Wetlands Race:

An introductory activity to estuarine habitats

Objective

Use this game as a fun way to introduce the topics of wetlands, estuaries, or seagrass. The grass can represent different habitats like wetlands (salt marshes) or seagrass beds (submerged aquatic vegetation).

Materials

- Predators= 2 clothes pins
  - Clothes pin labels:
    - Predator 1: Great Blue Heron
    - Predator 2: Snowy Egret
- Habitats= 2 large pans
  - Habitat labels:
    - Wetland
    - Drained Wetland
- Fake grass to cover the bottom of one of the cake pans
- Prey= multi colored pom poms or beads
- Key of Prey Species, each color assigned a different estuarine prey species

Duration

5-15 min

Ages

Any grade

Vocab

Predator, prey, wetland, habitat, adaptation, seagrass, estuary, species, pollution

Procedure

Invite two students to the front and have them choose a predator clothes pin and a habitat. Explain what each piece of the game represents (predators, prey, habitats). Time the two students for 30 sec and see how many prey species they can transfer from the habitat into the predator stomach using the clothes pin like a beak. Ask students to observe the challenges of eating prey in each habitat. Is feeding in the drained wetland harder or easier? Where would prey species have a higher likelihood of survival? The student with the drained wetland should have eaten more prey in the time given. Ask how changes in the environment (like draining a wetland) impact different animal species.

Explanation: Estuaries serve as a refuge meaning they provide shelter for fish and shellfish at various life stages and a place for plants and animals to attach. As a nursery, they also provide foraging habitat suitable for development of juvenile life stages of fish, shellfish, and crabs. These babies are more protected from predators than in the open ocean and can safely search for food.

Habitat loss: An animal's habitat is its home. Habitat loss can lead to a decreased population of plants or animals. Wetlands, one of the most important types of habitat, are threatened all around the Albemarle-Pamlico watershed. They are filled in for development, drained for agriculture or dredged for marinas. More than half of US wetlands have been lost since the 1600s. Wetlands become "drylands" when people fill them, build dams, or divert the water that feeds these areas. Some animals can adapt to these changes but many others cannot. This game shows how vulnerable many species become when their wetland habitats are drained. Other wetland functions include flood control, storm buffer, nutrient removal, nursery, home for animals, and recreation.

Submerged Aquatic Vegetation variation:

Underwater grasses or submerged aquatic vegetation (SAV) are plants that grow underwater. They are similar to sea grass but grow in the shallow, brackish waters of the sounds and its tributaries. This activity could also be used to represent underwater environments. In this version, label the wetland as a seagrass bed and the drained wetland as a sandy bottom. Pollution degrades water quality in the sounds and rivers resulting in declines of seagrass. SAV provide habitat, food and shelter for many species of aquatic life. Changes in this species are likely to affect other aquatic species. For example, juvenile fish and crabs hide in the grasses to protect themselves from predators. SAV also absorb nutrients and sediment pollution and can act as a gauge of water quality.

Key of Prey Species (example):

Shrimp (pink)

Common mummichog (orange)

Blue mussels (blue)

Steamer clam (white)

Horseshoe crab (green)

Goose barnacles (teal)

Blue crab (purple)

This activity goes well with APNEP's lesson plan NC's Underwater Grasses!
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