



Cooking, Cleaning and Companions

OBJECTIVES: Students will be able to:

- describe two different methods of preparing a fish
- explain at least one benefit to eating fish as a regular part of a diet
- make an informed choice when considering fishing as an affordable leisure activity

METHOD: Students will prepare and cook the fish caught on their field trip.

MATERIALS:

- 1) Fillet knives
- 2) Spoons or fish scalers
- 3) Plastic bags, newspaper or other waste wrappings
- 4) Several copies of the DNR's Choose Wisely guide
- 5) First-aid kit

*If using the recipe below gather ingredients, cookware, aluminum foil, and paper towels.

SETTING: Outdoors or in a large indoor kitchen

DURATION: Conduct as part of the fishing field trip or one 45-minute period.

VOCABULARY: Fillet

STANDARDS:

Physical Education: D 8.1, 8.2, 8.3; F 8.3, 8.6, 12.1, 12.5, 12.6. **Environmental Education:** D.8.3, 8.5. **Science:** A.12.5, B.8.6.

BACKGROUND: Encouraging students to prepare and cook their fish is an excellent way to entice students into another fishing adventure.

OPENING: Demonstrate the proper methods for cleaning and for filleting a fish.

MAIN ACTIVITY: Students will be preparing and cooking fish. Divide the students into groups so that each student has a fish to work with. Discuss the method most appropriate for preparing each fish as a group. Remind students to work with the knife blade pointed away from their hands. Some students may not want to be involved in cleaning the fish, but should at least read through the steps in their booklet and be familiar with the differences between cleaning and filleting. As students prepare their fish, encourage them to look at and record the contents of the fish's stomach.

Once all fish are properly prepared, students can use the recipe provided to bake or fry the catch. Assign some students to recipe preparation, some to the dipping of the fish, and some to the cooking. Serve the fish as finger-food on squares of paper towel unless cooking enough for a meal.

CLOSING: Encourage students to gather fish recipes from home and have a recipe exchange in a future class.

ASSESSMENT QUESTION: Describe three ways that you can continue to learn about fish and help to protect them after this course is over.

ANSWERS: Take a friend fishing, help with restoration projects, write letters, get outside, don't transport bait or live fish and other VHS prevention tips, leave no trash at fishing sites, other possibilities

EXTENSION:

In Depth: Have students research the health benefits of eating self-caught fish.

Service Learning: Have students work with a community group or elementary school to plan a fishing outing for younger children. Ask them to plan an experience that is both safe and enjoyable for the children. Remember, students 16 and over need a fishing license.

MUSIC:
For Your Indoor Dining Pleasure

Food preparation should be a pleasant experience and can be made more so with music. Water and fish have inspired musicians through the ages. Here is a short list of selections that could enhance your fish fry; many more can be found with a quick Google search of “fishing songs” or “clean water songs.”

Swimming to the Other Side by Pat Humphries

Clean Water by Malvina Reynolds

Fishing Blues by Taj Mahal

Take Me to the River by Al Green (and immortalized by Big Mouth Billy Bass)

Blue Boat Home by Peter Mayer

Trollin’ on the River by Alvin Rhodes (parody of Creedence Clearwater Revival’s *Proud Mary*).

Bon Appétit!

● If you have downloaded this booklet, please see the appendix that follows for additional materials.

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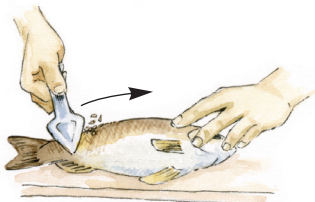



Cooking, Cleaning and Companions

Cooking and eating a fish you caught is one of life's simple pleasures. First, however, you have to prepare it. Preparing a fish provides an opportunity to learn more about fish anatomy and fish diets. After preparing, you're ready to cook and eat the fish. Fish are low in fat and calories and are a good source of protein.

Staying Sharp

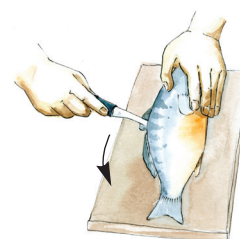
Cleaning is the technique used to prepare fish without removing bones. **Filleting** leaves the fish boneless, and occasionally skinless, and is generally used for larger fish. The most important step in preparing any fish is choosing a sharp knife of the correct size and shape. Most fillet knives have thin, slightly flexible blades five to eight inches long. A dull knife can be more dangerous than a sharp knife because you have to work harder to make the proper cuts. Make sure your knife is sharp, and hold it away from your fingers and body as you prepare your fish. Work patiently and attentively.

Cleaning Steps

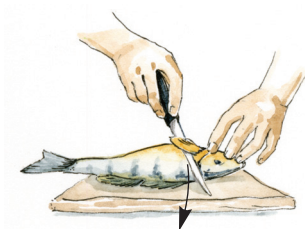
- Use a spoon or fish scaler to remove scales. 
- Without cutting through bones or internal organs, cut around the head, behind the pectoral fins, and down to the anus.  Remove the scales.
- Break the backbone by bending the head downward and twisting. Remove the head and internal organs. 
- Check local rules, but generally you can dispose of wrapped waste in a trash bin or bury it deep in your garden. Fish waste does not belong in compost bins.  Remove the internal organs.

Fish Fillet

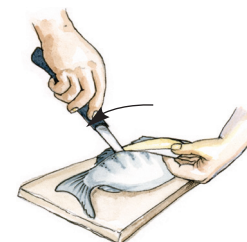
- Cut along the dorsal fin from head to tail and along the anal fin from anus to tail.
- Just behind the gill cover make a vertical cut through the flesh down to the bone. This cut extends from the back to the stomach. Deepen the cut made along the dorsal fin working from head to tail. Hold the knife nearly parallel to the row of bones extending upward from the spine to the back. This cut should extend downward only as far as the backbone.
- Repeat this procedure on the stomach side. Cut first from behind the gills to the anus, then along the anal fin cut you made earlier. These cuts should be just below the surface of the belly skin to avoid rupturing internal organs. As you cut up toward the backbone your fillet will come free.



Cut along the dorsal fin from head to tail.



Just behind the gill cover, make a vertical cut.



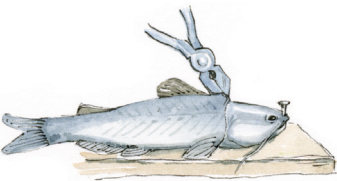
Hold the knife nearly parallel to the row of bones extending upward from the spine to the back.

Tummy Talk

Check out your fish's stomach! Examining a fish's last meal will help you become a better angler. Knowing what the fish was eating can help you better match your next lure to this species' diet.



Hold the fish down with one hand just in front of the tail fin.



For catfish, remove the skin by cutting around the head and pulling the skin off with pliers.

- Do not cut the fillet from the tail. Flip the fillet so that it is lying skin-side down. Hold the fish down with one hand just in front of the tail fin. Beginning at the tail carefully skin the fillet, working away from your hand. Work slowly and patiently; cutting too deeply will result in cutting through the skin and not cutting deeply enough will result in lost meat.
- Check local rules, but generally you can dispose of wrapped waste in a trash bin or bury it in your garden.

A note about catfish and bullheads: skin removal is accomplished by cutting around the head and pulling the skin off with pliers.

Flaky, Not Fishy

Fish are a tasty, healthy way to add a lot of muscle-building protein to your diet without adding fat. Many cookbooks have recipes specific to different species of fish, but fish can be prepared quite simply as well. Regardless of how much time you take with your fish preparation, fish should be flaky in texture and shouldn't taste fishy. The muscle layers of a properly cooked fish should separate effortlessly (flake) and the flesh will turn from translucent to white. Fish can easily be overcooked, making them taste dry. Fish can also be undercooked, which could transfer fish parasites to humans. And no fish tastes good if it was left too long in the sun after being caught, so remember to ice your fish and keep it cool! Give your own cooking skills a try by following the recipe below:

The Famous Triple Dip Fish Fry

- | | |
|-----------------------------------|---|
| 1 pound fish fillets | 1) Pat fish dry with paper towels and set aside. |
| 1 cup flour | 2) In a shallow dish, mix flour, pepper, paprika, and salt. |
| ¼ teaspoon ground pepper | 3) In another shallow dish beat egg together with water to make an egg wash. |
| ¼ teaspoon paprika | 4) In a third shallow dish, place the crushed crumbs of your choice. |
| ¼ teaspoon salt | 5) Pick up a fillet and dip it in the first bowl until coated with flour. Next dip the fillet in the egg wash, then transfer it to the third dish and pat the crumbs evenly over the entire fish. Do this for each fillet, separating them by aluminum foil on a plate. |
| 1 egg | |
| 1/8 cup water | TO FRY Heat ¼ inch of cooking oil in a heavy skillet. When a pinch of flour sizzles in the pan, it's hot enough for the fish. Cook a few fillets at a time until the fish are brown and crispy. |
| 1–1½ cups bread or cracker crumbs | |
| cooking oil | TO BAKE Coat a pan with cooking oil and place it in the oven. Heat oven to 450°F. Place fillets on the heated pan and cook about 6-7 minutes on each side, until crispy. |



Cut It Out!

Even though eating fish is healthy, you should be aware that certain lakes and rivers have special advisories about PCBs and mercury. PCBs and mercury are toxins that are found in high concentrations in the fish of some lakes. Check the DNR website at dnr.wi.gov/fish/consumption to investigate which ones have advisories.

You can safely enjoy fish from Wisconsin waters as a regular part of a healthy diet. Just observe these recommendations in the DNR's *Choose Wisely* fish consumption guide: cut the fat off of your fish; eat younger, smaller fish; and eat a wide variety of fish.

Swimming Upstream

Fishing is an amazing way to spend time outdoors, learn about the natural world, enjoy time with family and friends, explore the state, and catch fabulous food. But maintaining a healthy fishery requires our attention and care. If you see something that concerns you while out on the water—litter, erosion, a thick mat of algae—do something about it! The future of fishing in this state rests in the hands of those who regularly use it. If you think fishing is a valuable and important pastime, it's up to you to make your voice heard and your opinions matter.

There are direct and indirect paths to helping protect our natural resources. Some people choose to dedicate their lives to natural resources in careers at conservation organizations like the DNR. If you are planning a career in natural resources, check the DNR website for a sampling of jobs in the field. If you see one that looks great, interview someone in that job to find out what sort of skills you should be getting while still in school. You can also check university websites to see what types of courses they offer for people interested in our natural resources.

You don't need a career in conservation to be a conservationist. No matter what career you choose, artists, economists, cashiers, mathematicians, and flight attendants, to name a few, can all advocate and volunteer on behalf of natural resources. There are many ways to stay involved with and learn more about

Wisconsin's fish and waters. Here are a few suggestions:

- Take a friend fishing. One of the best ways to gain support for the resource is to introduce others to it.
- If you like trout fishing, or are interested in starting, contact Trout Unlimited to see if they have a chapter near you. You could help with a restoration effort, or meet others who want to help trout.
- Start a fishing club at your school or join one in your community.
- Speak up! Write letters to your representatives and senators about your resource concerns and vote as soon as you are eligible!
- Get outside. Being an active observer is the first step to working for the changes you would like to see.

It's not always easy to improve our natural resources, but neither is it to swim upstream and plenty of fish do it every year. Keep your eyes on the water and your mind open. Even if you don't continue fishing, you will continue to live in a world where water resources and aquatic wildlife will play a role in the health and stability of our planet. Don't lose touch with the water in your world!

Cheap Date

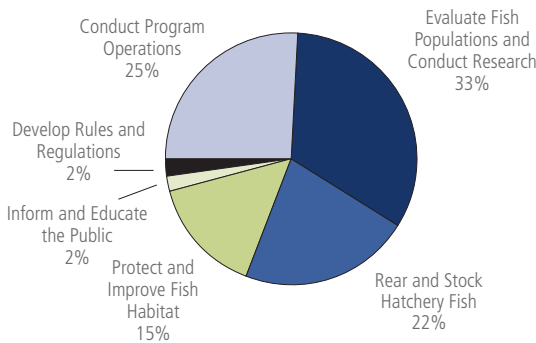
Take your date or a pal fishing! After a small annual investment, you can fish 365 days a year with whomever you want. Many Wisconsin communities are situated on or near fishable waters. Pack a picnic, call a friend or two, hop on your bike, and head for the water's edge.



A love of fishing has inspired generations of anglers to pay close attention to natural resources. Invite a friend to join you in enjoying the beauty and excitement that fishing offers.

Where does your license money go?

Money collected through the Sport Fish Restoration Fund and fish license fees funds the fisheries program at the Department of Natural Resources. Within the fisheries program, the money gets divided into many different projects, illustrated in the pie chart below:



All that for less than the cost of one night on the town! *Data from 2006 DNR Fishing Report*

Compare the cost of a day of fishing to other leisure activities. Consider total costs of participation and how often you can use your investment. Here are some examples:

ACTIVITY	MINIMUM REQUIREMENTS	COST	ONE-TIME USE OR OPPORTUNITY	MULTIPLE USES OR OPPORTUNITIES
Fishing	<div>License & Stamps</div> <div>Rod</div> <div>Reel</div> <div>Bait</div> <div>Tackle</div> <div>Other:</div>			
Prom	<div>Ticket</div> <div>Clothes</div> <div>Dinner</div> <div>Flowers</div> <div>Special Transportation</div> <div>Other:</div>			
A night out	<div>Several options:</div> <div>movie, food, gasoline.</div> <div>List what you would do.</div>			
A night at home	<div>Several options:</div> <div>games, music, snacks.</div> <div>List what you would do.</div>			