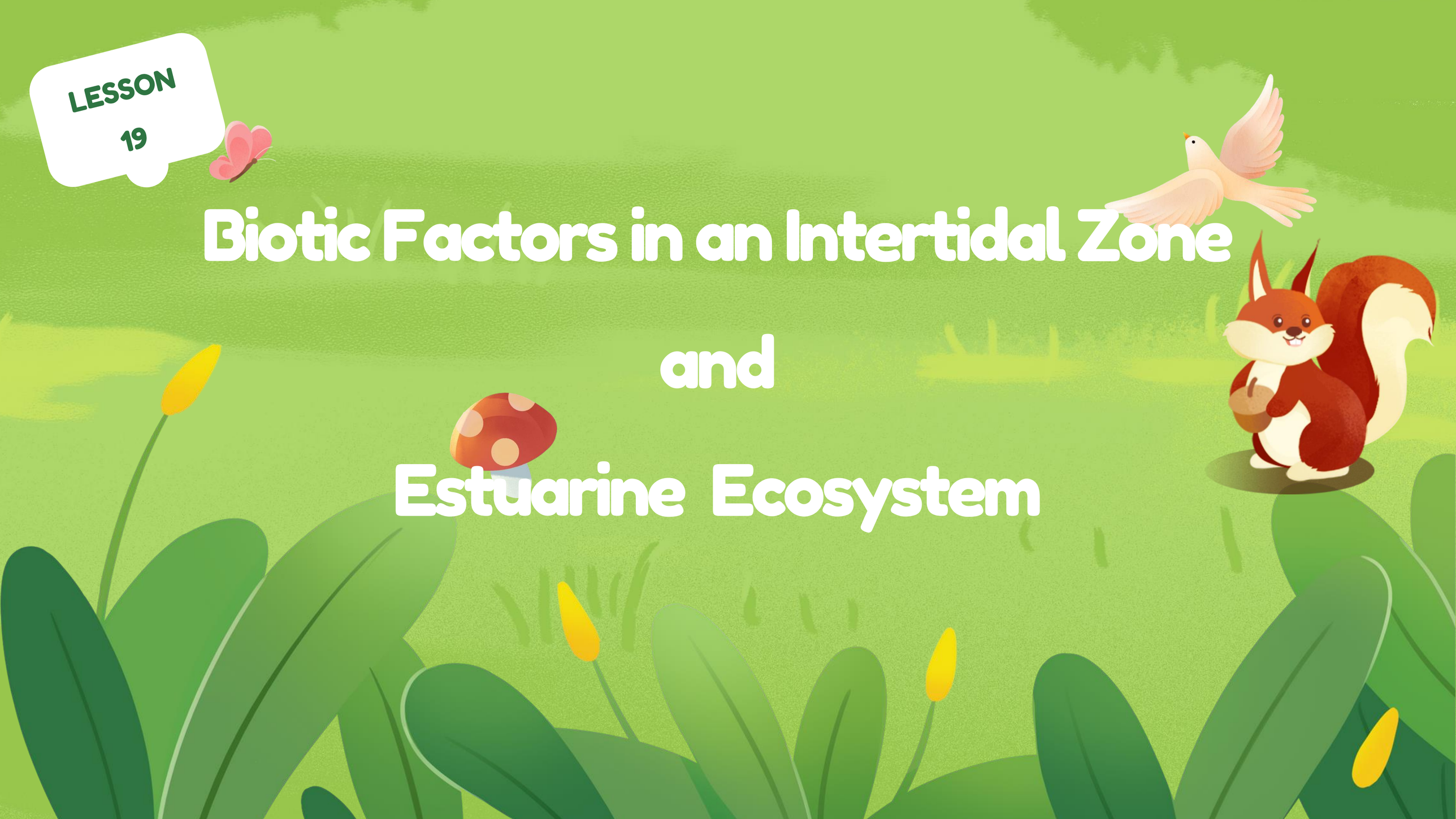
LESSON 19

Biotic Factors in an Intertidal Zone and Estuarine Ecosystem



You have learned from the previous lesson that nonliving or abiotic factors can affect an ecosystem. However, ecosystem are not solely dependent on these factors. The living or biotic factors also have an effect to ecosystems.

Biotic factors in an ecosystem such as intertidal zone and estuary are composed of all plants, animals and microorganisms living in it. These organisms live in different habitats found in intertidal zones and estuaries. These includes coral reefs, salt marshes, mud flats, rocky shores, and mangrove forests.

CORAL REEFS - are the areas of estuaries which part of the subtidal zone where biodiversity is rich. Biodiversity refers to the abundance of different living organisms living in an area. Coral reefs provide shelter to thousand of fish. The coral themselves are animals that feed on plankton. These corals forms reef that protect the coast from strong waves and currents. However, coral reefs are very sensitive. An abrupt change in water temperature may cause deaths to sea animals.

SALT MARSHES - are areas in the estuary that are filled with seawater during high tides and are drained during low tides. They are marshy because they are filled with decomposing plant matter. Organisms found in salt marshes are clams, mussels, oyster crabs, snails, and shrimps. Plant found in salt marshes are sea grasses and other plant that are tolerant of saltwater. Salt-tolerant plants are called halophytes.

MUD FLATS - or tidal flats are areas in estuaries where mud from the seas or rivers is deposited. They are usually the areas for migratory birds, crabs, sand dollars, mussels, clams, mollusks, shellfish, and some fish. Algae, like sea lettuce and sea spaghetti, provide food for the herbivores in this area.

ROCKY SHORES - are areas in estuaries where solid rocks are found. Animals found in the rocky shores are plankton, brittle stars, starfish, hermit, crab, barnacles, limpets, mollusks, periwinkle, shore crabs, shrimps, and prawns. Sine many of the organisms in the rocky shores are herbivores, seaweeds provide food for them. Large predators in the rocky shores are fish and migratory birds.

MANGROVE FORESTS - are areas in the estuary that are filled with mangrove trees. These trees have adapted to saltwater. Mangroves protect the coasts against erosion caused by waves, winds, and tides,. They also protect coral reefs and seagrass beds from silting or deposition of sand. Mangrove forest are also breeding grounds for different kinds of fish and shellfish. Other organisms found in the mangrove ecosystems are algae, barnacles, oysters, shrimps, lobsters, and crabs.

How are intertidal and estuarine ecosystems affected by man's activities? Deforestation, land and water pollution, burning of fossils fuels, and other activities by the man may harm these ecosystems, causing them to be unbalanced.