Take a Kid Fishing

Beginner's Unit Leaders' Guide

Pilot Draft
2/01/00

Developed by:

Ontario Ministry of Natural Resources
Ontario Federation of Anglers & Hunters
Ontario 4-H Council

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Take a Kid Fishing Project Welcome!

It has often been said that, "Volunteer 4-H club leaders are a blend of friend, teacher and parent." That's a big order to fill! But you will discover that you have many talents as a 4-H volunteer. Having an interest in young people and their development and being willing to take up the challenge of 4-H leadership is the first step to success.

This project focuses on the many different aspects of fishing. However, the development of members as individuals is your real goal. You will get to know the club members and where their interests lie very well. Use this knowledge, as well as your own expertise and imagination to plan a fun, interesting and challenging club program for your members. Enjoy being a 4-H club leader!

Before the project begins leaders will:

- familiarize yourself with current provincial and local 4-H policies;
- attend a leader training session (if scheduled);
- advertise the project and organize a club with a minimum of six eligible members and one volunteer leader per club except in cases deemed to be unique and approved by the local 4-H Association; and
- review available resources and begin planning the club program.

During the project leaders will:

- attend each meeting and the Achievement Program
- assist members in planning and presenting the club program

- provide a FUN atmosphere in which members can learn and make new friends
- ensure the club membership list is completed and membership fees are collected - forward these to the designated person in your area before the second meeting
- order awards and project and name plates once membership list is completed
- help each member to set and achieve goals for personal development
- encourage members to work together as a group
- provide guidance in choosing and completing an Achievement Program
- evaluate the club program and share the results with the 4-H Association

4-H Club Program Planning

A successful 4-H club doesn't just happen! Careful planning is necessary and very important. As a 4-H leader, you have a responsibility to do the best job you can in providing a fun, learning experience for the 4-H members. Planning will make this a reality.

The 4-H Volunteers' Handbook has lots of valuable information to help you and your members plan a successful club program. Refer to "The 4-H Meeting" section of your handbook for tips on planning successful meetings, effective communication, games, judging and special events. The chart on page iii can be used to record your plans.

4-H Club Program Planning Chart

(copy as many as required for each year)

Meeting or Event	Date	Topic, Activity or Task	People Who Could Help	Presentation Ideas To Consider

What Is An Achievement Program?

An Achievement Program is:

- an opportunity for members to share the knowledge and skills they have gained during this 4-H project
- each member should be involved in some way
- informs the public about the purpose and goals of the 4-H program

Achievement Program ideas specific to this project are suggested below, and on pages 185-186. Involve club members in selecting a suitable idea and making the necessary preparations.

Achievement Ideas

There are lots of things that you can do to help your members celebrate their accomplishments in the Take a Kid Fishing Project. Because an achievement program is required in order to complete this club, you will want to make sure that you put a lot of thought into making it fun, rewarding and interesting for everyone involved. Your members will be looking to you for guidance, but some of them will have good ideas. Here are some ideas:

- put up an educational booth at a fair, plowing match or community event that explains what your club does, and gives information on fishing and fish ecology and biology
- create and produce an educational video which will promote fishing and looking after our water resources

- Build an internet website for your Take a Kid Fishing club.
- Set up a display in a shopping mall, outlining the purposes of 4-H and showing your club's activities

The First Meeting

Objectives

To have members and leaders get to know each other

To have all 4-H members understand the structure and format of the 4-H club meeting

To elect a club executive who will be responsible for the business portion of the meetings

To have members understand what is expected of them for club completion requirements

In your first meeting with each club, include the factsheet " Take a Kid Fishing Welcome" and the activities listed in this section.

Welcome and Get Acquainted

- Welcome the members and conduct an ice breaker to help members and leaders get to know each other.

Getting Started (10 minutes)

- Begin with the **4-H Pledge**. Post a copy so everyone can see it.
- Complete the **membership list**.
- Outline the **opportunities** members have such as taking part in the local fairs and shows, "4-H Go For The Gold," 4-H Members' Conference, etc.
- Distribute "4-H Club Member Lives Here" and 4-H "Club Project" **signs** if available.
- Distribute the **Take a Kid Fishing Project Welcome** factsheet.
- Discuss the members' **requirements** for the project (see Welcome factsheet). Outline any expectations you have of the members.
- Briefly discuss the **Achievement Program** – type, date, time, location.

A Road Map to Good Meetings (20 minutes)

- It is important for everyone to become familiar with the basics of running a good meeting. Review with members the purpose of an agenda and the executive's responsibilities. Have the club members elect an executive and complete the chart in the factsheet.
- Refer to the 4-H Volunteers' Handbook and the OMAFRA Factsheet, *Procedures for Meetings* (96-009).

The Last Meeting

A Certificate of Completion and a Project Summary have been included in this Guide, pages xii and xiii. Your signature on either of these indicates you feel the member has completed the project to the best of his or her ability. Space is provided for you to add some individual comments to offer encouragement to the member. The Project Summary sheet also asks for written feedback from the member and his or her parents or guardians. (The questions on this sheet have been selected from the informal evaluation sentences, listed below.) Select whichever sheet best meets your needs and make copies for the members.

It is recommended that the certificates not be awarded until the Achievement Program. If you give them out before this time, some members mistakenly assume that they don't need to participate in the program.

Informal Evaluation

Take a few minutes at the last meeting to do an informal evaluation with members. One way to do this is to ask them to complete one or all of the following sentences.

- I joined this club because ...
- I really enjoyed ...
- I didn't enjoy ...
- I had a hard time ...
- My favourite meeting activity was ...
- My least favourite meeting activity was ...

- If I was to take this project again, I would change ...
- I learned ...
- I've changed ...
- I'm glad ...

It Worked For Us!

Your experience in leading this club would be helpful to another leader in your area. You are encouraged to make some comments about the project, what resources you discovered locally and the members' feelings about the project and pass this information on to your 4-H Association and to the Ontario 4-H Council is interested in your comments too. Their address is below under Feedback.

Special Notes For This Project

- Remember to refer to your 4-H Volunteers' Handbook. You will find many useful tips and ideas covering topics such as program planning, successful meetings, parliamentary procedure, and effective communication and presentation methods. Refer to your Volunteers' Handbook as you plan meetings. If you do not have a handbook, please contact your 4-H association.

Feedback

The Ontario 4-H Council reviews and evaluates 4-H resources. Comments and suggestions about 4-H manuals and guides are always welcome. They may be sent to the following address.

4-H Resource Development
Ontario 4-H Council
R. R. #5 Guelph, Ontario
Phone/Fax: 1-800-937-5161
Email: lduke@ntl.sympatico.ca
Website: http://www.4-HOntario.ca

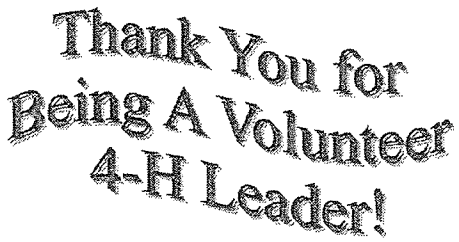
Kids Help Phone

Kids Help Phone is available to over 7 million children and teenagers throughout Canada.It is a national, bilingual, confidential, toll free helpline staffed by paid, trained professionals. In response to the problems and concerns of our youth, Kids Help Phone provides a listening ear, emotional support, counseling, information and referrals. Children and teens from anywhere in Canada can call anonymously 24 hours a day, 365 days a year.

Children and teens can call about anything that is bothering them including – abuse; drugs; alcohol; conflicts with parents, friends or teachers; pregnancy; sexuality; suicide; or parental separation and divorce.

Please mention this number to your members and explain what it is for. Make sure they know that it is free and they don't have to give a name or address.

The Kids Help Phone gets 1000 calls a day ... 2000 more get a busy signal. If you or your club or someone you know would like to make a donation to the Kids Help Phone, call 1-800-268-3062.



Take a Kid Fishing

Welcome to Members

The Ontario 4-H Program provides opportunities for the personal development of youth.

The 4-H Pledge

"I pledge
My HEAD to clearer thinking,
My HEART to greater loyalty,
My HANDS to larger service,
My HEALTH to better living,
For my club, my community and my country."

General Requirements for Members

- attend 2/3 of the meetings
- complete the project to your leader's satisfaction
- attend the achievement program

How Members Can Get Involved!

In order to keep your club on the right track at all times, you need coaches or an executive. These members will work more closely with the leaders, the volunteers, the youth leader and other members of the club to achieve that goal.

Be willing to let your name stand for an executive position. It is a rewarding and fun experience. Following your club's elections, complete this club executive chart.

Club Executive:		
	Name	Phone/Email
President		
Vice-President		
Secretary		
Treasurer		
Press Reporter		
Other		

Club Membership:	
Member	Phone/Email

Leaders	Phone/Email

4-H Association Contact	Phone/Email

Members Meeting Schedule

	Date	Time	Place
Meeting One			
Meeting Two			
Meeting Three			
Meeting Four			
Meeting Five			
Meeting Six			
Achievement Program			

PROJECT SUMMARY – Take a Kid Fishing

(complete at the end of the project)

A. Member Comments:

I joined this club because _____

_____

_____

I really enjoyed _____

_____

_____

I didn't enjoy _____

_____

_____

If I was to take this project again, I would change _____

_____

_____

I learned _____

_____

I'm glad _____

_____

B. Parent/Guardian Comments:

_____

_____

C. Leader Comments:

_____

_____

4-H Ontario

Take a Kid Fishing Project

Congratulations on successfully completing this 4-H project.

_____

_____

_____

_____

_____ _____

Date Club Leader's Signature

WELCOME TO *TAKE A KID FISHING!*

Fishing is an activity with both environmental and social benefits that can also become a lifelong passion. Fishing can link people and our aquatic resources in a fundamental and practical way, a way that can generate caring, responsibility and action to protect, rehabilitate or enhance those resources. It can also generate memories which will last a lifetime.

Research shows that the sooner you can "hook" someone on fishing, the longer, on average, they will fish. We designed this **Take A Kid Fishing** Program with that in mind. It is full of hands-on, discovery-based activities and fishing opportunities that not only teach fishing skills, but also introduce kids to fish identification, biology, ecology, management and personal responsibility. We want to "start 'em young and start 'em right", so that they will care for the resource as long as they fish.

The program will eventually contain three units: beginner, lake fishing and stream fishing. These units will be designed to capture young people at any level of fishing ability, as well as provide a graduated approach that will take kids with little or no experience and turn them, over time, into anglers of some sophistication – anglers who realize that fishing is far more than filling the freezer.

The Beginners Unit

The goal of this program is to develop a new generation of anglers who:

- understand aquatic ecology;
- are aware of and appreciate Ontario's precious and diverse aquatic resources;
- feel a sense of responsibility and stewardship toward those resources; and
- not only understand how to catch and selectively release fish, but how to do it in a safe, ethical and responsible manner.

To accomplish this goal, the Beginners Unit is organized into five Meetings and a Fishing Trip. The meetings are designed to answer, in order, the following questions:

What will I catch?
Where will I catch it?
What will I catch it with?
How will I catch it?
How will I treat it?

Each meeting incorporates three themes which will receive more or less emphasis depending on the question:

Fish Biology/Aquatic Ecology
Personal ethics & responsibility/Safety
Techniques/equipment

The unit will focus on the individual angler – what they need to know, what effects they have on the resource, and how they should behave in relation to that resource. Kids will observe and handle fish beginning in Meeting One, and will be fishing by Meeting Three. They will have the opportunity to apply what they've learned during an extended fishing trip at the end of the Unit.

We have done our best to provide you, the leader, with an active, enjoyable, thought-provoking program. We wish you the best in getting out and using it, and look forward to any thoughts, comments and ideas that you may have as a result. Together, we can make this program grow.

Ethics and personal responsibility

Creating ethical anglers may be *the* most important goal of the program, and of this Unit. While ethics are directly addressed in Activity 1.3 and throughout Meeting 5, they cannot be limited to only those areas. "Actions speak louder than words" is nowhere more true than here – how you as a leader behave toward the resource, and how you direct the behaviour of your members, will to a large degree influence their approach to fishing for years to come.

Building a proper angling ethic may therefore be the most important, and difficult, task facing you as an instructor. It must start at the beginning of this unit, and will continue throughout this unit, and following units, but only if you keep it uppermost in your mind, and encourage your students to do likewise.

In order to provide some direction in this area, the following discussion on ethics has been adapted, with permission, from the *New York Sportfishing and Aquatic Resources Education Program (SAREP).* Research, plus years of practical application in this excellent program, provide useful insights into how to build fishing ethics. Please apply these insights whenever you can.

There are some **common threads** weaving through effective ethics education methods. Keep these in mind as you approach ethics in your program:

- building a sense of community and family, and using this group identity to nurture prosocial behaviour;
- the role of a leader is to guide, not to dictate;
- developing a climate of mutual respect;
- building group consensus and ownership in group norms, including codes of behaviour;
- using peer teaching, counseling and support;
- building all these elements into a sustained, long-term effort over a significant period of time.

The outcome of your ethics education efforts should be a youngster who can logically think through an ethical situation, choose the right course, and act on his or her convictions. You get the youngster to this point by giving them:

- the tools of critical thinking and moral reasoning;
- frequent opportunities to actively use these tools in a setting that is emotionally safe and respectful;
- experiences in seeing you and others behave appropriately in numerous fishing settings, over time;
- experience in developing ethical guidelines, so they have some ownership; and
- the social support of the group, family and community.

In addition to setting a good example, you need to help your kids to fish right and feel good about it. This can be done through:

- observing others in ethical situations, and helping members see the ethics involved in the choices made;
- demonstrating appropriate and inappropriate behaviour through modeling and role-playing, using the scenarios suggested in Lesson 5 as a basis for discussing and practicing angling ethics, and dealing with ethics violations;
- encouraging members in making the sometimes difficult choices where no single action is necessarily wrong or bad, all choices may be right, and they must choose what is most right; and
- reinforcing and rewarding positive ethical behaviours when your members demonstrate them. Let them know *you know* they've done right. Be sure to involve the rest of the group in this recognition process. Peer support is a very powerful thing.

In determining what is "most right", consider the following questions:

> Will the action benefit the aquatic resource, now or in the future?
>
> Will the action be good for fishing, now or in the future? Will people watching think positive things about fishing, and anglers, as a result?
>
> Does the action fit your personal values related to fishing? Will it benefit, or at least not harm, other anglers? other people?

If, by the end of the Unit, you have your members pausing to reflect on their actions, you will have made a good start.

How to use this unit

Leadership. The Beginner's Unit is designed to be lead by a team made up of a 4-H program leader and an experienced anger with an interest in youth and youth fishing. For that reason, there is not a lot of detailed information on fishing, although much of the basics can be found either within the lessons or in the *Take A Kid Fishing* Guides provided for each member. At times, this "team" may be one person, if you have experience in both areas. If not, and you do not know any anglers who can provide help, check with a local angling club. If there are no clubs, contact the Ontario Federation of Anglers and Hunters (705-748-6324) to determine if there are members in your area who may be able to help.

Equipment. We cannot provide rods and reels. They do, however, seem to multiply in garages, and a local club may be able to coordinate an old equipment drive to provide useable gear. Gear may also be available on loan from a local *O.F.A.H Tackle Share©* outlet such as a Provincial Park, Conservation Authority, library or Big Brothers office. If all else fails, Activity 3.3 provides a cheap alternative to get things started.

Unit flow. There are lots of activities and options here for you to choose from. We have tried to create a mix of active simulations/role plays, discussion & decision making, skills training and practical fishing experiences. While we feel that the progression of Meetings and activities is a good one, you may wish to be selective in choosing activities or options based on the age of your group, their prior fishing experience, the time available, or the accessibility of reasonable fishing locations. Limited water access, for example, may necessitate combining several waterside sessions into one. We are, however, after a balance of fishing skills, biological understanding and angling ethics. **If at all possible, we would like you to include Activities 1.2, 1.3, 2.5, 5.2 and 5.3 in your program.**

In this design, actual fishing does not take place until Meeting 3. There are good reasons for this, but in this world of fast food and immediate gratification, it may be hard to rein in the desire to get out there and fish. Good anglers know what they're fishing for, know how to fish for it, know the regulations, and know where the fish are found. All these things precede putting lines in the water, unless you want to trust to luck. The activities which introduce these things are fun, involve your members with the resource from the first activity, and reinforce the importance of knowledge and ethics before they ever begin to fish. One way to avoid pressure to fish immediately is to begin the Unit in the early spring before it warms up significantly and becomes attractive for fishing. A number of the "inside" activities could then be combined and done before the motivation to fish gets too high.

You may be thinking about doing this unit in one day, particularly if water access is a concern. **We do not recommend this option,** for the following reasons:

- the desire to fish will be extremely high, and the anticipation may overwhelm any introductory activities that you run.
- "iffy" weather or "iffy" fish may dampen the entire experience.

- there is no opportunity for reflection, reinforcement, learning more and trying again.
- while fishing ethics can be modeled or reinforced in this setting, building ethics through discussion and reflection is very difficult.
- one major strength of quality youth fishing programs is having ongoing, in-depth experiences shared by kids and adults. This requires a fairly long-term commitment and regular involvement with a caring adult.

Consider instead several land-based sessions built around one or two major fishing outings.

Safety

Running a safe program is paramount. A fishing program has particular challenges: sharp things (hooks, fish spines, knives), flying objects (sinkers, practice plugs), potentially slippery areas (steep banks, rocks) and water. Lots of water, perhaps even cold water. These safety issues are highlighted or reminders given at appropriate places throughout the Unit, and a basic introduction to safety can be found in the *Take A Kid Fishing* Guide, page 18. Key issues are also addressed below.

Hooks. Hooks *must* be sharp. Awareness of hooks, then is critical, and is described in Activity 3.3. For safety reasons alone, consider barbless hooks, or mashing down the barbs on the hooks used with a pair of pliers. A few additional fish may be lost, but the additional peace of mind may be worth it. If you do decide to use barbed hooks and one gets buried beyond the barb, *get medical attention.* Do *not* attempt to get the hook out yourself.

Knives. Paradoxically, sharp knives are less dangerous than dull ones. They require less force to cut, and knife control is easier. Minimize knife use. Nail clippers are much better for cutting line, and parts of the fish cleaning process can be easily done with scissors, although a good knife is required for filleting.

Spines. Make members aware of the fish that have spines, and where (usually dorsal and anal fins), especially the sunfish that they are likely to catch. Demonstrate how to bend the spines back as you grab the fish with wet hands. If you catch catfish, make a particular point of the pectoral fin spines, since few other fish have them. Treat spine injuries like any other puncture wound.

Flying objects. Casting safety requires constant reminders, since members must think of three or four things at once, and safety may not be a top-of-the-mind issue until they are more practiced. Stay away from any power lines. However, in spite of your best efforts, a power line may reach out and grab some terminal tackle. If it does, cut away the tackle and forget it. Under no circumstances attempt to remove the tackle, even if it contains your favourite lure.

Water. There are two approaches to working around water. The easiest and safest is to insist that everyone, including leaders, wear Coast Guard approved floatation gear at

all times. The alternative is to require gear based on participants' age, ability to swim, water and air conditions (temperature, wind), near shore conditions (shallow vs. deep), steepness of the banks and/or presence of slippery rocks. While the latter approach increases the risk slightly, this may be outweighed by the value of discussing why floatation is used in some cases and not others, and how to make safe decisions. If gear is used at all times and without discussion, some members may shed it at first opportunity and without consideration of the safety of doing so. If there is any doubt, however, use it.

Choosing safe water (fairly shallow, no casting obstructions, no current, minimum bank slope, few nearshore rocks) will minimize safety concerns, but not eliminate them. However, good fishing locations may contain some additional risk. At all times, have a reaching pole and a throwing ring & line at hand, as well as towels and blankets.

Fishing from boats is not recommended for this Unit. **Under no circumstances should you fish near power plant intakes, dams or weirs, or quickly flowing water.**

MEETING ONE: WHAT WILL I CATCH?

What will the group learn? They will be able to identify common Ontario fish species, explore some special adaptations that fish have made in order to survive and flourish, recognize fish behaviors, and explore the link between accurate fish identification and regulations.

Objectives

1. To increase awareness, understanding and knowledge of the external adaptations of fish, how those adaptations allow fish to live successfully in water, and how to apply that knowledge to fishing.
2. To develop skills related to fish identification, and linking identification with information useful in angling for various fish.
3. To create an understanding of the value and benefits of fishing regulations, the link between accurate fish identification and regulation, and the difference between rules and ethics.

In a nutshell

Up Close and Personal	45 minutes
Who's Who?	30 minutes
Rules 'n Regs	45 minutes
Total Time:	**120 minutes**

From a Perch Eye's View

Get ready to identify and explore the different types of fish inhabiting Ontario's lakes and streams.

What makes a rainbow trout different from a catfish? Why is a pumpkinseed so round with bright spots? The answers lie in exploring the relationship between a fish's key traits and their homes, or habitat. Each fish has adapted its body shape and habits (lifestyle) to its habitat. For example, the pumpkinseed lives in quiet waters around thick vegetation; consequently, it is the shape of your palm so it can easily maneuver through the cover, and its color allows it to hide in areas with light and shadow. For an angler or observer, knowing which adaptation belongs to which fish adds an additional measure of satisfaction to their hobby. This knowledge is also the key to knowing where and when to fish and obeying the regulations.

Identifying fish is easy if you know which traits are the "keys" to unlocking a fish's identity: the absence or presence of certain structures, body shape, the location of body

parts (like the mouth), relative size and shape of body parts, and counts of scales, fin rays or spines. In most cases, fish can be identified just by examining these features, but sometimes internal structures also need to be examined. Identification keys, illustrations, and descriptions that are based on these traits are often used to help identify plants and animals. Once you accomplish the skill of using a key, you'll probably be able to identify any fish that comes your way!

You may wonder why colour and size are not more widely used. One reason is that they vary among individuals of the same type of fish, depending on age, sex, season, and maturity. Another reason is that color fades rapidly after death, and size can be affected by water quality or population structure.

Kids have a natural curiosity about these special traits of fish and animals. In order to learn about those traits and their relationship to the environment, one needs to touch, smell, see, and explore. The program encourages this "hands on" (experiential, or "learn by doing") approach to learning. As a leader, you'll conduct this great hunt for knowledge and understanding of these relationships as they relate to Ontario fish.

Identification and Regulation

Back when there were very few people in Ontario, and a whole lot of fish, taking some here or there was no big deal. But as our use of aquatic resources grew, habitats and fish populations, in some cases, shrank. It became easy to take more fish than a particular lake or stream could support. Some fish, like the Atlantic salmon, disappeared. Others, like the lake trout, almost did in some areas. It became necessary to "manage" fish populations, that is protect and assist them where necessary.

People quickly learned that it is generally easier to manage impacts on fish rather than the fish themselves. In order to manage recreational fishing, managers developed fishing regulations. And since each fish species reacts differently to impacts, regulations must reflect both local impacts and individual species responses. Anglers, then, must not only be able to identify their catch, but be able to locate local limits and exceptions.

That skill, however, is useless, unless the angler in question is motivated to follow the rules. Management is everybody's task, if there are to be fish left for future generations. Each new angler must understand the need for regulations and choose to follow them if their enlistment is to be a benefit to the angling community and to the resource.

Up Close and Personal

Purpose: *To make direct contact with either living or dead fish, and through that contact, learn something of fish structure, adaptations and behaviour, and how that applies to fishing.*

Outcomes: *Members will be able to describe the basic external adaptations (shape, fins, eyes, gills, scales) that allow fish to live successfully in water.*

Concepts: *6.2, 6.4, 6.5*

Group size: *6 - 30*

Site: *Waterside or meeting room; aquariums or counter space required to examine fish.*

Time: *45 minutes*

Supplies: *minnow trap(s) (opt.), large jars, fishbowls or small aquaria (opt.), at least one pump with airstone (opt). Live bait fish or dead sport fish.*

Before the Meeting: *If you are using a minnow trap, it should be set for 4 - 12 hours. Bait it with bread or dry dog food, and mark it with your name and address. Scout the shoreline carefully to see if there are good spots for fish observation by small groups. If you are not trapping fish, arrange for purchase from a local baitfish dealer. Even if you are trapping, you may want to have dealer fish for backup and comparison. Make sure any dead fish are thawed.*

A QUICK LOOK:

One of the first questions a young angler will ask is, "What will I catch?" The short answer, of course, is, "fish!" In this introductory activity, that driving curiosity is aimed at either the small baitfish you can catch yourself, or buy live from a baitfish dealer. The question to be answered is, "What can I find out through close observation of these small fish?" That information may then be applied to sport fish. If you cannot acquire live fish, dead fish can be examined through the use of *Resource Sheet 3.*

The important thing is to get involved with real fish from the very beginning. It is also important that the shore area and any fish caught or even used when dead be treated will respect. That will set the tone for development of personal ethics and proper behaviour that may last a lifetime. And what *you* do will indeed speak far louder than anything you might say in the course of this unit. You may wish to review the information on ethics and personal responsibility found in the WELCOME section of this unit.

If you do not collect and return baitfish with your group, you may have time to do part of *Resource Sheet 3.* Any dead sportfish can be used in support of Activity 1.2, *Who's Who?*

READY, SET, GO!:

Waterside option. If you have set minnow traps and will pull them with the group, spend a little time exploring along the shore, looking for small fish. Explain that fish can be 'spooky', and they may need to approach the shore carefully and quietly. If you have a large group, divide the shore into sections and assign each section to 3-5 members. Have each group watch carefully. If they are still, the fish should quickly resume normal activity. Have the groups consider the following questions. Are the fish together or separate? Are they found out in the open or near plants, rocks or docks? What do the fish do if you move suddenly, or wave your arms? How is this behaviour useful to the fish? How might onshore behaviour affect the success of nearshore fishing?

Have the group pull in the minnow trap(s) and place the fish in a bucket for transport, or directly into large jars or fishbowls, and move them to a location where you can sit and observe. They should move quickly, but with care and minimum stress on the fish.

Live fish observation option. Each group of 3-5 should have a jar or bowl with 1 to 5 or 6 fish (but don't overcrowd). Have the groups quietly observe while the fish settle down. Note: there may be considerable differences between trapped fish and fish from a dealer, which may settle down more quickly and react less to motion.

Pass out *Resource Sheets 1* and *2*, and have each group identify the major parts indicated, as well as general shape, eyes and scales. *Sheet 2* shows the major features of trout, salmon and whitefish, and is more similar to the smaller minnows, dace and shiners than *Sheet 1.* If they have different kinds of fish, have them figure out the best ways to tell them apart. Note: identifying individual baitfish, or even baitfish from non-baitfish is not important at this level. What *is* important is that they begin to develop an eye for differences in fish, and how to tell fish apart.

Look more closely at how the fish use their fins. Challenge each group to determine how fishes move forward or backward, stay in one place, go up or down, stop, or turn.

Have them closely watch the action of the mouth and gills. Use the following questions to guide their observations: are the movements of mouth and gill cover related? Do they open at the same time, or one after the other? Do the rate of these motions change if the fish is at rest, or if it moves around a lot? Note the closeness of the gills to the mouth area, and the importance of avoiding damage to the gill area if fish they catch are to be returned to the water.

Returning fish. If you trapped your fish, carefully return them to the *same* location where they were caught. This is important to do with the group if at all possible, even if

it takes time from the rest of your program. You are modeling behaviour that shows respect for living things, even (especially!) for those things that might end up on the end of your hook some day. However, **do *not* put baitfish from a dealer into a local waterbody**. They may not be found in those waters, and could upset the balance and interactions of the local fish (see Activity 5.4). Dumping baitfish like this is **illegal.** Indicate to the group that you will use them to fish or return them to the dealer.

Dead fish option. Provide one fish (cold but not frozen) to each group of 3-5 members. Have as many different kinds of native or naturalized Ontario fish as you can catch, beg or buy (since the drawing is of a yellow perch, perch would be a useful, but not essential, fish). Encourage each group member to pick up and handle their group's fish at different times throughout the activity, as well as compare their fish to those belonging to other groups. At minimum, the activity can be done with whatever whole fish are available from the market.

Provide *Resource Sheets 1-3* to each member. Group members should work together as they each complete *Sheet 3*. Circulate and respond to individual and group questions. Each member should wash their hands with soap and water when the examination is complete.

Leader Resource Info sheets are available for background.

OTHER IDEAS:

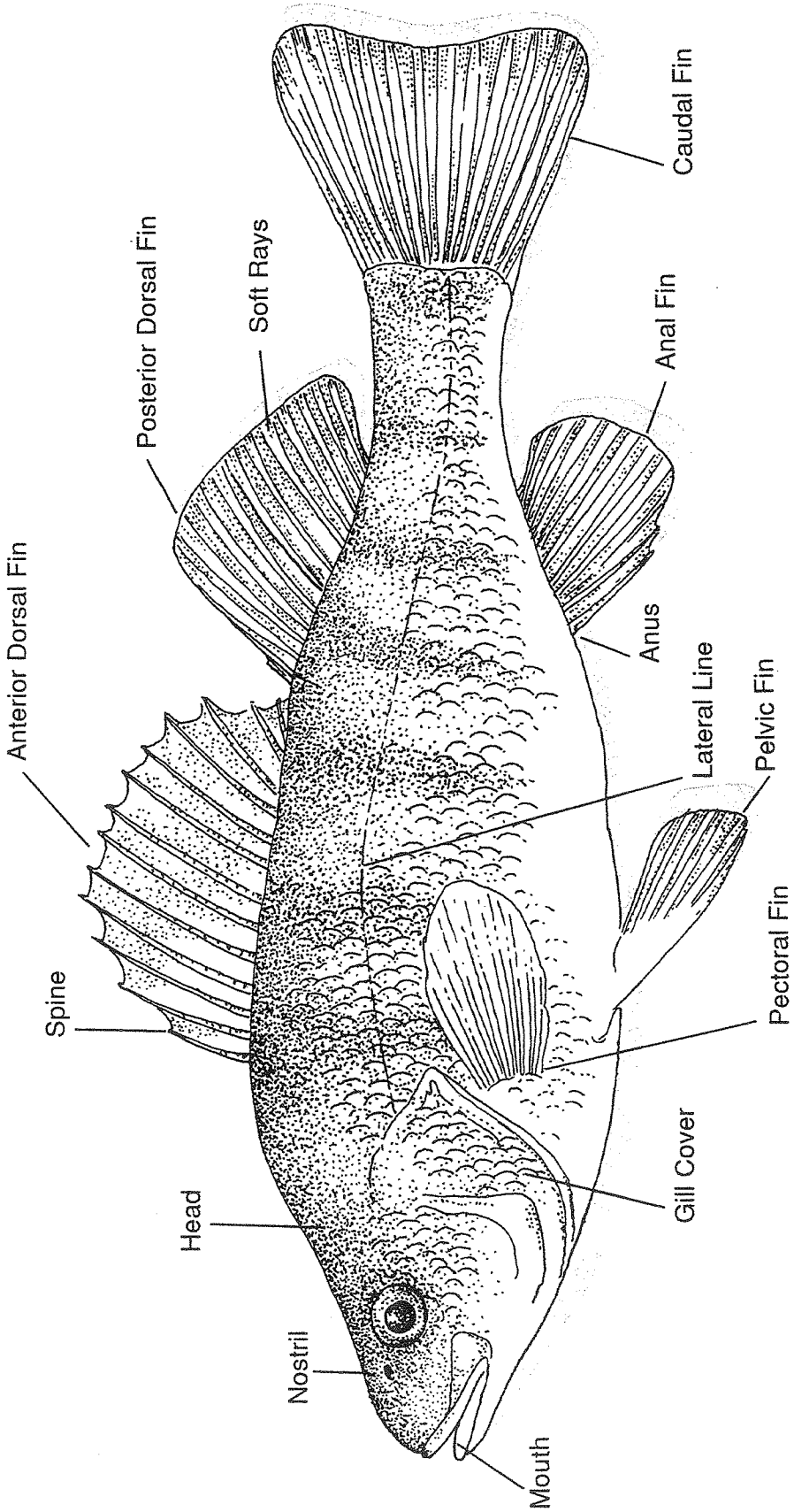
- ***Gyotaku***, or Japanese fish printing, uses whole fish to create designs on paper or cloth. Directions can be found in arts & crafts books.
- For younger members, compare a simple body outline with that of a fish. Match or draw lines between parts with similar functions, e.g. legs and caudal fin, nose and nostrils (used only for 'smelling' by fish), lungs and gills.
- Create "superfish" based on particular environmental challenges, e.g. go extremely fast, survive beneath Niagara Falls, survive being out of the water part of the time.
- Experiment with small plastic bottles to determine the function and best placement of fins. Cut some fins from a bottle or other thin plastic and attach them using a hot-glue gun. Attach a string to the lid, add some water so it doesn't float, but doesn't sink quickly, and test its stability in a small, nearby stream. Compare it to a finless bottle.

HANDOUT MASTERS:

Resource Sheet 1 *Ins and Outs of a Yellow Perch*
Resource Sheet 2 *Features of Salmon and Trout*
Resource Sheet 3 *Up Close and Personal*
Resource Sheet 4 *Shape Relationships*
Leader Resource Info *Up Close...*

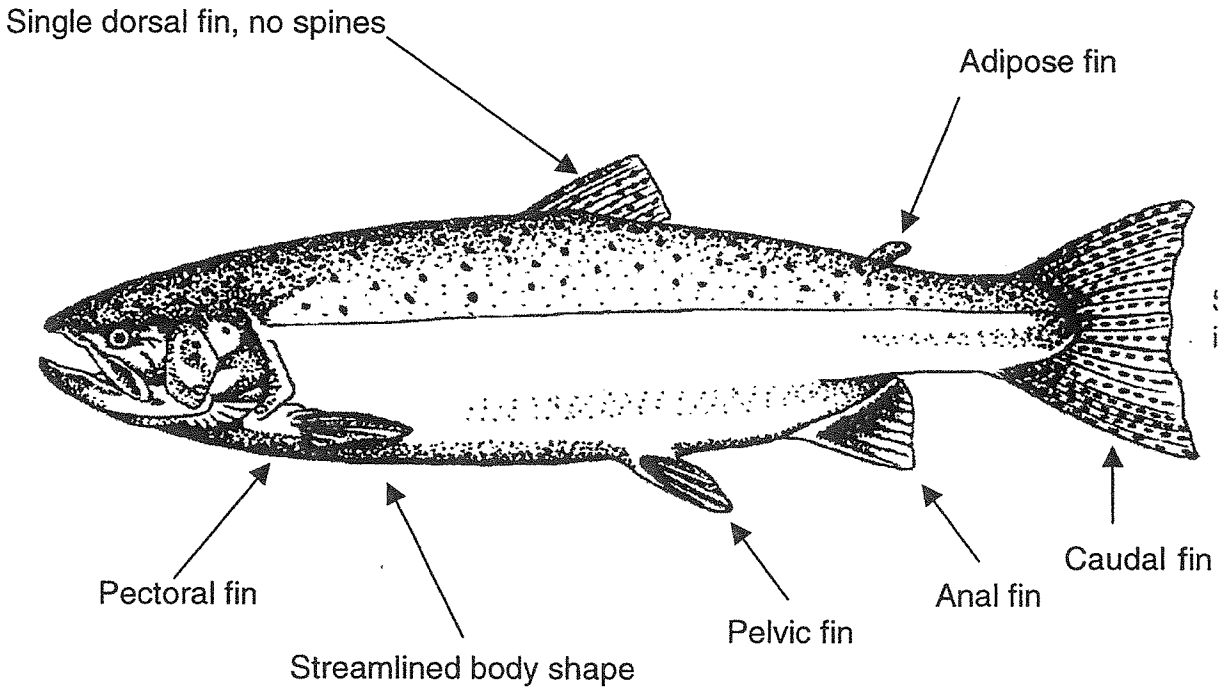
STUDENT RESOURCE SHEET 1

The Ins and Outs of a Yellow Perch



RESOURCE SHEET 2

Features of Salmon and Trout



RESOURCE SHEET 3 Up Close and Personal

Fish live in water. Before you say, "Duh!", think about what it would mean to live in water all of the time. Could you walk? Run? How would you eat? Listen to music? Dance? Fish have figured out how to live in water. In fact, fish are so good at it that they are found almost anywhere there is water. And they have been there more than 100 times as long as we've been around on land. How do they do it? By answering that question, you will find out more about fish. And the more you know, the easier it will be to find, catch and successfully release them.

General shape. Take a good look at the shape of your fish. Without worrying about details like fin shape, draw the general outline of your fish when you look at it from the side, from the top and from the front:

Side view **Top view** **Front view**

What else can you think of that is shaped something like your fish? _____

_____

Why are all these things shaped the way they are? _____

Hint: Think about running through chest-deep water. What is a better way of moving through it, and why?

Not all fish shapes are exactly the same. If other groups have different fish, look at their shape for a minute. Are they fat, thin, rounded, eye-shaped? These shapes can tell you something about how fish move, and even where you might find them. Get a copy of *Resource Sheet 4* and look at your fish again. Which general shape does your fish resemble? _____ What kind of movement is it good at? _____ Where might you find it? _____

_____

Fins. *Using Resource Sheet 1*, identify all of the fins on your fish. Pull them out and look at them with a large pin or dissecting needle. Be CAREFUL! If your fish has spines they may be sharp. Why might a fish have sharp spines? _____

_____

If you don't have a perch, compare your fish's fins to the drawing. Are there any differences in shape, size or location? _____

Think about live fish you have seen, or even fish in movies/TV, and write down how you think they use each fin:

dorsal: _____
caudal: _____
pectoral: _____
pelvic: _____
anal: _____

As soon as possible, find a live fish and try to check your answers.

Eyes. The size and location of eyes can tell you something about how and when to fish for that fish. Look at the size of the eye in relation to the size of the fish. Fish with relatively large eyes can see well at twilight, or in deeper or murkier water. Does your fish have large eyes? _____ Would it be more or less active near shore during the day? _____.

Look at your fish both head-on and from the top. Draw where the eyes are:

head-on **top-view**

Compare the placement of the eyes with other kinds of fish if you can. Are the eyes of your fish more to the middle of the side or more to the top of the side? _____ Looking down on the fish, can you see some of the eye, or just the eye covering? _____ _____ Looking head-on, can you see some of the eye, or just the eye covering? _____ Can your fish see well to the front? _____ to the side? _____ to the top? _____ Where is the best place to put bait or a lure for it to be seen by this fish? _____ _____

Colour. Become a predator, and describe the colour of your fish

from below: _____
from above: _____
from the side: _____

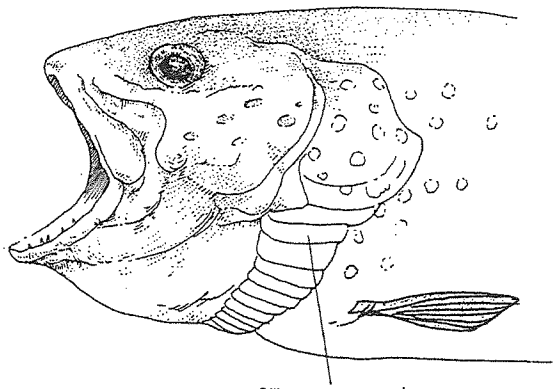
What kind of background would you see the fish against

from below: _____
from above: _____
from the side: _____

Why do you think your fish is coloured they way it is? _____
_____
Why do some anglers use dark lures after sunset? _____
_____

Scales. Lightly run your fingernails over your fish from head to tail. Now do it from tail to head. How is it different? _____
Look closely at your fish as you bend it from side to side. What happens? What two things do scales do for a fish? _____
Now rub your fingers together. What do they feel like? _____
Like scales, this slippery **mucus** helps the fish. How might it help? _____
_____ How would careful handling help fish that you are releasing? _____

Gills. Fish 'breathe' by taking oxygen out of the water with their gills. Look closely at your fish, and figure out how the water must move over the gills. Show water movement on the diagram below. Open the gill cover and look carefully at the gills.



Would it be easy or hard to damage them? _____ How would you **not** hold a fish you wanted to return to the water? _____
_____ Why? _____

RESOURCE SHEET 3 Up Close and Personal
(Leader's)

Fish live in water. Before you say, "Duh!", think about what it would mean to live in water all of the time. Could you walk? Run? How would you eat? Listen to music? Dance? Fish have figured out how to live in water. In fact, fish are so good at it that they are found almost anywhere there is water. And they have been there more than 100 times as long as we've been around on land. How do they do it? By answering that question, you will find out more about fish. And the more you know, the easier it will be to find, catch and successfully release them.

General shape. Take a good look at the shape of your fish. Without worrying about details like fin shape, draw the general outline of your fish when you look at it from the side, from the top and from the front: ***Answers will vary, e.g.:***

Side view

Top view

Front view

What else can you think of that is shaped something like your fish? submarines, race cars, airplanes, boat hulls or bottoms, whales, missles, bombs

Why are all these things shaped the way they are? to slip easily through air or water

Hint: Think about running through chest-deep water. What is a better way of moving through it, and why?

Not all fish shapes are exactly the same. If other groups have different fish, look at their shape for a minute. Are they fat, thin, rounded, eye-shaped? These shapes can tell you something about how fish move, and even where you might find them. Get a copy of *Resource Sheet 4* and look at your fish again. Which general shape does your fish resemble? _____ What kind of movement is it good at? _____ Where might you find it? _____

Fins. *Using Resource Sheet 1*, identify all of the fins on your fish. Pull them out and look at them with a large pin or dissecting needle. Be CAREFUL! If your fish has spines they may be sharp. Why might a fish have sharp spines? to threaten other fish; to keep from being eaten (spines can lock in place and make fish difficult to swallow)

If you don't have a perch, compare your fish's fins to the drawing. Are there any differences in shape, size or location? _____
Think about live fish you have seen, or even fish in movies/TV, and write down how you think they use each fin:

dorsal: helps fish stay upright; protection (if spiny)
caudal: helps fish move forward
pectoral: helps fish to steer and slow down
pelvic: helps with balance, some steering and to slow down
anal: helps fish stay upright; protection (if spiny)

As soon as possible, find a live fish and try to check your answers.

Eyes. The size and location of eyes can tell you something about how and when to fish for that fish. Look at the size of the eye in relation to the size of the fish. Fish with relatively large eyes can see well at twilight, or in deeper or murkier water. Does your fish have large eyes? _____ Would it be more or less active near shore during the day? larger eyes, less active

Look at your fish both head-on and from the top. Draw where the eyes are:

head-on **top-view**

Compare the placement of the eyes with other kinds of fish if you can. Are the eyes of your fish more to the middle of the side or more to the top of the side? _____
Looking down on the fish, can you see some of the eye, or just the eye covering? _____ _____ Looking head-on, can you see some of the eye, or just the eye covering? _____ Can your fish see well to the front? _____ to the side? _____ to the top? _____ Where is the best place to put bait or a lure for it to be seen by this fish? _____ _____

Colour. Become a predator, and describe the colour of your fish

from below: generally lighter
from above: generally darker; colour will vary; may have bands or spots
from the side: top half darker than bottom half

What kind of background would you see the fish against

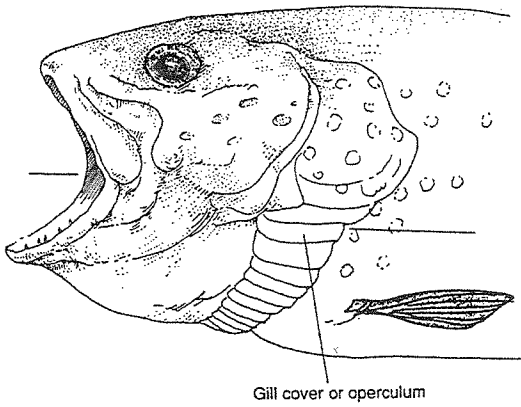
from below: **light sky through surface**
from above: **darker bottom, perhaps with plants or rocks**
from the side: **lighter towards the surface, darker towards the bottom; sun and shadow will lighten top half and darken bottom half**

Why do you think your fish is coloured they way it is? **camouflage**

Why do some anglers use dark lures after sunset? **to increase the difference (contrast) be-tween the lure and the darker sky**

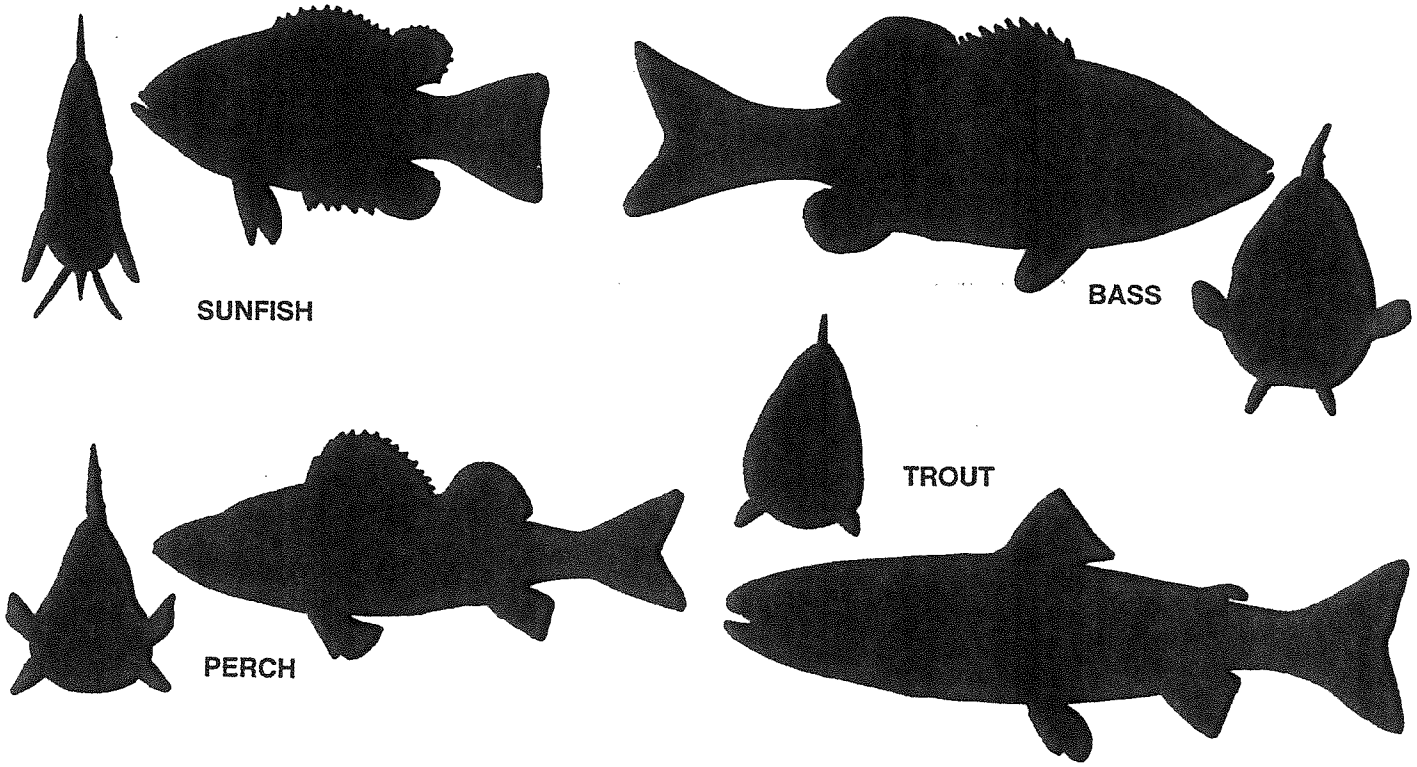
Scales. Lightly run your fingernails over your fish from head to tail. Now do it from tail to head. How is it different? **feels rougher going tail to head - catches scale openings** Look closely at your fish as you bend it from side to side. What happens? What two things do scales do for a fish? **scales move and open slightly, allowing fish to flex; scales help protect fish, while allowing movement and flexibility**
Now rub your fingers together. What do they feel like? **slippery**
Like scales, this slippery **mucus** helps the fish. How does it help? **hard to hold on to; protection against bacteria and dirt among scales** How would careful handling help fish that you are releasing? **keeps scales and mucus in place**

Gills. Fish 'breathe' by taking oxygen out of the water with their gills. Look closely at your fish, and figure out how the water must move over the gills. Show water movement on the diagram below. Open the gill cover and look carefully at the gills.



Would it be easy or hard to damage them? **easy** How would you **not** hold a fish you wanted to return to the water? **hooking fingers under gill cover** Why? **would easily damage gills**

RESOURCE SHEET 4 Shape Relationships



FISH	HABITAT	BODY SHAPE Side; head on	MOVEMENT	COMMENT
Sunfish type	weedy or rocky shallows	rounded; thin	quick turns in rocks & weeds	rounded shape and spiny fins make it hard to swallow
Bass type	weedy or rocky; fairly shallow	fairly robust but not as rounded as sunfish; narrow oval	some quick turns, some short, straignt bursts	has compromise shape
Perch type	some open water, some weedy	somewhat elongated; oval	some open water swimming, some turns among weeds	compromise, but more open water than bass
Trout type	open lakes or fast-flowing streams	streamlined/ elongated; oval	prolonged/high-speed swimming, often against current	muscular body designed for open-water swimming

LEADER RESOURCE INFO UP CLOSE....

Fishes live in water. This rather obvious statement underlies a wide range of adaptations that fishes have in order to live in aquatic habitats. The following adaptations can be explored.

General shape: Water is hard to push through. Just think of trying to run through chest-deep water. As a result, most fishes orient themselves head-on to their normal direction of movement, much as we must to swim. They are also more or less streamlined to reduce drag and slice through the water. Faster fishes are sleeker and more streamlined than slower ones.

Fins: One advantage of water is that you can push against it to move or orient yourself. As a result, practically all animals that move through water have webbing or at least projections between fingers and/or toes to make that pushing more efficient. Compare the ease of swimming with and without fins. Fish fins represent an extreme in this type of adaptation, and fishes use their fins for little else. Note how the smaller fins used to turn and orient fishes can fold against the body, reducing drag during fast swimming.

Fins are thin membranes supported by a framework of either hard bony projections called spines, or soft, flexible bones called rays. Fins have three main functions – locomotion, stability or balance, and steering.

The **caudal** fin, or tail, helps to propel fishes forward by flipping from side to side. Fishes without caudal fins, however, move through the water by moving their bodies from side to side in S-shaped curves. The pressure of their bodies against the dense medium of water results in propulsion.

The **dorsal** (back) fin and **anal** (bottom) fin help fishes to stay in an upright position. The spiny dorsal fin found in some species may also serve as protection against predators. ***Note:*** Dorsal fins on some fish are not like perch (see the key, Acitivity 1.2); the small fin near the tail on the backs of salmon and trout (adipose fin) is *not* part of the dorsal.

The **pectoral** fins at the sides of fishes' bodies help them steer. They allow fishes to go up, down, left or right, or to slow down.

The **pelvic** fins on the underside of fishes' bodies help with balance, and may be used to hold them in one place. Some fishes have other fins, such as the **adipose** fin, which is small and composed of fatty tissue without bones or rays.

Eyes: One reason we have eyelids is to blink them and keep our eyes wet. Fishes have no need to blink, and have no lids. The size of the eye will vary, depending on the fish's behaviour. Fishes that are particularly active at twilight, in deeper water or in

turbid water will have larger eyes than other fishes. The walleye and rock bass are good examples of such fishes.

Gills: Fishes must breathe air, or oxygen, but they must get it from air that has been dissolved in the water (a few fishes, our carp among them, can get some of their oxygen from the air under extreme circumstances). Not much air can dissolve in water (there is 26 times as much oxygen in air than in well-oxygenated" water), so gills are much better at extracting it from water (they take out about 80%) than lungs are in extracting it from air (25%). Students should understand that the water enters the mouth and then moves over the gills before exiting through the slit at the rear edge of the gill cover. The water is *not* swallowed.

Swim or Air bladder: Most fishes (bottom-dwellers excepted) must have some means of remaining neutrally buoyant, so that they don't have to use up energy trying to keep from either floating up or sinking down. Many fishes use a swim or air bladder to do this, slowly adding or removing air as they rise or fall, in order to compensate for pressure changes. Students can see if it's easier to float or sink with their lungs full of air, or more or less empty. Scuba divers use buoyancy compensators (fancy life jackets) to do the same job as these bladders.

Scales: The epidermis (skin) of fishes, as on all animals, is a thin layer that is a defense from disease and other potentially hazardous elements in the environment. Embedded in the skin of most fishes are hard bony scales, overlapping from the head towards the tail, which help minimize friction in water and provide a protective covering. These scales help protect fish from small predators and from injuries caused by rocks and obstacles. Scales are translucent and allow the natural skin colour of fishes to be seen. They continue to grow throughout the life of fishes and are replaced when lost through injury.

Scales represent a basic compromise between speed and protection. By sliding over one another, scales allow fish to remain flexible enough to turn and wriggle through the water. Fish with larger scales, however, give up some flexibility, and therefore speed, to gain added protection. Larger scales also create more friction between the fish and the water, and the fish must use more energy to move.

Mucus glands are located throughout the skin cells. These secrete a slippery substance that lubricates and heals the skin, as well as helping to protect fishes against infestation from parasites. It is this slipperiness that makes fishes so hard to hold, thus helping many fishes escape from predators and enabling them to slip through the water with minimal effort.

Members can observe live fishes to note the positioning and arrangement of scales. They may use a preserved fish to examine more closely the scale arrangement and distinct surface features.

Who's Who?

Purpose: *To introduce and sharpen fish identification skills through use of a fish key.*

Outcomes: *Members will become familiar with fish identification traits and keys, be able to identify common Ontario fish families using a key, and link identification to fish behaviours and angling techniques.*

Concepts: *6.2, 6.3, 6.6*

Group Size: *5-30*

Site: *Outdoors (shaded area) or Indoors (meeting room)*

Time: *30 minutes*

Supplies: *Pictorial Key to Some Common Ontario Fish Families (page 27); Common Ontario Fish Cards (pages 29 - 36); Resource Sheet 1 from "Up Close and Personal"; Take A Kid Fishing Guides (one per member); Fish of Ontario Poster; Common Ontario Warmwater and Coldwater Sportfish cards; whole fish or a mount (optional); fishing licence and/or MNR permit[1] (needed for whole fish demonstrations)*

Before the Meeting: *Copy enough of the pictorial key and the fish cards without the information on the back to give a set to each small group. (Note: The common name, family, key traits, habitats, and fishing tips are on the back of the master sheet for your information at this point; make up a set/group with the information if you plan to play Fish Jeopardy – see OTHER IDEAS.)*

A QUICK LOOK:

In this activity, you will review identifying traits (external) of fish with the group, using Resource Sheet 1 from "Up Close and Personal". If desired, use a whole fish or a mount to help review these traits. Next, you will demonstrate how to use the pictorial key. Everyone will then use the key to identify fish commonly found in the area using the Common Ontario Fish Cards.

Leader's Note: This key is an *artificial* key, which means it was designed only for the families that are found in it. This makes it simpler than most keys, and easier to use for beginners. However, if you try to key out fish that aren't in these families you will end

[1] You can obtain a free "Licence to Collect Fish for Scientific Purposes" from your MNR District or Area Office. Discuss with staff biologists the best types of local fish to capture, and methods for capturing them.

up on the wrong track. For example, white bass ends up with the perches using this key.

READY, SET, GO!:

Ask the question, "Why do we need to know the names of the fish we catch, anyway?" (this could be played up a bit if you wish to take on the role of devil's advocate). List and discuss all answers the members come up with. Some key reasons:

- Different kinds of fish have different seasons and limits. Knowing your catch may keep you from unknowingly breaking the law.
- Knowing your catch will help you determine whether it is safe to eat.
- Different fish are found in different places. If you know what fish are in an area, you can focus on the places they are most often found.
- Different fish react differently to bait or lures. If you know what fish are in an area, you can present the bait or lure in ways that give you a better chance of success.
- It is just part of the fun to be able to name your catch.
- It makes it easier to talk (or brag) to other anglers about fishing.
- It's a lot easier to answer the question, "What'd you catch?"

Indicate that certain traits, or characteristics, are used to help identify fish. Refer to Resource Sheet 1 from "Up Close and Personal". Using a whole fish or a mount, show the different fish traits and explain each of their functions:

- overall shape of fish (pan, torpedo, flat)
- location and shape of mouth
- presence or absence of scales, barbels, and adipose fins
- differences between and counts of fin rays and spines
- shape of tail fin
- location and shape of pelvic and anal fins
- length, structure, and shape of dorsal fin
- features unique to certain fish
- lateral line location
- location of gill cover
- colour (may fade or change once fish is dead)

Show how to use the pictorial key using a mount, whole fish, or picture. Explain that keys help unlock the identify of plants and animals by giving you choices, based upon traits. Each time you make a choice, you move one step closer to learning its identity. (Traits in the pictorial fish key are based upon the characteristics you just reviewed.) Work step by step to reach the correct family identification--you might want to practice this ahead of time.

Break everyone into groups of four or five. Give each participant a pictorial key and a fish card. (Select cards which highlight the species most likely to be caught during the fishing time.) They will try to identify the fish on the cards using the pictorial key. Move from group to group helping participants locate fins, determine tail shapes, etc. Groups will probably make a few wrong choices at first. That's okay--just help them get back on the right stream.

By now you've probably noticed that fish in the same family (i.e., northern pike and muskie) will often have similar traits, just like members of a human family. Use your fish cards to reinforce these fish family similarities and differences. This is a good time to explain how these traits relate to the habitat where they live and how they act.

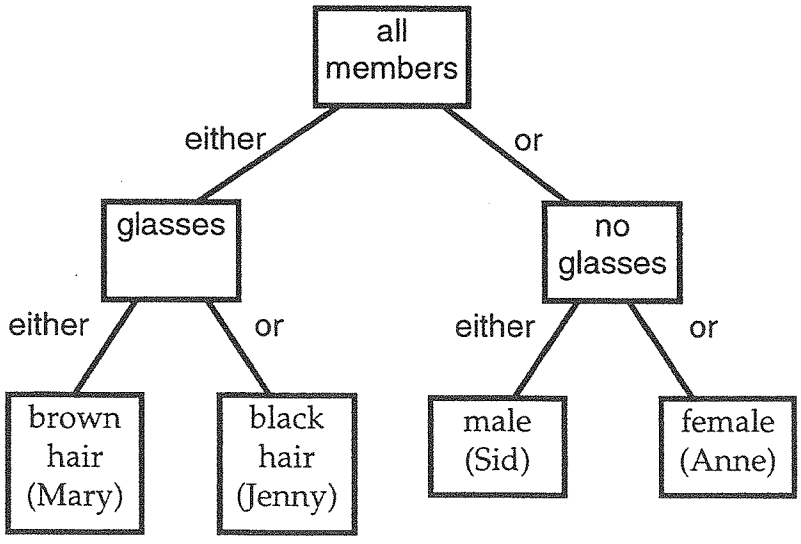
Continue working until group members fully understand how keys work, and can describe the key identifying traits of fish. Let the groups try to identify as many of the fish cards as they can in the time available.

Once they are good at using the key, display the *Fish of Ontario* poster. Emphasize that, while fish can be identified from the poster, using the key first helped them understand family and group relationships and features, and what to concentrate on when they are identifying a fish. Often, they can then place a fish in a group, e.g. sunfish, even if that particular fish is not on a chart or in a guide. Pass out both *Sportfish* cards as aids for them to use whenever they are fishing.

OTHER IDEAS:

- The key provided is good only to the level of families. Older members can create additional keys that will take each family down to individual species.
- If the group finds doing the key difficult, try having the group make their own key by using the traits of the kids themselves. For example, boys/girls, glasses/no glasses, blonde/red/brown hair, etc. This could also be done with shoes, coats, etc. Try to use characteristics that divide each group and resulting sub-groups roughly in half, until you get down to individuals.

For example:



- Create groups of 5-6 and hand out sets of cards with the information on the back. Indicate that at the beginning of the next meeting, they will play a "Fish Jeopardy" game, using questions made up from the information on the cards. Categories will be by fish groups (sunfish, perch/walleye, catfish, trout, and salmon), so they might want to have "experts" on these fish in their groups. You will identify a group by holding up a picture of a fish in it. Teams can then "Buzz in" and identify the fish. If they are right, they get to answer (in the form of a question) statements based on card information from that group, e.g.: "how to catch bluegill" --> "What is still-fishing with a worm?"? "where to catch largemouth bass" --> "What are weedy lakes?" Assign points based on correct identification and proper questions. Subtract points for mistakes. Provide a suitable reward to the winners.

PICTORIAL KEY TO SOME COMMON ONTARIO FISH FAMILIES

START

JAW PAIRED FINS

ADIPOSE FIN

No

Yes

DORSAL FIN (POSITION & PARTS)

Two Parts (spiney and soft rays)

One Part (soft rays maybe a spine)

DORSAL FIN SHAPE

Front and Back Dorsal Fins Mostly About the Same Length; If Back Fin Longer, Then also Higher

Back Dorsal Fin Longer and Lower than Front Dorsal Fin

DRUMS (*Sclaenidae*)
Freshwater Drum

DORSAL FIN SPINE

Yes

Sawtoothed Spine

No

CARP & GOLDFISHES (*Cyprinidae*-in part)
Common Carp

CATFISHES (*Ictaluridae*)
Black Bullhead
Channel Catfish

Yes

No Scales

BARBELS

No

Axillary Process
Small Scales

TROUT & SALMON (*Salmonidae*)
Lake Trout
Lake Whitefish
Brook Trout
Rainbow Trout
Brown Trout
Chinook Salmon
Coho Salmon

DORSAL FIN CONNECTION

Slightly or Not Connected

PERCHES (*Percidae*)
Yellow Perch
Walleye

Well Connected

SUNFISHES (*Centrarchidae*)
Pumpkinseed
White Crappie
Black Crappie
Bluegill
Smallmouth Bass
Largemouth Bass
Rock Bass

MOUTH POSITION

Down

SUCKERS (*Catastomidae*-in part)
White Sucker

Forward

DORSAL FIN PLACEMENT

On Rear Third of Body

PIKES (*Esocidae*)
Northern Pike
Muskie

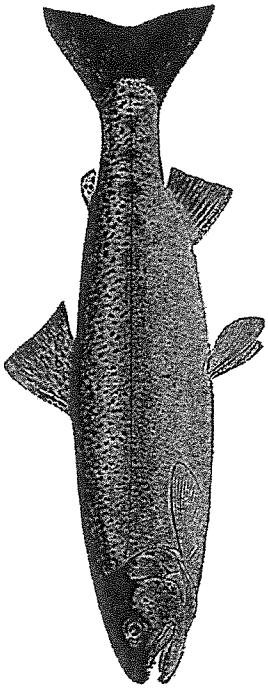
On Forward 2/3's of Body

MINNOWS (*Cyprinidae*-in part)
Fathead Minnow
Golden Shiner

NOTES:

Common Ontario Fish Cards

D



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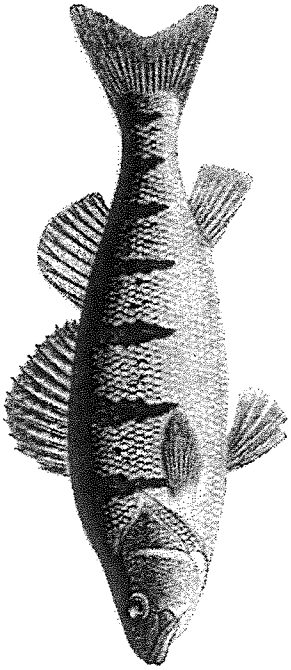

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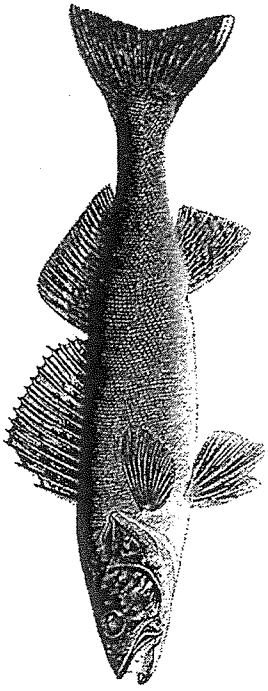

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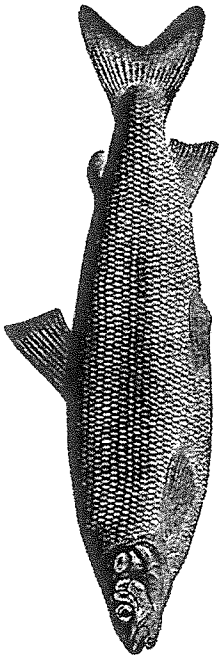

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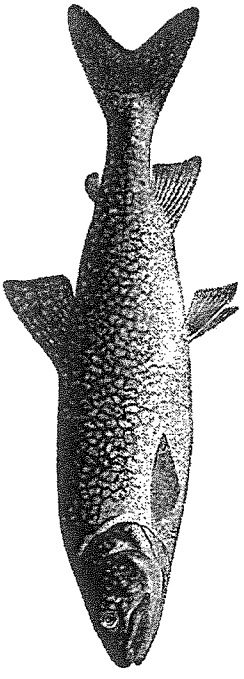

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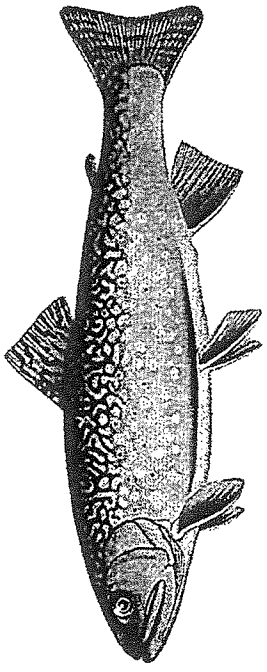

D. RAINBOW TROUT (introduced)
Family: Trout and Salmon
Shape: Stubby torpedo
Mouth: Medium and forward
Fins: Adipose fin; Dorsal even with pelvic; Slightly forked tail
Scales: Small
Colour: Bluish/olive above with silvery sides and pink lateral stripe
Habitat: Cool, clear lakes and streams below a line running roughly northwest to southeast near the north shores of the Great Lakes (oligo/mesotrophic)
Habits: Hardiest of the trout; Sight feeder; Very active during insect hatches
Food: Small fish, insects, fish eggs, and worms
Tackle: 4-8 lb. line; Flies, spinners, or live bait slightly off the bottom in rivers; crankbaits & spoons in lakes

E. YELLOW PERCH
Family: Perch
Shape: Stocky torpedo
Mouth: Small and forward
Fins: Two part dorsal with spines; Dorsal even with pectorals; Forked tail; Anal spines 2
Scales: Medium
Colour: Pale yellow to bright orange; 6-7 vertical bars on side
Habitat: Rocky, vegetated, fairly deep lakes and rivers across Ontario expect for Hudson and James Bay Lowlands (oligotrophic to large mesotrophic)
Habits: Swim in large schools
Food: Small fish, zooplankton, insects, snails, leeches, and crayfish
Tackle: 4-6 lb. line; Jig/fly/live bait in open water

F. WALLEYE
Family: Perch
Shape: Torpedo
Mouth: Medium and forward with teeth
Fins: Two part dorsal; Dorsal even with pectorals; Forked tail; Anal spines 2
Scales: Medium
Colour: Dark olive brown to black; Black spot at rear base of dorsal; White margin on lower part of tail
Habitat: Rocky/vegetated lakes and open/deep pools in streams across Ontario (mesotrophic)
Habits: Migrate up streams to spawn; Feed at night; Loose schools
Food: Yellow perch, small fish, insects, snails, leeches, and crayfish
Tackle: 6-10 lb. line; Spoons, crankbaits, jigs, and live bait fished on or near bottom; Evening/dusk/dawn best

A. LAKE WHITEFISH
Family: Trout and Salmon
Shape: Deep-bodied torpedo
Mouth: Small and forward; Snout overhangs lower jaw
Fins: Adipose fin; Dorsal even with pelvic; Forked tail
Scales: Small
Colour: Iridescent sides with dark olive brown back
Habitat: Cool, deep, clear lakes across Ontario (oligotrophic)
Habits: Sight feeder; Very active during mayfly hatch; Winter at bottom; Spring at surface
Food: Snails, clams, mayfly, and caddisfly
Tackle: 4-8 lb. line; Flies, small spinners, and jigs best during hatch

B. LAKE TROUT
Family: Trout and Salmon
Shape: Deep-bodied torpedo
Mouth: Medium and forward
Fins: Adipose; Dorsal even with pelvic; Deeply forked tail
Scales: Small
Colour: Grey, green or olive background with white spots extend into the dorsal
Habitat: Cold, deep, clear lakes with rock and bolder shores across Ontario, except for Hudson and James Bay lowlands (oligotrophic)
Habits: Spring/fall shallows; Rest of time deep water; Range over a 30 mile area
Food: Small fish, insects, and freshwater shrimp
Tackle: 4-8 lb. line; Spoons/spinners on downrigger or at river mouth; Sunset or stirred-up water best

C. BROOK TROUT
Family: Trout and Salmon
Shape: Stubby torpedo
Mouth: Medium and forward
Fins: Adipose; Dorsal even with pelvic; Square tail
Scales: Minute
Colour: Dark green to silver with red spots; Back with worm-like pattern; Anal and tail with white margins
Habitat: Cold, clear, spring-fed streams and brooks across all but far northwest Ontario (oligotrophic)
Habits: Wary; Often wait below watercress feeding on items swept downstream
Food: Small fish, insects, and worms
Tackle: 4-6 lb. line; Spinners or flies at dusk; Worms off the bottom

Common Ontario Fish Cards

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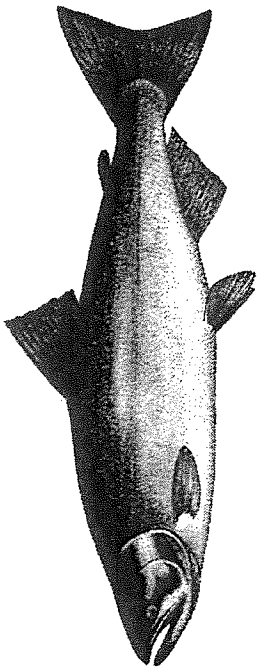

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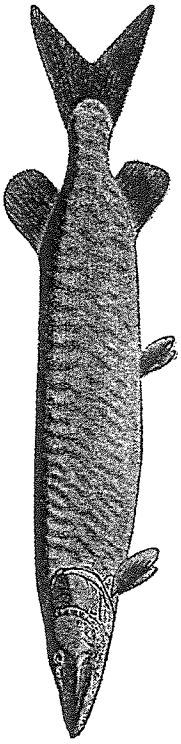

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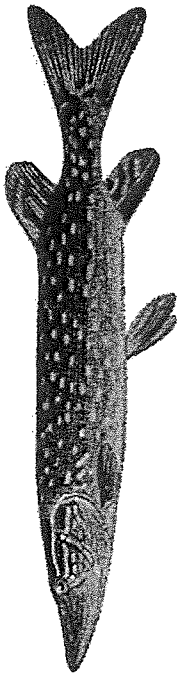

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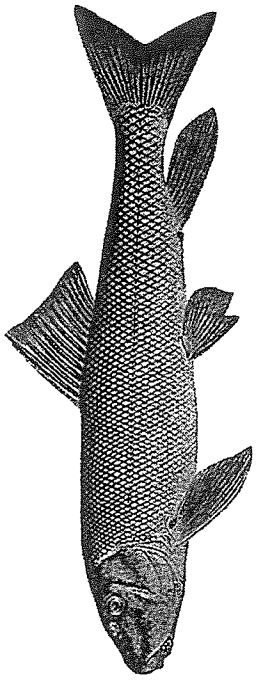

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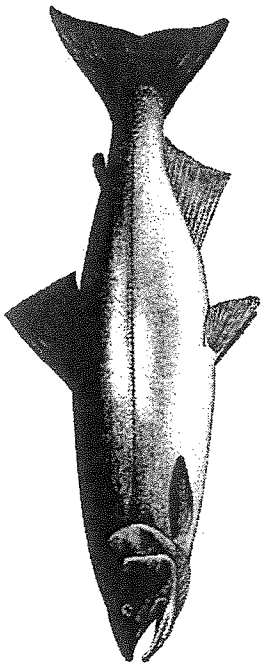

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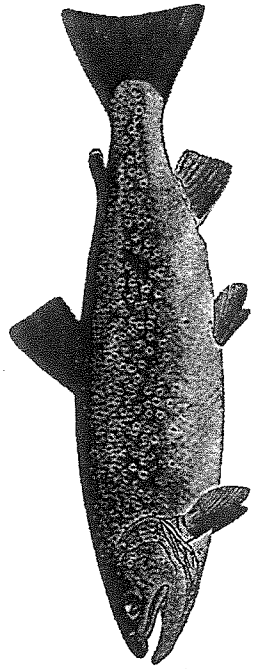

J. CHINOOK SALMON (introduced)
Family: Trout and Salmon
Shape: Deep-bodied torpedo
Mouth: Medium and Forward
Fins: Adipose; Dorsal even with pelvic; very shallowly forked tail
Scales: Small
Colour: Back, head & upper sides green to blue-green with black spots; Lower sides silvery; all fins with at least a few black spots
Habitat: Great Lakes in deep water
Habits: Open water near thermocline; near river mouths and up rivers in fall
Food: Alewife, cisco, smelt
Tackle: 6-12 lb. line; spoons or crankbaits downrigged near thermocline in Spring or Summer; roe, spinners in rivers late Summer/Fall

K. MUSKIE
Family: Pikes
Shape: Long torpedo
Mouth: Duckbilled with lots of canine teeth; 6-9 pores on bottom side of each lower jaw
Fins: One part dorsal; Dorsal even with anal; Forked tail
Scales: Normal
Colour: Silvery to greenish or brown; Markings variable but when present dark bars or spots on a light background
Habitat: Clear vegetated lakes and large rivers in south, central, eastern, near northeastern and Lake of the Woods to Lac Seul areas (large oligotrophic to mesotrophic)
Habits: Sedentary "lone wolf"; Ambush feeder
Food: Small to medium fish
Tackle: 10-12 lb. line with wire leader; Fast retrieve of heavy active crank-, spinner- or jerkbaits/spoons or foot-long white suckers in fall; slow retrieve jigs with big twister tails

L. NORTHERN PIKE
Family: Pikes
Shape: Long torpedo
Mouth: Duckbilled with lots of canine teeth; 5 pores on bottom of each side of lower jaw
Fins: One part dorsal; Dorsal even with anal; Tail forked
Scales: Normal
Colour: Greenish above and white below; Light spots on a dark background
Habitat: Vegetated quiet or slow-moving lakes, rivers, and streams across Ontario (oligotrophic to large mesotrophic)
Habits: Sedentary "lone wolf"; Ambush feeder
Food: Small and medium fish
Tackle: 8-10 lb. line/wire leader; Spoons, crank-, spinner- or jerkbaits, jigs, minnows, and foot-long white suckers in spring or fall

G. WHITE SUCKER
Family: Suckers
Shape: Slender, cylindrical
Mouth: Downward, sucker shape on blunt snout
Fins: One part stubby dorsal even with pelvic; No spine
Scales: Front of body small; Back of body large
Colour: Black with rosy band other times grayish white; Variable during spawning
Habitat: Clear lakes and small rivers across Ontario (oligotrophic to large mesotrophic)
Habits: Bottom schooling
Food: Bottom insects, plants, algae, and crustaceans
Tackle: 6-8 lb. line; Worm fished off bottom of pools and riffles during spawn

H. COHO SALMON (introduced)
Family: Trout and Salmon
Shape: Deep-bodied torpedo
Mouth: Medium and forward
Fins: Adipose; Dorsal even with pelvic; slightly indented tail
Scales: Small
Colour: Steel-blue to green on head and back, silver sides; small black spots above lateral line, base of dorsal fin, and upper lobe of caudal fin
Habitat: Great Lakes in deep water
Habits: Open water near thermocline; near river mouths and up rivers in fall
Food: Alewife, cisco, smelt
Tackle: 6-12 lb. line; spoons or crankbaits downrigged near thermocline in Spring or Summer; roe, spinners in rivers late Summer/Fall

I. BROWN TROUT (introduced)
Family: Trout and Salmon
Shape: Stubby torpedo
Mouth: Medium and forward
Fins: Adipose; Dorsal even with pelvic; Square tail
Scales: Small
Colour: Brown back & silver sides, with haloed black spots on back, sides and head; pink to rusty red spots on sides; black spots on adipose & dorsal fins; vague caudal spots
Habitat: Cool, deep lakes and streams in southern and eastern Ontario (oligotrophic to mesotrophic)
Habits: less sensitive to pollution and siltation than brook trout
Food: Insects, crayfish, molluscs, frogs, small fish
Tackle: 4-8 lb. line; Flies, spinners or live bait slightly off the bottom in creeks; spoons and long, thin crankbaits in lakes

Common Ontario Fish Cards

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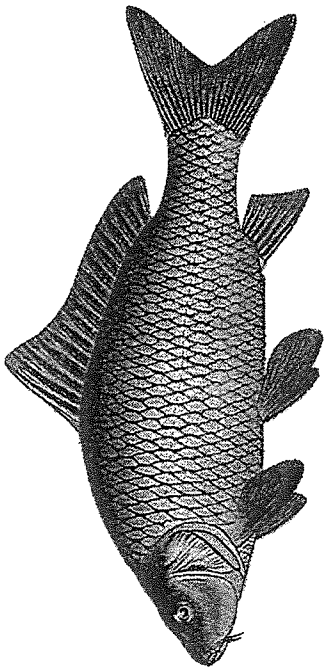

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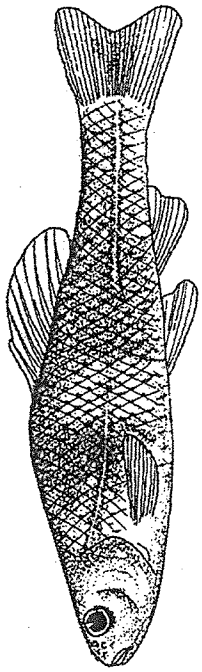

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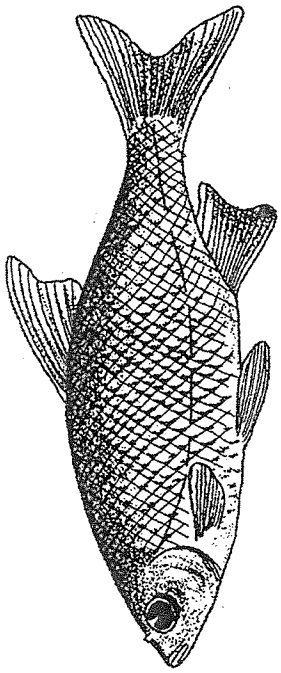

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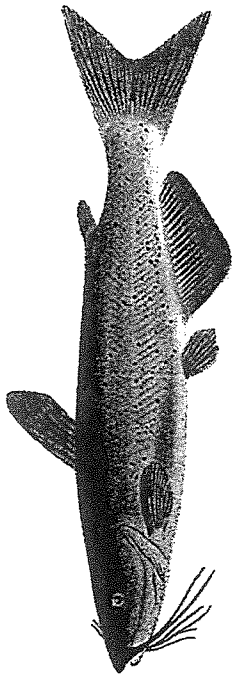

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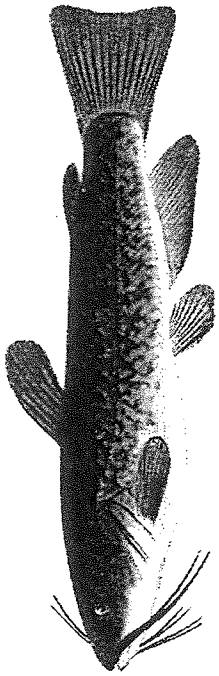

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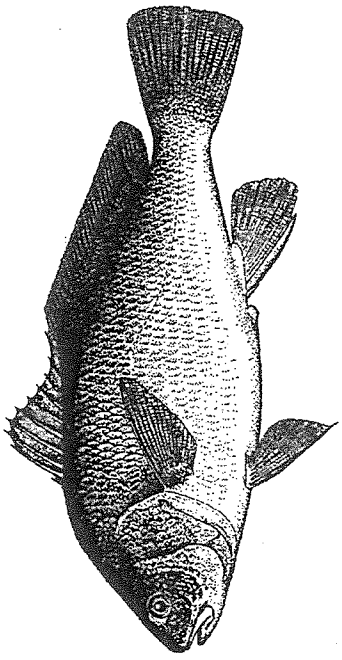


P. COMMON CARP (introduced)
Family: Minnow
Shape: Chubby football
Mouth: Sucker like with a barbell at each side
Fins: Dorsal and anal with a saw-toothed spine; Dorsal sickle shaped and even with pelvic
Scales: Large
Colour: Brassy to olive back with gold sides
Habitat: Warm, shallow, mud-bottom lakes, streams, and rivers in southern and central Ontario; spreading north (eutrophic)
Habits: Very adaptable to wide range of conditions
Food: Insects, crayfish, plant roots/shoots, and seeds
Tackle: 6-10 lb. line; Canned corn, worms, doughballs fished off bottom

Q. FATHEAD MINNOW
Family: Minnow
Shape: Chubby slab-sided football
Mouth: Small and forward on a blunt rounded snout
Fins: One part dorsal even with pelvic; Dorsal with black bar across middle; Tail forked with dark spot at base
Scales: Crowded anteriorly
Colour: Normally drab brown or yellowish-olive; Male during breeding black with two vertical bars and back and snout with bumps
Habitat: Silty ponds, ditches, and shallow lakes across Ontario (eutrophic)
Habits: Survive low oxygen levels; School in mid-water or near bottom
Food: Algae, plankton, worms, and insects (mosquitoes)
Tackle: Seine or minnow trap; Used as bait for other fish

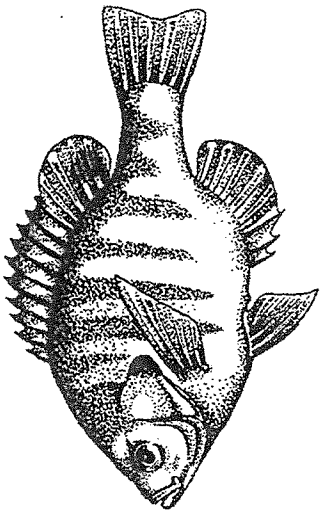
R. GOLDEN SHINER
Family: Minnow
Shape: Deep-bodied, compressed; Belly behind pelvic fins keeled
Mouth: Small upturned
Fins: One part dorsal even with pelvic
Scales: Normal with none along keel; Lateral line strongly curved downward
Colour: Greenish-gold tinge that fades rapidly
Habitat: Vegetated quiet water lakes, ponds, and sloughs in southern, central, eastern, and near northeastern Ontario, as well as below a rough northwest to southeast line touching the top of Lake Superior (small mesotrophic to eutrophic)
Habits: Tolerant of low oxygen and nutrient enrichment; Loose aggregated schools
Food: Plants, snails, and terrestrial insects
Tackle: 4-6 lb. line; Dry flies; Seine or minnow bucket; Used mainly as bait fish

M. CHANNEL CATFISH
Family: Catfish
Shape: Slender light bulb
Mouth: Wide and flat with bristle teeth; Barbels present; Lower jaw protrudes beyond upper
Fins: Adipose fin; Forked tail with slender base; Spines in dorsal and pectorals; Anal rounded
Scales: None
Colour: Blue-gray with scattered black spots on back and sides (large fish often loose spots)
Habitat: Clear, swift, rocky riffles/deep pools streams of south, central and eastern Ontario, as well as the Lake of the Woods area (eutrophic)
Habits: Locates food by taste/smell
Food: Small fish, insects, crayfish, snails, and clams
Tackle: 8-10 lb. line; Fish riffles/shallows off bottom at night with "stink baits", crayfish, worms, or minnows; Fish pools or cover during the day or after a rain

N. BROWN BULLHEAD
Family: Catfish
Shape: Short and heavy
Mouth: Wide on a short broad head; Bristle teeth; Dark brown to black barbels
Fins: Adipose fin; Dorsal and pectoral fins with spines; Squarish tail with rounded tips
Scales: None
Colour: Yellowish brown to black with yellow to white belly
Habitat: Clear, shallow, vegetated, mud/sand/gravel/rock bottom lakes and slow streams in southern, central and eastern Ontario, as well as near northeast and Lake of the Woods (small mesotrophic and eutrophic)
Habits: Very hardy; Locates food by taste/smell; Indicator of better water quality
Food: Insects, crayfish, minnows, or almost anything dead or alive
Tackle: 6-8 lb. line; Still-fishing with worms; Fish on or close to the bottom

O. FRESHWATER DRUM
Family: Drum
Shape: Elongated, deep-bodied, hump-back
Mouth: Medium slightly turned down on blunt rounded snout
Fins: Separated two part dorsal; long rear dorsal; Diamond shaped tail
Scales: Rough edged; Lateral line through tail
Colour: Gray back, silver sides, and white belly
Habitat: Clear to muddy shallow lakes and rivers in Great Lakes/St. Lawrence drainage, except for Lake Superior (eutrophic areas)
Habits: Stays near bottom; Make croaking or booming sounds with swim bladder
Food: Worms, insects, minnows, crayfish, clams, and snails
Tackle: 6-12 lb. line; Fish live worm/crayfish/small minnows or artificial spinners/flies off bottom; Mid-May to late June and again mid-September to late October

Common Ontario Fish Cards



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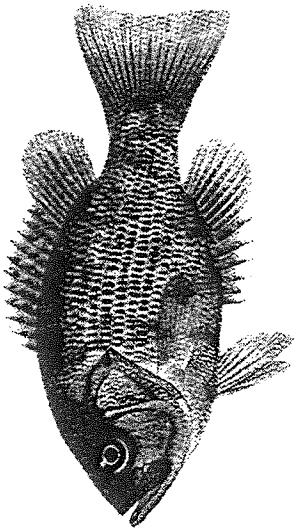

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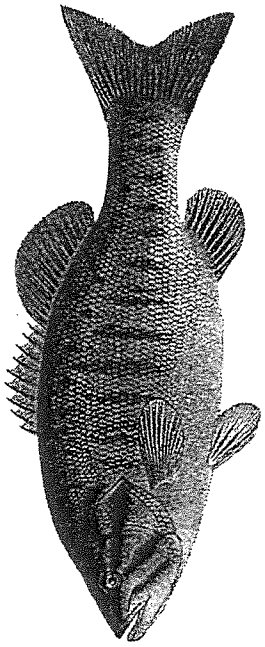

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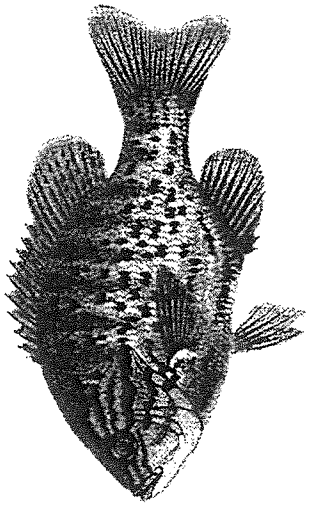

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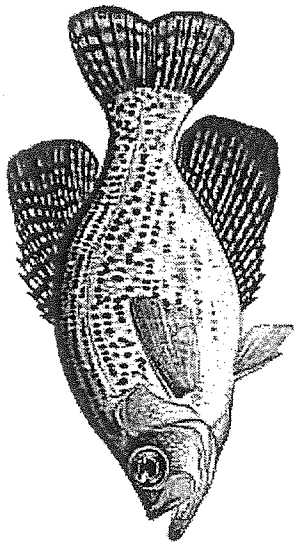

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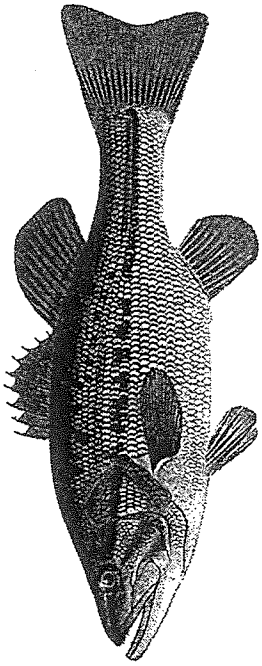

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V. BLUEGILL
Family: Sunfish
Shape: Flat, round pan
Mouth: Small "o" shape
Fins: Well-connected two part dorsal with a spot at base; Dorsal even with pectorals; Long pointed pectorals
Scales: Normal
Colour: Olive purplish tinge with orange to blue belly; Solid black gill-flap; Vertical bars on sides; Varies with sex, age, and between individuals
Habitat: Heavily vegetated, clear warm lakes/streams/rivers of southern, central and eastern Ontario, as well as the Quetico/Rainy River areas (small mesotrophic to eutrophic)
Habits: Travels in loose schools; Day in pool or shade; Dusk/dawn moves into shallows; Suck insects from the surface; Nibble on bait
Food: Small fish, insects, snails, and zooplankton
Tackle: 4-6 lb. line; Still-fishing or slow retrieve of a worm/crickets/grasshopper/small jig/fly; June best

W. ROCK BASS
Family: Sunfish
Shape: Heavy-bodied and stout
Mouth: Large, extending past middle of the eye
Fins: Well-connected two part dorsal; Dorsal even with pectoral
Scales: Normal; Each scale with a black spot
Colour: Brassy with distinct black spots; Distinct reddish eye; Change pigmentation to surroundings
Habitat: Shallow, weedy, slow-moving, soft bottom lakes and streams in southern, central, eastern and northeastern Ontario below the Lowlands, as well as below a rough northwest to southeast line touching the top of Lake Superior (mesotrophic areas)
Habits: Travels in schools; Daytime feeders; Sedentary and secretive
Food: Insects, snails, crayfish, and small fish
Tackle: 4-8 lb. line; Worms/grasshoppers/small crankbaits/spinners/flies slightly off bottom; Mid-June to -July best

X. SMALLMOUTH BASS
Family: Sunfish
Shape: Slender streamlined shoe box
Mouth: Large; Jaw extending to near front of eye
Fins: Connected two part dorsal with a deep notch
Scales: Normal
Colour: Dark green with golden-yellow/green sides with white belly; Black vertical bars; Colour intensity varies with habitat
Habitat: Moderately shallow, rocky and sandy areas of lakes and rivers across Ontario below a rough, east-west line touching the north shore of Lake Nipigon (large mesotrophic)
Habits: Ambush sight feeder; Most active morning/evening; Very territorial
Food: Small fish, bluegill, crayfish, and frogs
Tackle: 4-10 lb. line; Slow retrieve of jigs/frogs/minnows/spinner- and crankbaits/ spoons/topwater plugs

S. PUMPKINSEED
Family: Sunfish
Shape: Flat, round pan
Mouth: Small "o" shape
Fins: Well-connected two part dorsal; Dorsal even with pectorals; Long pointed pectorals
Scales: Normal with scattered orange spots
Colour: Speckled greenish with yellowish-orange belly; Blood-red edge of gill-tab; Iridescent blue radiating lines on the cheek
Habitat: Vegetated, clear, quiet waters of southern, central, eastern, and near northeastern Ontario, as well as the Lake of the Woods/Lac Seul areas (small mesotrophic to eutrophic)
Habits: Spawn with bluegill; Congregate beneath cover; Feed on surface
Food: Aquatic insects, snails, and small fish
Tackle: 4-8 lb. line; Worms, grasshoppers, small spinners around vegetation; June cast to spawning beds; July-August cast to plant bed edges

T. BLACK CRAPPIE
Family: Sunfish
Shape: Flat, deep, round pan
Mouth: Large with paper thin lips
Fins: Well-connected two part dorsal; Dorsal even with pectorals; 7-8 spines in dorsal (white has 5-6 spines)
Scales: Normal
Colour: Greenish on top; Silvery to lighter green sides with irregular mosaic of black blotches; black vermiculation on fins
Habitat: Warm to cool rivers, backwaters, mostly in south (meso-/eutrophic)
Habits: In loose aggregates around cover such as docks, fallen trees, brush
Food: Small fish and invertebrates
Tackle: 4-6 lb. line; when still-fishing keep bait slightly above fish; or slow retrieve of small minnows/worms/crankbaits/spoons/jigs; Flies only in late evening; Winter and spring fishing best

U. LARGEMOUTH BASS
Family: Sunfish
Shape: Slender streamlined shoe box
Mouth: Large; Jaw extending beyond eye
Fins: Connected two part dorsal with a deep notch
Scales: Normal
Colour: Dark green with silvery-yellow/green sides with white belly; Black lateral stripe; Varies with habitat
Habitat: Clear to turbid, weedy, quiet, sand/mud bottom lakes and streams in southern, central and eastern Ontario, as well as below a rough northwest to southeast line running between Superior and Lake Nipigon (small mesotrophic to eutrophic)
Habits: Ambush sight feeder; Most active morning/evening; Very territorial
Food: Small fish, bluegill, crayfish, and frogs
Tackle: 6-10 lb. line; Slow retrieve of plastic worms & jigs/frogs/ minnows/spinner- and crankbaits/spoons/topwater plugs in vegetation

Rules 'n Regs

Purpose: *To introduce the Ontario Recreational Fishing Regulations Summary, and have members leave the activity comfortable with its use.*

Outcomes: *Members should understand the value and benefits of fishing regulations, the link between accurate fish identification and regulation, and the difference between rules and ethics.*

Concepts: *4.5, 6.1, 6.3*

Group size: *6 to 30*

Site: *Outdoors (picnic tables or grassy area) or indoors (class- or meeting room)*

Time: *45 minutes*

Supplies: *Ontario Recreational Fishing Regulations Summary (1 each or per small group)*

Options: *Resource Sheet 1, Some Ontario Fishing Rules*
Resource Sheet 2, Using Your Ontario Recreational Fishing Summary
Resource Sheet 3, Scavenger Hunt

A QUICK LOOK:

This activity focuses on the practical "how to's" of the *Ontario Recreational Fishing Summary.* Skill in it's use is as important as skill in casting. However, the intent here goes much further, introducing the value of fishing regulations and the role of ethics in fishing. While there is a focus on the *Summary,* don't lose sight of this larger picture. It might be useful to review the section on ethics found in *Welcome to Take A Kid Fishing!* at the front of this Unit.

READY, SET, GO!:

Discuss rules in general, and why we have them. List examples of rules that members follow, and why they think each rule is a good idea. Refer back to the "rules" everyone followed during the first two activities, particularly ones that 'protected' living fish.

Ask if anyone knows any *fishing* rules - things you must or must *not* do when fishing. Accept and list all answers, e.g. only fish at certain times; only catch so many fish; only catch bigger (or smaller) fish; must have a licence.

Depending on the ability levels of your group, choose one of the following options:

a) Hand out Resource Sheet 1 to the group, pointing out the rules for fishing in Ontario. (The rules on this sheet have been taken from the *Ontario Recreational Fishing Regulations Summary, 2000*)

b) Create groups of three to five, and hand out a copy or copies of the *Summary* to each group. Give each group one rule-related question from the *Scavenger Hunt* and have them find and post the answer. When they are done, have them find other examples of fishing rules from the front of the summary.

Compare the rules from the Resource Sheet or the *Summary* with the group's initial list, and try to think of reasons why these rules exist, e.g.:

- **Closed seasons**: to protect fishes while they reproduce; to reduce overall fishing pressure.
- **Size limits**: to let fishes get big enough to reproduce in some cases; in others, to protect fish of prime spawning size.
- **Catch limits**: to leave enough fish for others to catch; to let fishes fulfill their role in the environment.

If you haven't created groups of three to five, do so now and pass out the *Summary* and Resource Sheet 2. Indicate that it is not enough to know the general rules. They need to know when they can fish and what they can keep in their area and at their specific fishing spots. The Resource Sheet will help them do this. Have each group work through the Sheet on their own, answering the questions as best they can. Work with each group individually, responding to questions they may have. Go over the Sheet as a large group to ensure that each small group got the right answers.

Emphasize the importance of knowing your catch to the proper functioning of seasons and limits. Challenge each group to come up with a season or limit for several fish, using only pictures of those fish, e.g. the fish cards from Activity 1.2. This could be done in a "game show" format, with points for first right answer and prizes for the winners.

FOR DISCUSSION:

Q: What could happen if people break the fishing rules and are caught?
A: Lose their licence, lose their fishing equipment and/or boat, pay a fine, go to prison (see under "Fishing Laws" near the front of the summary).

Q: Are there other reasons not to break the rules?
A: Basically, so there are fish for the future. This may be viewed very selfishly ("I want there to be fish for me") or very altruistically ("Fish deserve to live, too"), or even ecologically ("Fish are important to a healthy, functioning ecosystem.") The

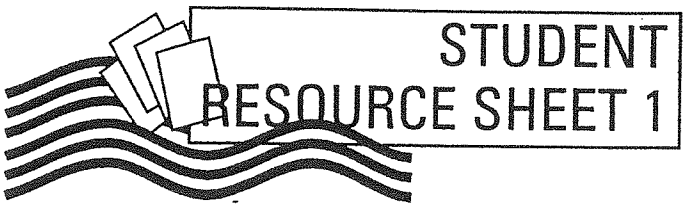
important thing here is that awareness of some other reasons begins to move people away from following rules because they *have* to, to following them because they *want* to. It can also shape their behaviour in ways that go beyond just following the rules to how they interact with fish and their aquatic environment. This changes the discussion from one of laws and legal consequences to ethics and codes of behaviour. While this will be addressed again in Lesson 5, members should be aware of behaviours and consequences in each lesson and activity.

OTHER IDEAS:

- Have each group develop a question about fishing in their area, using the Summary. Swap questions among the groups and have them answered.
- Hand out Resource Sheet 3 (Scavenger Hunt). Have each member complete it prior to the next meeting.
- Have the whole group discuss the need to set rules or a code of behaviour for themselves.

HANDOUT MASTERS:

Resource Sheet 1: Some Ontario Fishing Rules (from FW C16, *Gone Fishin')*
Resource Sheet 2: Using Your *Ontario Recreational Fishing Summary*
Resource Sheet 3: *Ontario Recreational Fishing Summary* Scavenger Hunt



Gone Fishin'

SOME ONTARIO FISHING RULES

Sport Fishing Licences

If you live in Ontario, you must have a fishing licence to fish unless you are:

- under 18 or 65 years of age and older;
- disabled;
- a status Indian fishing on your own reserve, or where treaties allow.

You **must** carry the licence when fishing.

Fish Sanctuaries

There are special places set aside, called "fish sanctuaries", where no fishing is allowed. Look for warning signs, or call your local Ministry of Natural Resources District or Area Office to see if there are any sanctuaries where you live.

Fishing Seasons

Some fishes can only be caught during part of the year. Each area of Ontario has its own seasons for each kind of fish, and one stream or lake may be different from another. A book of rules (*Ontario Sport Fishing Regulations Summary*) tells you these things.

How Many Fish?

For some fishes, you can catch and keep as many as you want. For other fishes, you can catch and keep just so many each day that you fish. The number for each fish is different in different parts of Ontario. See your book of rules.

Size Limits

For some fish species, you can only keep fish that are longer, or sometimes shorter, than the size limit. The size for each fish may be different for different parts of Ontario. See your book of rules.

Telling What You Have

Unless you are fixing fish to be eaten right away, you have to keep some of your fishes so that a Conservation Officer can tell what kind they are (leave a patch of skin on), how big they are (if there is a size limit for that species), and how many you have (put only one fish or 2 fillets in each package).

Fishing Gear

There are some limits on how you fish, and some ways of fishing are not allowed at all.

1. You can only use one line when sport fishing in open water.**
2. A fishing line must not have more than four hooks on it. In some areas, only **barbless** hooks are allowed.*
3. A fish must be hooked in the mouth, and not snagged in some other part of the body. You must let snagged fish go.
4. You cannot use spear guns.
5. Dynamite is not allowed.
6. You cannot use lights unless they are part of a fishing lure.

Bait Fish

There are some limits on how you use bait fish:

1. Anyone with a fishing licence can catch bait fish for their own use. There are some limits on how many (no more than 120 fish in the summer or 18 kg in the winter) and the size of the nets or traps used to catch them.
2. Bait fish can **only** be let go into the lake or stream where they were caught.
3. Bait fish (and other types of live or dead bait) cannot be used in some places.

Other means of fishing

In **some** places and at **some** times, you can catch certain kinds of fishes using dip-nets, seines, bow and arrow, or spears. See your book of rules.

* A treble hook is considered one hook if part of a lure, but *three* hooks if part of a live bait rig.

** 2 lines, if fishing from a boat in most of Lakes Erie and Ontario; see your regulation exceptions.

RESOURCE SHEET 2

USING YOUR ONTARIO RECREATIONAL FISHING SUMMARY

Step 1. Look at the small map on page v. What area will you be fishing in? _____

Step 2. Find that map in the summary, using the table under # 3. Is your fishing area on that map? _____

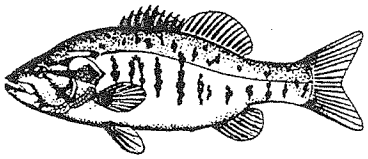
2a. If it is **not**, find the correct map, and then continue with **3.** Correct map: _____

Step 3. Your fishing area will be inside a blue boundary, or line. Look at the blue number inside that line. That is your **division.** Your division is: _____

Step 4. Look at the *Division/Species* table that comes right after the map. Find your division number in the band across the top. Look down the column and across from each fish to find out when seasons are open.

When can you fish for **northern pike** in your division? _____

When can you fish for this fish:

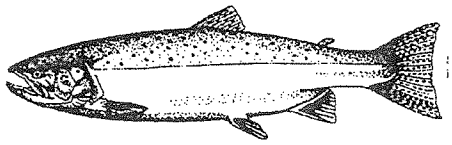


_____

Step 5. The same table will tell you how many fish of each kind you can catch and keep in one day. It will also tell you if there is a size limit for each kind of fish.

How many **walleye** can you keep in your division? _____ What if you had a *Conservation Licence?* _____ What is the size limit? _____

How many of this fish can you keep?



_____

Step 6. Finally, you need to know *exactly* where you want to fish and find out if there are any special rules for that spot. Look under *Exceptions to the General Regulations,* which follow any *Additional Fishing Opportunities.* The streams and lakes are in alphabetical order, following some more general exceptions. Check both tables.

Is your fishing spot listed under the *exceptions*? _____

If so, what is the exception? _____ (over)

Why is all this so complicated? Each lake or stream in Ontario is just a little bit different from any other. To protect the fish so that they are still there when you grow up, we may need to treat each area differently. Where there are lots of fish you can keep more. Where there are fewer, or more anglers, you can keep less, or only ones of a certain size, or fish on fewer days of the year.

RESOURCE SHEET 3

ONTARIO RECREATIONAL FISHING SUMMARY SCAVENGER HUNT

There's lots of useful, interesting and important information in your *Fishing Summary*. See how many of the following items you can find by scavenging around in it. Most of the information can be found in the first 18 pages, but for a few items you will have to look deeper!

1. Are fish sanctuaries always marked with signs? _____
2. You do **not** need a Resident Fishing Licence if you are: _____
3. Is it ok to dump aquarium fish into Ontario lakes and streams? _____
4. What is a key identifier for **walleye**? _____
5. Can you keep a fish that has been snagged? _____
6. When is *Take A Kid Fishing Week*? _____ Are fishing licences required? _____
7. Name one fish you can spear somewhere in Ontario: _____. Can any fish be speared in or near your division? _____
8. If you see a poacher, what number should you call? _____
9. What is the date of this year's *Ontario Family Fishing Weekend?* _____ What is special about this weekend? _____
10. What phone number can you call to get a lost licence replaced? _____
11. Is it legal to fish with salamanders? _____
12. If you don't like rock bass in your lake and you catch one, can you throw it into the woods? _____
13. If you have a Conservation Licence, how many muskie can you keep? _____
14. What is the phone number of the nearest MNR office? _____
15. Can you take a live bass you caught and put it in a lake nearer your house? _____
16. How many lines can you have in the water? _____ How many hooks? _____
17. In what NW division do lake trout get Christmas Eve off? _____

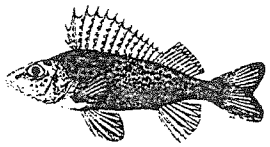
18. Can divers have a spear gun when they dive? _____

19. How many bait-fish can you have year-round? _____ Can you sell them? _____

20. Are fish eaten as shore meals counted as part of your daily catch limit? _____

21. How many bullfrogs can you possess on June 28? _____

22. What *is* this? What should you do if you find one? _____



_____

23. How big was the largest yellow perch caught in Ontario? _____

24. Do you require a permit to camp on crown land? _____

25. Are sculpins bait-fish or coarse fish? _____

26. Does a Conservation Officer need a warrant to inspect a vehicle if he or she reasonably believes that conservation laws are being broken? _____

27. What is one thing you have to do when going home with your catch? _____
_____

28. Is it legal to try to catch fish when their season is closed, if you are going to release them? _____

29. How far north are rock bass found? _____

30. Can you fish with one single hook and one treble hook on your line? _____

31. Name one Division where only artificial flies are allowed as bait in some waters.
_____

32. When can you use live bait fish in Algonquin Park? _____

33. What can sinkers be made of, besides lead? _____

34. Does "possession" include fish in your freezer at home? _____

35. Is an Outdoors Card a fishing licence? _____

RESOURCE SHEET 3

ONTARIO RECREATIONAL FISHING SUMMARY SCAVENGER HUNT
Leader's

There's lots of useful, interesting and important information in your *Fishing Summary*. See how many of the following items you can find by scavenging around in it. Most of the information can be found in the first 18 pages, but for a few items you will have to look deeper! *Note: page references based on 2000 Recreational Fishing Summary.*

1. Are fish sanctuaries always marked with signs? *no (5)*

2. You do **not** need a Resident Fishing Licence if you are: *under 18/over 64 (1)*

3. Is it ok to dump aquarium fish into Ontario lakes and streams? *no (12)*

4. What is key identifier for **walleye**? *white tip on lower tail fin (14)*

5. Can you keep a fish that has been snagged? *no* (9)

6. When is *Take A Kid Fishing Week*? *August 1 - 7*. Are fishing licences required? *yes (iv)*

7. Name one fish you can spear somewhere in Ontario: *carp, sucker, n. pike (9-10)*. Can any fish be speared in or near your division? *(9-10)*

8. If you see a poacher, what number should you call? *1-800-222-TIPS (vi)*

9. What is the date of this year's *Ontario Family Fishing Weekend?* *varies - early July*. What is special about this weekend? *don't need a fishing licence (vi)*

10. What phone number can you call to get a lost licence replaced? *1-800-387-7011 (3)*

11. Is it legal to fish with salamanders? *no – changed for 2000 (7)*

12. If you don't like rock bass in your lake and you catch one, can you throw it into the woods? *no (5)*

13. If you have a Conservation Licence, how many muskie can you keep? *none (3)*

14. What is the phone number of the nearest MNR office? *(96-7)*

15. Can you take a live bass you caught and put it in a lake nearer your house? *not unless you have a special licence (6, 12)*

16. In most cases, how many lines can you have in the water? *1(open) (5); generally 2 (ice) (6)* How many hooks? *four (5)*

17. In what NW division do lake trout get Christmas eve off? *24 (77)*

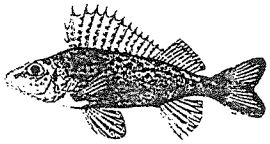
18. Can divers have a spear gun when they dive? *no (11)*

19. How many bait fish can you have year-round? *120 (7)* Can you sell them? *no (8)*

20. Are fish eaten as shore meals counted as part of your daily catch limit? *yes (21)*

21. How many bullfrogs can you possess on June 28? *none (8)*

22. What *is* this? What should you do if you find one? *ruffe contact your Invading Species Hotline 800-563-7711 (13)*



23. How big was the largest yellow perch caught in Ontario? *1.0 Kg./2.25 lb. (18)*

24. Do you require a permit to camp on crown land? *no (12)*

25. Are sculpins bait fish or coarse fish? *bait (7)*

26. Does a Conservation Officer need a warrant to inspect a vehicle if he or she reasonably believes that conservation laws are being broken? *no (4)*

27. What is one thing you have to do when going home with your catch? *leave skin, wrap separately or leave head & tail where limits apply (16)*

28. Is it legal to try to catch fish when their season is closed, if you are going to release them? *no (5)*

29. How far north are rock bass found? *Lake Abitibi (14)*

30. Can you fish with one single hook and one treble hook on your line? *yes (5)*

31. Name one Division where only artificial flies are allowed as bait in some waters. *18 or 21 (5)*

32. When can you use live bait fish in Algonquin Park? *never (45)*

33. What can sinkers be made of, besides lead? *clay, tin, bizmuth, steel, putty (7)*

34. Does "possession" include fish in your freezer at home? yes (5)

35. Is an Outdoors Card a fishing licence? no (1)

MEETING TWO: WHERE WILL I CATCH IT?

What will the group learn? Individuals will be able to name the four basic habitat needs and describe various habitats used by fish and humans. They will also be able to see plants and animals as part of a food web, and understand that these plants and animals are dependent upon each other and their habitats for survival. They will also understand that negative impacts such as water pollution can enter and follow these food web pathways, eventually reaching both sport fish and the anglers who eat them.

Objectives

1. To increase awareness, understanding and knowledge of fish habitats, including the basic needs that are met by those habitats, and the typical community members found in at least one habitat.
2. To create an understanding of aquatic food webs, and how pollutants can follow pathways within those webs.
3. To develop skills in using the *Guide to Eating Ontario Sport Fish,* and the motivation to do so.

In a nutshell

Habitat Lab Sit	15 minutes
Water Habitats Site Study	45 minutes
Would You Drink this Water?	20 minutes
Food Web Tag	30 minutes
To Eat or Not to Eat	20 minutes
Total Time:	**130 minutes**

Habitat - *A Closer Look*

Food, water, cover, and space are the four basic habitat needs of all living organisms--from bluegill to songbirds to humans. A bluegill spends its day trying to meet all its needs--feeding, drawing oxygen from water, hiding from predators, and finding enough space to move around in small, loose groups. If all these needs are regularly met, then the bluegill has found a welcomed habitat--a safe and thriving home.

Food. Sometimes, a single area doesn't fill all of an organism's needs: food in a lake, pond, or stream might be limited; too many fish that prey (feed) on smaller fish may be present and limit their food supply; large numbers of bass might eat all of the bluegill in a pond leaving none to reproduce and thus eliminating one of their food supplies.

People, also, may face food shortages. Sometimes these food shortages affect large human populations; sometimes they affect individual families.

Water. Water, as you might have guessed, is critical to a fish's survival. Quantity alone won't ensure a thriving fish population. The quality of water often decides which species, if any, can live in a given lake, pond, or stream. Water quality also affects where people can swim.

Cover. Aquatic plants, rocks, fallen trees, and other items form cover. Each type of fish uses cover for different reasons. Small fish stay in cover to avoid being eaten, while larger fish may use cover as camouflage to ambush unsuspecting prey. Both may use it for spawning. Humans also need cover to protect them from the rain, snow, and tornadoes!

Space. Space is the final critical need of any animal or plant. The amount of space available directly affects the number of plants and animals in that area. Some fish like minnows need very little space and will swim in schools. Others like catfish need more space and tend to be loners. Many animals have individual space needs. Humans also don't do their best in places where their personal needs for space are not met.

Only a limited number and size of fish can be supported in a lake or pond by these habitat components--this is the water body's carrying capacity. Carrying capacity is the total size and number of an organism that an area can support without damaging the individual organism or the area. When fishing, we should keep this in mind and not expect to catch what the system can't produce.

Food Webs

Food is one of the most limiting habitat components. Organisms need fuel to carry out their activities. To get this fuel, organisms transfer energy by feeding on each other. This energy flow can be represented by a food web. So, how is a food web spun in a pond, lake, or stream?

From the arctic to the tropics, the sun and nutrients are the source of energy for food webs. The sun and nutrients help plankton (microscopic plants and animals called food producers) grow. The plankton are eaten by minnows and insects (food consumers). The minnow is swallowed whole by a perch (food consumer), which is then chased and eaten by a northern pike (food consumer). The pike is dinner for a human family of four (food consumer). Finally, organisms such as bacteria (food decomposers) break down dead or waste materials into nutrients. These nutrients then provide future fuel for producers. But wait! The pike also eats minnows, and the people also eat perch, and the perch might be hungry enough to feed directly on the plankton. Now we've got a web.

Water, Water, Everywhere

Water is an essential part of habitat for all living organisms. Bluegill, pumpkinseed, northern pike, and crayfish all depend on water. But will all water sustain life? Or does water need to have a certain level of quality to be used by certain fish?

We impact the quality of water when we add things that don't belong there. Point-source pollution enters water from a single source, such as an outflow pipe or an oil spill. Non-point source pollution emerges from numerous sources; it can't be pinpointed to one origin. Chemicals or plant and other organic runoff from feedlots, lawns, urban areas, etc., are all sources of non-point pollution. These pollutants alter water, sometimes making it undrinkable or unusable, or even killing fish. This altered water must then be cleaned and filtered to make it fit to use again.

Water quality can also be altered by nature. Erosion (the wearing away and moving of dirt from a surrounding area) can be caused by rain, ice, wind, or water running overland (called surface runoff). This moving dirt and soil is often deposited in a stream or lake. Too much soil in the water can reduce the clarity (clearness) and increase sedimentation (the buildup of dirt and soil in a body of water). Erosion is a non-point source of pollution, that can be accelerated by human activity being done in the surrounding area (watershed).

Water quality affects where fish live, how they behave, and whether they survive. If water clarity decreases, a fish (who feeds by sight) may have trouble finding prey (because it is harder to see). If oxygen levels in a lake drop due to too many nutrients, some fish will die. Also, fish living in polluted waters can contain mercury, PCBs, and other contaminants (pollutants) that are harmful to people if eaten in the wrong amounts. It is essential that anglers understand how these contaminants accumulate within aquatic food webs, how they can ensure that the fish they eat is safe, and how they can work to reduce the contaminant levels in the fish that they catch.

We need to maintain and restore high water quality to our lakes, streams, and ponds. Stewardship of our environment means taking care of our waters...and our very future!