

## Sand Critters [MS]

\*Adapted from New Wave of Learning\*

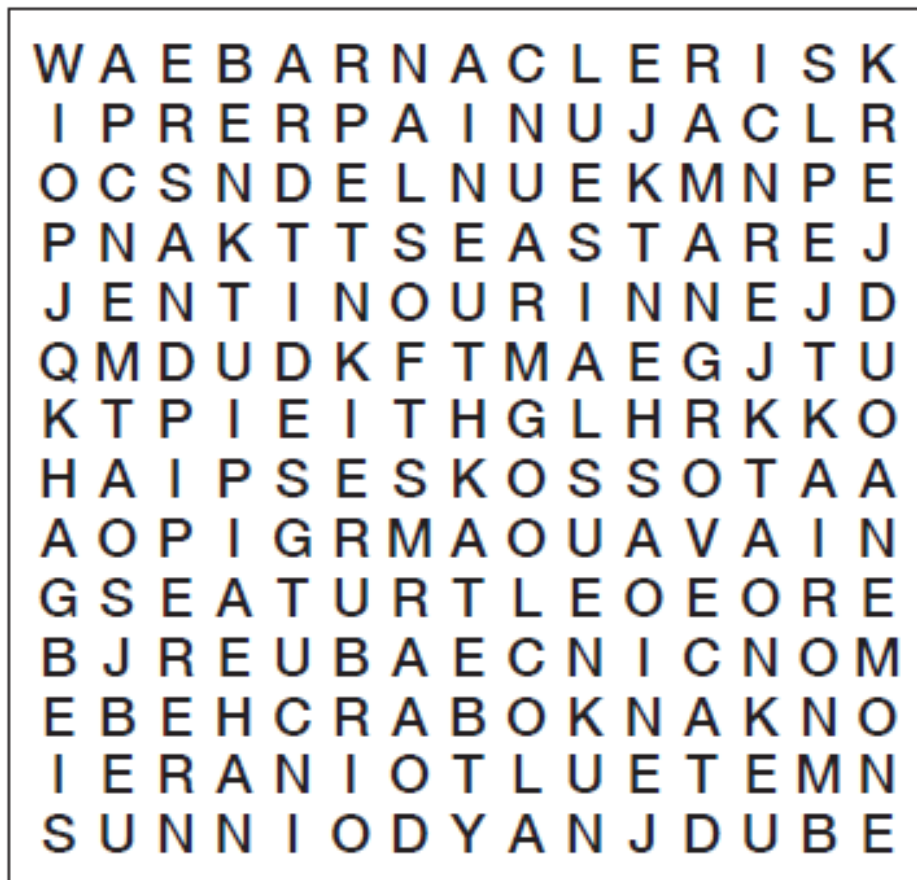
**Grades:** K-2

**Time:** 45 minutes to 1 hour

**Goals:** To demonstrate which organisms have adapted to survive the unique conditions of a barrier beach.

**Objectives:**

Students will be able to: identify sand-dwelling organisms; understand how their bodies have adapted to where they live; and describe the parts of the beach where they live.



**Find the shoreline terms below in the word search.  
They can be horizontal or vertical.**

- |              |               |
|--------------|---------------|
| 1) SANDPIPER | 5) TIDES      |
| 2) CRAB      | 6) ANEMONE    |
| 3) SEASTAR   | 7) BARNACLE   |
| 4) MANGROVE  | 8) SEA TURTLE |

**Key Words:**

Dunes

Nearshore

Sand fleas

Backshore

Ghost crabs

Tubeworms

Foreshore

Mole crabs

Coquina clams

**Background Information:**

\*Adapted from Beaches and Dunes\*

Animals have adapted themselves to living not only underground, but very close to the water table on barrier islands. Because the habitat is always shifting, these organisms must be able to cope with water, salinity, temperature, and sand variation. They are also susceptible to beach erosion, storm surges, and large storms such as hurricanes.

These species live in and among the sand grains, burrowing deep and creating complex cavities under the surface of the sand. They are small, relative to species that live above ground, and rely on the water table for their food, usually in the form of planktonic species and nutrients. Their bodies are equipped with small digging legs as well as mouthparts used for sifting through sand grains and water for prey.

These invertebrates will most likely be found nearer to the water's edge in the intertidal zone. Beach hoppers, mole crabs, and sand fleas dig holes in the sand to escape the midday heat and when the sand has dried up during low tide. They come closer to the surface during high tide and in the evenings when the sands are cooler.

Tubeworms and coquina clams are ideal intertidal zone inhabitants because they have outer protective encasings to keep them from drying up in the summer heat. Like their larger counterparts, coquina clams are much smaller and will burrow underground right at the water's edge so they maximize their feeding times. Tubeworms create calcium carbonate tubes and will stretch their featherlike tentacles out into the water to capture microscopic prey. When the tide is low or the sand hot, they will retreat into their tubes to await the next tide. Birds with long beaks, such as sanderlings, will usually probe the mud for them.