# Survival in an Estuary

#### Life in a Transition Zone









As you view the images that follow, observe the environmental conditions for species that live in the estuary. Be prepared to describe physical conditions for one species. Consider conditions such as temperature, space, other species, weather, and water flow.



# What is an estuary?

An estuary is a partially enclosed body of water where two different bodies of water meet and mix (e.g. fresh water from rivers or streams and salt water from the ocean, or fresh water from rivers or streams and chemically distinct water of a large lake).



### Estuaries

Estuaries are formed where fresh water meets and mixes with ocean water.

Estuaries are found where rivers meet the sea.

Estuaries are found where rivers meet chemically distinct lakes.







- Each estuary includes a variety of habitats.Some may be bordered by marshes.
- Estuary features such as swamps or lagoons form behind barrier islands and beaches.







Bays, harbors, sounds, and inlets are all estuaries.

Bayous are formed by channels of slow moving water leading from a river or lake.







 Salt marshes form in estuaries in areas protected from highenergy waves.



Tidal flats are part of many estuaries.Oyster and clams are harvested here.



Mangrove forests
 surround wetland
 areas in southern
 estuaries.

In mountainous areas, estuaries may be found in seaside fjords.







## **Estuary Life**

Many types of plantsgrow in estuaries.One of the mostcommon is cordgrass.

Eelgrass is another common plant that grows in brackish water.







Many bivalves, such as oysters (above), and mussels (below), inhabit estuaries.







Blue crabs are harvested to eat.

Diamondback terrapins are the only turtle that lives in brackish water.







- Killifish thrive in estuaries.
- Alewives live in salt water but move through estuaries and into rivers to spawn.
  They are a favorite prey species for salmon and many other predators.







- Coho salmon migrate
  up rivers to spawn
  each year, returning
  to the area they were
  spawned.
- Great blue herons feed on fish and amphibians living in estuaries.





