

Look Before You Leap



KEY TERMS

- **Aquatic life** – Life in bodies of water.
- **Buoyancy** – The upward force a fluid exerts on bodies in it.
- **Currents** – Fast-moving water.
- **Depth** – Measurement downward in the water.
- **Food chain** – A series of organisms interrelated in their feeding habits, each being fed upon by a larger one that in turn feeds still a larger one.
- **Hypothermia** – A life-threatening condition in which the body is unable to maintain warmth and the entire body cools.
- **Hypothesis** – A prediction in science or an informed guess.
- **Sunscreen** – A cream, lotion or spray used to protect the skin from harmful rays of the sun.
- **Water pollution** – Contamination of water with harmful substances.

OBJECTIVES

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

Topic 1: Check It Out

- Recognize a safe place for swimming and diving.

Topic 2: Wind and Waves

- Relate how wind affects waves and currents in water.

Topic 3: Effect of Pollution on Ocean Creatures

- Describe how pollution affects ocean creatures and our environment.

Topic 4: The Importance of Sunscreen

- Explain the importance of wearing sunscreen.

MATERIALS, EQUIPMENT AND SUPPLIES

All Topics

- Look Before You Leap poster
- *Longfellow's WHALE Tales* DVD
- DVD player and monitor
- Optional:
 - Look Before You Leap stickers (one for each student)

Look Before You Leap



Topic 1: Check It Out

- Activity Sheet 3-1: Check It Out (one for each student)
- Activity Sheet 3-2: Look Before You Leap (one for each student)
- Activity Sheet 3-3: Think Before You Jump In (one for each student)
- Activity Sheet 3-4: Watch Out (one for each student)
- Fact Sheet: Longfellow's Safety Equipment Information
- Fact Sheet: Longfellow's Rules for Safe Diving
- Fact Sheet: Longfellow's Tips on Currents and Dams
- Fact Sheet: Longfellow's Aquatic Life Facts

Topic 2: Wind and Waves

- Large metal cake pan
- Water
- Straws (one for each student)
- Activity Sheet 3-5: Better Safe Than Sorry (one for each student)

Topic 3: Effect of Pollution on Ocean Creatures

- Two large, clear plastic cups
- Feathers
- Clean cup of water
- Motor oil or cooking oil

Topic 4: The Importance of Sunscreen

- Bottle of sunscreen
- A pair of water shoes



LEADER'S NOTES

- Display the Look Before You Leap poster at the front of the class. To begin a discussion about the poster, ask students questions, such as "Is this a safe place to swim? Why or why not?" 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, "Look Before You Leap," can be shown to support this topic.

INTRODUCTION

Key Points:

- **Swimming in a safe place is important. You should always swim in a supervised area with a lifeguard on duty and with a buddy. Make sure safety equipment is at the site.**

Look Before You Leap



- Look at the water. Check the depth. Make sure the water looks safe. If you cannot swim, the water should be waist to chest deep.
- We are going to do some activities that will help you remember when you swim that you should always Look Before You Leap.

TOPIC 1: CHECK IT OUT

Recommended Grade Levels: K–6

Key Points and Discussion:

- Who should you look for before swimming?
Answer: A lifeguard.
- Who should be swimming with you?
Answer: A buddy.
- What equipment should be at the swimming site?
Answers: Responses should include the following:
 - Ring buoy
 - Rescue tube
 - Heaving line



LEADER'S NOTE

See Fact Sheet: Longfellow's Safety Equipment Information for additional safety equipment.

- Should you dive headfirst into waves?
Answer: No. Because you cannot see how deep it is below the waves, head, neck or back injuries can result from diving headfirst into the surf at a beach.
- How deep should the water be for swimming?
Answer: Waist to chest deep for nonswimmers.
- How should the water temperature feel?
Answer: Cool to warm.
- What should the bottom surface be like?
Answers: Responses could include the following:
 - Firm
 - Gently sloping
 - Free from the following:
 - Stumps
 - Sharp objects
 - Cans
 - Broken glass

Look Before You Leap



- *Holes*
- *Weeds*
- **What could cause you trouble in a lake, river or the ocean?**

Answers: Responses could include the following:

- *Currents*
- *Dams*
- *Aquatic life*



LEADER'S NOTE

See the following fact sheets for additional information on safe diving and water hazards:

- *Fact Sheet: Longfellow's Rules for Safe Diving*
- *Fact Sheet: Longfellow's Tips on Currents and Dams*
- *Fact Sheet: Longfellow's Aquatic Life Facts*

Activity:

Have students complete the following:

- Activity Sheet 3-1: Check It Out
- Activity Sheet 3-2: Look Before You Leap
- Activity Sheet 3-3: Think Before You Jump In
- Activity Sheet 3-4: Watch Out

TOPIC 2: WIND AND WAVES

Recommended Grade Levels: K–6

Key Points and Discussion:

- **What helps to cause waves?**
Answer: Wind helps to cause waves.
- **What effect does high wind have on ocean waves?**
Answer: The waves become larger when there is high wind.
- **Is it safe to swim when the waves are very high?**
Answer: No. It is not safe to swim when the waves are very high.

Activity:

- Tell students, “We are going to do a science experiment that shows how wind helps to cause waves.”
- Have a large metal cake pan of water and a straw for each student.

Look Before You Leap



- In groups of four to five, have students blow through their straws across the surface of the water in the pan. The harder they blow, the bigger the waves.
- Next, have students blow in different directions, causing currents.

Key Points and Discussion:

- **What should you do if you get caught in a strong current?**

Answers: Responses should include the following:

- Call for help.
 - Have your buddy yell for help.
 - If the current carries you straight out, try to swim out of the current in a direction parallel to shore. If you cannot swim out of the current, float on your back or tread water.
- **How can you prevent a problem if the waves are very high?**

Answers: Responses should include the following:

- Stay on the shore.
- Ask the lifeguard if swimming is safe.
- Look before you leap.

Activity:

Have students complete Activity Sheet 3-5: Better Safe Than Sorry.

TOPIC 3: EFFECT OF POLLUTION ON OCEAN CREATURES

Recommended Grade Levels: 4–6

Key Points and Discussion:

- **What is water pollution?**

Answer: Dirty, unsafe water

- **What causes water pollution?**

Answers: Responses could include the following:

- Oil spills
 - Trash in the water
 - Dumping of waste and chemicals
- **What happens to ocean creatures in polluted water?**

Answers: Responses could include the following:

- They can get sick and die.
 - They cannot swim or eat.
 - They cannot find food.
- **What happens to the food chain of ocean creatures?**

Answer: Every ocean creature is affected by pollution. All creatures depend on each other.

Look Before You Leap



- **What happens when there is an oil spill?**

Answer: An oil tanker can carry 500,000 tons of oil. This can cause massive destruction to ocean creatures and to beaches where animals and seabirds live.

- **What is buoyancy?**

Answer: The ability to float. (The upward force a fluid exerts on bodies in it.)

- **What is your hypothesis about what will happen to a seabird covered in oil?**

Answer: He will lose his buoyancy or ability to float and eat food.

Activity:

- Tell students, **“We are going to do an experiment to see how oil affects the feathers of seabirds.”**
- Hold up a feather and say to the students, **“I want you to imagine that this feather is a seabird in the ocean.”**
- Hold up a glass of clean water.
- Hold up a glass of motor oil.
- Dip the feather in water.
- Dip the feather in motor oil.

Key Points and Discussion:

- **What happens to the feathers in clean fresh water?**
Answer: Water runs right off.
- **What does this mean for the bird?**
Answer: The bird can fly and eat.
- **What happens to the feather in oil?**
Answer: The feather gets dirty and sticky.
- **What does this mean for the bird?**
Answer: The bird cannot fly or eat, and the bird could die.



LEADER'S NOTE

Show students how the barbs of the feather are stuck together.

- **What would happen to Longfellow the Whale if he was covered in oil?**
Answer: He would get very ill, be unable to eat and possibly die. Longfellow is a blue whale that eats only plankton. His food supply could be destroyed.
- **A blue whale is about 100 feet long and is the largest mammal in the world. How many yards is 100 feet?**
Answer: 33 yards plus 1 foot.

Look Before You Leap



LEADER'S NOTE

You can show students how big a blue whale is by—

- Laying out a string that is 100 feet in length.
- Having students lie down head to foot in a hallway or other large area to see how many of them it takes to “create” a whale.

- **What can you do to help clean up our beaches and lakes?**

Answer: Never leave trash. Pick up trash that others have left.

- **What effect do plastic rings around cans have on ocean creatures?**

Answer: They can get caught around their necks and kill them.

- **Why should you look around you before you leap?**

Answers: Responses should include the following:

- Look before you enter the water because it may be unsafe.
- Look around you because there may be trash on the beach that can be harmful.
- Make sure you are in a safe area.

TOPIC 4: THE IMPORTANCE OF SUNSCREEN

Recommended Grade Levels: K–3

Key Points and Discussion:

- **Look at your body before you leap into the water. Make sure you have put on your sunscreen and that your feet are protected from rough surfaces.**

- **Why is wearing sunscreen important?**

Answer: It protects your skin against harmful rays and helps prevent skin cancer and sunburn.

- **How often do you apply sunscreen?**

Answer: At least every 2 hours and before and after swimming.

- **Why is it important to wear water shoes?**

Answers: Responses should include the following:

- They help protect your feet from harmful aquatic life, rocks or plants in the ocean.
- They help protect your feet from rough surfaces on the bottom of a pool.
- They help protect your feet from hot sand.

Activity:

- Have students stand up and put their hands over their eyes as a shield.
- Say to students, “**Look**” and have them look around.
- Have students say in unison several times, “Look before you leap.”
- Say to students:
 - “**Thumbs up if you have your buddy.**”
 - “**Thumbs up if you are in a supervised area.**”

Look Before You Leap



- “Thumbs up if your area looks safe.”
- “Thumbs up if you are wearing sunscreen.”
- “Thumbs up if you are wearing water shoes.”
- Say to students, “You are now ready to swim.”

WRAP-UP



LEADER'S NOTE

Refer back to the poster *Look Before You Leap* as you review the lesson.

Key Points and Discussion:

- **Why should you Look Before You Leap?**
Answer: To see if it safe.
- **Why should you look at the water and check it out?**
Answer: To notice large waves or strong currents.
- **What effect can large waves have on swimming at the beach?**
Answer: Large waves make it dangerous for swimming.
- **How can you help stop pollution?**
Answer: Never leave trash at the beach. Pick up trash that others have left.
- **Why should you wear sunscreen?**
Answer: To protect your skin.
- **Remember to Swim with a Buddy in a Supervised Area and Look Before You Leap!**

Longfellow's Safety Equipment Information



How to Make a Reaching Assist

If you want to assist someone in trouble in the water and you can reach the victim with an object, you should—

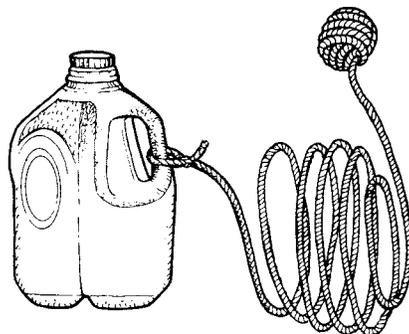
- Stay out of the water.
- Brace yourself on a pool deck, pier surface or shoreline.
- Reach out to the victim using any object that extends your reach, such as a pole, an oar, a paddle, a tree branch, a shirt, a belt or a towel.
- When the victim grasps the object, slowly and carefully pull him or her to safety. Keep your body low and lean back to avoid being pulled into the water.

How to Make a Throwing Assist

If you want to assist someone in trouble in the water using a throwing device, you should—

- Get into a stride position. The leg opposite your throwing arm is forward. This helps maintain balance during the throw.
- Step on the end of the line with your forward foot. Avoid stepping on the coiled line with your other foot.
- Shout to get the victim's attention. Make eye contact and say that you are going to throw the object now. Tell the victim to grab it.
- Bend your knees and throw the object to the victim. Try to throw the object upwind or up current, just over the victim's head, so the line drops within reach.
- When the victim has grasped the object or the line, slowly pull him or her to safety.
- Keep your weight low and back. Lean away from the water as you bring the victim to safety.
- If the object does not reach the victim, quickly pull the line back in and throw it again. Try to keep the line from tangling, but do not waste time trying to recoil it. If the object is a throw bag, partially fill the bag with some water and throw it again.

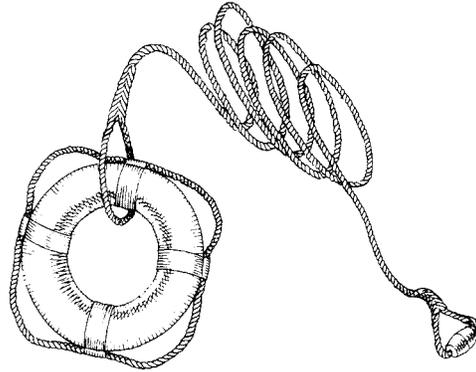
Types of Safety Equipment



Heaving Jug

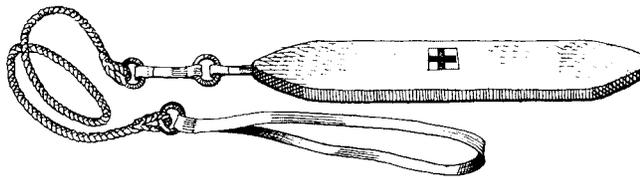
A homemade, emergency throwing device made from a gallon plastic container with one-half inch of water inside and a line attached to the handle.

Longfellow's Safety Equipment Information



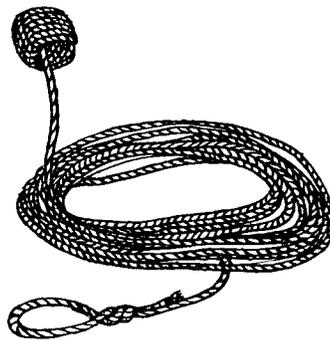
Ring Buoy

A buoyant ring with 40 to 50 feet of lightweight line attached. The ring is thrown by the rescuer to someone in trouble in the water. An object on the other end of the line prevents it from slipping out of the rescuer's grasp.



Rescue Tube

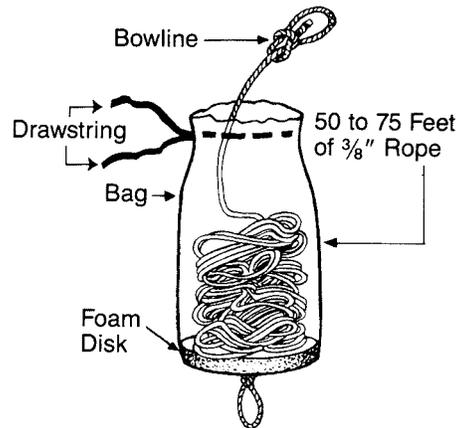
A vinyl, foam-filled, floating support approximately 45 to 54 inches long. It has a towline with a shoulder strap attached. It may be used as a throwing device.



Heaving Line

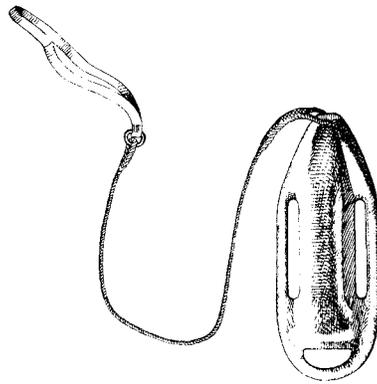
A strong, lightweight line, 40 to 50 feet long. A buoyant, weighted object on one end helps direct the line out to the victim when it is thrown.

Longfellow's Safety Equipment Information



Throw-Rope Bag

A nylon bag containing polypropylene line that floats. It is a throwing device often used to rescue someone who has fallen from a boat.



Rescue Buoy

A hard plastic buoy with handles on both sides. It has a 6-foot towline with a shoulder strap attached. It is used by waterfront lifeguards when making a swimming rescue.



Reaching Pole

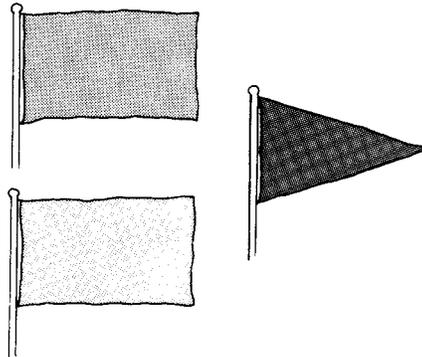
A pole 10 to 15 feet long, made of bamboo, aluminum or fiberglass, that is extended into the water to someone in trouble. A long branch or fishing pole could serve the same purpose.



Lifelines

Buoyed lines that mark and separate swimming and diving areas, shallow and deep water.

Longfellow's Safety Equipment Information



Warning Flags

Flags of various colors displayed to describe safety conditions in the water. Here are some examples—

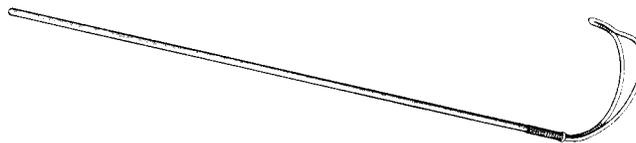
- Green Flag—safe, open for swimming
- Red Flag—unsafe, closed for swimming
- Yellow Flag—caution, limited swimming because of currents or other conditions



First Aid Kit



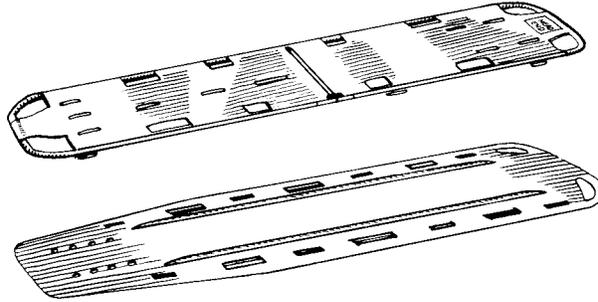
Telephone



Shepherd's Crook

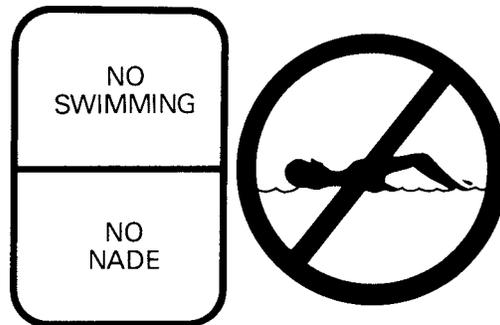
A long, lightweight pole with a blunted hook at one end. It is used as a reaching pole or to encircle an unconscious victim in the water.

Longfellow's Safety Equipment Information



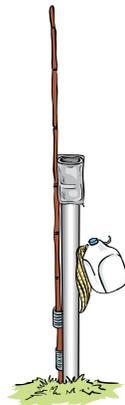
Backboard

A board used to immobilize a victim with suspected head, neck or back injuries. Straps help avoid further injury by keeping the victim from moving.



Posted Rules

Rules posted near supervised swimming areas. They contain facility rules and warnings.



Safety Post

A post with reaching and throwing devices attached. It is usually located at home pools or private ponds.

Longfellow's Rules for Safe Diving



Diving Safety

A headfirst entry into shallow water is the leading cause of head, neck or back injuries in the water. The following guidelines are recommended for safe diving:

- Learn how to dive safely from a qualified instructor.
- In a headfirst dive, extend the arms with your elbows locked alongside the head. Keep your hands together with thumbs touching (or interlocked) and palms facing toward the water. Keeping the arms, wrists and fingers in line with the head helps control the angle of entry. This reduces the impact of the water on the top of the head and helps protect from injury. A diver's body should be tensed and straight from the hands to the pointed toes.
- Follow safety rules at all times—never make exceptions.
- Do not wear earplugs; pressure changes make them dangerous.
- Obey “No Diving” signs. They are there for safety.
- Be sure of water depth and ensure that the water is free from obstructions. The first time in the water, ease in or walk in; do not jump or dive.
- Never dive into an above-ground pool, the shallow end of any in-ground pool or at a beach.
- Never dive into cloudy or murky water.
- In open water, always check first for objects under the surface, such as logs, stumps, boulders and pilings.
- Check the shape of the pool bottom to be sure the diving area is large enough and deep enough for the intended dive.
- The presence of a diving board does not necessarily mean it is safe to dive. Pools at homes, motels and hotels might not have a safe diving envelope.
- When diving from a deck, the area of entry should be free of obstructions (such as lane lines and kickboards) for at least 4 feet on both sides. For dives from a 1-meter diving board, you need 10 feet of clearance on both sides.
- Dive only off the end of a diving board. Diving off the side of a diving board might result in striking the side of the pool or entering water that is not deep enough.
- Do not bounce more than once on the end of a diving board to avoid missing the edge or slipping off the diving board.
- Do not run on a diving board or attempt to dive a long way through the air. The water might not be deep enough at the point of entry.
- For springboard diving, use equipment that meets the standards set for competition.
- Do not dive from a height greater than 1 meter unless trained in elevated entry.
- Swim away from the diving board after entering the water. Do not be a hazard for the next diver.
- Never use drugs or alcohol when diving.
- Do not wear swimming goggles when diving.

Longfellow's Tips on Currents and Dams

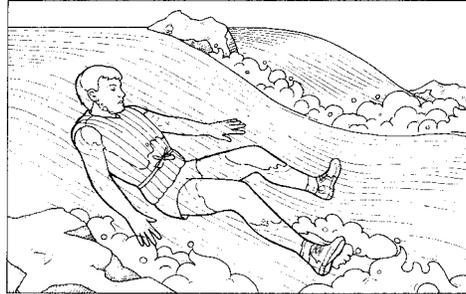


Types of Currents and How to Escape Them

River rapid

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

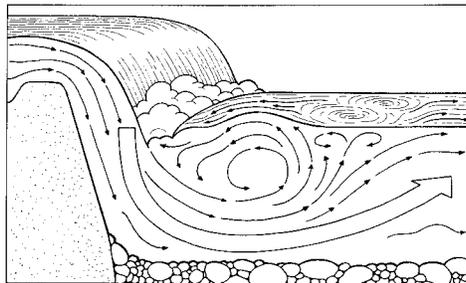
How to escape: Roll over onto your back and go downstream feetfirst to avoid hitting your head. When you are out of the strongest part of the current, swim straight toward the shore. Because of the current, you will actually move downstream at an angle toward the shore.



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.

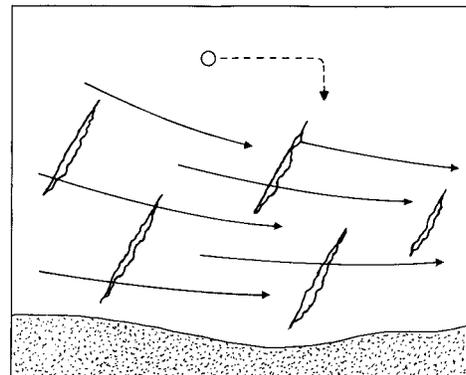
How to escape: Swim to the bottom and then swim out with the current to reach the surface.



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.)

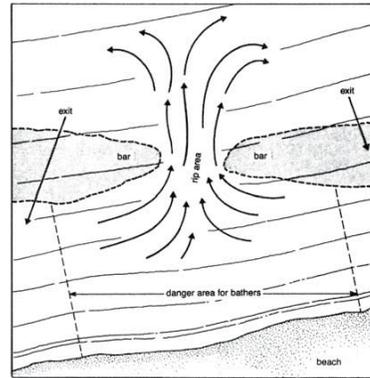


Longfellow's Tips on Currents and Dams



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:

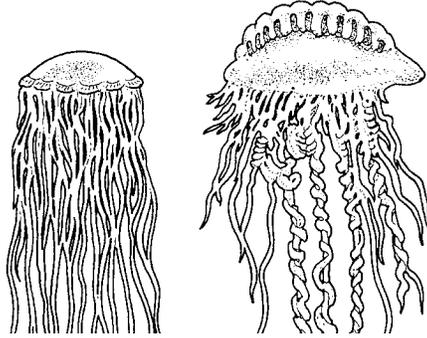
- Watch for open floodgates. When floodgates are opened, the water level can rise quickly below the dam and can create a dangerous wall of water.
- Never swim or boat near a dam. If gates open at a hydroelectric power dam, the current can pull swimmers and even boaters who are above the dam into and 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 Aquatic Life Facts



Weeds

Weeds, grass and kelp are not usually a menace to swimmers. However, an inexperienced swimmer who swims into a patch of weeds could become entangled. If the swimmer then tries to thrash free, the weeds could wrap securely around the arms and legs. Slow, gentle shaking and withdrawing movements will clear them.



Jellyfish and Portuguese Men-of-War

The tentacles of these nearly clear animals may cause reactions ranging from a mild sting to shock, nausea or trouble breathing. Swimmers should avoid these aquatic creatures in the water and on the beach.



Coral

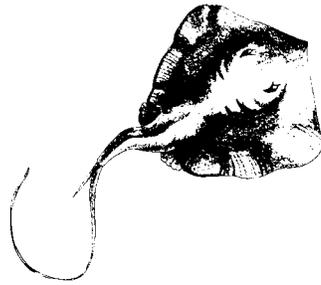
Coral can cause multiple cuts. These cuts require thorough cleaning and possibly medical attention. Avoid swimming in areas where coral may cause a problem.



Cone Shells

The cone shell is a type of mollusk related to the snail. It can puncture the skin and inject venom through the wound. Cone shell poisoning can cause numbness and tingling about the nose and mouth, paralysis and even death. Wounds from cone shells need medical attention immediately. Swimmers should avoid picking these shells up from the bottom of the ocean.

Longfellow's Aquatic Life Facts



Stingrays

Stingrays do not normally attack people but will protect themselves if stepped on by puncturing a person's skin and inject venom from the barbed spines at the base of their tail. Symptoms of such wounds include shock, vomiting, diarrhea and muscular paralysis. Wounds from stingrays need medical attention. When entering the water, swimmers should shuffle their feet. This will cause stingrays to swim out of the area.



Leeches

Leeches are more of a nuisance than a danger. Leeches are found in freshwater areas, particularly in murky, muddy water.

Predators

Sharks, barracuda, moray eels and other predators can produce severe bite wounds. The best protection is to swim in areas where there are no predators and in a supervised area where someone is on the lookout for them.

Snakes

Snakes normally avoid people. Swimmers should not try to corner or chase a snake, and they should always check carefully for snakes under a boat before moving it or turning it over.

Sea Urchins

Sea urchins, found in the ocean, are covered with sharp brittle spines. If handled or stepped on, the spines can puncture a person's hand or foot and can be quite painful. Some species are also poisonous. Swimmers should not pick up sea urchins and should be careful not to step on them.

Longfellow's Aquatic Life Facts



What to Do if You Encounter an Aquatic Animal

If you come across an aquatic animal in or out of the water and you suspect it could be harmful, you should—

- Leave it alone. Do not touch it. Remember you are in their environment.
- Move away slowly.
- Note its exact location and tell the lifeguard or other authority.

How to Prevent Stings and Bites

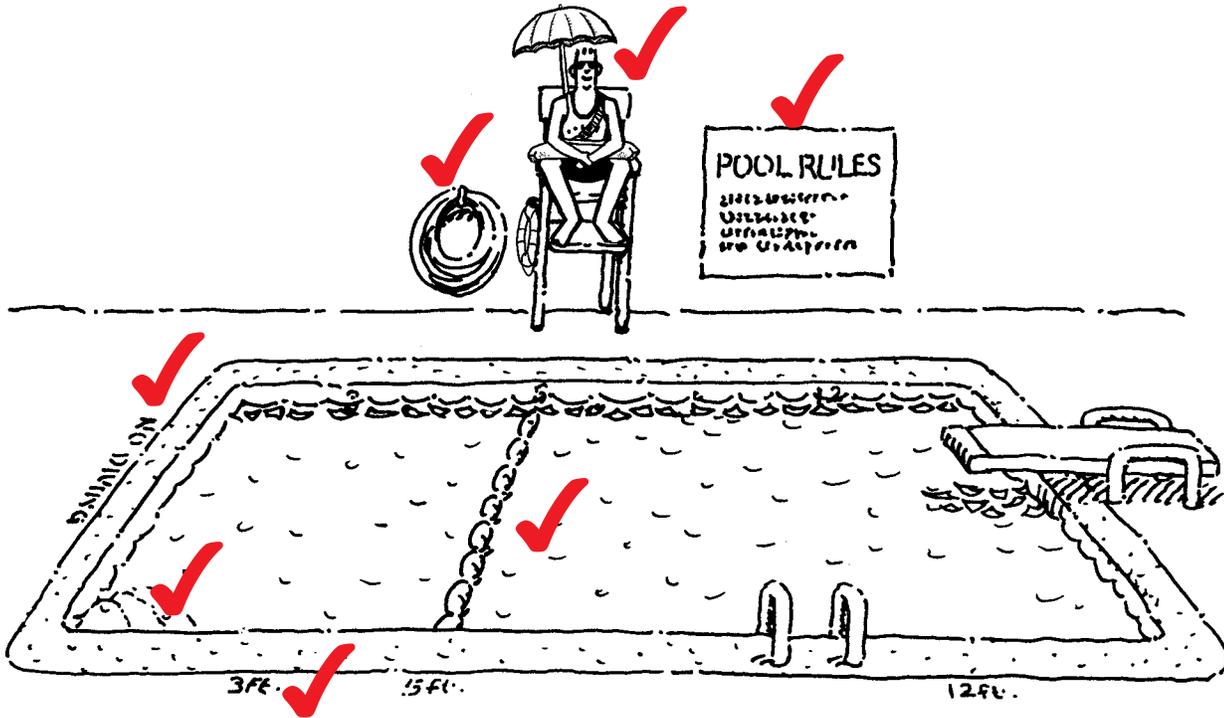
Your best defense against stings and bites is to learn about aquatic animals and their habitats. If you can recognize the dangerous ones and you know where they live, you will know what to stay away from.

If you are bitten or stung by an aquatic animal, call for help immediately and then carefully wash the wound while you wait for medical assistance. (You should always find out where you can get help and medical assistance before you go swimming.)

Check It Out



Here is a typical swimming area. Put a check mark by or make a list of each thing you should look for before you go swimming.



Look Before You Leap



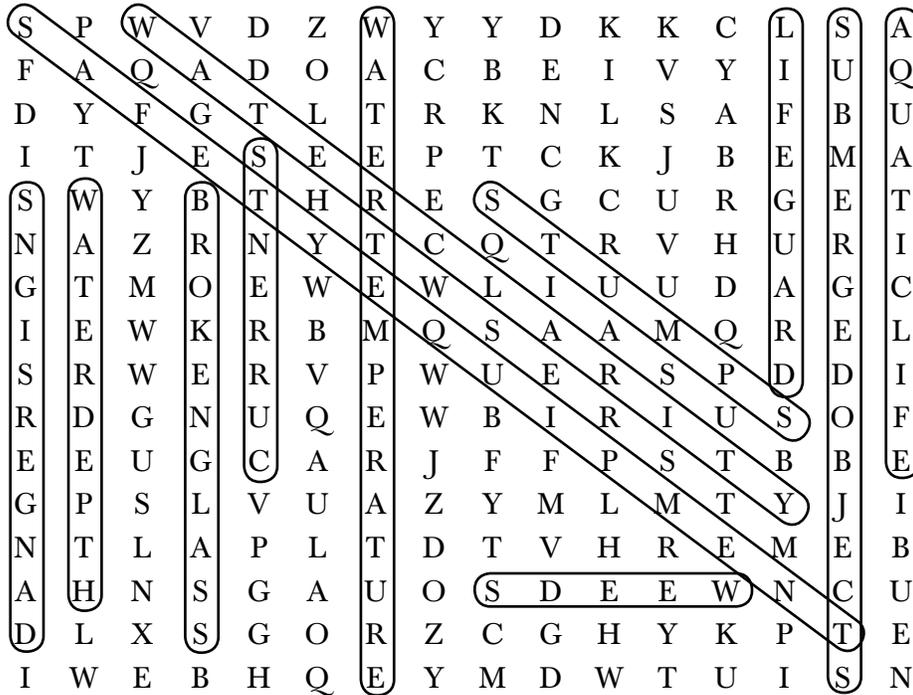
Color all the dangerous objects shown under the water.



Think Before You Jump In



Find the hidden words listed below. They describe things you should consider before you go in the water. The words can run up, down, backward, forward or diagonally.



Word List

SUBMERGED OBJECTS

STUMPS

SAFETY EQUIPMENT

BROKEN GLASS

CURRENTS

WATER CLARITY

DANGER SIGNS

WATER DEPTH

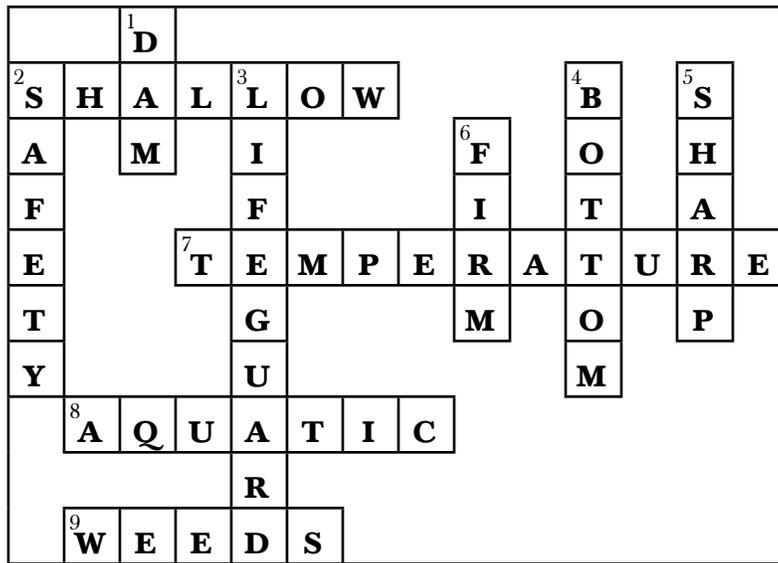
WATER TEMPERATURE

AQUATIC LIFE

LIFEGUARD

WEEDS

Watch Out



Across

- Do not dive in _____ water.
- Make sure the water _____ is comfortable.
- Be on the lookout for _____ life.
- Make sure the bottom is free of _____ and free of grass.

Down

- Do not swim close to a _____.
- _____ equipment should be available.
- A _____ should be on duty.
- At a pool, the water should be clear enough to see the _____.
- The bottom should be free from _____ objects.
- Make sure the bottom is _____ and gently sloping.

Better Safe Than Sorry



Circle the pictures that show safe swimming situations. Put an X on the pictures that show unsafe swimming situations.

