



PROJECT OCEANOLOGY



Nearshore Fish Population Game

This game is modeled after 'A Day in the Life of an Estuary', a game developed by New Jersey Sea Grant Consortium and the NJDOT Office of Maritime Resources.

Objectives: Following completion of this lesson, students will be able to:

1. Describe factors that might increase or decrease fish populations in estuaries
2. Identify which factors have the greatest impact on fish populations
3. Identify which factors are natural and which factors are human-caused
4. Describe two effective strategies for protecting fish populations in estuaries

Materials: Paper Fish (can also use goldfish crackers), Game Card Sets (one set of each per team).
Although fish diversity is not the focus of this activity, using the paper fish provided can help familiarize students with the names and images of local nearshore fish.

Set up for Game:

Divide students into teams of 4-5, with one student designated as the Fish Banker and card holder. Teams should sit around a desk or table, and place 10 fish on the table. The Fish Banker holds additional fish (20-30) and the deck of game cards.

Play:

Each student draws a card in turn, reads it out loud, and completes the action. The game continues until all cards have been drawn OR the "estuary" (represented by the desk or table) is depleted of fish.

Teacher note: the game is designed so that if card order is randomized, about half the groups will deplete their estuaries, while the other half will not.

Discussion Questions:

See next page. This can be handed out as homework, used in-class for small group discussions, or posed to the class as a group after the activity.



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Nearshore Fish Population Game Discussion Questions

1. What two factors had the strongest positive impact on the fish populations in your estuary? For each factor, explain why it helped:

Factor 1:

Factor 2:

2. What two factors had the strongest negative impact on the fish populations in your estuary? For each factor, explain why it hurt:

Factor 1:

Factor 2:



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3. Sort your cards into two stacks – one for changes caused by humans, and one for changes that are the result of natural causes. Does human activity play a major or minor role in the ecology of your estuary? Explain your reasoning.

4. Imagine you are a conservation biologist trying to protect the estuary. Your time and resources are limited, so you can only choose one action to take. What would you do, and why?