



## IDEAS FOR USING THE HABITAT MATS



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### **Purpose:**

Participants will be able to:

1. Describe the elements of good fish habitats, in either freshwater or saltwater.
2. Describe fish and shellfish (shrimps, crabs, etc.) movement in saltwater habitats.
3. Describe the best places within those habitats to catch different types of fish.
4. Explain different ways and times to fish for different types of fish.

### **Equipment/Materials:**

1. TPWD Habitat Mats – freshwater or saltwater
2. Fish cut-outs or small fish models of different species that would normally be found in those habitats
3. Optional materials (ie small rocks, twigs, mussels, oysters, etc.) to represent different structures that can provide good cover and that would attract different types of fish

### **Optional Materials:**

1. Examples of different types of terminal tackle, lures and other fishing equipment used for different types of fishing
2. For extension lessons, you can also include materials to represent docks, homes, buildings and other man-made structures that may be used to do extension activities.

### **General Procedure:**

1. Spread the habitat mat out on a table or floor so participants are able to gather around and see the habitat mat.
2. If providing elements to add to the habitat mat, give those to the participants at this time, giving participants an opportunity to explain how those elements improve the habitat for fish.
3. Ask students to look at the habitat and describe different features (ie. for the lake it would be an island, a cove, the dam, where the deeper areas are located, the shallower areas and where the streams flow in and the river flows out. You might even talk about the watershed around the lake.)
4. Ask participants to identify some of the common species of fish that they might encounter when fishing in that type of habitat.
5. Tell the participants to review the habitat and decide where those fish might be located and why they might be in those locations. Ask participants to place the fish cut-outs or models in those locations.
6. Use this time to also discuss when to fish for different types of fish. You may also discuss the particular behaviors of different types of fish and how those behaviors help it to survive. Knowing those behaviors also help you know the best methods and equipment to use to catch those particular species of fish.

7. Show examples of different ways to rig your tackle, different lures to use and different ways to fish for each type of fish that you have introduced.

## **EXTENSIONS:**

Introduce concepts dealing with human impacts and environmental stewardship

1. To introduce the idea of human impacts on fish habitat, use materials to represent buildings, boats, picnic areas, roads, etc.
2. Ask participants how human activities can impact fish habitat. (This discussion can include both positive and negative impacts, with an emphasis on what individuals can do to reduce negative impacts and increase positive impacts. The discussion can also include the concepts of point source pollution and non-point source pollution. By showing how rain can wash small amounts of pollutants from roads and other man-made structures, you can illustrate non-point pollution. By illustrating what can happen if someone dumps trash, oil or other refuse on land near a water body or in the water body itself, you can illustrate point source pollution.)

Introduce concepts dealing with habitat and fish management

1. Ask participants what would happen if there were no limits on the number and kinds of fish that a person can catch. Who develops the regulations for fishing? How do biologists know what limits will achieve their management goals?
2. Discuss the idea that Texas Parks and Wildlife biologists spend a great deal of time investigating and studying aquatic habitats and fish all over the state with the goal of insuring that the habitats are healthy and that fish populations are also healthy. They work with private and public landowners, providing information and developing methods to improve aquatic habitats. Sometimes, when pollution incidents occur, wildlife biologists can help track down what caused the pollution and make recommendations about how to clean up the pollution. In some cases, polluters are given citations or even taken to court to obtain compensation for the damage that occurred because of the pollution.
3. This work that biologists do is supported by a grant from the federal government through the Sport Fish and Restoration Act. This Act of Congress set up a fund paid for by taxes on sporting goods and motor boat fuels. Each state is apportioned a share of those funds to use for aquatic habitat management, for fish stocking and for aquatic education. Folks who use aquatic habitats and enjoy fishing actually help pay for the work done to keep aquatic habitats healthy.

Introduce food chain and food web concepts.

See "The Creek Café" lesson plan.