

Marsh Walk

A community is frequently defined as the living component of an ecosystem. A beach ecosystem consists of all the living organisms there plus the non-living components of the beach such as the sand, sun, and surf. An estuary is a water passage where the ocean tide meets a freshwater source (river current, water table seepage). Salt marshes are part of the estuarine environment, characterized by large flat tracts of land protected from the direct wave action of the tide.

Within a community, organisms interact with each other in various ways. Of primary importance is how they divide the available energy resources (food). Through photosynthesis, the plants in a community produce the food on which the animals depend. The animals in turn eat the plants or eat each other. Dead organisms are ultimately decomposed, releasing and recycling nutrients through the community.

The intertidal and shallow waters at the edge of the sea are very vulnerable to the effects of human activity. This is particularly true of estuarine communities, which are directly affected by the river runoff of populated upland areas.

Although each community is composed of a unique assemblage of organisms, communities do not live isolated from one another. They exchange food and nutrients as well as pollutants and pesticides.

OceanQuest staff will include the major concepts listed below in the marsh/beach walk. Hopefully your students will connect to the natural world by making themselves part of that world. The staff at OceanQuest believes that a personalized approach to "scientific" learning will make them aware of the vital role THEY play in the health of the world.

Major concepts:

- **Adaptation:** Find an example of a bodily adaptation (plant or animal) that enhances survival in a harsh environment. Describe how an animal's behavioral adaptations can increase its chances for survival.
- **Change:** Describe changes that may occur during a day, year or long-term geological basis. Describe how these changes will affect an animal or plant.
- **Habitat:** Find two or three microhabitats and explain how they differ. Describe an organism likely to live in each environment.
- **Ecosystem:** Explain what makes the coastal environment unique to other environments. List five animals and three plants found in each coastal environment.
- **Energy Cycle:** Explain the significance of the sun to the shore environment. Explain why the death of any organism is a necessary part of living.
- **Human Impact:** Give examples of human impact on the shore, both positive and negative. Suggest how humans can lessen negative or strengthen positive impacts.
- **Interdependence:** Describe an animal and/or plant relationship on the shore or in the marsh that demonstrates interdependence. Find a section where an interdependence link has been broken, and identify the cause of the disruption.