

The Multiple Uses of Estuaries:

Teacher's Instructions for Map Activity

1. The map of coastal Louisiana is divided into two numbered sections for ease in Xeroxing. Copy each section and, if desired, tape the sections together before giving the maps to the students. You may want your higher-level students to tape the maps themselves. Copy the sheet of symbols also, making one copy for each student.
2. Suggest that the students work in groups of two or three. Each group should receive one map. Each student in the group should receive one page of symbols, so that each symbol can be used a number of times. These symbols can be cut by the students.
3. Discuss with the students the meanings of the symbols and their importance in coastal Louisiana (see following section).
4. Allow students to discuss in their groups where the symbols should be placed on the map. Each group should prepare a trial map so that you can check the accuracy of placement. For the trial map, have your students use tape instead of glue so that symbols can be moved. Let each group present its work to the class, giving reasons why the symbols were placed where they were.

Symbols

1. Bridges: South Louisiana has a number of major bridges that are important to commerce. Among these are: New Orleans—the Greater Mississippi River Bridge, the Huey P. Long Bridge, and the Pontchartrain Causeway; Baton Rouge—the I-10 Bridge across the Mississippi River; the Atchafalaya Basin Bridge; Lake Charles—the Calcasieu River Bridge; and the Sunshine Bridge near Donaldsonville.
2. Recreation: Recreational activities in coastal Louisiana include fishing, camping, hunting, boating, and swimming. Some major locations for these include the following:

Lake Pontchartrain: *swimming, boating, fishing*

Grand Isle and lower Bayou Lafourche area: *freshwater and deep-sea fishing, camping, boating, hunting, swimming*

Vermilion Bay: *boating, fishing, hunting, camping, and swimming (at Cypremort Point beach)*

Cameron Parish coast: *fishing, camping, boating, hunting*

3. Oysters: Among the sites where oysters are cultivated are Lake Borgne, Chandeleur Islands, Breton Sound, Barataria Bay, and Calcasieu Lake. Oysters can thrive in both brackish and salt waters.
4. Shrimp fleets: Shrimp boats trawl out in the Gulf of Mexico.

5. Shrimp nursery grounds: Shrimp spawn in the ocean, but later the larvae invade the coastal marshes where they thrive for several months. As juvenile shrimp, they then move back into open water to complete their life cycle. Examples of important estuarine areas for shrimp nurseries include Barataria Bay, Terrebonne Bay, Atchafalaya Bay, Vermilion Bay, and Calcasieu Lake.
6. Birds: Coastal Louisiana provides year-round habitat for a wide variety of native birds, including egrets, pelicans, and ibises, as well as a winter home for two-thirds of the Mississippi Flyway's water fowl, like many species of ducks and geese. These birds can be found throughout estuarine areas in southern Louisiana. Bird refuges include Avery Island, near New Iberia; the Rockefeller Refuge in Cameron Parish; the Marsh Island Refuge on Vermilion Bay; and the Delta National Wildlife Refuge near Pilottown in Plaquemines Parish.
7. Shipping: Major deep-water ports in coastal Louisiana include New Orleans, Baton Rouge, and Lake Charles, which handle enormous amounts of cargo each year. These ports import raw materials such as petroleum and ores, and export grains from all over the nation.
8. Louisiana exports include rice and forestry products.
8. Housing: In addition to the major metropolitan areas of New Orleans, Baton Rouge, Lake Charles, and Lafayette, busy residential and commercial developments have grown up around estuarine areas like Timbalier Bay, Terrebonne Bay, and Atchafalaya Bay.
9. Industry: Estuarine areas attract most industry because of ease in shipping foods, the availability of water for power, and the abundance of natural resources like oil, natural gas, and marine life. Petrochemical plants, ore-processing plants, and manufacturing plants can be found along the Mississippi River corridor between New Orleans and Baton Rouge; near Lafayette, Houma, Lake Charles, and Morgan City.
10. Fish: Besides recreational fishing for such species as trout, bass, perch, mackerel, red snapper, and flounder, commercial fishing is important in Louisiana. Menhaden, for example, an estuary-dependent species, is the leading fishery in the state and produced 1.28 billion pounds in 1980. Fish inhabit estuarine areas throughout southern Louisiana as well as the Gulf of Mexico.