



Aquatic Adventures

Objectives

Participating young people and adults will:

1. Discuss the difference between the living and non-living components and how the two interact
2. Identify several aquatic plants, insects and animals
3. Piece together a simple food chain using the organisms they collected.

Youth Development Objectives

Participating young people will:

1. Gather and analyze information
2. Develop comfort and confidence when around water habitats
3. Develop self confidence
4. Enhance enjoyment of fishing and outdoor recreation.

Roles for Teen and Junior Leaders

1. Assist with scouting out locations.
2. Safety monitors
3. Assist with identification of critters.

Potential Parental Involvement

1. See A Roles for Teen and Junior Leaders@ above.
2. Conduct similar activities with the family.
3. Review field guides other books about critters.
4. Encourage >learn to swim= activities and other

Best Time: anytime, although this activity can provide a great starting point for further study. This activity can also serve as a great finale to other related activities. Anytime the fishing is slow! Go Fish is a great introductory activity

Best Location: small stream, shallow pond or lakeshore, beach

Time Required: 1 hour or more

Equipment/Materials

Materials

Sampling equipment (including any of the following: dip nets, minnow seine, window screen bug net, sieves, small shovels, bare hands, insect nets--see directions for making these in Critter Collector handout

Magnifying lens, glasses or microscope.

Containers such as white trays, pans, small jars, to place critters collected.

Identification aids such as *Golden Guide to Pond Life*, local, state or regional guides to fish and other aquatic life.

Tweezers, eye dropper (to pick up

activities which increase comfort and confidence
Band safety Baround water.

Evaluation Activities/Suggestions

- 1. Ask youth to sort organisms collected**
- 2. Ask youth to use field guides to identify organisms**
- 3. Use pictures or drawings as flash cards to test identification skills**
- 4. Youth draw pictures of critters collected.**
- 5. Youth draw food chain or web.**
- 6. Prepare a habitat map of site, noting locations of critters, and physical habitat (bottom, flow etc)**

small critters)

Thermometer

Waders, hip-boots, rubber boots, or "creek tennies" for each student in the water

OPTIONAL: pH and dissolved oxygen test kits

Safety Considerations

Anytime youth are in or near the water appropriate safety precautions must be made. Pick a location with a firm bottom and is easily accessible. The shallow end of pond, small creek or stream are ideal.. Visit the site prior to the session. Make sure participants know how to dress, i.e. old shoes, shorts, hip boots. All participants should wear shoes or boots. Throw bags and other lifesaving devices are also recommended. Extra caution must be used when collecting in cold water (less than 70 degrees. Youth should get out and take breaks. Blankets and dry clothes are also recommended.

ReferencesCaduto, M. J., 1985, *Pond and Brook: a Guide to Nature in Freshwater Environments*, Prentice Hall, Englewood Cliffs NJ
ISBN 0-87451-509-2

Schmidt, B, 1991, *Sportfishing and Aquatic Resources Handbook*, pp 61-86, Kendall Hunt Publishing, Dubuque IA
ISBN 0-8403-6599-3

Schmidt, B, 1997, *Advanced Sportfishing and Aquatic Resources Handbook*, pp. 73-98, 105-110, Kendall Hunt Publishing, Dubuque IA. ISBN 0-7872-3544-x

Reid, George, K. 1987, 1967, *Golden Guide to Pond Life: A Guide to Common Plants and Animals of North American Ponds and Lakes*, Golden Press, NY, ISBN 0-301-24017-7

Lesson Outline:

Presentation

- I. Community
 - a. Non living
 - 1. water
 - (a) temperature
 - 2. rocks, bottom
 - 3. chemical
 - (a) dissolved oxygen
 - (b) pH
 - b. Living
 - 1. Fish
 - 2. Insects
 - 3. Other invertebrates

Application

Take participants to site and **REVIEW** concepts of community, habitat, food chains and webs, living vs. nonliving. **TELL** them the ground rules, set time limits, and identify hazards. Should **DEMONSTRATE** use of sampling gear. Also **TELL** them to bring back anything they collect.

Ask youth to **OBSERVE** the site & its features. **BRAINSTORM** the places where they would expect to find critters. **BRAINSTORM** list of critters they **PREDICT** will be found. Youth should **RECORD** information (names, drawings, sketches) about the critters they **COLLECT** or **OBSERVE**.

Allow youth to sample site. If test kits are used, group can be divided between collection of non-living data and living data. Youth can **IDENTIFY** their catch either: (1) as they collect, (2) wait till the end to identify everything, or (3) a combination of (1) and (2).

After specified time call everyone back and collect sampling gear.

REVIEW the concepts discussed earlier such as living vs. non-living and have them relate their observations. Use this time to **DISCUSS** what was collected, **IDENTIFYING** as best they/you can (if you have no idea, use terms like six-legger).

Ask them to **ANALYZE** the information they have gathered and **DESCRIBE** a simple food chain using the critters collected. If you did any water sampling, discuss those results at this time.

Summary Activity

1. Using data collected earlier or a recapping of the experience, describe a simple food chain using critters collected.
2. Draw map of site, noting locations of types of critters collected, notable aspects (trees, stumps etc.).

Exhibit or Sharing Suggestions

1. Build collections of critters collected
2. Build model or draw diagram of the site with critters illustrated
3. Write a story about a typical day at this location, the interactions etc.

Community Service and AGiving Back@ Activities

1. Work with local or state resource agencies to adopt a particular waterway. This may include litter pickup, water quality monitoring, in-stream habitat improvement, streambank plantings etc.
2. Share the data they collect, observations etc. with local newspaper.

Extensions or Ways of Learning More

1. Record your efforts and compare them with future outings to the same location. Compare/contrast any differences.
2. Repeat this adventure in a different body of water and compare and contrast these results. The works best when the differences are great. e.g. saltwater compared fresh, pond compared to stream.
3. Contact local office of state fish and wildlife agency. Invite a biologist to visit and discuss how similar techniques are used in doing their job.

Links to Other Programs

People and Fish:

1. Use *Know Your Code* activity to formulate a code of conduct for conducting creek stumps
2. Use *Take Home a Limit of Litter* activity to conduct clean up of site and determine who left trash

Fishing Skills

1. Match lures and flies to critters collected
2. Create site maps & Identify potential hot spots

Tackle Crafting

1. Use critters collected as models to tie flies or build lures.