



Seining



Pre - Class Activity

Introduction: Soon you will be participating in a beach seining class at Driftwood Education Center. Beach seining is a specific style of fishing that requires manual handling of a net. In the following activity, you will be introduced to some of the species you may catch as well as an introduction to the features and use of the beach seine net.

Directions (Part 1): Use the following interactive activity to initiate a discussion of fish adaptations and diversity. Students should "build a fish" on the interactive webpage provided by Shedd Aquarium. Have each student build several different fish or have the students compare and contrast the features and behaviors of their fish with the rest of the class. Discuss why different features and behaviors might be beneficial for survival. Discuss why it is important that there are several different survival strategies in the ocean food web. The discussion should include why diversity is an important characteristic for the hardiness of an ecosystem.

Shedd Aquarium "Build a Fish" webpage:

http://unctv.pbslearningmedia.org/asset/lsp07_int_buildafish/

Now that you have discussed the importance of diversity in fish shape and behavior, compare the fish created by the class to some real species that can be found on the coast of Georgia. A guide of common fish is included on the following page.



Atlantic Croaker (*Micropogonias undulatus*)



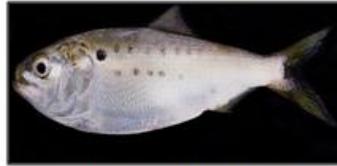
Southern Kingfish (*Menticirrhus americanus*)



Mullet (*Mugil cephalus*)



Ballyhoo (*Hemiramphus brasiliensis*)



Atlantic Menhaden (*Brevoortia tyrannus*)



American Shad (*Alosa sapidissima*)



Lookdown (*Selene vomer*)



Planehead Filefish (*Monacanthus hispidus*)



Pinfish (*Lagodon rhomboides*)



Spot (*Leiostomus xanthurus*)



Florida Pompano (*Trachinotus carolinus*)



Permit (*Trachinotus falcatus*)



Striped anchovy (*Anchoa hepsetus*)



Northern Puffer (*Spherooides maculatus*)



Butterfish (*Poronotus triacanthus*)



Hog Chocker (*Trinectes maculatus*)



Southern Flounder (*Paralichthys lethostigma*)



Southern Stargazer (*Astroscopus y-graecum*)



Male Mummichug (*Fundulus heteroclitus*)



Female



Atlantic Silverside (*Menidia menidia*)



Atlantic Bumper (*Chloroscombrus chrysurus*)



Speckled Crab (*Arenaeus cribrarius*)



Blue Crab (*Callinectes sapidus*)



Spider Crab (*Libinia emarginata*)



Sea Gooseberry/Comb Jelly (*Pleurobrachia bachei*)



Atlantic Brief Squid (*Lolliguncula brevis*)



Cannonball Jelly (*Stomolophus meleagris*)



Smooth Butterfly Ray (*Gymnura micrura*)



Cownose ray (*Rhinoptera bonasus*)

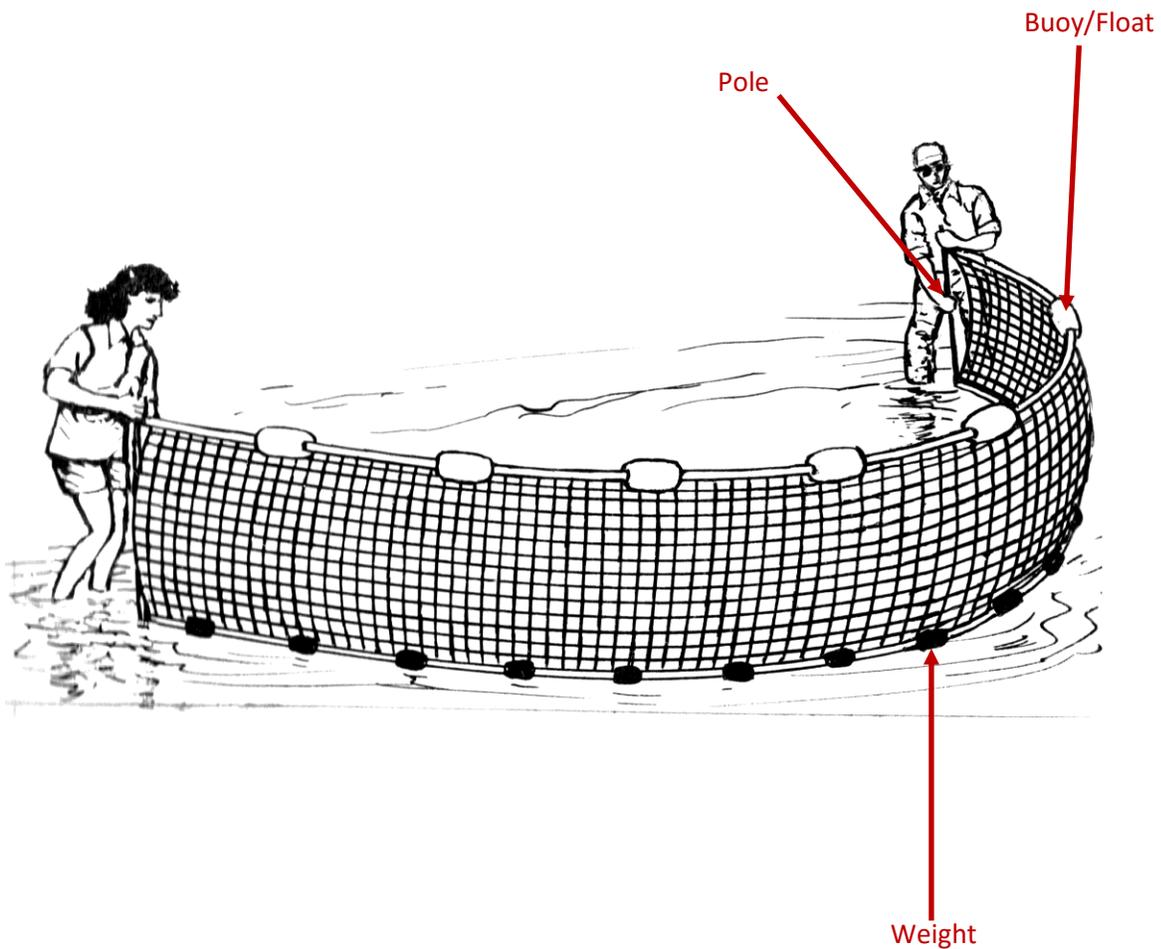


Atlantic Stingray (*Dasyatis sabina*)



White Shrimp (*Litopenaeus setiferus*)

Directions (Part 2): Take a look at the diagram of a beach seine net shown below. Notice that the floats and weights keep the net vertical in the water. Discuss why it would be important to keep the weights close to the sandy bottom and the floats at the surface of the water. When you are seining, you move the net from offshore toward the beach and attempt to catch the fish between the net and the shore. Notice how the net bubbles out in the diagram instead of being in a straight line through the water. Think about the types of fish you discussed in Part 1. Do you think that the bubble shape would be helpful for catching certain types of fish over others? What if you kept the net in a straighter line? Would the speed of the net movement matter?





Seining



Post - Class Activity

Fishing for Answers

Introduction: Seining class at Driftwood introduced your group to one method of fishing. The following activity will extend this introduction into research and discussion of the motivations, methods, and impacts of different styles of fishing. The activity will exercise the data mining, writing, and presentation skills of your group.

Directions: Students will choose a fishing technique (i.e. trolling, jigging, long-lining, pots, etc.) to use as a topic for a short paper and presentation. This can be done individually or in small groups. Topics can range from subsistence fishing techniques to leisure and sport fishing techniques to commercial fishing methods at the discretion of the teacher. Each paper and presentation should include information about the common motives for fishing in the chosen style, the usual target species, and the positive and negative outcomes or impacts of the chosen fishing technique. Following the presentations, the teacher should initiate a discussion reviewing the pros and cons of the chosen techniques. Explain that the more diverse an ecosystem, the easier it is for the ecosystem to carry on after major change. The discussion should include brainstorming potential alternatives and sustainable fishing options.