability or tendency of an object or person to float; the upward force a fluid exerts on a body in it.

Capsize: To turn a craft upside down in the water.

Emergency: A serious situation that needs immediate action.

Exhaustion: Extremely tired or weak.

Hypothermia: A very serious (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 this lesson, students will be able to:

- Explain panic and describe ways to stay calm in an aquatic emergency.
- Determine if an object floats better in fresh water or salt water.
- Identify ways to stay safe in an aquatic emergency.
- Explain how to stay safe if caught in a river or ocean current.
- Recognize the potential hazards of being immersed in cold water.
- Define hypothermia and identify the signals of hypothermia.
- Describe how to prevent hypothermia.
- Know how to handle exhaustion or sudden leg cramps.

MATERIALS, EQUIPMENT AND SUPPLIES

- Poster: Think So You Don't Sink
- *Longfellow's WHALE Tales* video
- DVD player and monitor or computer with Internet access, projector and screen
- Two large, clear plastic cups for every two or three people
- Salt
- Two eggs for every two or three people. (The eggs may be hard boiled.)
- Crayons, markers and pencils
- Fact Sheet 6: Longfellow's Tips on Currents and Dams

- Fact Sheet 8: Longfellow's Information on Hypothermia
- Student Handouts (one for each student):
 - Activity Sheet 4-1: Help Yourself
 - Activity Sheet 4-2: Find a Float
 - Activity Sheet 4-3: Don't Panic
 - Activity Sheet 4-4: Stay Calm
 - Activity Sheet 4-5: Think So You Don't Sink

Leader's Note

Display the poster, Think So You Don't Sink, at the front of the classroom. Begin a discussion about the poster by pointing to each scene and asking students questions such as, "What problem is this 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 will not sink?" Refer to the poster throughout the lesson. As an option, you may use a projector to display the electronic version of the poster. Show the Longfellow's WHALE Tales video segment, "Think So You Don't Sink," to support this topic.

TOPIC: INTRODUCTION

Key Points

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

TOPIC: CAUSES AND PREVENTION OF PANIC

Key Points and Discussion

- How many of you have ever seen someone in trouble in the water?
Answer: Responses will vary.
- How do you think that person felt?
Answer: Responses will vary.
- How would you feel if you had trouble in the water?
Answer: Responses will vary.
- Panic is a sudden and overwhelming terror that can make you unable to help yourself or others.

- Some things that might make you panic in the water are:

- Leg cramps.
- Exhaustion.
- Getting caught in weeds.
- Strong currents.
- Being in a boat that turns over.
- Cold water.
- Being pushed in.
- Swimming out too far.

- What could you do to help yourself?

Answer: Responses will vary but may include the following:

- Call for help
- Relax
- Float on your back
- Hold onto the overturned boat
- Get out of the cold water

- What is an emergency?

Answer: An emergency is a sudden, serious, usually unforeseen situation that needs immediate action.

- You can prevent emergency situations in the water by knowing your limits and by swimming only in areas that have been approved for swimming and are supervised by a lifeguard.

- What rule helps us remember what to do in an aquatic emergency?

Answer: Think so you don't sink.

Leader's Note: Have students complete Activity Sheet 4-1: Help Yourself.

TOPIC: FIND YOUR FLOAT

Key Points

- Most of the earth's surface is covered by oceans. Oceans have salt water.
- We are going to do an experiment to learn about one major difference between salt water and fresh water.

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 "salt water.")

- Have students dissolve 3 to 4 tablespoons of salt in the cup labeled “salt water.”
- Have students place an egg in each cup.

Key Points and Discussion

- What happens to the egg in the salt water?

Answer: *It floats.*

- What happens to the egg in the cup of water that does not have salt?

Answer: *It sinks.*

- Would you float better in the ocean or in a pool?

Answer: *The ocean because objects float better in salt water.*

- Most people can float in fresh water or salt water, but you will be more buoyant (better able to float) in salt water.
- Remembering that you can float is important if you have a problem while swimming.
- Understanding that some objects float better than others (have more buoyancy) helps us know that some objects can help us stay afloat.
- One reason wearing a life jacket is so important is because life jackets help you float.

Leader’s Note: *Have students complete Activity Sheet 4-2: Find a Float.*

TOPIC: KNOW HOW TO RESCUE YOURSELF

Key Points and Discussion

- What are some types of aquatic environments?

Answer: *Responses should include the following:*

- *Beach*
- *River*
- *Ocean*
- *Bay*
- *Pool*
- *Waterpark*

- What kinds of emergencies can happen in aquatic environments?

Answer: *Responses will vary but may include the following:*

- *Your boat can turn over (capsize).*
- *You can be pushed by a current.*

- You could get a cramp or be too tired to swim any more (exhaustion).
- You could get cold and start shivering (hypothermia).
- We are going to talk about how you can stay safe in each of these emergencies if you remember to think so you don't sink!

Ocean Currents

Key Points and Discussion

- What if you are swimming in the ocean and you get caught in an ocean current? Would you know what to do?
Answer: Responses will vary.
- A longshore current moves along the shore, carrying a swimmer farther down the beach.
 - If you are caught in a longshore current, 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.
- A rip current moves straight out to sea beyond the breaking waves. Rip currents can carry a swimmer into deep water.
 - If you are caught in a rip current, swim along the shore until you are out of the current. Once you are free, turn and swim toward the shore.

River Currents

Key Points and Discussion

- What if you are swimming in a river and you get caught in fast-moving water? What would you do?
Answer: Responses will vary.
- If you are caught in a river current, you should roll over onto your back and go downstream feetfirst to avoid hitting your head. When you are out of the fast-moving water, swim straight toward the shore.

Leader's Note: See Fact Sheet 6, *Longfellow's Tips on Currents and Dams*, for more information about currents and dams. You can provide this information to students, depending on the level of the group. Remind students that swim lessons are the best way to stay safe in water and that the American Red Cross has Learn-to-Swim courses for people of all ages and swimming ability.

Sudden Immersion

Key Points and Discussion

- What if you are in a boat or canoe and it capsizes (turns over)? What would you do?
Answer: Responses will vary.

- Remember that a capsized boat traps air. This will make it float.
- You should stay with the boat and hold onto it. It will help you stay afloat.
- Boats are bigger than people and rescuers can find boats easier than people in the water.
- You never know when a boat might capsize.
- That is why you should always wear a life jacket on a boat.
- If the boat capsizes, the life jacket will help you float and will help you not to panic.

Leader's Note: Have students complete Activity Sheet 4-3: *Don't Panic*.

TOPIC: HYPOTHERMIA

Key Points and Discussion

- Hypothermia is a condition in which the body is unable to maintain warmth and the entire body cools.
- Signals of hypothermia include the following:
 - Shivering
 - Numbness
 - Glassy stare
 - Indifference
 - Loss of consciousness
- Hypothermia is very serious. It is life threatening.
- Life jackets help conserve body heat and help you keep your head out of water. Life jackets should always be worn around cold water.
- You can protect yourself from hypothermia by:
 - Always wearing a U.S. Coast Guard-approved life jacket when you are around cold water.
 - Wearing layers of insulated clothing that keep you warm, even when wet.
 - Wearing a hat. Body heat is quickly lost through the head.
- If you fall into cold water and you are waiting to be rescued:
 - Keep your clothes on.
 - Keep your head out of the water.
 - Get into the HELP position, which stands for Heat Escape Lessening Posture. In this position you cross your arms across your chest and pull your knees up to your chest.
 - If you are with other people, you can lessen heat escape if you huddle together.

Leader's Note: See Fact Sheet 8, *Longfellow's Information on Hypothermia*, for more information on hypothermia. You can provide this information to students, based on the level of the group.

Leader's Note: Have students complete Activity Sheet 4-4: *Stay Calm*.

TOPIC: EXHAUSTION AND LEG CRAMPS

Key Points and Discussion

- What would you do if you were in the water and became too tired to swim?

Answer: Responses will vary.

- What would you do if you got a cramp in your leg while you were swimming?

Answer: Responses will vary.

- We are going to talk about how you can stay safe in each of these situations and to think so you don't sink.
- Exhaustion means you are extremely tired and you don't have the energy to keep swimming or moving.
 - Remember you can float. You should roll over on your back and float.
 - To prevent exhaustion, take frequent rests out of the water.
- Sudden leg cramps (muscle pain) can be a problem when swimming. Swimmers are sometimes surprised by the sudden pain and can sink if they do not think.
- Immediately stop the kicking action that caused the cramp. Try to massage the muscle to make the cramp go away. Continue swimming to shore, but use a different kick.

Leader's Note: Have students complete Activity Sheet 4-5: Think So You Don't Sink.

Activity

- Tell students, "I am going to name an action. If it is something you should DO to stay safe, stand up. If it is something you should NOT DO, sit down."

- 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: WRAP-UP

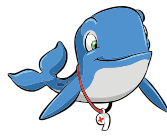
Leader's Note: Refer back to the poster, *Think So You Don't Sink*, as you review the lesson.

Discussion

- Why is it important to think when you are faced with an aquatic emergency?

Answer: You should think so that you do not panic. Instead you can consider what your actions should be to keep you safe.

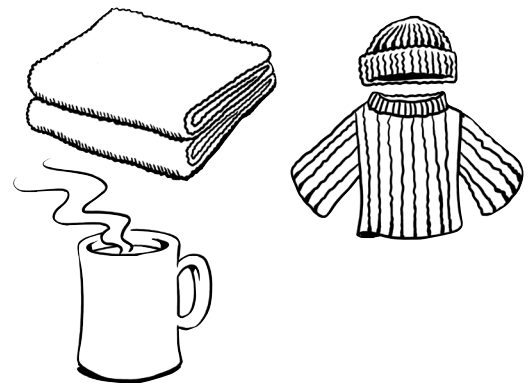
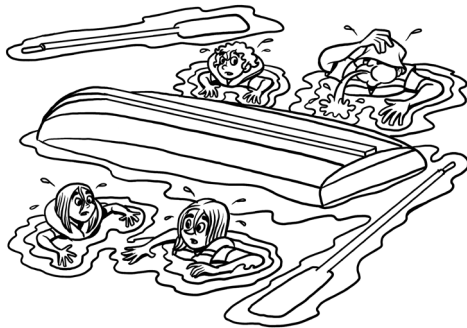
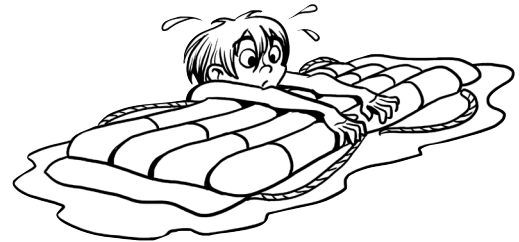
- Some good actions include:
 - Call for help if you are in trouble in the water.
 - Float on your back if you become too tired in the water.
 - Swim only in areas that are supervised by lifeguards.
 - Swim with a buddy.
 - Always wear a life jacket around cold water.
 - If you get caught in a current, don't try to swim against the current.
- Remember to think so you don't sink.

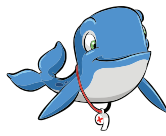


Help Yourself

Name: _____

Here are some pictures of things that could happen to you around water. Draw a line from each problem to the self-help picture that shows how to solve the problem. Then color the pictures.

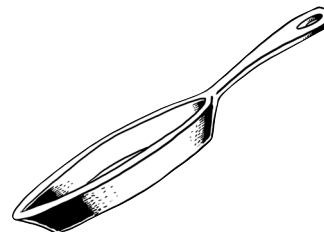
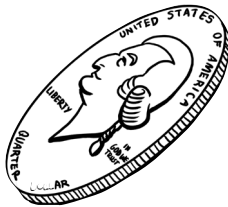
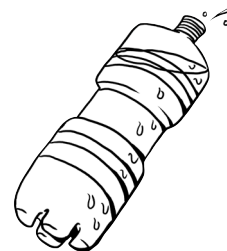
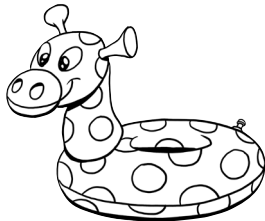
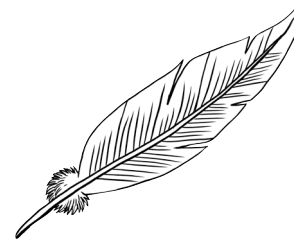
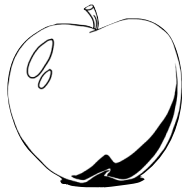




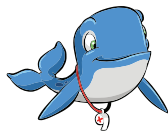
Find a Float

Name: _____

Look at each drawing and put a check mark next to it if you think it will float and an X if you think it will sink.



Write about why you think some objects float and some sink.



Don't Panic

Name: _____

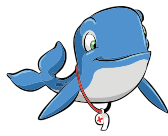
Read each scenario below and write about what you think the person should do. Draw a picture of one scenario on the other side of this page.

1. Earl and Louanne are having a contest to see who can swim the farthest. Earl gets tired and turns around to swim back to shallow water. Louanne keeps swimming. Suddenly, she realizes that Earl is not there and she has swum farther than she intended. She turns around to swim back but becomes tired before she reaches shallow water. She starts to get scared because she does not think she can make it. What should she do?

2. Jose and Chris are on a river canoeing trip with their scout troop. Their canoe hits a rock and turns over. Both boys have on life jackets. What should they do?

3. Sam and Eva are swimming in a pond when Sam feels something wrap around his ankle. When he tries to swim, he finds that he is caught in water weeds. What should he do?

4. Abe and Brandon are standing on the edge of the pool deck at the deep end. Abe pushes Brandon into the water. Because he was not prepared to go in, Brandon swallows a mouthful of water. When he comes up, he is coughing. What should he do?



Stay Calm

Name: _____

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 across or down.

i d s s w a t e r w e e d s n
g s t n e r r u t n q v c o v
c j w j c c o l d w a t e r u
s u d d e n i m m e r s i o n
a i a y o f p b n s m p v m r
q a y h i k d c y n t m p t i
u r i v e r c u r r e n t o p
a j b t f s m h s c u q d j c
t h e h d s l e g c r a m p u
i m x p r r w o k v r v o w r
c b n x h v b b a k k x w x r
l z a r f s s t e g a x h c e
i l p e x h a u s t i o n y n
f r c y a b i m b k b z w g t
e s t m a l c h c a m t s t n

Word List

aquatic life

exhaustion

rip current

sudden immersion

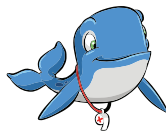
cold water

leg cramp

river current

water weeds

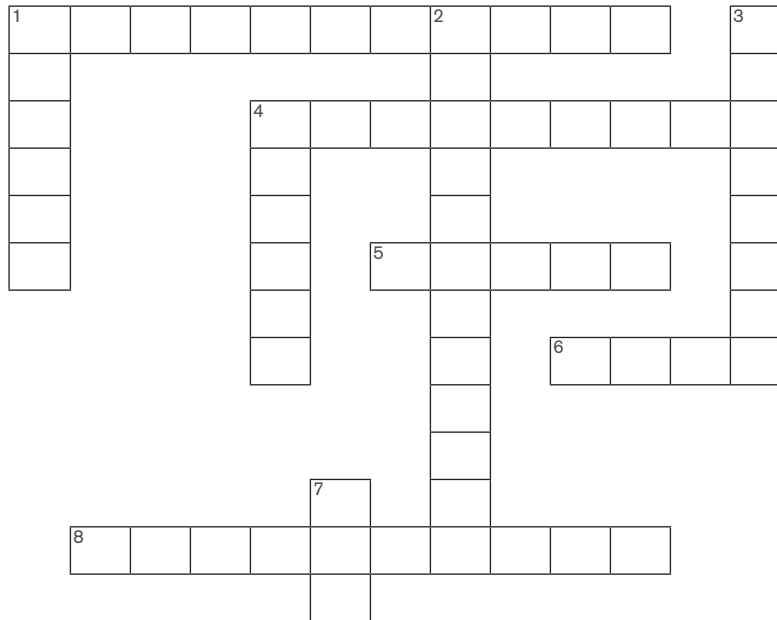




Think So You Don't Sink

Name: _____

Read each clue. Then enter the word in the correct spaces on the crossword puzzle.

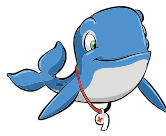


Across

1. This is what it is called when your entire body cools and is unable to keep warm.
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

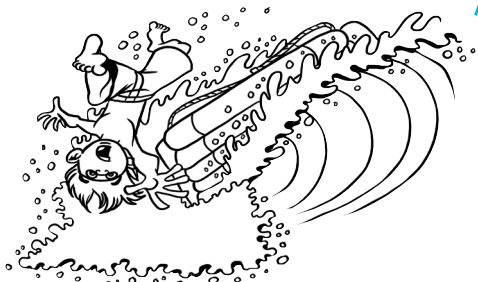
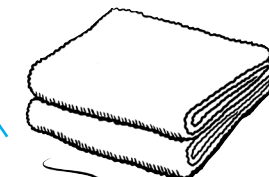
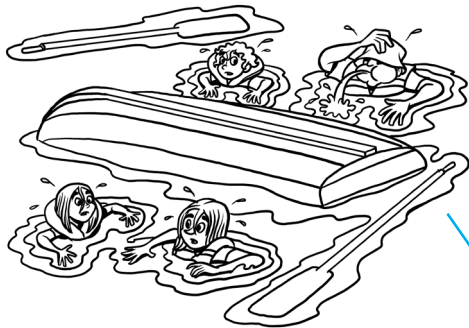
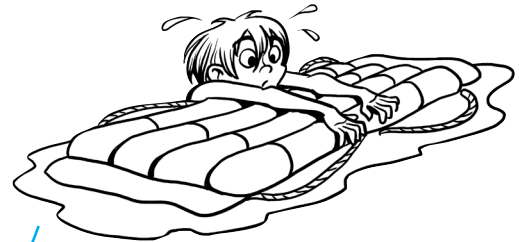
1. If you end up in cold water and other people are with you, then you can get into this position.
2. If you are caught in this, float downstream feetfirst on your back (two words).
3. If this happens, relax, bend over and massage the muscle (two words).
4. You move this way if caught in water weeds.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

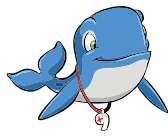


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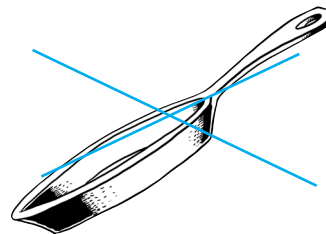
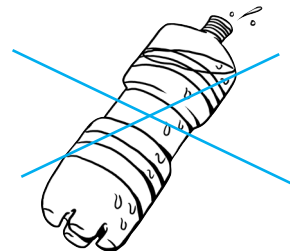
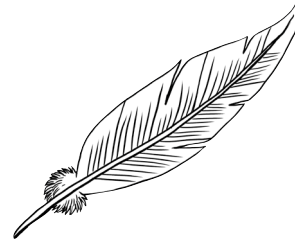
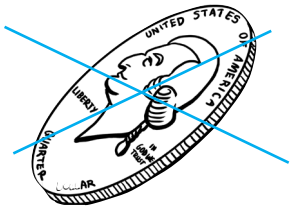
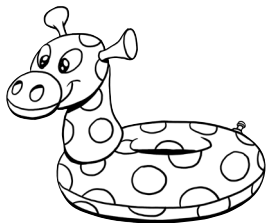
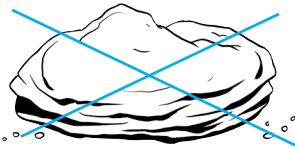
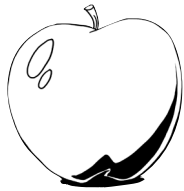




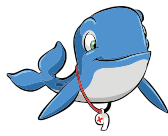
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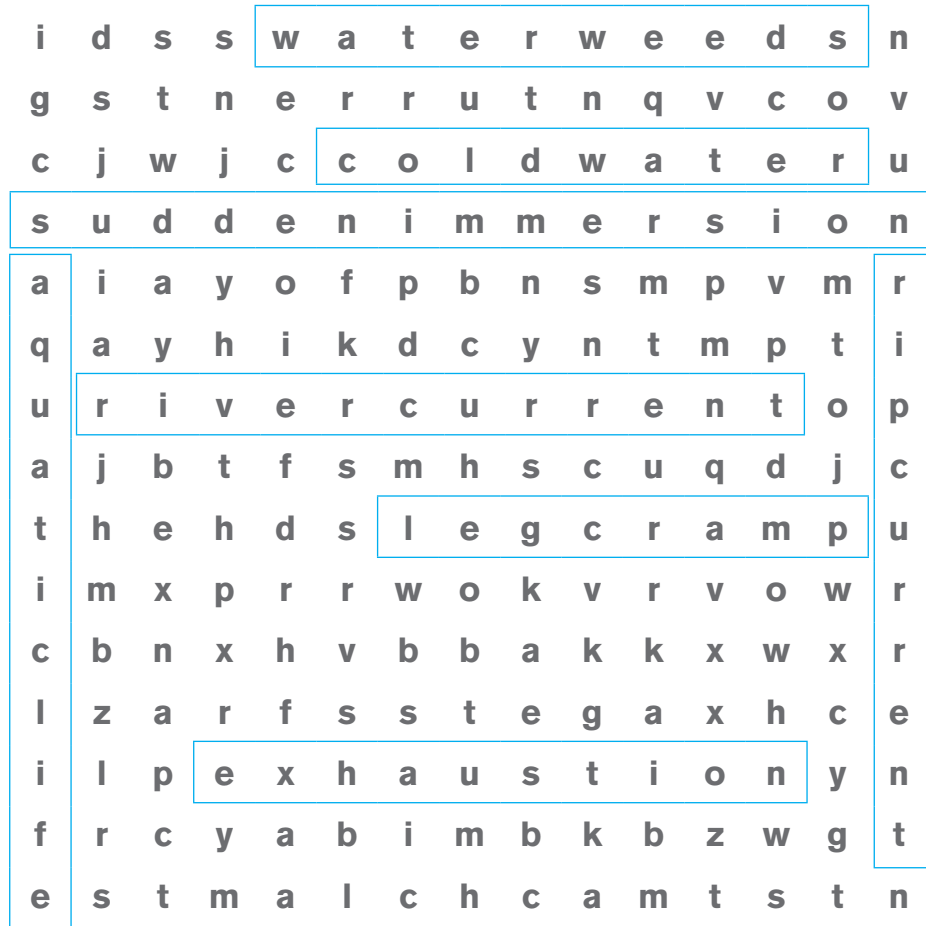
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Stay Calm

Name: _____

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 across or down.



Word List

aquatic life

cold water

exhaustion

leg cramp

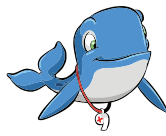
rip current

river current

sudden immersion

water weeds

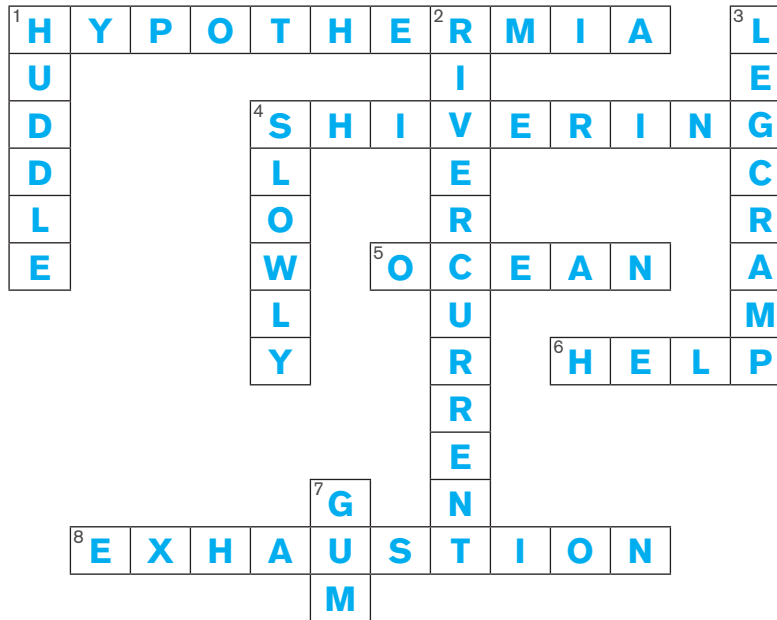




Think So You Don't Sink

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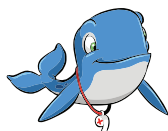


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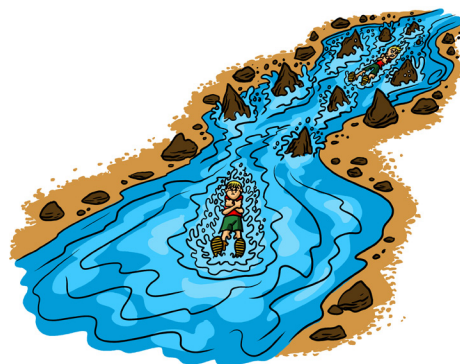
Longfellow's Tips on Currents and Dams

Types of Currents and How to Escape Them

River Rapid

What it is: White water, fast-moving water; unpredictable.

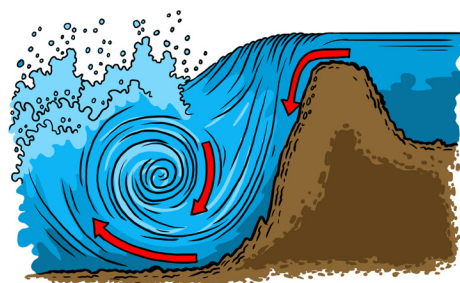
How to escape: Roll over onto your back and go downstream feetfirst to avoid hitting your head. Back paddle with the arms and try to steer away from the main current. Once out of the main current, swim or wade directly toward shore. Because of the current, this will result in a slightly downstream path.



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 underwater.

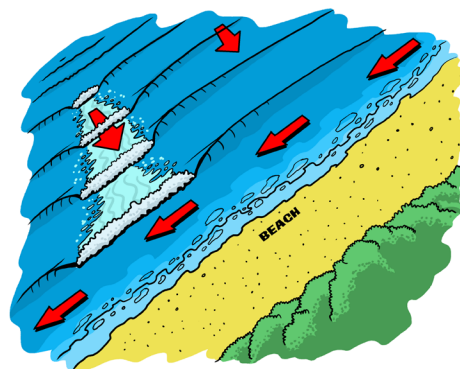
How to escape: Swim to the bottom and get into the downstream current. Then reach the surface.



Longshore Current

What it is: A longshore current moves along the shore, carrying a swimmer farther down the beach.

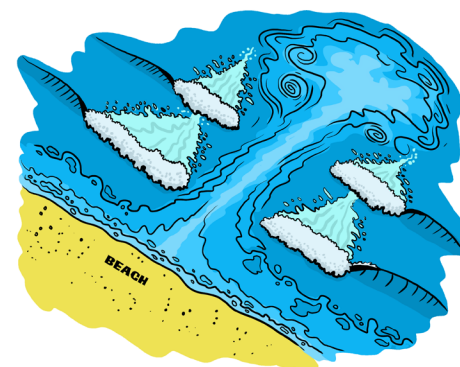
How to escape: Try to swim toward shore while moving along with the current. You will eventually get to shore, although you may be some distance from where you entered the water.



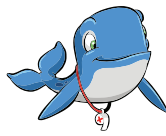
Rip Current

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

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



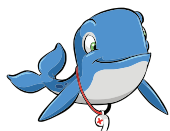
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Longfellow's Tips on Currents and Dams

Dams

- No dam is ever safe. Never swim or boat near a dam.
- A dam is a barrier built across a river, stream or creek to control the flow of water.
- Some dams can create powerful hydraulic currents. Boats and canoes have been caught in such hydraulic currents.
- When floodgates open, the water level can rise quickly below the dam and can create a dangerous wall of water.
- The current created when the dam is opened can pull anyone or anything (including boats) above the dam into danger.
- 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 a condition in which the body is unable to maintain warmth and the entire body cools. Hypothermia is very serious. It is life threatening.

What Causes Hypothermia?

Hypothermia is brought on by exposure to cold, chilling winds and by getting wet. Children and the elderly are at more of a risk for hypothermia than other people.

Certain conditions can more easily lead to hypothermia, including:

- Drinking alcohol.
- Taking drugs and certain medications.
- Some medical conditions, such as diabetes or heart disease.
- Prolonged exposure to cold, wet and/or windy conditions.
- Wet clothing.

Signals of Hypothermia

Signals of hypothermia include:

- Shivering.
- Numbness.
- Glassy stare.
- Indifference.
- Loss of consciousness.

Shivering that stops without rewarming is a sign that the person's condition is worsening. He or she needs immediate medical care.

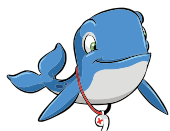
How to Prevent Hypothermia

Protect yourself from hypothermia by:

- Always wearing a U.S. Coast Guard–approved life jacket when around cold water.
- Wearing several layers of clothing. The first layer should keep moisture away from skin. The second layer should keep you warm. The outer layer should be waterproof or water-resistant.
- Wearing a hat. Body heat is quickly lost through the head.

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Longfellow's Information on Hypothermia

What to Do If You Fall into Cold Water and Are Waiting to Be Rescued

To protect yourself from 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). In this position you hold your upper arms against your sides, fold your lower arms across your chest and pull your knees up to your chest.
- If you are with other people, you can lessen heat escape if you huddle together.
- Swim to shore only if it is a short distance or if a current is carrying you toward danger.

WEAR YOUR LIFE JACKET WHEN YOU ARE AROUND COLD WATER!



How Long Can You Survive in Cold Water?

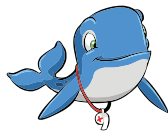
The length of time you can survive in cold water depends on what you are wearing, your age, your body size and type, your fitness level, the length of exposure in the water and the temperature of the water.

You should remember that:

- Wearing a life jacket 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.
- Wearing a life jacket increases your survival time.

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Longfellow's Information on Hypothermia

How to Help Someone with Hypothermia

To care for hypothermia:

- CHECK the scene and the person.
- Send someone to CALL 9-1-1 or the local emergency number.
- Gently move the person to a warm place.
- Remove any wet clothing and dry the person.
- Put on dry clothing.
- Warm the person gradually by wrapping him or her in blankets and plastic sheeting to hold in body heat.
- If you are far from medical care, position the person near a heat source. Keep checking the heat source. Keep a barrier such as a blanket, towel or clothing between the heat source and the person.
- If the person is awake, give warm liquids that do not contain alcohol or caffeine.
- DO NOT WARM THE PERSON TOO QUICKLY, such as by placing him or her in warm water.
- Check breathing and look for any changes in the person's condition.
- If the person is not breathing, perform CPR if you know how.
- Continue to warm the person until emergency medical services personnel take over.