

Safety and Fishing at the Water's Edge

To be safe, be prepared!



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Please note: Academic Standards are updated regularly and our alignments will be updated on the DNR Academic Standards Website at: www.mndnr.gov/education/teachers/edstandards_intro.html

Chapter 6 • Lesson 1

Safety and Fishing at the Water's Edge

Minnesota Academic Standards

- ☐ Lesson *introduces* this Benchmark.
- ◐ Lesson *partially* addresses this Benchmark.
- ◑ Lesson *fully* addresses this Benchmark.

Language Arts

Grades 3, 4, and 5

I. Reading and Literature

B. Vocabulary Expansion:

Benchmark 1—The student will acquire, understand and use new vocabulary through explicit instruction and independent reading. ◑

II. Writing

A. Types of Writing:

Benchmark 1—The student will write in a variety of modes to express meaning, including: a. descriptive, b. narrative, c. informative, d. friendly letter, e. poetic. ◑

Grade 3

III. Speaking, Listening, and Viewing

A. Speaking and Listening:

Benchmark 1—The student will participate in and follow agreed-upon rules for conversation and formal discussions in large and small groups. ◑

Benchmark 2—The student will demonstrate active listening and comprehension. ◑

Benchmark 3—The student will follow multi-step oral directions. ◑

Benchmark 4—The student will give oral presentations to different audiences for different purposes. ◑

Benchmark 6—The student will perform expressive oral readings of prose, poetry or drama. ◑

Grade 4

III. Speaking, Listening, and Viewing

A. Speaking and Listening:

Benchmark 1—The student will participate in and follow agreed-upon rules for conversation and formal discussions in large and small groups. ◑

Benchmark 2—The student will demonstrate active listening and comprehension. ◑

Benchmark 3—The student will give oral presentations to different audiences for different purposes. ◑

Benchmark 5—The student will perform expressive oral readings of prose, poetry or drama. ◑

Grade 5

III. Speaking, Listening, and Viewing

A. Speaking and Listening:

Benchmark 1—The student will participate in and follow agreed-upon rules for conversation and formal discussions in large and small groups. ◑

Benchmark 2—The student will demonstrate active listening and comprehension. ◑

Benchmark 4—The student will give oral presentations to various audiences for different purposes. ◑

Benchmark 6—The student will perform expressive oral readings of prose, poetry or drama. ◑

Math

Alignment to the 2007 Minnesota Academic Math Standards coming soon. (If students complete the SPF Assessment Option #5)

Grades 3, 4, and 5

I. Mathematical Reasoning

Benchmark 1—The student will communicate, reason and represent situations mathematically. ◑

Benchmark 5—The student will express a written problem in suitable mathematical language, solve the problem and interpret the result in the original context. ◑

Grade 3

II. Number Sense, Computation, and Operations

A. Number Sense:

Benchmark 1—The student will read, write with numerals, compare and order whole numbers to 9,999. ◑

B. Computation and Operation:

Benchmark 6—The student will demonstrate an understanding of the multiplication facts through 10 using concrete models. 🗎

Grade 4

II. Number Sense, Computation, and Operations**A. Number Sense:**

Benchmark 3—The student will use fractions and decimals to solve problems representing parts of a whole, parts of a set and division of whole numbers in real-world and mathematical problems. 🗎

II. Number Sense, Computation, and Operations**B. Computation and Operation:**

Benchmark 4—The student will demonstrate mastery of multiplication facts for the numbers 0-10, without a calculator. 🗎

Benchmark 5—The student will use multiplication and division of whole numbers to solve simple real-world and mathematical problems. 🗎

Grade 5

II. Number Sense, Computation, and Operations**B. Computation and Operation:**

Benchmark 1—The student will use addition, subtraction, multiplication and division of multi-digit whole numbers to solve multi-step, real-world and mathematical problems. 🗎

Benchmark 4—The student will multiple, without a calculator, a two-digit whole number or decimal by a two-digit whole number or decimal, such as 3.2×3.4 . 🗎

History and Social Studies

Grades K-3

VII. Government and Citizenship**B. Beliefs and Principles of United States Democracy:**

Benchmark 1—Students will give examples of rules in the classroom/school and community, provide reasons for the specific rules, and know the characteristics of good rules. 🗎

Benchmark 2—Students will explain that rules and laws apply to everyone and describe consequences for breaking the rules or laws. 🗎

Grades 4-8

V. Geography**D. Interconnections:**

Benchmark 2—Students will analyze how the physical environment influences human activities. 🗎

Science

Grade 3

III. Earth and Space Science**B. The Water Cycle, Weather and Climate:**

Benchmark 1—The student will measure, record, and describe weather conditions using common instruments. 🗎

Grade 4

I. History and Nature of Science**A. Scientific World View:**

Benchmark 1—The student will explore the uses and effects of science in our interaction with the natural world. 🗎

Benchmark 2—The student will discuss responsible use of science. 🗎

Benchmark 3—The student will recognize the impact of scientific and technological activities on the natural world. 🗎

Environmental Literacy Scope and Sequence**Benchmarks**

- Social and natural systems are made of parts. (PreK-2)
- Social and natural systems may not continue to function if some of their parts are missing. (PreK-2)
- When the parts of social and natural systems are put together, they can do things they couldn't do by themselves. (PreK-2)
- In social and natural systems that consist of many parts, the parts usually influence one another. (3-5)
- Social and natural systems may not function as well if parts are missing, damaged, mismatched or misconnected. (3-5)

For the full Environmental Literacy Scope and Sequence, see:

www.seek.state.mn.us/eemn_c.cfm

Chapter 6 • Lesson 1

Safety and Fishing at the Water's Edge

Grade Level: 3-5

Preparation Time: 30 minutes

Activity Duration: Part 1: 60 minutes

Part 2: 90 minutes, plus travel time

Group Size: any

Subject Areas: Health & Safety, Physical Education, Science, Social Studies, Language Arts

Academic Skills: application, calculation, demonstration, identification, kinesthetic concept development, listening, recognition, writing

Setting: Part 1: indoor or outdoor gathering area

Part 2: water body

Vocabulary: dehydration, hypothermia, PFD, respect, responsibility, severe thunderstorm warning, severe thunderstorm watch, snagged, SPF

Internet Search Words: biting insects, exposure, first aid, fishing ethics, fishing safety, handling fish, invasive species, Minnesota fishing regulations, poisonous plants, SPF, UV radiation, water safety, weather safety

Instructor's Background Information

Fishing is fun! In order to create an enjoyable experience for your students, be sure to plan for safety. *Safety is always the first consideration for any fishing trip.* Even for the most experienced anglers, outdoor safety precautions are a priority. This lesson includes safety precautions to consider as the class *prepares* for its fishing trip as well as safety precautions to take *while* fishing at the water's edge.

Part 1: Safety and Preparing for the Fishing Trip

Outdoor skills and fishing skills vary from person to person. It's important to take the time to develop your safety plan so that your fishing experience is safe and enjoyable for everyone. If you haven't fished yourself, and the prospect of taking your students fishing seems daunting, enlist help from people who do fish, or from some people who can help supervise. Most people who fish will be eager to help, and to share their expertise and enthusiasm with a group of young future anglers!

When taking groups of students on a fishing trip, safety is a priority for everyone, but the program leader or lead instructor should be sure that safety is taught, and that safety procedures are followed before and during the trip. Involve the students in choosing a safe site and

Summary

A safe fishing trip begins long before you head to your site. For safety, survey the site prior to your class fishing trip. Create a safety plan. Discuss safety procedures and explain safety equipment. Be sure students know how to cast, handle fishing equipment, and fish safely. Be aware of and respect the space of others using the water resources.

Students will help choose a safe fishing site and write a safety rap, song, or poem with safety rules and tips for the trip. Then, they'll put their skills and planning into action and have fun fishing!

Student Objectives

The students will:

- 1 Participate in a discussion on how to pick a safe fishing location and create a fishing site safety checklist to use in identifying a safe shore-fishing location.
- 2 Demonstrate respectful and responsible behavior during pre-trip planning and during the fishing trip.
- 3 Select appropriate safety rules to follow for a fishing trip, incorporating the rules into a safety, rap, song, or poem.
- 4 Identify and properly use safety items brought to the fishing site.
- 5 Evaluate whether the class fishing trip included adequate planning and safety considerations, making any necessary adjustments for future fishing trips.
- 6 Have a safe and successful fishing trip!

Materials

Part 1: Safety and Preparing for the Fishing Trip

- Cell phone
- First aid kit
- Drinking water
- Cups
- Throwable personal flotation device (PFD) attached to a rope at least 50 feet long
- Additional personal flotation devices (PFDs), as needed
- Map of local fishing site
- **Don't Get Hooked Sheet**
- **Safety and Site Evaluation Form**
- **MinnAqua Program Water's Edge Safety Overview**
- Sunscreen, 15 SPF or higher
- Hats, with brims
- Insect repellent
- Comfortable clothing (that can get dirty): long sleeved shirt, jacket, long pants
- Sturdy shoes, such as hiking shoes or tennis shoes (no sandals or flip-flops)
- Polarized sunglasses with UV protection
- Whistle, attached to a lanyard

Part 2: Fishing Safely at the Water's Edge

- Fishing rods and reels, rigged and ready to go, one per student
- Adult chaperones, one for each group of five to ten students
- Needlenosed pliers or forceps for removing hooks from fish, one per adult
- Fingernail clippers for cutting line, one per adult (may be attached to lanyards)

continued

Words to Remember While Making a Safety Plan

Respect: showing special attention, concern, or consideration for something, or having a high regard or esteem for something. Respect is central to all safety considerations. Safety involves respecting self, others, other living things, the environment, and equipment.

Responsibility: accountability, reliability, and trustworthiness. Practicing safety is a display of responsibility

determining safety rules and angling etiquette to follow during the trip. Be certain that students understand why rules are necessary, and have them suggest and agree to the rules as a group. By involving students in the creation of your safety plan, you're not only securing their help in ensuring a safe trip, you're also helping them develop lifelong safety habits.

Enlist the help of other instructors, parents, or adult volunteers to adequately supervise the group. Never take a group of students to a body of water by yourself. Safety precautions must be taken every time you're near the water. Water doesn't have to be deep to be dangerous. Be aware of allergies or other special needs your students may have.

Complete any permission slips that your organization, school or district requires, and bring along emergency contact information for every participating student.



If your trip includes people who use wheelchairs, look for piers with low or interrupted railings. Along streams, look for sites with bumper rocks.

Selecting the Site

Be sure to choose a safe and productive fishing area along the shoreline of a pond, lake, or stream. If possible, visit the site prior to your scheduled fishing trip to survey the area. If you can't do this in advance, contact your local park district or city offices for information on the site.

Things to Check and Plan When Choosing a Fishing Spot

| Check on | Plan for |
|--|---|
| Water near dams and reservoir releases can be deep, with strong and unpredictable currents. Avoid choosing these areas as fishing spots. | A safe, productive area along the shoreline of a pond, lake, or stream. |
| Accessibility to water. Are trails, fishing platforms, or piers available? | Students' special needs for access to the site |
| Fast-moving water—it can be dangerous. | Moving water. If fishing on a river or fast stream, position an adult downstream from the group to mark a boundary and aid in rescue if someone should fall in upstream. |
| Overhead branches or other obstacles that could catch hooks as anglers cast. | Open area for safe casting. |
| High, steep banks. | Fish only on low banks that gently slope to the water access/fishing site. |
| Adequate shade. | Shelter in case of inclement weather (sun, cold, heat, wind, rain, hail, lightning, tornadoes). Or, keep buses onsite during trip. If weather becomes threatening, you can come back to fish on another day. |
| Mud, or wet or slippery footing. | Dry, secure footing. |
| Beach or swimming areas—these aren't good spots for fishing. | Fishing, not swimming. Fish at a distance from beaches for public safety and to keep lost hooks out of swimming areas. Good fish habitat includes aquatic plants, submerged logs, rocks, brush piles, stumps, docks, or piers. Many of these things are usually removed to create swimming areas. |

Materials (continued)

- Bait—choose one, or a combination of the following:
 - angleworms or nightcrawlers, two per student
 - wax worms, three per student
 - minnows, three per student
 - extra bobbers, sinkers, and hooks
- **The Perfect Rigging Sheet**
- **Safe Angler Certificate Sheet**, one per student
- Pens or pencils
- Clipboards
- Stringer and ice cooler (if you plan to keep fish)
- Minnesota fishing regulations booklets
- Fishing licenses for anyone 16 and older, including adult helpers
- First aid kit and safety items discussed in Activity 1

Optional assessment materials

- **Factoring in SPF Sheet**, one per student
- Pencils or pens



If your site is on private property, always secure permission from the landowner prior to your trip. Write down and save the owner's name and address so your class can send a thank-you card after the trip.

continued

| Check on | Plan for |
|--|---|
| Check weather conditions and forecasts. | Remain informed of weather conditions. Be aware of approaching storms. A severe thunderstorm watch is issued when severe thunderstorms are possible in an area. A severe thunderstorm warning is issued when a severe thunderstorm occurs in an area. |
| Rain | Schedule an alternate date for your fishing trip in case of rain. |
| Lightning | Don't fish in lightning. Carbon fiber rods, lead-cored lines, and all wet tackle conduct electricity. Seek shelter. |
| Sun—the sun's ultraviolet (UV) rays can cause burns on both sunny and overcast days. The sun's reflection on water can also make it difficult to watch a bobber or to look under the surface of the water. | Shaded areas. Provide frequent shade breaks to let students cool off and get out of the sun to avoid sunburn and dehydration (losing too much water). Bring along and use waterproof sunscreen with an SPF (sun protection factor) of at least 15. Students should wear sunglasses, polarized if possible, and a hat with a brim to shield eyes from the sun. Sunglasses and hats will also help protect eyes and ears from any misguided hook scratches or punctures, especially when fishing on windy days. |
| Cold | Refer to Lesson 6:2—Ice Fishing Safety to prepare for cold weather conditions. |
| Hypothermia | Hypothermia occurs when the body loses heat faster than it can produce it. Hypothermia can occur in any weather, and at any temperature lower than 98.6° F. When a person gets wet, the water conducts heat away from the body 25 times faster than air. Staying dry is as important as staying warm. |
| Restrooms—available, open, and stocked. | Bring extra toilet paper. |
| Running water available for washing hands. | Bring soap or antiseptic wipes. |

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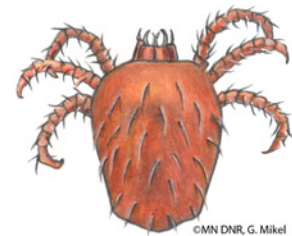
| Check on | Plan for |
|---|---|
| Running water available for drinking (or bring drinking water). | Have water available to students and provide frequent water breaks to prevent dehydration. Avoid beverages with high sugar content or caffeine, which increase the risk of hypothermia. |
| Biting insects, including black flies, deerflies, horseflies, stable flies, and tiny biting midges (no-see-ums), and, lest we forget, mosquitoes! Chigger and deer tick bites should be avoided, too. | Use repellent and wear long sleeves and long pants to cover skin, and provide some protection from insect bites. Avoid brushy, wooded places from mid-May through mid-July when the risk of Lyme's disease-causing deer tick bites is high. Use a tick repellent containing permethrin or DEET on clothing. |
| Poisonous plants. | Survey the site for plants such as poison ivy, poison oak, poison sumac, stinging nettles, and wild parsnip. Be certain that students could avoid these plants if present in the fishing area. The poisonous oil (urushiol) covers the entire plant including leaves, berries, and stems. Active year-round, this oil causes an allergic rash in 85% of us. |
| Be familiar with any student allergies. | Bring along emergency contact information and a plan to follow if a student suffers a reaction. |
| Know the location and phone number of the nearest hospital or emergency treatment facility. | Bring along emergency contact information for your students. |
| Is cell phone coverage available at the site? | If your cell phone won't work at the site, make an alternate plan for calling 911 or emergency contacts for students should the need arise. |
| Ratio of adults to students on the trip | We recommend a ratio of one adult for every five to ten students. |



Female Deer Tick



Male Deer Tick



Chigger



To help you identify poison ivy, remember this saying: "Leaves of three, let it be!"

Pack These Items in Your First Aid and Emergency Kit

- local map
- extra sunscreen and insect repellent
- extra drinking cups for water
- throwable PFD (personal flotation device) with 50 feet of rope securely attached
- life jackets or PFDs, as needed
- emergency whistle attached to a lanyard



Choose a place where there will be fish to catch! Look for good fish habitat. Areas providing cover and shade for fish include aquatic plants, submerged logs, rocks, brush piles, stumps, docks, or piers. Find out which species of fish may be caught at the site by checking the Lake Finder area of the DNR website, or by checking with your local DNR Fisheries office.



Adults can take youth under the age of 16 fishing without a license twice a year during Take a Kid Fishing weekend and Take a Mom Fishing weekend. Check the fishing regulations booklet or DNR website for dates.

- band-aids, bandaging tape, antiseptic ointment, scissors, gauze, rubber gloves, plastic bags, twist ties
- paper cup to cover and protect embedded hook injuries
- cell phone, if coverage will be available at site
- other items, as needed

Clothing

Proper clothing can make the trip safer and more comfortable for your students. Tell them to dress for the weather in comfortable clothes that can get dirty. Light-colored clothing, long-sleeved shirts, and long pants provide protection from sun and insects. Lightweight clothes prevent overheating on hot days. Layered clothing provides insulation in colder weather. A windproof outer shell provides better protection and heat retention than an outer shirt or sweatshirt. Students can always remove a layer or two if they get too warm, or if the temperature rises.

Sturdy shoes, like tennis shoes, reduce the chance of turning an ankle on uneven terrain, and protect sensitive feet from rogue hooks. Students should wear sunglasses, polarized if possible, and a hat with a brim to shield their eyes from the sun. Sunglasses and hats can also protect eyes and ears from any misguided hook scratches or punctures, especially when fishing on windy days. Hats and other head coverings prevent heat loss and keep students warm on cold days.

Sunscreen

Wear sunscreen. Ask each student to bring waterproof sunscreen with an SPF of at least 15. Be especially certain that students apply sunscreen generously to their noses, ears, and necks. A lip balm containing sunscreen is advisable, too. After applying sunscreen or insect repellent, students should thoroughly clean the palms of their hands to avoid getting sunscreen or insect repellent on bait or tackle. Unusual tastes and smells can turn very appealing bait or lures into something a fish would prefer to avoid.

Part 2: The Fishing Trip and Safety at the Water's Edge

It's a good idea to enlist, in advance, the help of experienced anglers. All adult helpers must have a fishing license. When taking a group of students fishing, you should bring along an adult certified in first aid and CPR. Some school districts require that a water safety instructor or lifeguard accompany groups of students planning to be near water.

Take time to think—in advance—about the various elements of a safety plan: the things you'll do to keep everyone safe. Don't take any unnecessary risks.

Implement Your Emergency Plan

- Post one adult near the safety equipment (first aid kit, throwable personal flotation device (PFD), water station, sunscreen, insect repellent).
- Decide which adults should cover these distinct responsibilities in the event of an injury, illness, or other emergency.
 - At least one adult should remain with the class or group, caring for the rest of the students and maintaining order
 - One adult should be assigned to get help, if needed.
 - One adult should stay with any ill or injured student.
- Be prepared to offer any emergency help needed—without putting yourself in an unsafe situation. Stay near an emergency scene only if it's safe to do so.



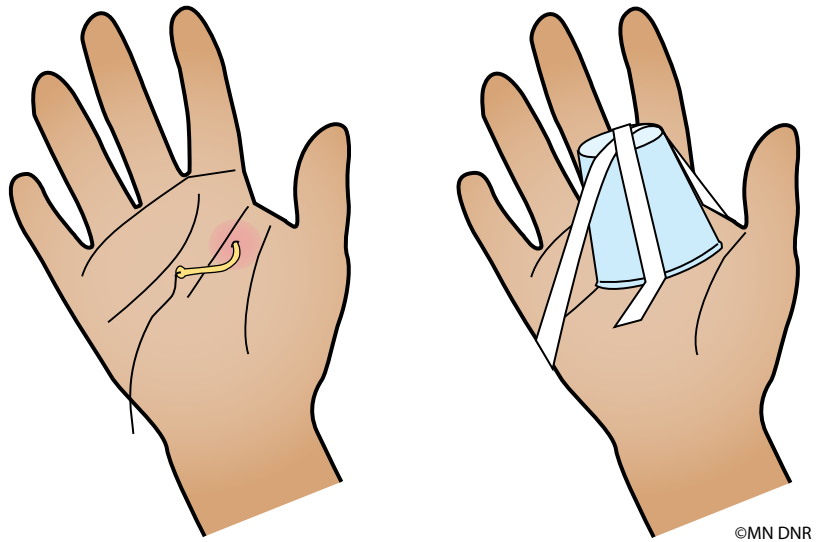
Hook Safety

Hooks are sharp! Make sure everyone is well-aware of potential injury from fishing hooks. A few common-sense practices will ensure that no one accidentally gets hooked.

- Consider using barbless hooks or use pliers to flatten barbs.
- Tell students that they will be responsible for knowing where their hooks are at all times.
- Never run when holding a fishing rod.
- Always keep the hook secured to the rod. Don't walk with a fishing rod pointed in front of you—carry it in a vertical position.
- Practice how to cast safely.
- *Always* look behind you before casting!
- While fishing, keep hooks and lures out over the water, and don't crowd others. Ask for help with freeing snagged lines.
- Wear a hat and sunglasses to protect your eyes, ears, and head from wayward hooks.

Puncture wounds hurt, and they can cause infections or tetanus. Hooks aren't always clean, and they can be rusty. Antibiotics and a tetanus shot are recommended for hook puncture injuries. Always thoroughly clean and disinfect any wound, cut, or scrape caused by a hook. If a hook sticks someone, but doesn't penetrate the tissue deeply enough to go past the barb, the hook can be removed by gently backing it out in the direction that it entered the skin. Treat minor cuts and scrapes from hooks by cleaning the wound and applying antiseptic ointment and a band-aid. A doctor should treat deep puncture wounds.

If a hook punctures the skin and the barb becomes embedded, or punctures tissue in the face, a medical professional should remove it. Attempting to remove an embedded hook yourself can cause further damage to the injured tissue. Cover the embedded hook or lure with a paper cup or tape to protect the area, and get the victim to a hospital or emergency clinic as soon as possible.



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Immobilize an embedded hook by covering the area with an overturned paper cup, tape, or both.

Baiting the Hook

Students will achieve a sense of independence by baiting their own hooks. This will also save you a great deal of time—time better spent watching the group, sharing the students' excitement as they reel in fish, or taking memorable photos. Some students may be apprehensive about handling live bait at first, so your positive attitude will be important in encouraging them to bait their own hooks.

Wax worms, angleworms, and nightcrawlers are excellent bait choices for most types of shore-fishing, and they're easy to obtain from bait shops. Minnows can be used, too, but they're harder to keep alive. If you're using angleworms or nightcrawlers, pinch, tear, or cut them into two or three smaller pieces when fishing for sunfish. Sunfish have small mouths!



©MN DNR

Bait your hook with a nightcrawler, angleworm, mealworm, or minnow.

Place bait securely on the hook. Thread worms or a worm piece by hooking through it two or three times. Teach students to lay their rod

down while baiting the hook. It's much easier to maneuver the slippery or wiggly bait onto a sharp hook with both hands when not holding on to the rod, too. Remind students to pick up any dropped fishing hooks to prevent others from stepping on sharp hooks. Also remind them to pick up all unused or cut pieces of fishing line so animals don't get tangled up in it. Many bait and tackle shops recycle monofilament line.

Discarding Unused Bait

It's illegal to discard unused bait into the lake or onto the ground. Leftover bait should be saved for another day of fishing. Or you may dispose of any unused bait (nightcrawlers, minnows, etc.) in a container in the trash. Don't discard it into the water, near shore, or on land. Worms aren't native to Minnesota, and worms and other bait can be harmful to native plant and animal communities. Throw unused worms in the trash or save them in your refrigerator for another day. Unused minnows may be buried in your garden. Bait species may harbor diseases that can be transferred to other organisms in the water.

It's also illegal to transport any live fish that you catch unless you have a permit obtained from the DNR, or you are under 16 and using them in a home aquarium—and they are the species listed in the DNR's Minnesota fishing regulations booklet under "Possessing and Transporting Fish." Read the regulations booklet to become familiar with regulations designed to prevent the spread of aquatic invasive species.

Invasive Species

Invasive species are plants and animals that aren't native to a particular area. They can be harmful to native species. To protect and ensure the safety of native species, check to see if the fishing site is posted for the presence of exotic species. You'll need to take extra care in cleaning all fishing lines and equipment before leaving the fishing site to remove any plant material, eggs, larvae, or tiny organisms. This prevents invasive species from spreading from one place to another.



**STOP AQUATIC
HITCHHIKERS!**

Prevent the transport of nuisance species.
Clean all recreational equipment.



Equipment and Casting Safety

Make sure all fishing equipment is in good working order before the fishing trip. Let students know that it's important to respect equipment and to handle it with care if they want it to help them catch fish!

Students may own their own rods and reels. If they plan to use their own equipment, consider collecting it a few days prior to your event to make sure it's in good working order. If necessary, refer to the Fishing Rod and Reel Maintenance Q&A at the end of **Lesson 5:2—Casting a Closed-face Rod & Reel Combo**.



When carrying a rod, hold it vertically.

At the site, set up a fishing equipment and bait station, so rods and bait can be distributed and collected in an orderly fashion. The station should also be stocked with hooks, weights, and bobbers.

Before handing out fishing equipment, remind students how to hold a rod. First, secure the hook by hooking it into the hook keeper or a low line guide. Grip the rod just above where the hook is secured to prevent it from loosening. Hold the rod vertically to keep the rod tip from hitting another person. Remind students never to run with fishing rod in hand.

Bring along a couple of spare rods in case someone's rod jams or breaks during the fishing trip. Swapping a malfunctioning rod for one in good working order simply prevents unnecessary frustration and lost fishing time!

When students return equipment to the station, they should do so in an orderly fashion, without running, and carrying rods vertically with hooks secured.

Casting

Before your fishing trip, have students practice casting with a casting plug tied to a fishing line instead of a hook. Set up some scenarios to demonstrate how accidents can happen while casting. Have students practice safe casting skills. For specifics, see **Lesson 5:1—Freshwater Rods and Reels** or **Lesson 5:2—Casting a Closed-face Rod and Reel Combo**. When every student consistently demonstrates safe casting, you're ready for the fishing trip!

On the trip, each student should carefully choose a casting spot on the shore or on a pier. Before you cast, always:

- look behind you for people, pets, bushes, tree branches, power lines, or other obstacles that could get hooked
- if necessary, move a safe distance away from any potential obstacle
- look in every direction

- check behind yourself again, before you cast
- look in the direction of, and beyond your cast, too
- watch for swimmers, waterfowl, water plants, and submerged branches in the water—never cast directly toward another person

Snags

It is always possible for a cast to veer off-target and become **snagged** on a branch or elsewhere above or below the water's surface. Tell students to ask an adult to help them with a snagged line.



Move close to a snagged hook that is within your reach to try to free it by hand first. If the hook isn't within reach, don't pull on the line with your hand. Monofilament line can very easily cut fingers and hands. Lock your line by reeling forward, tighten the drag, point the rod tip toward the stuck hook or lure, and slowly and steadily reel in the line tightly—but not too tightly! Pull the rod straight back, but hold the rod handle out at an angle away from yourself. Don't pull the line toward you. Turn your head and look away before you pull back: you'll be able to feel the hook come free, or the line break. Don't jerk the rod—this can cause the hook to fly through the air. Keep everyone out of the way, just in case the hook does fly.

If the hook won't come loose after a few tries, you may need to cut the line. If this happens, just re-rig the line and start fishing again.

Handling Fish Safely

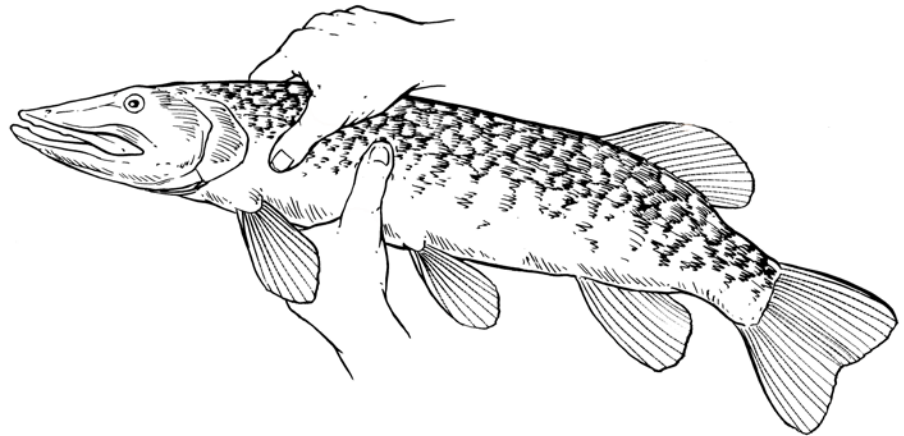
Teach students how to identify fish. Which ones have sharp teeth, gill covers, or spines that they must avoid? Teach students how to handle these fish carefully to avoid punctures, cuts, and bites from sharp teeth! Proper handling also helps minimize injuries to fish. Anglers have a responsibility to respect and protect aquatic resources, including fish.

Tips for handling fish responsibly:

- Use non-lead sinkers and tackle. Lead is toxic. When waterfowl or other birds and small animals ingest lost tackle, they can be poisoned by the lead and die.
- To reduce the probability of having a fish swallow the hook, teach students how to set a hook when they get a bite, or use circle hooks.
- Reel in the fish quickly to avoid excessive tiring, especially when you plan to release it.
- Always wet your hands before handling a fish to minimize disturbance to the protective slime that covers its scales. The slime protects the fish from diseases and parasites. The slime doesn't stick to wet hands.
- Keep the fish in the water as long as possible. Quickly return the fish to the water after handling.
- Wait until the fish is calm before lifting it from the water and removing the hook.

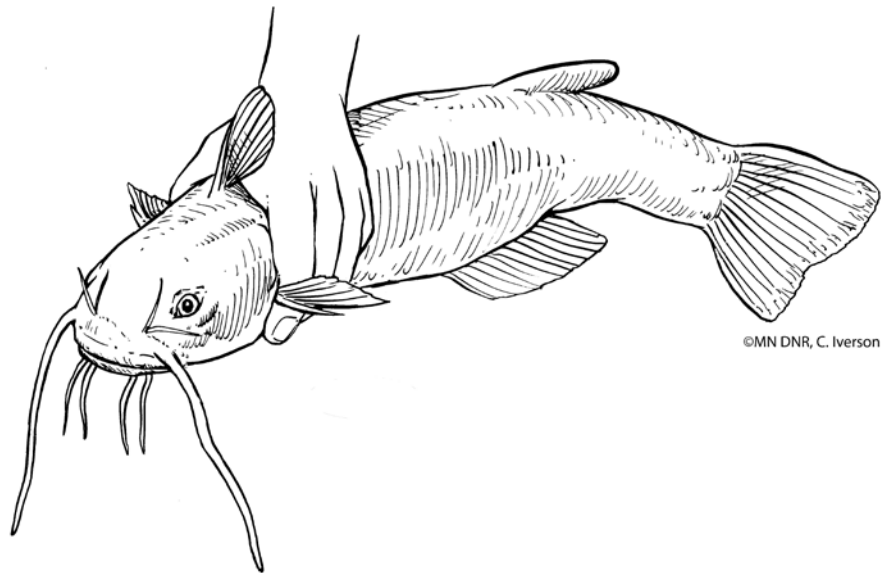


If taking students fishing for the first time, it helps to use circle hooks. The point faces the shank and is designed to hook the fish in the mouth as it turns to swim away rather than having to set the hook and rely on a quick response. Fish are less likely to be throat-hooked with circle hooks. This can reduce hooking mortality for catch-and-release. If circle hooks are available in your area, buy ones with long shanks that make them easier to handle.



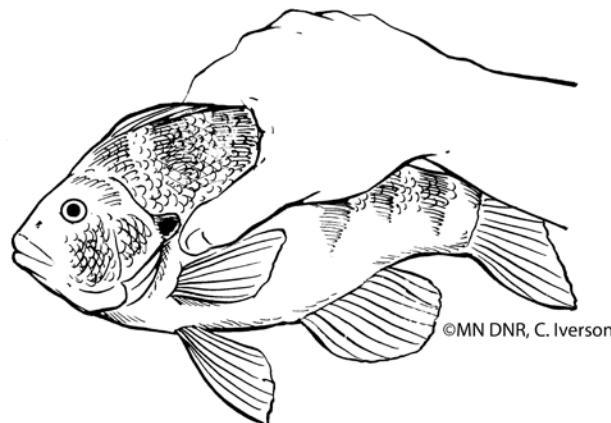
©MN DNR, C. Iverson

Muskellunge, northern pike, and walleye have big teeth! Avoid holding them near their mouths.



©MN DNR, C. Iverson

Catfish and bullheads have thick, sharp spines in their dorsal (top) and pectoral (side) fins. Be careful not to let them pierce your skin.



©MN DNR, C. Iverson

Smooth the spines in the dorsal fin of a sunfish from nose to tail.

Removing the Hook

Use needlenosed pliers, forceps, or a hook remover to remove hooks quickly and with care.

If the fish swallows the hook, cut the line, and leave the hook in the fish. Attempts to remove a deeply-embedded hook will extensively injure the fish. The fish's stomach acids will dissolve a hook.

Release Fish Gently

If you aren't keeping the fish, quickly and gently ease it back into the water. Let the fish swim away after water flows over its gills and it recovers. Handling the fish quickly, safely, and gently will give it a chance to grow bigger so it can be caught again on another day!

You can obtain the Minnesota DNR's detailed catch-and-release brochure from the DNR Information Office by calling 1-651-296-5481 or 1-888-646-6367.

Keeping Fish Fresh

Remember that fish decay quickly after they die, especially in the heat. Bring a chest filled with ice to keep the fish cold until you're able to clean them. Fish should be cleaned as soon as possible after they're caught, and kept cold until they're cooked. Fish should be frozen if you don't plan to cook and eat them immediately. Wrap and label packages for freezing, noting contents, quantity, and date. Frozen fish can be kept for as long as three months, and should be thawed in the refrigerator—never at room temperature.

Consider Other Anglers and Recreationists

Other anglers may also be fishing at your chosen lake, river, or stream. Always give them plenty of room, and respect their space. Students should be friendly, courteous, and quiet so they don't disturb the anglers—or the fish they're trying to catch.

Anglers aren't the only users of lakes, streams, and rivers. When fishing, students should be respectful, polite, and patient with swimmers, canoeists, bird watchers, walkers, and others enjoying the resource. Avoid casting near private docks with sunbathers, or near others enjoying the lake or stream.

Protect and Respect the Environment

Remember to be a steward of the environment you visit. Follow rules and regulations, stay on trails, pack out trash and any cut or broken monofilament line. Heed the saying "Leave no trace!" by leaving your site as clean—or cleaner—than you found it.



Harvesting Fish

Before the fishing trip, decide whether to keep or release the fish that the students catch. MinnAqua encourages catch-and-release fishing. But instructors can choose to keep fish if they practice proper use of the resource, including handling, transportation, preparation, and good use (harvesting the amount actually needed for a meal rather than taking extra fish that will go to waste).

Is My Fish Safe to Eat?

Check the Minnesota Department of Health website for information on toxins and Minnesota fish consumption advisories. Following the recommended guidelines for fish consumption will reduce the known health risks posed by consuming fish from polluted waters.

Have Fun

Most students are satisfied with catching a greater number of smaller fish, such as bluegills, rather than catching a few big fish. Catching a few fish on the first outing will pique students' interest and make them look forward to the next trip. Fishing piers and shoreline areas with nearby aquatic plants are good places to catch small sunfish like bluegills.

Some students may want to fish all day. For others, 30 minutes is long enough. Plan for about 90 minutes—this is long enough to get organized and fish for about an hour and should satisfy everyone.

Emphasize that fishing is fun and catching a fish is an added bonus. You can always go fishing again! Instill good conservation habits by picking up litter, following regulations, and carefully returning fish to the water if you don't plan to eat them.

With good planning, everyone can have a safe, fun, and successful fishing trip!

Procedure

Preparation

- 1 Know and follow the safety policies of your school or program. Some school districts may require that you have a certified water safety instructor (WSI), lifeguard, or certified medical professional present if students are to attend activities at a water body.
- 2 Pack a backpack with a jacket or raincoat, hat, sunglasses, sunscreen, bug spray, and water bottle.
- 3 Obtain items on materials list, and check and restock your first aid kit.
- 4 Obtain required parent/guardian permission slips.
- 5 Schedule adult volunteers to assist with the fishing trip (one adult for every five to ten students). You may want to secure backup volunteers in case anyone must cancel at the last minute.
- 6 Learn about and prepare for any allergies or special needs of students and participants.
- 7 Choose a fishing site. Visit the fishing site and complete the **Safety and Site Evaluation Form**.
- 8 Post the **Don't Get Hooked Sheet** in the classroom.
- 9 Make copies of the **The Perfect Rigging Sheet**. You may want to laminate these for future use.
- 10 Make copies of the **Safe Angler Certificates**, one per student, and the **Factor in SPF Sheets** if your students will be completing Assessment 5, one per student

 **Activity****Part 1: Safety Before the Fishing Trip****Warm-up**

- 1 Have students create a checklist for determining the safety of a fishing site. Prompt them to include safe access and footing, water conditions, poisonous plants, availability of shade, water and restrooms, overhanging branches or other obstacles that could impair casting. How would they plan for weather considerations?
- 2 Emphasize that fishing is a safe activity, but that accidents can happen during any activity. Explain that you will need their help in planning the trip, and that safety precautions must be taken ahead of time. Ask students to brainstorm a list of other safety factors to consider before a fishing trip. List their suggestions on the whiteboard or overhead projection device. The list could include rain, lightning, clothing, sun, overheating, hypothermia, hydration, staying dry, staying in boundaries, water safety, sharp hooks, safe fish handling, poisonous plants, insects, allergies, casting, animals, avoiding fast water, and others.
- 3 Discuss the importance of preparing for and preventing possible accidents involving the factors on both lists. Ask students for ideas on how to plan for each consideration on the list before the trip. On the whiteboard, write appropriate suggestions next to each item on the list. For example, next to “sun,” write “wear sunscreen and sunglasses;” next to “water safety,” write suggestions like “be careful near the water, use fishing piers and platforms for shore fishing, take a break in the shade if you get hot, bring along a throwable PFD, wear a life jacket if you can’t swim,” and so forth. Ask students why safety rules are necessary. Remind them that you want them to have fun rather than injuries or accidents during the fishing trip. Be prepared to help others without risking your own safety.
- 4 No one should ever go fishing alone, and you should always tell someone where you plan to fish. Stress the importance of the buddy system for anglers. Ask students to name one or two people that could accompany them on a future fishing trip—a parent, friend, grandparent, sibling, neighbor, aunt, or uncle. For the group fishing trip, pair each student with a classmate, or have students choose fishing buddies.

Lesson

- 1 Discuss what to wear and personal items to bring on the fishing trip. To demonstrate the items students should bring, use a backpack packed with a jacket or raincoat, a hat, sunglasses, sunscreen, bug spray, and water bottle. Pull items one at a time out of the backpack and discuss the safety importance of each one. Talk about dressing for the weather and wearing proper footwear.



You may wish to make up cards on hypothermia, clothing, sun, heat emergencies, and other safety situations, and give them to groups of three students. Have the groups review the information on the cards and share or act out the information for the rest of the class.



Everyone in the group should plan to shout the word “Danger!” in case of emergency. Shouting “Help!” is less clear because, often, students will be asking adults for “help” when they have lost bait, have a fish on a line, or a snagged line. Tell students that, when anyone hears “Danger!” adults and students understand that there is an emergency, and will immediately launch the emergency plan.

- 2 Discuss safety precautions to follow near water. Teach the students what to do if someone falls in the water—to shout “Danger!” Tell an adult. Don’t go into the water after the victim—an adult will grab the throw-able PFD from the safety station to toss to the person in the water. Make sure the rope is securely attached. Hold on to the end of the rope with one hand and toss the flotation device past the victim, and carefully pull PFD to victim. The victim should grab the rope or flotation device, and hang on until they’re safe.
- 3 Tell students they will help develop a safety plan for their fishing trip. They will incorporate their safety rules into a rhyming poem, rap, or safety song. In pairs (with their fishing buddy) have students write the poem, rap, or safety song. Students may refer to the safety list on the whiteboard. Ask each pair to perform their piece for the class. You may have the class vote to judge the best piece (the one with the most complete safety information) or combine all of the poems, raps, and songs into one that includes all the safety items you want the students to remember.
Some rules to include:
 - Never run with fishing rod in hand.
 - Look behind you before you cast, and then look forward in the direction of your cast.
 - Always know where your hook is.
 - Stay with your buddy, and within designated boundaries.
 - Don’t wade or swim.
 - Wear a PFD (if this is your school policy).
- 4 Help the class learn the final safety rap, poem, or song. Distribute **Safe Angler Certificates** to students upon demonstrating they have learned the class fishing safety poem, rap, or song.
- 5 Practice casting. For instructions, see **Lesson 5:2—Casting a Closed-face Rod and Reel Combo**.
- 6 Discuss how to identify and properly handle fish.

Wrap-up

Practice the poem, rap, or safety song. Have students perform their pieces for another group, class, or for parents to reinforce, teach, and demonstrate rules ensuring safety at the water’s edge while fishing.

If possible, have students accompany you on visits to two or more nearby water bodies or several locations on a particular lake or river. At each location, they should consult their checklist to determine the safest site for shore-fishing. Use the safest site for your class fishing trip. Point out that the students now know how to look for good shore-fishing sites for future fishing trips.

Part 2: Fishing Safely at the Water's Edge

Warm up

- 1 Do a buddy check, and set boundaries. Tell students they're not to go outside the boundaries, and that they should remain with their buddies at all times.
- 2 Discuss the use and location of safety equipment, including the water station, first aid kit, shade, shelter, bathroom, and throwable PFD.
- 3 Blow your whistle and let students know that the whistle blast means that you need everyone's attention. For example, you might blow the whistle if inclement weather approaches, another safety concern has arisen, or it's time to pack things and return to school. When students hear the whistle, they should locate their buddies, stop all noise and activity, and wait for directions from the instructor or leader.
- 4 Discuss techniques for helping a person in danger, and what the students should do to make the rescue go smoothly. Students should be reminded to shout "Danger!" to attract the attention of an adult during an emergency. Tell students that, when anyone hears "Danger!" adults and students understand that there is an emergency, and will immediately launch the emergency plan.
- 5 Practice shouting "Danger!" loudly as a group. Stress the importance of stopping all unrelated activity and talking whenever someone shouts "Danger!" or blows the whistle. The nature of the emergency must be identified immediately, and addressed by adults. Everyone else's safety must be considered, too, and the cooperation of everyone in an emergency or dangerous situation is essential.
- 6 Review the safety rules (have students recite the safety poem or rap, or sing the safety song).
- 7 Know the specified emergency roles for each adult. Be aware of who will carry a cell phone.
- 8 Non-swimmers and those students whose parents have requested life jackets or personal flotation devices (PFDs) must wear them. Near deep, fast-moving, or very cold water, everyone should wear a PFD. Demonstrate the proper use of life jackets: choose one that fits, show students how to put it on, secure a snug fit, and how to remove it. If someone is required to wear a PFD, demonstrate proper fit to the entire class. Have two PFDs available, a very large one and another that's the correct size. Put the large one on a student volunteer, buckle it, and pull it off over their head to demonstrate its ineffectiveness. Then demonstrate how to wear the proper-sized PFD: securely and snugly, with all buckles and belts fastened.



Only adults should use the throwable PFD and rope. Keep the attached rope coiled, so it can be easily thrown. Introduce the adult in charge of each group. (You may want to assign one adult to each group of five students.)

Lesson

- 1 Review the proper handling and carrying of rods. Review casting safety.
- 2 Review hook-handling safety. Demonstrate baiting the hooks. Ask students who have fished to demonstrate baiting a hook. Encourage students to bait their own hooks as they become comfortable.
- 3 Demonstrate how to land a fish. Have one volunteer be a bass, one a bluegill, and another an angler. Let the fish “swim” near “cover,” such as hula-hoops or another target easy to cast toward. Using a casting plug, the angler gently casts the plug near the “cover.” The appropriate fish takes the bait (by holding it in their hands). Talk the angler through the landing of this fish. For example, is the fish diving for the bottom? Keep tension on the line, and slowly feed some line to the fish to avoid breaking the line. Is the fish swimming toward you? Reel your line in quickly to keep the line taught! Demonstrate this a few times. Remind the group not to drag the fish across the ground or pier when it's landed.
- 4 Using a replica (felt cutout, pillow, or mount) or a real fish, demonstrate the proper way to hold the fish while removing a hook. When handled gently, quickly, and with a few precautions to have the fish out of the water for the shortest possible time, released fish have excellent chances of surviving. Handling tips are detailed in the Minnesota DNR brochure, *Catch and Release*, which is available from your area fisheries office or the DNR Information Center (1-888-MINN-DNR). Always wet hands to help keep the slime covering intact. Emphasize that, unless fish are to be eaten—or, occasionally, prepared as trophy mounts—they should be immediately released unharmed into the lake. The fish will then grow bigger to be caught on another day. This voluntary recycling of fish helps maintain Minnesota's quality fishing.
- 5 Show students **The Perfect Rigging Sheet**.
- 6 Show or review what the bobber does to tell anglers that they're about to catch a fish.
- 7 Discuss with the students what can be done to prevent injury if the fish is hooked so deeply that removing the hook would hurt the fish.
- 8 Ask the students, “What if your hook gets stuck on a branch, log, or rock in the water?” (Students should ask an adult to free the line. Don't jerk the line; warn others nearby that you're trying to free a snag; look away, and slowly and steadily pull your pole straight back at an angle away from yourself. Sometimes hooks can fly through the air when freed. Cut the line and re-rig if you can't get the hook free.)
- 9 Assign a small group of students to each adult helper and indicate fishing boundaries. Give each adult helper a fingernail clipper for cutting line and a needlenosed pliers or forceps for unhooking fish.
- 10 Pass out poles and bait. Have fun fishing! Return fishing equipment to the station.



Remember to reinforce concepts of habitat, ecosystems, fish identification, and stewardship—including picking up litter and leaving only footprints.

Wrap-up

- 1 After your fishing trip, ask the students questions. Which rules worked? Were you prepared? Was the trip safe? What would you plan for the next time you go fishing?
- 2 Ask each student to write down all the safety measures they must consider while fishing. They should include: tell someone where I am going; find a buddy (preferably an adult or older person) to go with me; find an area where there are other people during the day; gather all equipment; check the weather forecast and dress accordingly; put on sunscreen and bug repellent; decide whether to keep or release the fish I catch; know the fishing regulations; respect others, respect the fish, and be a good environmental steward.
- 3 You could also ask the following knowledge questions.
 - What is the most important step in rigging a fishing rod? (The knot.)
 - Where would you cast a line to catch sunfish? (Near cover, such as docks, plants, or fallen logs.)
 - What does it mean when a bobber goes under the water? (That you either have a fish, or that your split shot sinkers are too heavy for the bobber you've chosen.)
 - How should one handle a fish? (Quickly and gently. If the fish has swallowed the hook, don't try to remove it—just cut the line.)
 - What is catch-and-release fishing? (Releasing fish that you don't plan to eat back into the water unharmed. This gives them a chance to grow larger, and to reproduce.)
- 5 If your event took place on private property, have students write a thank-you letter to the property owner. You may wish to send along copies of photos taken on your trip.
- 6 Have students make and send thank-you notes to the volunteers who helped on the fishing trip.
- 7 Provide students with **Safe Angler Certificate** and have them complete them as directed.

Assessment Options

- 1 Evaluate the fishing trip safety, site safety checklist, safety rules poems, raps, or songs for the following criteria: safe access and footing, water conditions, poisonous plants, overhanging branches or other obstacles to casting, weather conditions and availability of shade, water, and restrooms,
- 2 Have students write a fishing trip safety evaluation after the fishing trip to determine whether the class had a safe fishing trip, if the safety plans resulted in a safe trip with students demonstrating safe and respectful behavior. Identify and describe the use of safety equipment brought on the trip, including changes or additions to the site safety checklist and safety poems, raps, or songs that suggest possible improvements for future fishing trips.
- 3 Complete the **Safe Anglers Certificate**. Check students' answers to the questions on the certificate.
- 4 Have students teach another class or group how to plan a safe fishing trip.
- 5 Have students learn about sun protection factor ratings for sunscreen and determine the minimum SPF required for protection during various sun exposure periods. Hold up a bottle of sunscreen and tell the class that sunscreens provide important protection from harmful UV rays. Depending on one's skin type, it usually takes from fifteen minutes to a couple of hours for UV rays to cause sunburn. It doesn't have to be sunny for UV rays to cause sunburn—they can pass through clouds. "Sun sensible" people wear sunscreen on overcast days, too. Give the SPF rating on the bottle, and ask if anyone knows what the number means. For the group fishing trip, ask everyone to bring sunscreen with an SPF of 15 or greater because water reflects UV rays, increasing the risk of sunburn. Review the following with students: SPF ratings and sunscreen. SPF is an abbreviation for Sun Protection Factor. SPF numbers for sunscreen range from 2 to 50, telling users how much longer they could stay in the sun without getting burned than they could if wearing no sunscreen. For example, if one normally starts to burn after spending 20 minutes in the sun, a sunscreen with an SPF of 8 will protect that person from sunburn for eight times longer than that (160 minutes, or two hours and 40 minutes).

$$20 \text{ minutes} \times \text{SPF } 8 = 160 \text{ minutes}$$

If a person normally starts to burn after 30 minutes in the sun, a sunscreen with an SPF of 8 will protect that person from sunburn for 240 minutes (three hours).

$$30 \text{ minutes} \times \text{SPF } 8 = 240 \text{ minutes}$$

- 6 Do the **Factoring in SPF Sheet**.
- 7 Assessment options include the Checklist and Rubric on the following pages.

Safety and Fishing at the Waters Edge Checklist

| Possible Points | Points Earned | Points Earned | |
|-----------------|---------------|---------------|---|
| | Student | Instructor | |
| 4 | _____ | _____ | Student can identify criteria for a safe fishing site, including footing, access to water, absence of poisonous plants, available shade, shelter, and drinking water. |
| 3 | _____ | _____ | Student can use that criteria to judge whether or not a fishing site is safe. |
| 4 | _____ | _____ | Student can define: <ul style="list-style-type: none"> • <i>hypothermia</i> • <i>dehydration</i> • <i>respect</i> • <i>responsibility</i> |
| 2 | _____ | _____ | Student understands the relationship between respectful and responsible behavior during trip preparation, the fishing trip, and safety evaluation. |
| 4 | _____ | _____ | Student can give an example of fishing trip-related behaviors showing respect and responsibility toward: <ul style="list-style-type: none"> • self • fellow students • group leaders • rules and regulations • land owners • other anglers • others using the water resource • the fish resource • the natural environment |

continued

Checklists are tools for students and instructors. Checklists involve students in managing their own learning. They help students understand and set learning goals before the lesson begins, and help them monitor their progress during the lesson, ensuring that they meet learning goals and objectives by the end of the lesson. Students can also use checklists to discover areas that may need improvement. Checklists help instructors monitor each student's progress throughout the lesson, facilitating appropriate adjustment of instruction to ensure learning by the end of the lesson. The instructor may wish to have students add several of their own learning goals to the checklist to personalize it, and to accommodate varied learning needs and styles.

Grade

34-38 points = A

Excellent. Work is above expectations.

30-33 points = B

Good. Work meets expectations.

25-29 points = C

Work is generally good. Some areas are better developed than others.

19-24 points = D

Work does not meet expectations, it isn't clear that student understands objectives.

0-18 points = F

Work is unacceptable.

| | | | |
|---|-------|-------|---|
| 4 | _____ | _____ | Student cooperates within group to develop a set of safety rules that help ensure a safe fishing trip, including: <ul style="list-style-type: none"> • consideration of weather conditions • sun exposure • insects • hydration • safety near the water • fishing with a buddy • informing an adult of fishing plans • handling equipment and fish safely |
| 3 | _____ | _____ | Student uses safety rules to create and present a safety rap. |
| 4 | _____ | _____ | Student can identify fishing safety items and give an example of how to use each on a fishing trip, including: <ul style="list-style-type: none"> • throwable PFD • personal PFD • first aid kit • sunscreen • insect repellent • local map • safety whistle |
| 4 | _____ | _____ | Student can state two reasons for the importance of evaluating plans and safety measures post-trip, including: <ul style="list-style-type: none"> • ensuring that future fishing trips will be successful and safe • determining whether safety rules should be changed to make future fishing trips more safe |
| 2 | _____ | _____ | Student can bait a hook. |
| 4 | _____ | _____ | Student describes fast release and gentle handling techniques that maximize survival odds for released fish. |

Total Points

38 _____ _____ **Score** _____

Safety and Fishing at the Water's Edge Scoring Rubric

| | 4 Excellent | 3 Good | 2 Fair | 1 Poor | 0 Unacceptable |
|---|---|--|---|--|---|
| Shore Fishing Safety | Can identify criteria for a safe fishing site, including footing, access to water, absence of poisonous plants, available shade, shelter, and drinking water. Can use criteria to judge whether or not a fishing site is safe. | Can identify at least three of the following criteria for a safe fishing site: footing, access to water, absence of poisonous plants, available shade, shelter, and drinking water. Can use criteria to judge whether or not a fishing site is safe. | Can identify criteria for a safe fishing site, including at least two of the following: footing, access to water, absence of poisonous plants, available shade, shelter, and drinking water. | Can identify one criterion for a safe fishing site, including: footing, access to water, absence of poisonous plants, available shade, shelter, and drinking water. | Can only identify one criterion for a safe fishing site. |
| Respectful and responsible behavior is safe behavior | Understands relationship between respectful and responsible behavior during trip preparation, the fishing trip, and safety evaluation. Demonstrates respectful and responsible behavior toward self, fellow students, group leaders, rules and regulations, land owners, other anglers, others using the water resource, and the natural environment. | Understands relationship between respectful and responsible behavior during trip preparation, the fishing trip, and safety evaluation. With one reminder, demonstrates respectful and responsible behavior toward self, fellow students, group leaders, rules and regulations, land owners, other anglers, others using the water resource, and the natural environment. | Understands that respectful and responsible behavior is required during trip preparation and the fishing trip. With no more than three reminders, demonstrates respectful and responsible behavior toward self, fellow students, group leaders, rules and regulations, land owners, other anglers, others using the water resource, the fish resource, and the natural environment. | Ignores the requirement for respectful and responsible behavior during trip preparation. With more than three reminders, demonstrates general respectful and responsible behavior. | Doesn't demonstrate general respectful and responsible behavior during trip preparation or the fishing trip. |
| Trip preparation | Cooperates within group to develop an exceptional set of safety rules that help ensure a safe fishing trip, including consideration of weather conditions, sun, insects, hydration, safety near the water, fishing with a buddy, informing an adult of fishing plans, and handling equipment and fish safely. Participates in creating and presenting an entertaining and inspiring safety rap. | Cooperates within group to develop a set of safety rules that help ensure a safe fishing trip, including consideration of weather conditions, sun, insects, hydration, safety near the water, fishing with a buddy, informing an adult of fishing plans, and handling equipment and fish safely. Participates in creating and presenting a safety rap. | Participates to a lesser degree than other group members to develop a set of safety rules that help ensure a safe fishing trip, including consideration of weather conditions, sun, insects, hydration, safety near the water, fishing with a buddy, informing an adult of fishing plans, and handling equipment and fish safely. Participates minimally in creating and presenting a safety rap. | Doesn't cooperate with other group members. Suggests a set of safety rules that won't help ensure a safe fishing trip. | Doesn't participate in developing a set of safety rules. Doesn't cooperate or group to develop and present safety rap. Doesn't demonstrate regard for safety during fishing trip. |

| | 4 Excellent | 3 Good | 2 Fair | 1 Poor | 0 Unacceptable |
|---|--|---|--|--|--|
| Shore Fishing Safety Equipment for a safe fishing trip | Can accurately identify and appropriately use fishing safety items, including a throwable PFD, personal PFD, first aid kit, sunscreen, insect repellent, local map, and whistle. | Can identify and appropriately use most of the following fishing safety items, including a throwable PFD, personal PFD, first aid kit, sunscreen, insect repellent, local map, and whistle. | With assistance, can identify and appropriately use most of the following fishing safety items, including a throwable PFD, personal PFD, first aid kit, sunscreen, insect repellent, local map, and whistle. | Can't identify and appropriately use most of the following fishing safety items, including a throwable PFD, first aid kit, sunscreen, insect repellent, local map, and whistle | Uses safety equipment inappropriately, and without regard to safety. |
| Evaluate trip safety | Can state at least two reasons for the importance of evaluating plans and safety measures, including: ensuring that future fishing trips will be successful and safe; determining whether safety rules should be changed to make future fishing trips more safe. | Can state at least one reason for the importance of evaluating plans and safety measures, including: ensuring that future fishing trips will be successful and safe; determining whether safety rules should be changed to make future fishing trips more safe. | With assistance, can state at least one reason for the importance of evaluating plans and safety measures, including: ensuring that future fishing trips will be successful and safe; determining whether safety rules should be changed to make future fishing trips more safe. | Can't understand that evaluation of fishing trip safety is connected to ensuring that future fishing trips will be successful and safe; determining whether safety rules should be changed to make future fishing trips more safe. | Doesn't demonstrate cooperation in participation in planning and carrying out a safe fishing trip. |
| Handling fish and hook baiting | Describes fast release and gentle handling techniques that maximize survival odds for released fish. Can bait hook safely. | Discusses either fast release or gentle handling techniques that maximize survival odds for released fish. Can describe how to safely bait a hook. | Knows what to do, but not how it helps fish. Can identify bait but can't describe how to bait a hook. | Can't accurately describe proper handling and releasing of fish or bait a hook. | Doesn't try to describe proper handling and releasing of fish or how to bait a hook. |

Score _____ (Calculate score by dividing total points by number of criteria.)

Diving Deeper

Extensions

- 1 Water safety classes, first aid classes, and boating safety classes are offered for young people and adults through a variety of agencies (the Minnesota DNR, American Red Cross, local community centers, and others). Encourage your students to sign up for these classes, and to bring along a family member. You might also want to take a course as a class.
- 2 Invite a conservation officer or emergency medical technician to talk to your class about safety on fishing trips and to demonstrate various personal flotation devices and their proper use. Invite the school nurse, a doctor, or a representative from the Red Cross to talk to your class about first aid, outdoor safety, sunburn, heat emergencies, hydration, hypothermia, and treatment for insect bites and poisonous plants.
- 3 Prior to your fishing trip, have students create graphic organizers that illustrate safety concerns and precautions for anglers. Let students exercise creativity with different sizes and colors of paper. Have them cut and fold the paper to make moveable flaps, fold-outs, windows, and pockets as they design a large brochure or a poster.
- 4 At the site, conduct a life jacket relay race. (Strongly consider this activity if your school requires that all students wear PFDs near water.) Students will need to know how to wear them correctly before the race. Demonstrate the proper fit of a life jacket. Divide the class into teams of six to ten students each. Have each team form a line. Place a line of playing field cones about ten yards in front of the team lines, one cone in front of each team. Hand the first member of each team a life jacket. Each student will put on and fasten the life jacket properly, signal a thumbs-up, and run the ten yards to out around the cone and back. When they get back, they remove the life jacket and hand it to the person behind them in line. Each member of the team repeats the fitting and running, until one team finishes the relay and wins the race.
- 5 Conduct a “Leave No Trace” scavenger hunt. Have an adult volunteer visit the fishing site just before the fishing trip to set up a scavenger hunt course along a trail through a grove of bushes or trees. Plant objects of litter (candy wrappers, pop cans, plastic bags, tangled monofilament line, old fishing lures, an old shoe, a broken fishing pole, a bucket, and so forth) along the trail and in the trees and bushes. You could also stage people along the trail: “fishing” too close together, wearing a PFD that is not fastened, pretending to discard extra bait on shore, being loud and noisy, holding a fishing rod improperly—plus a few who are fishing properly and safely. Keep track of the number unsafe, undesirable, or out-of-place items planted along the trail. Upon students’ arrival, give each pair of buddies a pencil and a sheet of paper. Send pairs through the



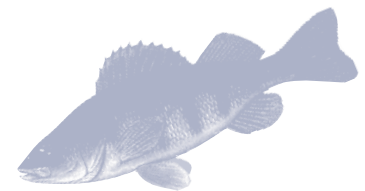
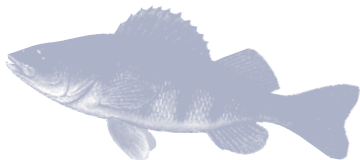
Graphic organizers can take the form of a concept map, tree, star, or web showing definitions, attributes, examples, classifications, structures, examples, relationships, and brainstorming. Charts and tables show attributes, characteristics, comparison, and organization. A chain or timeline illustrates processes, sequences, cause-and-effect, and chronology. Diagrams, charts, and drawings show physical structures, spatial relationships, and concrete objects. Cut and folded paper can be fashioned into flaps that, when lifted or otherwise manipulated, reveal details, definitions, descriptions, or explanations.

Leave No Trace Trail in two- to three-minute intervals. Each team should try to detect and record unsafe or undesirable items, and as many correct items, as they walk through the trail. When all teams have finished, note which teams detected all of the items. Be sure to leave no trace yourselves—collect all scavenger hunt items after the game! This scavenger hunt can also be staged on school grounds.

For the Small Fry

K-2 Option

- 1 Omit the Factor in SPF activity and worksheet. Safety issues are important with this group, but introduce safety ideas more slowly over time—not all at once—to prevent overwhelming the children.
- 2 Use barbless hooks while fishing. Be sure to have at least one adult for every three children. Use cane poles or pop can casters for fishing and fish from a pier or dock to eliminate the need for casting. All students should wear a life jacket for safety's sake.



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INSTRUCTOR COPY*MinnAqua Water's Edge Safety Overview***When planning an outdoor angling activity, consider:**

- participants with varied skills and levels of experience
- many people fishing in one area
- maintenance of orderly behavior and control in the event of an emergency
- a safety plan
- respect for self, others, equipment, the activity, property, rules and regulations, water, fish, the environment, and the future

Safety actions include:

- A **Site and Safety Evaluation Form** (see end of lesson) should be completed prior to conducting a fishing program. This form will help identify any possible hazards at the fishing site and provide a plan of action in case of emergency.
- Have all permission slips and permits completed and collected. Obtain emergency contact information for each participant.
- Prior to the program, find out if any of the participants have special medical needs (allergies to bee stings, asthma, other allergies).
- Review this form with the volunteers who will assist with your program.
- Have a cell phone with you at all times.
- Pre-assign adult responsibilities to follow in case of emergency: calling 911 or going for help, caring for and maintaining order among group participants, staying with the injured party
- Every MinnAqua program will have at least two adults familiar with the emergency action plan present at all times.
- Recommended adult-to-child ratios should be kept during all programs for maximum participant safety: dry site 1 adult:15 children; shoreline/pier 1:5; with additional assistance for special needs participants.
- Water's edge safety guidelines (as presented in this lesson) must be taught to all participants prior to shoreline fishing.
- A first aid kit must be available and displayed in an obvious location during any program. A first aid booklet and an emergency contact information folder should be included in each kit.
- A throwable personal flotation device with an attached rope should be in plain sight during any program held near the water. The rope shouldn't be wrapped around the cushion—it should be coiled for ease of deployment.
- Life vests may be required for non-swimmers. Life vests must be worn by any participant whose parent or guardian has requested that they do so.
- Never attempt to remove a hook embedded below the barb. Send the injured person to the nearest medical facility.

Don't Get Hooked Sheet

Fish safely, have fun, and DON'T GET HOOKED!

Fishhooks are sharp!

Puncture wounds hurt—and they can cause infections or tetanus.

Protect yourself and those around you! Know where your hook is at all times.

Pinch barbs on hooks or consider using barbless hooks.

Hooks and lures that are in use should be held out over the water.

Keep hooks and lures in a latched tackle box when you're not using them.

Always look behind you before you cast—and look forward as you cast!

Keep rod tip pointed away from other people.

Land your fish carefully.

When removing fish from hooks, use needlenosed pliers to get a good grip on the hook.



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Pinch the barb of the hook down.

IF YOU GET HOOKED

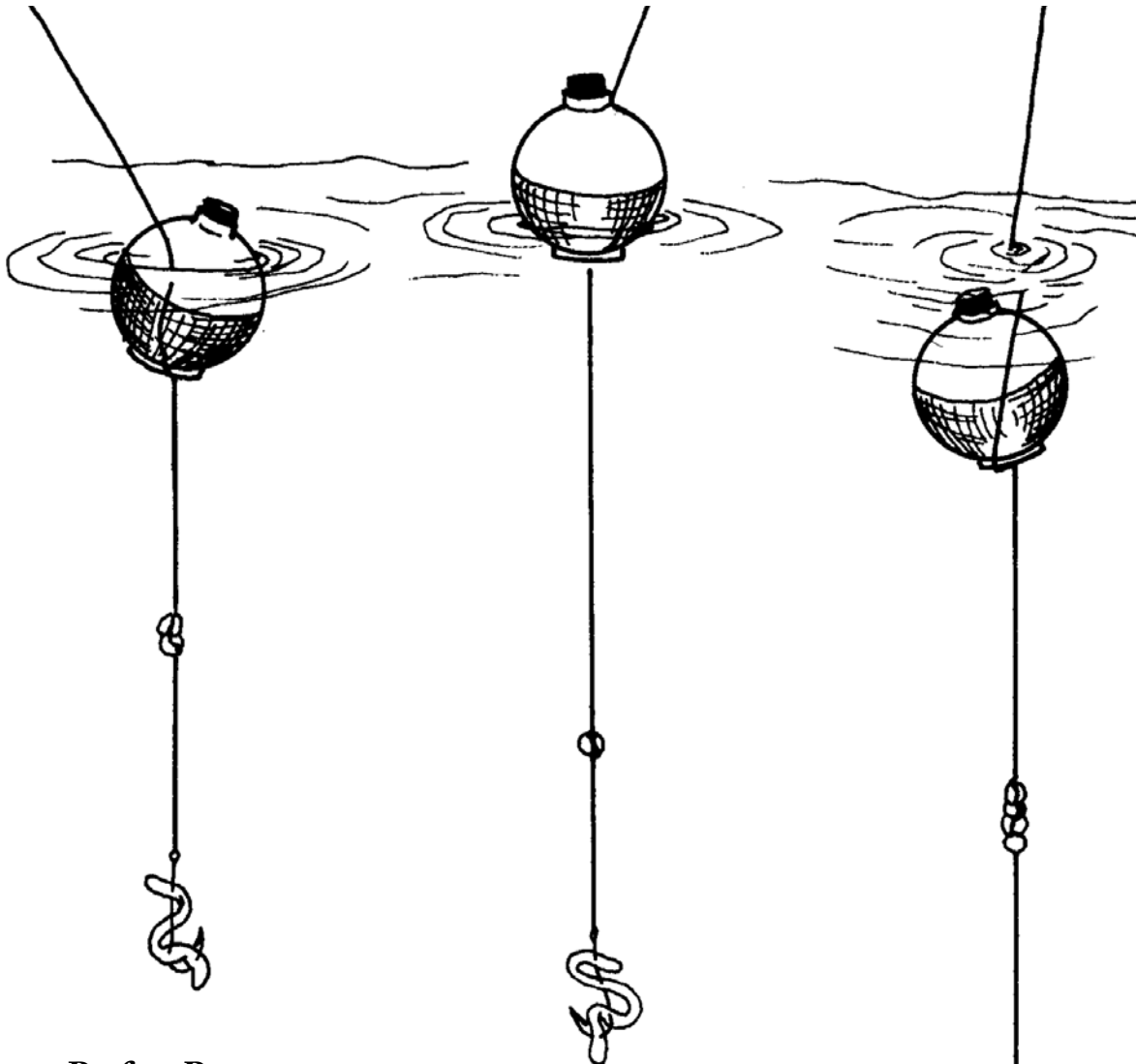
Is the hook embedded? Ouch!

- immobilize the hook with tape or cover it with a paper cup
- have a doctor remove the hook
- antibiotics and a tetanus shot are recommended

PLAY IT SAFE: pinch your barbs, fish with a buddy, and wear your life jacket!

STUDENT COPY

The Perfect Rigging Sheet



Perfect Rigging

**Too Little Weight—
or Bait Is on Bottom**

**Too Much Weight—
or You Have a Fish**

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Safety and Site Evaluation Form

Site information may already be available from your MinnAqua contact. Otherwise, make sure you evaluate your site prior to your program. Instructors and youth leaders should keep this form on file. MinnAqua leaders and volunteers should return this form to their education specialist immediately after your program.

Date _____ Site _____

County _____ Time _____ Nearest Town _____

Instructor _____

Safety Plan

Cell Phone Number _____ Directions to Site _____

Emergency Phone Number _____ Hospital Phone Number _____

Safety Equipment Checklist

_____ First Aid Kit _____ Fire Extinguisher (if cooking)

_____ Throwable Personal Flotation Device with Rope _____ Drinking Water

Volunteer Roles During Emergency

Stays with Hurt Student _____ Calls for Help _____

Stays with Group _____ Other Duties _____



If anyone is hurt during an authorized MinnAqua program, the instructor must call their MinnAqua contact within 24 hours to fill out appropriate forms. Certified volunteers are covered under Worker's Compensation. All others' coverage depends on who covers the program liability.

Site Information (check all that apply)

Access Type _____ Shoreline _____ Pier _____ Public _____

Private (if private property, is permission from owner obtained? Yes _____ No _____)

_____ Electricity _____ Indoor Facilities _____ Drinking Water Available

_____ Shelters _____ Trash Receptacles _____ Bathrooms

_____ Parking _____ Tables

_____ **Handicapped Accessible** (identify) _____

_____ On Bus Route (identify) _____

_____ Safety Hazards to Avoid _____

_____ Fees (identify) _____

Best fishing for _____

Seasonal Changes (plant growth, special regulations) _____

Is site posted for presence of exotic species? _____

Comments _____

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Name _____ Date _____

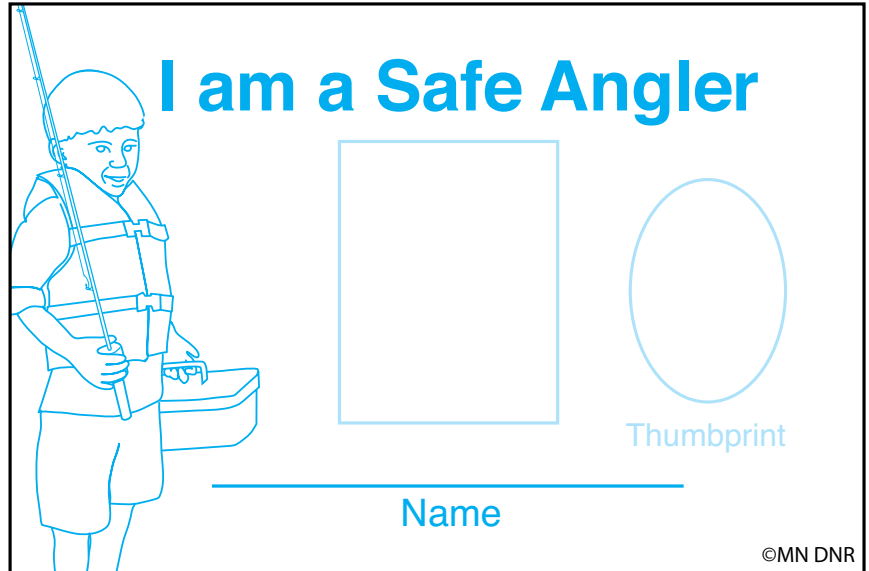
Safe Angler Certificate

Draw yourself in the box in the Safe Angler Certificate.

Using an inkpad, place your thumbprint in the circle provided.

Read the following rules aloud. Then add your own fishing rules to the list.

Be sure you show caring, sharing, and respect when fishing. Then you have earned your Safe Angler Certificate!



1. Safe anglers respect others' space, privacy, and territory. They fish quietly so they don't frighten fish or bother people. They don't crowd other people out of a fishing spot.
2. Safe anglers always practice safe fishing. They're careful when casting. They pick up all fishhooks so people don't step on them, and all fishing lines so animals don't get tangled in them.
3. Safe anglers know the size and number of fish that they may legally keep (or limit). Limits provide more chances for more people to catch fish.
4. Safe anglers land fish carefully, and release fish back into the water right away if they don't plan to eat them.
5. Safe anglers clean their lines and equipment before they leave a fishing spot. They don't move exotic species from place to place.
6. Safe anglers fish with a buddy and always tell a grownup where they're going, when they're leaving, and how long they expect to be gone.
7. _____
8. _____
9. _____
10. _____

Responsibility means accountability, reliability, and trustworthiness!

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Name _____ Date _____

Factoring in SPF Sheet

The SPF rating printed on a container of sunscreen says how much longer a person wearing that sunscreen can stay in the sun without getting sunburned than they could if they weren't wearing sunscreen. People with darker skin tend to burn less quickly than people with lighter skin. Doctors recommend a sunscreen with an SPF rating of at least 15 to protect most people from sunburn.

- Some things reduce a sunscreen's effectiveness. These are listed below. Can you think of two more?
 - Some medicines cause skin to be more sensitive to UV rays.
 - Sunscreen washes off when people swim.
 - Sunscreen can take as long as an hour before it starts to protect the skin—it should be applied well in advance.
 - A thin coat of sunscreen doesn't protect the skin as well as a thicker layer.
 - _____
 - _____
- You can usually stay in the sun for 20 minutes before your skin starts to burn. Your sunscreen is SPF 15. How long will it protect you from sunburn while you're fishing?

- Your fishing buddy uses a sunscreen with SPF 8, and usually begins to burn after spending fifteen minutes in the sun. You've been fishing for four hours. Is the sunscreen still protecting your buddy? If not, which SPF is best for your buddy?

- You have sensitive skin, and it only takes ten minutes before you start to get sunburned. Your brother and sister are taking you fishing and you plan to stay at the lake for three hours. Which SPF is best for you?

- You're going fishing today! You woke up to cloudy skies. Should you wear sunscreen? Why or why not?

INSTRUCTOR COPY*Factoring in SPF Answer Sheet*

1. **Some things reduce a sunscreen's effectiveness. These are listed below. Can you think of two more?**
 - Some medicines cause skin to be more sensitive to UV rays.
 - Sunscreen washes off when people swim.
 - Sunscreen can take as long as an hour before it starts to protect the skin—it should be applied well in advance.
 - A thin coat of sunscreen doesn't protect the skin as well as a thicker layer.

Additional answers:

 - Sweating is another thing that makes sunscreen less effective.
 - Hats shield the head from burning rays—you can't put sunscreen on your hair.
 - UV rays reflected from the water burn more easily, especially the face under the brim of a hat!
2. **You can usually stay in the sun for 20 minutes before your skin starts to burn. The sunscreen you've brought along is SPF 15. How long will it protect you from sunburn while you're fishing?**
 $20 \text{ minutes} \times \text{SPF } 15 = 300 \text{ minutes} = 5 \text{ hours}$
3. **Your fishing buddy uses a sunscreen with SPF 8, and usually begins to burn after spending fifteen minutes in the sun. You've been fishing for four hours. Is the sunscreen still protecting your buddy? If not, which SPF is best for your buddy?**
 At least SPF 16.
 $\text{SPF } 16 = 240 \text{ minutes}$
 15 minutes
4. **You have sensitive skin, and in ten minutes, you start to get sunburned. Your brother and sister are taking you fishing and you plan to stay at the lake for three hours. Which SPF is best for you?**
 At least SPF 18
 $\text{SPF } 18 = 180 \text{ minutes}$
 10 minutes
5. **You're going fishing today! You woke up to cloudy skies. Should you wear sunscreen? Why or why not?**
 Yes. UV rays pass through clouds. They can cause sunburn, premature aging, skin cancer, and cataracts.