

## *Freshwater Fisheries Management*

**Time Frame:** 20 minutes

**Age:** 9 and up

**Group Size:** 10-25

**Setting:** Outdoors

**Staff:** 2

**Use:** Out-of-class

### **NYS Learning Standards:**

#### MST-Section 4: Living Environment

Students will: understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

- *Key Idea 7:* Human decisions and activities have had a profound impact on the physical and living environment.

### **Objectives:**

- ✓ Students will be able to describe freshwater fisheries management (FWFM) practices
- ✓ Students will be able to compare and contrast 3 different types of FWFM gear: gill net, seine net, and hoop net

**Motivation:** Visual presentation of nets, act like fish during survey, e.g., pretend to be “scooped up” in fishing net

**Materials:** 15-50 foot seine net, 6 wooden stakes, hoop net, gill net, 1 freshwater fish model/picture, and a copy of *Fishing the Freshwaters of Long Island and New York City* brochure (optional)

### **Pre-Activity Procedures:**

1. Set up hoop net using 4 wooden stakes.
2. Set up gill net using 2 wooden stakes.

### **Activity Procedures:**

#### *Introduction (1-3 minutes)*

1. Staff will introduce selves and topic: FWFM. Be sure that students know that the lesson focuses on freshwater fisheries only.
  - a. Say: Hi everyone! My name is \_\_\_\_\_. Today we are going to explore the topic of management, specifically in relation to freshwater fish.
2. Ask students to tell what they know about “fish management.” Define “fish management.” Define “conservation.” Discuss the New York State Department of Environmental Conservation’s (NYSDEC) role in FWFM.
  - a. Say: Does anyone know what ‘management’ means? Fisheries management means to protect the fish that live in a specific body of water. Protecting parts of the environment is often referred to as conservation. At the NYSDEC, or New York State Department of Environmental

Conservation, the term “conservation” is part of our title. Our group strives to both protect and use natural resources including plants and animals.

*How to Manage? (12-15 minutes)*

3. Gear methods introduction.
  - a. Say: Well, can someone tell what fish are in this body of water just by looking at it? Can I/NYSDEC tell? (No!) So how can I/NYSDEC conserve and preserve fish if I don't know what is in there?
4. Identify different gear methods: hoop, gill, and seine nets.
  - a. Say: There are different methods for finding out which fish are in a body of water. At the NYSDEC, we use passive or active gear.
5. Start with passive gear: hoop and gill net. Talk to students about each net; discuss what each net does, how it works, what fish it is used for, its effects, etc. Use a fish model to show how a gill net works.
6. Use the hoop net as a demonstration. Have students pretend to be fish as they are directed into the hoops. Have participants behave as real fish found at the specific body of water.
  - a. Say: Let's pretend that you all are going to be \_\_\_\_\_. (Name fish found in the body of water.) You are going to be swimming and come across this net, so start swimming!
7. Next move to active gear: seine. Talk to students about this net; discuss what it does, how it works, what fish it is use for, its effects, etc.
8. Use the seine net as a demonstration. Have students act as fish as they are scooped up into the net. Again have the students behave as real fish found at specific body of water.
  - a. Say: Let's pretend that you are all now \_\_\_\_\_ (Name fish found in the body of water). You are going to be swimming in the deep water. (Point to “deep water” perimeter.) I will be the NYSDEC seining in the water and wanting to bring you to the “shore.” (Point to the “shore.”)

*Conclusion and Why to Manage? (2-5 minutes)*

9. Ask students why the NYSDEC manages the freshwaters of NYS. Discuss reasons why fisheries are managed. Show Fishing the Freshwaters of LI and NYC brochure to show other areas NYSDEC manages/they can fish.
  - a. Say: Why does the NYSDEC manage the lakes, ponds, and rivers of NYS? (It is done to help ensure that future generations and other anglers will enjoy fishing and hopefully have a great experience.)
  - b. Say: Aside from where we will be fishing today, LI has about 500 freshwater lakes and ponds and over 30 miles of rivers and streams. {Show brochure} The NYSDEC takes part in managing these water bodies as well. Go fishing and check them out.
10. Ask if there are any questions.