



MinnAqua Moments with Fishing: Get in the Habitat!

February 2009

Minnesota DNR
MinnAqua Program

Statewide Coordinator
Jenifer Matthees
651-259-5217

Metro Area
Roland Sigurdson
612-625-1291

Metro Area
Michelle Kelly
651-259-5751

Northern MN
Nadine Meyer
218-740-2063

Southern MN
Scott Moeller
507-359-6049

Inside this issue:

- MinnAqua Workshops - 2
- Mentoring & MinnAqua - 2
- Species Profile - 3
- Featured Lesson - 4
- Book Reviews - 5
- Fishing Equipment & Tips - 5
- Community Connections - 6
- Piers & Places - 7
- School Spotlight - 8
- FYI - News & Notes - 9

Partners In Action - Join the Trend!

By Jenifer Matthees

Everyone can play a role in introducing youth to the life-long activity of fishing and the DNR offers free fishing weekends like Take a Kid Ice Fishing (Feb14-16, 2009) or Take a Kid Fishing (June 5-7, 2009) where adults 18 or older when accompanied by a youth 16 or younger can fish without a license to try their hand at it.

There are a lot of you already that host your own events and we'd like to direct you to a national website where you can post your events for free and receive national promotion. Register your event at Take Me Fishing.org at

<http://www.takemefishing.org/community/programs-and-events/list-your-event>

This web site is hosted by the Recreational Boating and Fishing Foundation (RBFF) a non-profit organization dedicated to growing participation in fishing, boating and aquatic stewardship. Minnesota Dept. of Natural Resources partners with RBFF on programs like Anglers Legacy and Take Me Fishing national campaign. Its through partnerships like these that we leverage national promotion and support for our mission.

So "Join the Trend!" and introduce a youth to fishing. I know you'll enjoy it and Minnesota's natural resource heritage will continue because of great stewards like you.

Congratulations to the DNR MinnAqua Program! The MinnAqua Leader's Guide, Fishing: Get in the Habitat! won first place in the Interpretive Curriculum category for the National Association for Interpretation Interpretive Media Awards Program.



Check our website periodically for updates on the Leader's Guide and other MinnAqua activities.
www.mndnr.gov/minnaqua



Remember Us?

MinnAqua is sending you this newsletter because you have received the new leader's guide, *Fishing: Get in the Habitat!* either through a training workshop or you have requested information about the leaders guide. If you would like to be removed from our mailing list please let Jenifer Matthees know by contacting her at 651-259-5217 or jenifer.matthees@dnr.state.mn.us.



MinnAqua Training Workshops - Thank You!

by Jenifer Matthees



Since the July 2007 publication of the newly designed **Fishing: Get in the Habitat!** leader's guide, MinnAqua Specialists have reached 858 educators in eighteen counties. If you received the CD and would like to sign up for a hands on training, contact Jenifer.Matthees@dnr.state.mn.us or one of the MinnAqua Education Specialists listed below and we'll get you connected to the Specialist for your area.

Contact us to schedule your workshop:

Statewide Coordinator
Jenifer Matthees
651-259-5217

Metro Area
Roland Sigurdson
612-625-1291

Northern MN
Nadine Meyer
218-740-2063

Metro Area
Michelle Kelly
651-259-5751

Southern MN
Scott Moeller
507-359-6049

DNR Mailbag

The following is an excerpt of a letter received by DNR Aquatic Education Specialist Nadine Meyer, from Battle Lake teacher Bret Setterholm.

“Just wanted to give you heads up on the MinnAqua lessons. Eric and I have been having an absolute blast teaching these. Last week we even did team-teaching with the watershed lesson. The students loved it! I believe that MinnAqua and the DNR have hit a homerun with this program”.

*Meyer trained Setterholm and 14 others last fall in how to use the MinnAqua Leader's Guide **Fishing: Get In The Habitat!** to teach science to grade 5 - 6 students.*

Mentoring and MinnAqua

by Mike Kurre

One More Cast

Sitting at the dinner table thinking about tomorrow's first open-water fishing adventure of the year, I was going over my "to do" list before slipping the boat into the lake for its maiden spring voyage with my best friend and his young son as first mates.

Truck ready? Check. Trailer ready? Check. Boat ready? Check. Tackle ready? Check. Bait? My fishing companions will get fresh wax worms and crappie minnows in the morning. Fishing gear ready? Nope! I forgot to change line on the ultra light reels. Off to the local retailer after dinner.

Back to the list.

Food and drinks? Hmmmm, I wonder if my buddy has everything he needs? His son's going to need plenty of snacks, a sandwich or three, some water and maybe a juice box or two. Better call and talk to him about food for all of us and I'll have to remind him to not to bring the sunscreen, proper sized life jackets, camera, tackle and rain gear. It's already secured in the boat. Don't want to have too much gear in the boat to trip over or break.

I knew it was going to be a cool spring morning but it had the promise of a quick warm up for the day or so said the weather folks. I'm never sure if the forecast will be accurate, so I always bring raingear and keep spare sets for my fishing partners tucked away in the watercraft.

The best fishing of the day won't happen until the sun warms the northwestern parts of the bay, so we won't need to get up too early. But from what my fishing partner tells me, his son won't sleep much anyway with the promise of a fishing expedition in the morning. So I know they'll try and take their time with a good breakfast, pick up the bait, grab a license, but his son will be too fired up to dawdle very long.

Still, where to go tomorrow? I racked my brain and started putting some facts about spring fishing together. Smaller bodies of water will warm faster. But we've had such a unusual run of beautiful sunny days with light winds; which should push the temperatures up even in some of the larger lakes to the point where the panfish should move into the shallow dark colored bays to take advantage of bait fish and insect emerging. Any green vegetation we can spot, will add the cover and oxygen to the water; that will also be to our advantage.

As the captain of the boat it was my decision to head for big water that day. We looked for all those key components for a successful day; not just fishing from past memories and plopping down where we caught panfish in the past.

Our young fishing partner had already learned the basics of aquatic habitat and fishing from a lesson plan the MinnAqua Leader's Guide **Fishing: Get in the Habitat!** provided. Now to put into practice what he learned in the classroom and what his dad taught him while casting in the backyard.

Mentoring and MinnAqua continued on page 4

Species Profile** - Close-up on the Largemouth Bass

By Nadine Meyer

Largemouth bass: *Micropterus salmoides*
(my-KROP-tuh-rus) the early Greek word for “small fin”
and (sal-MOY-deez) means “salmon-like” in Latin

In Minnesota, largemouth bass can be found in shallow, fertile, lakes and river backwaters with ample aquatic vegetation as well as in vegetated bays of larger lakes. Other common names for largemouth bass are black bass, green bass, green trout, and slough bass. They are the largest species of the Sunfish family.

Identification

Largemouth bass have a two-part connected dorsal fin like other sunfish – spiny in front and soft in the back. Their bodies are generally shaped like a laterally flattened football. Their colors include a dark-green back with a white to grayish white belly and a dark black lateral stripe ranging from the gill plate to the tail. Their forward-facing mouths are very large and when the mouth is closed the lower jaw extends behind the eyes.

Food

Immature *Micropterus salmoides* feed on zooplankton and aquatic insects. As they grow their diet shifts to crayfish and other fish species. Sunfish are the food of choice for most adult largemouth bass.

Handling

When handling a largemouth bass, smooth down the spines of the dorsal fin from nose to tail much like you would handle a sunfish. **Lesson 6:1 – Safety and Fishing at the Water’s Edge** gives a good overview on handling fish.

Reproduction

Males begin to build nests in May and June, once water temperatures reach 60°F. The nests are built in 2-8 feet of water usually on a firm lakebottom among aquatic plants for cover. After a short courtship, females deposit 2,000-6,000 eggs in the nests, which are fertilized by the males. Females generally choose the nests of the largest males, but sometimes a small male will swim in quickly to attempt fertilization of the deposited eggs and then retreat, leaving the larger male to care for the eggs afterwards.



The males guard the nests and fan the eggs until they hatch; which takes approximately 3-4 days. Then the male will protect the fry, called a brood swarm, until they disperse after about a month. Females reach sexual maturity at about 4-5 years in age, while males reach sexual maturity around 3-4 years in age.

Largemouth bass live on average up to 15 years in the wild and 6 years in captivity. The longest known life-span of a largemouth bass in the wild is 23 years and in captivity is 11 years.



Predators

Larval and juvenile largemouth bass are prey species of yellow perch, walleye, northern pike, and muskellunge. As adults, largemouth bass can usually escape most predators. The primary predators on adult largemouth bass are humans.

Tackle

A good bass rod should have a heavy strong butt, and sensitive tips. You need a strong rod for setting the hook and reeling in the fish out of heavy cover. Probably most importantly though is to make sure you balance the rod with the same type of reel; a lightweight rod does not balance well with a heavy reel.

Anglers use artificial baits that mimic live baits and are made to pull through aquatic plants without too much snagging. Some artificial baits that are widely used are spinnerbaits, crankbaits, surface lures, jigs, and spoons. **Lesson 5:4 Tackling Your Tackle Box** gives an overview of the different types of lures listed here along with photos. Live bait such as night crawlers, frogs, crayfish, minnows, and leeches are popular for fishing largemouth bass. In very clear water the live bait will be a lot more effective than anything artificial.

Shorefishing for largemouth bass with your students can be successful if you look for a pier or shoreline surrounded by aquatic vegetation such as rushes, lily pads, and submerged aquatic plants. Generally largemouth bass will be found among other sunfish such as bluegill and pumpkinseeds. A piece of worm rigged underneath a bobber will give your students plenty of action.

Preparation for Cooking

Filleting a largemouth bass is very similar to filleting a sunfish. Follow the step-by-step instructions provided in **Lesson 6:5 – Eating Fish** to clean your catch and cook up some tasty treats.

Fun Facts

- ☞ It takes about 4 pounds of food to produce every pound of largemouth bass.
- ☞ This fish is a popular sport fish because it aggressively attacks lures and leaps out of the water when hooked.

***Species highlighted in this section will be aquatic (fish, plants or bugs) or semi-aquatic in the case of shoreline plants. We'll try to rotate through the various fauna and flora of our aquatic ecosystems in order to help you to become familiar with some amazing organisms from our state!!*

Featured Lesson - Lesson 4:2 - Fish Surveys

by Roland Sigurdson

Chapter 4 of the *Fishing: Get in the Habitat!* lesson series contains five of the 39 lessons. All of us use natural resources and share the responsibility for ensuring a sustainable quality of life in our state. This chapter identifies how the Minnesota Department of Natural Resources and the citizens of Minnesota work together to manage and conserve our natural resources through role-



Tagging a fish for mark and recapture

playing and problem solving activities. This is a big job and a serious responsibility in which we all must play a part.

Lesson 4:2 - Fish Surveys is a great lesson that connects fish sampling techniques, mathematics and natural resource management with real world outcomes.

Lesson Summary – *This lesson will help students learn why and how fisheries managers conduct fish surveys. Students will become familiar with some of the equipment and survey methods that Minnesota DNR fisheries biologists use. Special authorization, equipment, and expertise are needed to conduct a fish population survey in an actual lake, but you can conduct a survey simulation with student participation. Using tagging survey techniques and a formula involving multiplication and division, students estimate the number of walleye in an aquarium representing a lake. They conduct a problem solving investigation that helps them determine why local anglers are catching fewer fish in Lake MinnAqua.*

Tips & Tricks

- ☞ There are seven parts to the Procedure in this lesson, so become familiar with the complete lesson ahead of time. While you may never have calculated a Capture-Mark-Recapture study before, the lesson unfolds in a thoughtful, well-planned way to make it easy for the students to grasp the objectives.
- ☞ This lesson is very interdisciplinary. Connecting with your math curriculum will assist students in finding real world uses for estimates, ratios and proportions. This is the ultimate 'hands on' word problem!
- ☞ Spend a bit of time on the Wrap-up. One of the things that should become apparent to students is that in all sampling there is a certain amount of error. Discuss how being inconsistent in your sampling technique might skew the results of your hard work.
- ☞ Invite a fisheries biologist to visit your classroom or find out if the Area Fisheries Office will be sampling near your location. You may be able to observe a fisheries crew 'in action'.

Diving Deeper

For those students that are doubtful about the accuracy of this method, consider using suggestion #1 under Diving Deeper. Students will determine the percent error in order to find out how well their results mimic the real population size.

MinnAqua Lesson Connections

The concept of Carrying Capacity can be difficult one for students to grasp. Consider using **Lesson 1:2 – Food Chain Tag** or **Lesson 1:3 – Run For Your Life Cycle** as a way to help students connect the number of fish that can survive in any given lake with the available habitat and food resource available to those fish.



Fin clip - another form of marking fish

Mentoring and MinnAqua continued from page 2

The best thing my buddy did was to start off the day spending the time coaching his son instead of fishing himself. He took the time to explain where to cast, how to set the depth on the bobber and how to bait the hooks. He reinforced the predator/prey scenario, how to set the hook, how to avoid the spins on fins when detaching the fish from the hook and he explained catch-and-release philosophy with some of the medium-sized panfish going into the livewell for release into the grease for dinner.

When the bite slowed, we looked elsewhere for more of the same conditions found at our first spot. Only this time it was my turn to spend time with our newly accomplished angler. Low and behold after several attempts, we followed the plan and found a bay that held crappies, sunnies, bass and a bonus muskie. It was very rewarding when our youthful angler was keeping up and surpassing our catch rate. Panfishing is good for that – and some pictures.

It doesn't always work this way but it might – if you help provide the five critical factors for recruitment and retention: **a positive experience; opportunity for access to the resource; availability of right-sized equipment; access to a mentor; and social support from family, friends and YOU!**

If have a plan, some lessons learned in class, hands-on field days and some luck, you too can make an outdoors impression on today's youth.

“One more cast?” The question came loud and clear that spring day from our rookie angler!

When you hear those words, you can call yourself a mentor.

–Mike Kurre, Mentor Program Coordinator, can be reached at michael.kurre@dnr.state.mn.us

Book Reviews* - Fisheries Management

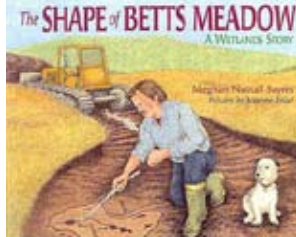
by Nadine Meyer

The Shape of Betts Meadow, 2002
by Meghan Nuttall Sayres, Joanne Friar,
Grades: PreK-3 ISBN: 0761321152

This picture-book account of the renewal of a dry meadow in Washington State begins when a local doctor decides to purchase the land and restore it to its original wetland state. Watercolor illustrations show the doctor first mapping the area from the air to establish where streams once flowed, and working with heavy equipment to dig holes for ponds. Other illustrations show the gradual return of birds, fish, frogs, and large mammals. A teacher's guide is available as a PDF download at

<http://www.meghannuttallsayres.com/teachers/betts-study-guide.pdf>

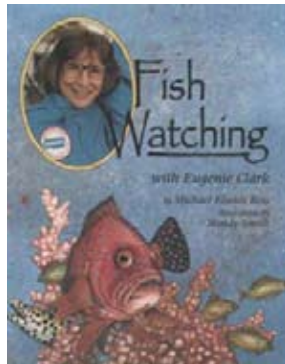
Available in hardcover and paperback



Fish Watching with Eugenie Clark, 2000
Michael Elsohn Ross, illustrated Wendy Smith
Grades: 3-6 ISBN: 1575053845

This book describes the life and career of ichthyologist Eugenie Clark, who began her research by observing freshwater aquarium fishes before undertaking an underwater study of sharks and other marine animals. The book includes observation tips and related activities.

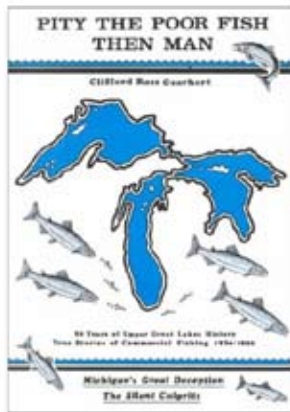
Not in print, can be purchased used.



Pity the Poor Fish Then Man: 50 Years of Upper Great Lakes History, by Clifford Ross Gearhart
Grades: 6-12 ISBN: 0932212522

This book is packed with true short stories about the commercial fisheries in the Upper Great Lakes from 1930-1980. Many of the stories include historical photos and/or illustrations of the fishing equipment used by the commercial fishing industry. The stories are engaging first-person accounts of the lives of commercial fishermen and their families.

Not in print, can be purchased used



**Book reviews are provided as an educational service and are not an endorsement by the MN Department of Natural Resources.*

Fishing Equipment & Tips Have you Taken A Kid Fishing lately?

by Roland Sigurdson

Introducing children to fishing can be a very rewarding experience. It's important to make these trips positive experiences for everyone. In order to make that happen you need to keep a few things in mind as you prepare.

- ☞ Plan to have fun. Seeing a child reel in their first fish is rewarding. Take pictures! In the years ahead you'll be glad you did.
- ☞ Select fishing spots with a high likelihood of success. Most kids are satisfied catching lots of smaller fish such as bluegills, perch or bullheads. Catching a few fish on the first couple of outings will make them look forward to the next trip. If you live in the Metro area, check out the Fishing in the Neighborhood page on the DNR website for kids fishing ponds. <http://www.dnr.state.mn.us/fishing/fin/index.html>
- ☞ Use live bait to increase the chance of catching a fish. Live bait is more interesting to children too. Minnows, worms, leeches...what could be more fun than that?
- ☞ Pick a place that is easy to get to, comfortable, and safe. Public fishing piers are great places to start. They offer stable platforms to fish from, railings to keep kids from falling in the water and often have large numbers of small sunfish around them.
- ☞ Bring snacks and beverages. Peanut butter and jelly sandwiches go a long way to making the trip memorable.
- ☞ Sunscreen, insect repellent and a basic first aid kit will make the trip comfortable for everyone.
- ☞ Provide kids with simple tackle in working order. Nothing is more discouraging to a child than complicated equipment or equipment that doesn't work. Consider giving the child a size appropriate fishing outfit. Cane poles are still one of the best ways to start children on the road to life long angling.
- ☞ Start with realistic expectations about taking young children fishing. Children have short attention spans and may want to move on to something else after a very short time. Try looking for bugs or animals or even skip stones across the water. You can't expect children to have the same level of enthusiasm you do the first few trips; don't make fishing a chore for them.
- ☞ Have patience. Lines will get snagged and tangled. Hooks will need baiting, repeatedly. Fish will create excitement and some panic. You'll be handling many of them.

Worried about having a fishing license? Minnesota has two free fishing weekends called Take A Kid Fishing and Take A Kid Ice Fishing weekends. One in June and one in February over the President's Day weekend. During this designated weekend, Minnesota residents 18 and older fish free with children younger than 16. These are great opportunities to give fishing a try.

Kids will get dirty, fall down and even get a little wet, but by taking time to introduce children to fishing you may end up with a fishing buddy for life.

Community Connections - Battle Lake School & Ice Team, LLC

by Nadine Meyer



Battle Lake School Ice Fishing Event with Ice Team, LLC Warming Houses

Teachers from Battle Lake School, in Ottertail County, west of Fergus Falls, MN worked to create a memorable and educational ice fishing event for their students. The following is an interview with Eric Olson, one of the teachers who was instrumental in organizing this event and integrating it into the school's curriculum.

NM: *How did you decide to take on an ice fishing program in your school?*

EO: My colleague, Bret and I are avid fishermen. Being around kids all the time, we found that a lot of students in our district don't have someone at home that takes them fishing or outside to enjoy the outdoors. Also, with our location it would be a shame for these students not to have an opportunity to enjoy the resources we have surrounding us.

A member of the Ice Team, LLC, a marketing organization representing the ice fishing industry, contacted me last summer and asked if our school would be interested in taking on the MinnAqua and Ice Team, LLC project, without hesitation we jumped at it. After a short conversation with school administration we started making contacts and aligning the right people to make this a success.

NM: *Describe the overall program - what did you do prior to going on the ice with your students, what did you do to prepare for the ice fishing event, what happened on the ice with your students, what kind of follow up are you planning?*

EO: The first step taken was to organize a training session with Nadine Meyer for the Fishing: Get in the Habitat! educator training. Nadine held a training session at Glendalough State Park with teachers Bret, Kris Lee, Dave Himmespach, myself, and several Ice Team, LLC members. After we went through training we knew this was something the kids would enjoy and we would enjoy the challenge of teaching.

We started our MinnAqua Fishing: Get in the Habitat! lessons with our students the beginning of November and continued until Christmas break, knowing that when the students returned from break we would be having our Ice Fishing Event.

Our Ice Fishing Event was held Jan. 9th with Battle Lake's 5th and 6th grade classes and Mr. Schwantz's 5th grade that we invited from Pelican Rapids. The 105 students met in the auditorium in Battle Lake School for an organizational meeting and a few words from local conservation officer Tricia Plautz. From there

each student was presented with an ice fishing rod and reel combo from the Ice Team, LLC. The students spent time rigging their combo for the Ice Fishing Event. Before we left for the lake, the students and volunteers ate lunch and we were ready to go.

When the student arrived at the lake the students were greeted by several local anglers and Ice Team, LLC members to assist them for the day. The local volunteers and members of Ice Team, LLC pre-drilled holes in the area that was plowed by local volunteers the day before. Ice Team, LLC provided warming shacks for the students and volunteers to warm themselves now and then. The students spent a few hours on the lake fishing, learning how to set lines according to depth, how to use sonar fish finders, looking at the bottom structures through underwater cameras, and taking in the knowledge from the anglers helping out.

When meeting with the local volunteers and the Ice Team, LLC members afterward we talked about what's next. How else can we continue to educate these students? All the adults were so impressed with how the students absorbed the information and were still hungry for more. They didn't want the day to be done, they kept asking "when is the next time we get to go fishing?" So, as a next program we are looking at is utilizing more lessons from Fishing: Get in the Habitat! and do a shore fishing event in May.

NM: *What community connections did you make in order to make this event a success?*

EO: Battle Lake is a community made up by organizations and businesses that are involved with the fishing and tourism industry. The community totally embraced the idea of teaching Environmental Education and introducing fishing to our classrooms. Ben's Bait, a local bait shop, provided bait and plowed



Students viewing fish and aquatic habitat through underwater cameras

out our fishing area. Also we received money contributions from Lakes Country Sportsman's Club, Ottertail Rod and Gun Club, Battle Lake Lions, and R. D. Offit. Besides these businesses several local volunteers donated hours of their time to make this event a success. Including a Community Women of Today group the served hot cocoa and treats to the students and volunteers while they were on the ice.

NM: *What words of inspiration do you have for other teachers who may be considering trying this out at their schools?*

EO: We were concerned at first that we would lose some students interest, and they would not enjoy the lessons and fishing event. We were happy to see that we were wrong. All the students involved themselves into the hands on lessons and gained excitement in our MinnAqua program. Every student walked on the ice with a smile and left knowing they have a life-long activity they can enjoy in the lakes area of Minnesota.

Piers & Places - Take a Kid Fishing – It's a “Shore Thing!”

Do you remember the first fish you ever caught? Or who you were with when you caught it? Few experiences match the excitement of a first fishing trip.

June 15-17, 2009 is Take a Kid Fishing Weekend

Minnesotans who want to introduce a child to fishing and catch some quality time together, can give fishing a try by taking advantage of Take-A-Kid Fishing weekend, June 5-7. Anyone 18 or older can fish without a license when fishing with a youth younger than age 16.

Teachers and youth program leaders should be sure to promote or plan your own fishing trips with your classroom or group and engage parents or volunteers too since they will not need a license to fish with the youth.

To help you plan and prepare for a fun fishing outing, MinnAqua's Take-A-Kid Fishing website includes postings of organized events, activities and other information.

<http://www.dnr.state.mn.us/takeakidfishing>

Start planning for your fishing trip by reviewing **Lesson 6:1-Safety and Fishing at the Water's Edge**. With this lesson, you'll have all the information needed to plan, prepare for, and successfully undertake your fishing trip. This lesson also includes a site checklist that will help you identify a great site to take kids fishing. You can also call your local DNR fisheries for suggestions for places are accessible, kid-friendly and likely to have fish.

The Fishing in the Neighborhood Program

Even if you live in the populated Twin Cities, there are great fishing opportunities near by. In fact, you likely won't have to look outside your own neighborhood!

Fishing in the Neighborhood or FiN works with various community partners to provide local opportunities for fishing in the Metro Area by installing piers and other structures for shore fishing and developing safe, family settings situated in residential areas where you can enjoy a day in the park as well as quality fishing close to home. With these local partners FiN also stocks fish, restores shoreline habitat and sponsors aquatic education.

With 60-plus FiN ponds families can easily go fishing with their friends, as well, walking or riding bikes to the fishing pier. Metro FiN pond locations can be found on the FiN website at:

<http://www.mndnr.gov/fishing/fin>

Keep it Simple – Make it a “Shore Thing”

When introducing young kids to fishing, it's important to keep things simple. Fishing from shore allows kids to run and play when they need to, and gives them an option for fishing on their own or with friends as they get older.

Of course, it's catching fish that will get kids hooked on fishing. Catching those first few fish will pique the interest of your



beginning anglers and they'll look forward to the next trip. Most of the FiN ponds are stocked in April and May before Take-A-Kid Fishing weekend in June. The FiN website gives updates on when the spring stocking occurs and with how many and what kinds of fish. During April

and May these updates are entered on the website weekly.

Don't have a fishing pole? Several of the FiN ponds have loaner poles available. In the East Metro, there are loaner poles at Lake Elmo Regional Park, Lebanon Hills Regional Park, William O'Brien State Park, and St. Croix Bluff Regional Parks.

And, in the West Metro, Loring Lake, Weber Lake, Powderhorn Park, and Centennial Lakes all have loaner poles available.

And don't forget **Lesson 5:3 - Pop Can Casting** to make your own fishing rigs from pop cans – they are simple for kids to make, and work great. It's lots of fun to catch a fish on a rig you made yourself.

For the more experienced anglers, Rick Walsh, DNR Fisheries FiN Biologist emphasizes, “These ponds don't just have small fish and bluegills, many also have larger game fish like bass, northern pike and a handful are stocked with big channel catfish and large bluegills. You can find ‘big fish in a little pond!’

The FiN Program has produced a booklet on Twin Cities Metro Area shore fishing for youth and families. This booklet is available from the DNR.

Don't live in the metro area of St Paul and Minneapolis? Go to DNR Lake Finder to find a lake near you

<http://www.mndnr.gov/lakefind/index.html>

A safe, fun trip is the ultimate goal for a successful fishing trip. To help ensure a positive experience, find helpful tips for taking kids fishing in this issue's **Fishing Equipment and Tips** article on page 5 of this newsletter.



Fishing Pier in Rogers, MN

School Spotlight - Cedar Creek Community School at the St. Francis School District's 2nd Annual Water Festival

By Michelle Kelly

The St. Francis School Independent School District #15 is nestled in the woods and fields of northern Anoka County and southern Isanti County, 40 miles north of the Twin Cities of Minneapolis and St. Paul. Pamela Beecham, is a third grade teacher at East Bethel Community School in the St. Francis School District (ISD 15). She has headed the district's elementary science team and has also contributed her experience and expertise with the MinnAqua Program as one of original pilot testers of **Fishing: Get in the Habitat!** lessons. Pam wanted to share the MinnAqua curriculum with the other teachers in her district so she scheduled the district's first **Fishing: Get in the Habitat!** training workshop in August of 2007, as part of that summer's elementary science in-service training week.

Abbi Case, St. Francis District's Cedar Creek Community School 5th grade teacher, attended that 2007 workshop and was inspired by Pam's enthusiastic endorsement of the lessons and activities in the curriculum guide. Abbi decided to coordinate a second **Fishing: Get in the Habitat!** workshop for the District's elementary teachers for the 2008 August in-service training week to provide further support for the teachers who had started using the MinnAqua curriculum guide, and to get **Fishing: Get in the Habitat!** in the hands of the teachers new to the district or who had been unable to attend the 2007 training workshop. Abbi also led the planning for this year's Lake George Water Festival, which has become the districts' culminating event for the fall **Fishing: Get in the Habitat!** units.

The training workshops prepared the district's elementary teachers to incorporate **Fishing: Get in the Habitat!** into their curriculum. Lessons from the MinnAqua curriculum teach third through fifth graders about fish identification and families, the six senses of fish, safety while fishing, and Minnesota fishing regulations, and bring relevancy to the concepts they are learning in class. The teachers are seeing that their students are engaged in their studies as they learn about Minnesota's water habitats and fish, and look forward to the Lake George Water Festival.

The second annual Lake George Water Festival, was held on October 3, 2008. Ms. Case wrote an article about the event and

has posted it on the Courier webpage, the St. Francis School District's news website last fall.

"It was a beautiful fall day when fifth grade students from Cedar Creek Community School set out for Lake George. At the Water Festival, students participated in four stations (also from the MinnAqua lessons). Here they learned about water pollution, conservation and the life cycle of a northern pike. The kids also made their own fishing poles from pop cans, and tried out some spin casters, too as they fished from the piers at Lake George," reports Abbi.



Students from Cedar Creek Community School participated in the second annual Lake George Water Festival on October 3, 2008. They learned about water pollution, conservation, and northern pike.

"All expenses for the festival were covered by a generous grant received from the Jeffers Foundation, in addition to contributions from school staff and parents," she continues. "The biggest thank-yous, however, went to the parent and community volunteers who ran every station at the festival. Their participation not only makes this fishing event possible from year to year, but reinforces the importance the families place on their children's education."

The parents who volunteered that day saw first-hand how fishing can hook kids on learning. Studies certainly are

important. Sharing memorable outdoor experiences with family is important for kids, too. The smiles on the students' faces as they reeled in wiggly sunfish on their pop-can casters at the Lake George Water Festival fishing station last October just may have inspired those parent volunteers to take their kids out fishing again!

If you'd like to schedule a MinnAqua Program **Fishing: Get in the Habitat!** training workshop for the teachers in your school district, or for your youth group colleagues, please contact the MinnAqua Education Specialist in your area.



Northern Pike Sac Fry

New! GreenPrint 3rd Edition: State Plan for Environmental Education

By Michelle Kelly



The third edition of the **GreenPrint** is now available! Developed by the MN Environmental Education Advisory Board with input from the environmental education community it outlines Minnesota's state plan for environmental education for 2008-2018.

The **GreenPrint**, was written to help the diverse members of Minnesota's environmental education (EE) community

bring their outcomes closer to the state goals for environmental literacy (*Minn. Stat. § 115A.073*).

Minnesota State Goals for Environmental Literacy - Statute § 115A.073

(a) Pupils and citizens should be able to apply informed decision-making processes to maintain a sustainable lifestyle. In order to do so, citizens should:

- (1) understand ecological systems;
- (2) understand the cause and effect relationship between human attitudes and behavior and the environment;
- (3) be able to evaluate alternative responses to environmental issues before deciding on alternative courses of action; and
- (4) understand the effects of multiple uses of the environment.

(b) Pupils and citizens shall have access to information and experiences needed to make informed decisions about actions to take on environmental issues.

The **GreenPrint**, serves as a foundation and support for all of those who educate, provide funds, develop programs, support efforts, and set policies that affect EE in Minnesota.

The MinnAqua Program is highlighted in the section entitled: "Progress Made Since 2000 on **GreenPrint**, second edition Outcomes." Here, MinnAqua is recognized as a notable example of "progress in EE in MN from 2000 to 2008" for two outcomes from the **GreenPrint**, 2nd edition. See pages 44 and 47 under:

- ☞ **Outcome 3: Focus on Out-of-Classroom EE Programs for K-12 Students** for the creation of the **Fishing: Get in the Habitat!** Leaders Guide, and
- ☞ **Outcome 7: Implementation of EE Assessment Tools** for MinnAqua's research-based program evaluation

MinnAqua will continue to have a proactive approach as it evolves and remains responsive to the changing angling and aquatic education needs in the state of Minnesota.

Download your new 2008 MN **GreenPrint** 3rd edition from the MN SEEK website at

http://www.seek.state.mn.us/eemn_d.cfm.

Free printed copies are distributed by the MN Pollution Control Agency's Learning Resource Center.

E-mail: clearinghouse@pca.state.mn.us



New! K-12 National Service-Learning Standards for Quality Practice

By Michelle Kelly

Service-learning: A philosophy, pedagogy, and model for community development that is used as an instructional strategy to meet learning goals and/or content standards. – National Youth Leadership Council

In 2008 the National Youth Leadership Council (NYLC), headquartered in St Paul, MN, unveiled K-12 national service-learning standards. The eight standards of effective SL practice are research-based, simple, attainable and measurable. Download the NYLC National Service-Learning Standards from:

http://www.nylc.org/objects/publications/G2G2008_StdArticle.pdf

Service-learning (SL) can be a strong catalyst for change. Research is confirming that high quality SL experiences strengthen people, schools, and communities (Billig 2004). SL empowers kids to transform themselves from recipients of information and resources into valuable, contributing members of a democracy.

NYLC offers the new standards with the hope that they will prove to be a significant tool for achieving the larger goals of service-learning: educational improvement, community development, and social change.

Fishing: Get in the Habitat! was designed to provide the background and the essential information educators and students need for putting learning into action by initiating self-sustaining stewardship projects. Take a look at the **Service-Learning Appendix** on your **Leaders Guide CD** under **Appendix: Additional Information and Resources**. It includes resources, project ideas, and lists of potential community partners to support the facilitation of quality SL projects and get you ready for action! MinnAqua's SL Appendix will guide you as you create a unit from a set of lessons in **Fishing: Get in the Habitat!**, and as you have your students take a look at the local community through the lens of the lesson concepts; identify an issue, concern or need in the community; connect with community partners; create a plan; and address the issue/concern/need.

Remember to "**Reflect, Evaluate and Celebrate!**" – Through service-learning, students/youth are empowered as they gain valuable skills, insights and recognition that will grow self-esteem, confidence, and motivation for continuing to engage in positive civic action and stewardship.

The new national service-learning standards will provide you with a set of research-based benchmarks and indicators that will help ensure your service-learning project is an effective and valuable experience for you and for your students/youth.

Billig, S.H. (2004). Heads, Hearts, and Hands: The Research on K-12 Service-Learning. Growing to Greatness 2004. St. Paul, MN: National Youth Leadership Council.



National Youth Leadership Council (NYLC),
1667 Snelling Avenue North, Suite D300,
Saint Paul, MN 55108 (651) 631-3672 Fax
(651) 631-2955