

Coastal Habitats



Beaches and Sand Dunes

What is sand?

Sand is made up of small, loose pieces of rock, soil, minerals, and even gemstones. It may also contain the remains of living things.

Sand particles, called grains, are smaller than gravel. They are larger than particles of mud or clay.

Sand grains can be described by their size, color, and shape as well as the way they feel to the touch. Some grains are hard, while others are softer. Some are jagged or rough. Others are smooth and polished. Sand particles may be flat, oval, or round in shape and small, medium, or large in size. Looking at sand under a microscope gives many clues about where it came from and how it formed.



Where is sand found?

Sand is found in many places all over the world. It collects at beaches and in lakes and rivers. It lies at the bottom of oceans. In some deserts and on some beaches, the wind blows sand into large hills called dunes. Sometimes sand gathers at the openings of deep canyons.

Because sand grains are so small and light, they travel more easily than most other kinds of rock. Wind, water, and ice can carry sand far away from the place where it first formed.

Animals that live in sand!

Many animals live in the sand to protect themselves from heat, rain, predators and other dangers. Some animals live in the sand close to the water, while other animals inhabit sand dunes at some distance from the nearest body of water. There are many animals that live in or around coastal beach shorelines including birds (seagulls, pelicans, penguins), mammals (seals), reptiles (sea turtles), molluscs and crustacean (crabs).



Animals that depend on sand for survival!

A female sea turtle and how she lays her eggs is a great example of how sand plays a vital role ensuring the survival of the sea turtle species.

A female sea turtle crawls above the high tide line across the beach to find a protected spot to lay her eggs. Using her front flippers, she digs out a "body pit." Then using her hind flippers, she digs an egg cavity. The depth of the cavity is determined by the length of the stretched hind flipper and can be up to 1m deep.

A female deposits 50 to 200 (depending on the species) Ping Pong ball shaped-eggs into the egg cavity. The eggs are soft-shelled, and are papery to leathery in texture. They do not break when they fall into the egg cavity. The eggs are surrounded by a thick, clear mucus.

The female covers the nest with sand using her hind flippers. Burying the eggs in sand serves three purposes: it helps protect the eggs from surface predators; it helps keep the soft, porous shells moist, thus protecting them from drying out; and it helps the eggs maintain proper temperature. Experts can identify the species of turtle by the type of mound left by the nesting female and by her flipper tracks in the sand.



Sea turtle eggs!

