“Let’s Outfit a Tackle Box”
Multidisciplinary Classroom Activities

Teachers guide for the Young Naturalists article “Let’s Outfit a Tackle Box” by Roland Sigurdson. Illustrations by Ron Finger. Published in the July–August 2006 Minnesota Conservation Volunteer, or visit www.dnr.state.mn.us/young_naturalists/tacklebox.

Young Naturalists teachers guides are provided free of charge to classroom teachers, parents, and students. Each guide contains a brief summary of the article, suggested independent reading levels, word counts, materials list, estimates of preparation and instructional time, academic standards applications, preview strategies and study questions overview, adaptations for special needs students, assessment options, extension activities, Web resources (including related Conservation Volunteer articles), copy-ready study questions with answer key, and a copy-ready vocabulary sheet and vocabulary study cards. There is also a practice quiz (with answer key) in Minnesota Comprehensive Assessments format. Materials may be reproduced and/or modified a to suit user needs. Users are encouraged to provide feedback through an online survey at www.dnr.state.mn.us/education/teachers/activities/ynstudyguides/survey.html.

Summary

Summary “Let’s Outfit a Tackle Box” introduces young anglers to the basics of outfitting a first tackle box. After describing a suitable box, the author lists the most important pieces of tackle, including hooks, line, sinkers, bobbers, lures, and tools. A Minnesota Fishing Regulations manual, life jacket, and safety gear (first aid kit, sunscreen, and drinking water) are also essential for a fun, safe day on the water.

Suggested reading levels: third through sixth grades
Total words: 981

www.dnr.state.mn.us/young_naturalists/tacklebox
“Let’s Outfit a Tackle Box”—Teachers Guide

Materials: Paper, poster board, pencils, pens, markers, and print resources from your media center, Minnesota Fishing Regulations booklet (see www.dnr.state.mn.us/regulations/fishing)

Preparation time: One to two hours, not including time for extension activities

Estimated instructional time: Two to three 50-minute class periods (not including extensions)

Minnesota Academic Standards applications: “Let’s Outfit a Tackle Box” may be applied to the following Minnesota Department of Education Academic Standards:

Language Arts
I. Reading and Literature
   A. Word Recognition, Analysis and Fluency
   B. Vocabulary Expansion
   C. Comprehension
II. Writing
   A. Types of Writing
   B. Elements of Composition
   C. Spelling
   D. Research
   E. Handwriting and Word Processing
III. Speaking, Listening and Viewing
   A. Speaking and Listening
   B. Media Literacy

Art Arts
Artistic Expression: Visual Arts

Science
IV. Life Science
   B. Diversity of Organisms
   C. Interdependence of Life

Grade 4
IV. Life Science
   B. Diversity of Organisms

Grade 5
IV. Life Science
   E. Biological Populations Change Over Time
   F. Flow of Matter and Energy

Social Studies
Grades 4–8
V. Geography
   D. Interconnections: The student will give examples of how people are connected to each other and to the environment.

Complete Minnesota Academic Standards are available at www.education.state.mn.us. Teachers who find other connections to standards are encouraged to contact Minnesota Conservation Volunteer.

Preview Survey the article. Ask your students to examine the illustrations. Use the KWL strategy (Ogle, 1986) to find out what your students already know (K) about fishing and fishing tackle, what (W) they would like to learn, and eventually, what they learned (L) while reading the article and related
materials and through participating in extension activities. Display your K and W ideas on poster board or paper (see Vocabulary preview, below). Add to your L list as you read and discuss the article. See www.teach-nology.com/web_tools/graphic_org/kwl for a KWL generator that will produce individual organizers for your students.

You may wish to preview the attached list as well as any other words based on knowledge of your students’ needs. Connections to vocabulary in the article may be made during the KWL activity. These are key concepts and should be discussed before reading. If students are not familiar with some of the terms, include them in the W list. Unfamiliar terms may be added to the W list as the article is read. Eventually, they can be moved to the L list. You may write vocabulary from the article in green ink, while other ideas are written in black. You may wish to use the study cards found at the end of this guide. Study cards (Hock, Deshler, and Schumaker, 2000), can be applied to any subject area. Cut along the horizontal lines, fold in the middle, and tape or staple. Blanks are provided to allow you or your students to add new words or phrases. On one side of the card, in large letters, write a key word or phrase from the article that students are expected to know. In smaller letters frame the word or phrase in a question or statement. On the other side of the card, in large letters, write the answer to the question. Finally, in smaller letters, frame the answer in a question or statement. This vocabulary list also gives the teacher a chance to talk about words with multiple meanings, such as spoon, tackle, and stalk. See www.manatee.k12.fl.us/sites/elementary/palmasola/multiplemean.htm for excellent multiple-meaning activities and materials. There are also two homographs, bass and lead, that will stimulate interesting discussion.

Study questions parallel the story (the answer to the first question appears first in the article, followed by the second, and so on). Preview the entire guide with your class before you read the article. You may wish to read the story aloud and complete the study questions in class, in small groups, or as an independent activity. The questions may be assigned as homework, depending on the reading ability of your students. Inclusion teachers may provide more direct support to special needs students (see Adaptations section, below). The study questions may also be used as a quiz. Note: Items 1, 6, 10, 12, and 14 require analytical thinking.

Read aloud to special needs students. Abbreviate the study questions or highlight priority items to be completed first—for example, items 3, 4, 8, 10, 11, and 13. If time allows, remaining items may be attempted. Peer helpers, paraprofessionals, or adult volunteers may lend a hand with the study questions. With close teacher supervision, cooperative groups can also offer effective support to special needs students, especially for extension activities.
Assessment

You may use all or some of the study questions, combined with vocabulary, as a quiz. Other assessment ideas: (1) Students may write an essay describing a fishing experience. (2) Students may sketch one or more fish species, including the lures or bait used to catch the fish. (3) Students may write an essay or design a poster comparing and contrasting advantages and disadvantages of live and artificial bait (with emphasis on what to do with unused live bait). (4) Student teams may debate the merits of using artificial versus live bait.

Extension activities

1. Read “Fishing for Words” and/or “The Scoop on Minnows,” also in the July–August 2006 issue of the Conservation Volunteer. You may include vocabulary from either article in your preview and assessment. Students may compare and contrast the information from the articles in essay or graphic form.

2. Order a free Northland Fisherman Fishing Guide from Northland Fishing Tackle (www.northlandtackle.com). Readers will learn a little bit about a variety of fishing topics, from equipment to weather to basic knot tying. This guide will give students many ideas for creating their own fishing lure (see activity 6).

3. The DNR offers several excellent fishing Web sites, including: Minnesota Fishing (www.dnr.state.mn.us/fishing), Lake Finder (www.dnr.state.mn.us/lakefinder) and Fishing Downtown (www.dnr.state.mn.us/fishing/downtown).

   All three sites provide added breadth and depth to topics from the articles. Students may print maps of a favorite lake and/or do research on species of fish found in a lake, fish consumption advisories, and water clarity. Guest speakers from the DNR may visit your class to present fishing or water resource information.

4. MinnAqua (www.dnr.state.mn.us/minnaqua) has a six-chapter curriculum that culminates in a fishing trip. The curriculum is full of activities you can use with your students.

5. Most schools in Minnesota are near lakes and rivers. Plan a fishing field trip.

6. A classroom aquarium will give students a chance to observe baitfish described in “The Scoop on Minnows.” An aquarium may also be used to demonstrate how different lures behave as they move through water.

7. Students may design their own fishing lure, either on paper or with modeling clay. Or have students make lures out of found objects (paper clips, rubber bands, hair barrettes, bits of aluminum foil, beads, feathers, etc.) and take turns explaining to the rest of the class why they think their lure would attract fish.

8. Encourage students to learn about the hazards of lead tackle and what is being done to protect birds from lead poisoning. A good place to start is the American Sport Fishing Association Web site (www.asafishing.org/asa/government/lead_in_tackle.html).
Web resources  Related Minnesota Conservation Volunteer articles (see www.dnr.state.mn.us/volunteer/articles) include:

July–August 2006  “The Scoop on Minnows”
January–February 2006  “You Don’t Want to Eat That Raw”
July–August 2005  “The Big Appeal of Smallmouth Bass”
May–June 2005  “Opening Day”
January–February 2005  “Let’s Go Ice Fishing!”
November–December 2004  “Fishing for a Living”
July–August 2004  “Muskie Rampage”
March–April 2004  “Fishing With Small Fry”
September–October 1999  “Monsters of the Deep” (YN article)
May–June 1996  “Fish Sense” (YN article with teachers guide)

Study Questions

“Let’s Outfit a Tackle Box,” by Roland Sigurdson. Illustrations by Ron Finger

Minnesota Conservation Volunteer, July–August 2006

www.dnr.state.mn.us/young_naturalists/tacklebox

Name _________________________________________ Period ________ Date ________________

1. Why do you think the author was the envy of his sister and brothers? _______________________
   ___________________________________________________________________________________
   ___________________________________________________________________________________

2. When he looked for tackle in his dad’s box, the author compared himself to a fish. Why? __
   ___________________________________________________________________________________

3. List several characteristics of a good tackle box. ________________________________
   ___________________________________________________________________________________
   ___________________________________________________________________________________

4. How does the number of a hook indicate its size? ________________________________
   ___________________________________________________________________________________
   ___________________________________________________________________________________

5. Which hook sizes are recommended for panfish? ________________________________

6. Why might a knot-tying card be a good addition to your tackle box? __________________
   ___________________________________________________________________________________

7. Lead sinkers can be hazardous. Why? ________________________________
   ___________________________________________________________________________________

8. How does the size of the lure you choose affect what you catch? ______________________
   ___________________________________________________________________________________

9. Suggest an artificial lure to catch the fish listed below ________________________________
   ___________________________________________________________________________________
   ___________________________________________________________________________________
   ___________________________________________________________________________________

10. Why would you want to have a Minnesota Fishing Regulations booklet in your box? ______

11. List at least three other gadgets you would put into your box and why you would include
    them. ________________________________________________________________
    ____________________________________________________________________________

___________________________________________________________________________________

13. Name one thing you do not have to put in your box if you are 15 or younger. _________

___________________________________________________________________________________

14. If you are out on a lake fishing and you hear three whistle blasts, what should you do?

___________________________________________________________________________________

___________________________________________________________________________________

**Challenge:** You are looking in your mom’s tackle box and you find a hard plastic lure with no hooks. What is it used for?
Study Questions Answer Key

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1. Why do you think the author was the envy of his sister and brothers? He was probably older than his siblings. They would have to wait until they turned 12 to get their first tackle box.

2. When he looked for tackle in his dad’s box, the author compared himself to a fish. Why? Just like a fish, he was attracted to the flashiest lure.

3. List several characteristics of a good tackle box. Strong, waterproof, with a good handle and latch.

4. How does the number of a hook indicate its size? Smaller hooks have larger numbers.

5. Which hook sizes are recommended for panfish? Small hooks (6, 8, and 10)

6. Why might a knot-tying card be a good addition to your tackle box? It can be hard to remember how to tie the right knot.

7. Lead sinkers can be hazardous. Why? Lead is poisonous to birds and animals (and to the angler, so don’t put lead sinkers in your mouth).

8. How does the size of the lure you choose affect what you catch? To catch a big fish use a big lure.

9. Suggest an artificial lure to catch the fish listed below:
   - Walleye jig, plastic worm, crankbait, popper, spoon
   - Muskie jig, crankbait, popper
   - Sunfish jig, plastic worm, popper
   - Bass jig, plastic worm, spinner, crankbait, popper, spoon
   - Trout jig, spinner, popper, spoon
   - Northern pike jig, spinner, crankbait, popper, spoon

10. Why would you want to have a Minnesota Fishing Regulations booklet in your box? So you can learn and follow fishing regulations.

11. List at least three other gadgets you would put into your box and why you would include them. Student should include at least three of the following: leaders, snap swivels, fingernail clippers, needle-nose pliers, practice plug, stringer, and lake or stream maps, with at least one reason for including each.


13. Name one thing you do not have to put in your box if you are 15 or younger. If you are under 16 years old you do not need a license.
14. If you are out on a lake fishing and you hear three whistle blasts what should you do? Three whistle blasts is a call for help. If you can, help. If not, then call or go for help.

Challenge: You are looking in your mom’s tackle box and you find a hard plastic lure with no hooks. What is it used for? It is most likely a practice plug for improving casting skills.
Name ___________________________ Period ______ Date ____________

1. If you are carrying your tackle box on a bicycle it should have a
   A. bobber in it.
   B. strong latch.
   C. full tray.
   D. sinker keeper.

2. To avoid dehydration always bring _____________ on fishing trips.
   A. drinking water
   B. sunscreen
   C. a hat
   D. candy

3. Most jigs have three parts, a _________________.
   A. hook, line, and sinker
   B. spool, line, and bobber
   C. head, hook, and tail
   D. spoon, swivel, and leader

4. A ______________ is an example of an artificial bait
   A. spinner
   B. worm
   C. leech
   D. minnow

5. Why is fishing tackle dangerous for loons?
   A. They may be attracted to the lure.
   B. They may be caught by a net.
   C. They may be run over by boats.
   D. They may get lead poisoning from swallowing lead sinkers.
Minnesota Comprehensive Assessments Practice Items Answer Key
“Let’s Outfit a Tackle Box,” by Roland Sigurdson. Illustrations by Ron Finger
Minnesota Conservation Volunteer, July–August 2006
www.dnr.state.mn.us/young_naturalists/tacklebox

1. If you are carrying your tackle box on a bicycle it should have a B. strong latch.
2. To avoid dehydration always bring A. drinking water on fishing trips.
3. Most jigs have three parts, a C. head, hook, and tail
4. A A. spinner is an example of artificial bait
5. Why is fishing tackle dangerous for loons? D. They may get lead poisoning from swallowing lead sinkers.
### Vocabulary

“Let’s Outfit a Tackle Box,” by Roland Sigurdson. Illustrations by Ron Finger  
*Minnesota Conservation Volunteer, July–August 2006*  
[www.dnr.state.mn.us/young_naturalists/tacklebox](http://www.dnr.state.mn.us/young_naturalists/tacklebox)

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>bass</td>
<td>several species of predatory fish that favor shallow, weedy areas of lakes and rivers</td>
</tr>
<tr>
<td>bobber</td>
<td>a floating devise that attaches to fishing line to hold the baited hook at a desired depth</td>
</tr>
<tr>
<td>dehydrated</td>
<td>having lost water</td>
</tr>
<tr>
<td>entice</td>
<td>to lure or attract</td>
</tr>
<tr>
<td>envy</td>
<td>desire for the possessions of another</td>
</tr>
<tr>
<td>fixed bobber</td>
<td>bobber that stays in one position on the fishing line</td>
</tr>
<tr>
<td>improved clinch knot</td>
<td>preferred knot for tying lures to monofilament (fishing) line</td>
</tr>
<tr>
<td>lead</td>
<td>toxic heavy metal used in some fishing tackle</td>
</tr>
<tr>
<td>lure</td>
<td>artificial bait; a device made of metal, wood, plastic, feathers, etc., used to entice fish</td>
</tr>
<tr>
<td>muskie</td>
<td>a predatory fish that is a larger relative to northern pike; a much sought-after trophy fish</td>
</tr>
<tr>
<td>northern pike</td>
<td>popular game fish, known for its fighting spirit</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>panfish</td>
<td>several species of round, flat fish, including sunfish, crappie, and rock bass</td>
</tr>
<tr>
<td>PFD</td>
<td>personal flotation device (life jacket) worn to keep a person floating in water</td>
</tr>
<tr>
<td>predator</td>
<td>animal that eats other animals</td>
</tr>
<tr>
<td>slip bobber</td>
<td>bobber that slides along the fishing line as the bait is reeled in</td>
</tr>
<tr>
<td>species</td>
<td>a group of living things that can breed with each other but not with other living things</td>
</tr>
<tr>
<td>split shot</td>
<td>fishing sinker that is cut part way through and squeezed onto the line</td>
</tr>
<tr>
<td>spoon</td>
<td>shiny, curved, metallic fishing lure</td>
</tr>
<tr>
<td>stalk</td>
<td>to track or pursue</td>
</tr>
<tr>
<td>tackle</td>
<td>equipment used in fishing</td>
</tr>
<tr>
<td>toxic</td>
<td>hazardous, poisonous</td>
</tr>
<tr>
<td>trout</td>
<td>freshwater relative of salmon, often caught with a fly</td>
</tr>
<tr>
<td>walleye</td>
<td>most popular Minnesota game fish, member of the perch family, named for its reflective eyes</td>
</tr>
</tbody>
</table>
**Vocabulary Study Cards**

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Cut along the horizontal lines, fold in the middle and tape or staple. Blanks are provided to allow you or your students to add new words or phrases.

<table>
<thead>
<tr>
<th>In a tackle box, a <strong>spoon</strong> is</th>
<th>A <strong>shiny, curved metallic fishing lure</strong> is a</th>
</tr>
</thead>
<tbody>
<tr>
<td>What does <strong>split shot</strong> mean?</td>
<td>A fishing sinker that is squeezed onto the line is a</td>
</tr>
<tr>
<td>What is <strong>envy</strong>?</td>
<td>What is a desire for someone else’s possessions called?</td>
</tr>
<tr>
<td>What is fishing tackle?</td>
<td>What is the equipment used in fishing called?</td>
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<tr>
<td>-------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>An example of a panfish is</td>
<td>What is a sunfish an example of?</td>
</tr>
<tr>
<td>A walleye is</td>
<td>The most popular Minnesota game fish is the</td>
</tr>
<tr>
<td>What is the northern pike?</td>
<td>A smaller relative of the muskie, known for its fighting spirit is the</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>When should an angler use the improved clinch knot?</td>
<td>The best way to tie a lure to monofilament (fishing) line is with an</td>
</tr>
<tr>
<td>What is lead?</td>
<td>A toxic heavy metal used in making some fishing tackle is</td>
</tr>
<tr>
<td>When a substance is toxic it is</td>
<td>What is a substance that is hazardous or poisonous called?</td>
</tr>
<tr>
<td>What is a fixed bobber?</td>
<td>What is a bobber that stays in one spot on the fishing line called?</td>
</tr>
</tbody>
</table>
What is a slip bobber?

What is an animal that eats other animals called?

What does species mean?

Animals that can breed with each other are members of the same species.

A predator is

What is an animal that eats other animals called?

What type of fish is a bass?

A predatory fish that lives in shallow, weedy water may be a bass.
What is a trout?

A freshwater cousin of salmon is called a

What is a muskie?

A large, aggressive game fish may be a

An example of a lure is

Artificial bait, such as a spoon, jig, spinner, or crankbait is a

What does it mean to entice a fish?

When you attract or lure a fish to your bait, you
<table>
<thead>
<tr>
<th><strong>What is a PFD?</strong></th>
<th><strong>Another name for a life jacket is</strong></th>
</tr>
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<tr>
<td>When you become dehydrated, your body</td>
<td>When your body loses too much water, you become</td>
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<tr>
<td><strong>What does to stalk mean?</strong></td>
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