

What's the Big Idea about Marine Biology? Creatures and Ecosystems in the Ocean

This text is provided courtesy of *O*logy, the American Museum of Natural History's website for kids.

There Are So Many Ways to Live in the Sea

Forests and prairies are examples of ecosystems on land. An ecosystem is a community of living things. Members survive by interacting with each other and with their environment. At first glance, the ocean seems like one big ecosystem.

Look below the surface and you'll see that there are lots of different kinds of ocean ecosystems — more than on land — all teeming with life. Ocean ecosystems depend on each other for survival.

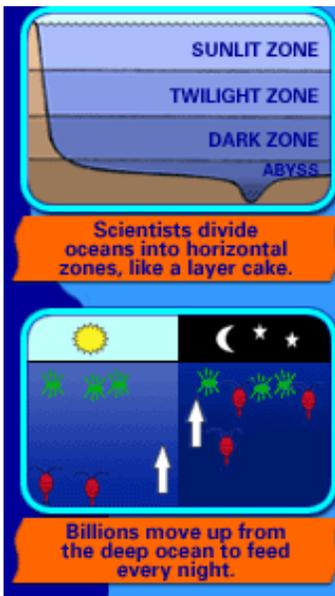


Illustration Credit: Eric Hamilton (top); courtesy of Debbie Steinberg, Virginia Institute of Marine Science (bottom)

Ocean Layer Cake

In the ocean you see a much greater variety of creatures if you move up or down than by moving from side to side.

The sunlit zone, near the top, is rich in life. Algae bloom here, providing huge quantities of food for the animals that live here, and for the billions of deep-sea animals that rise to feed here every night and then return to the deep at dawn. This vertical migration is the largest mass movement of life on Earth. And it happens every night!

As you dive deeper, to the colder, darker twilight zone, there's less life. Zooplankton and sea snow provide most of the food for the animals that live here.

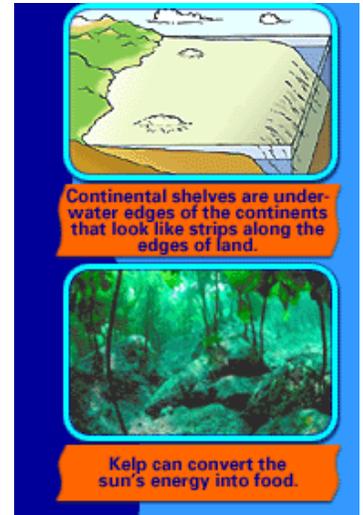
Way down deep is the icy-cold dark zone, where signs of life are rare. The pressure of the water would crush a human. It's pitch-black here because no sunlight penetrates. The only light is provided by bioluminescence — glowing lights on animals' bodies.



Photo Credit: courtesy of NOAA, Heather Dine (top); courtesy of Florida Department of Environmental Protection (bottom)

Life on the Edge

Ecosystems such as coral reefs, mangroves, kelp forests, and estuaries are found along the continental shelves. Eighty percent of all sea life lives here. Why? Because shallow water and closeness to land provide the conditions needed to support large quantities of life: food, light, and shelter. Algae, like kelp and phytoplankton, contain green, brown, and red pigments that enable them to convert the sun's energy into food.



Credit: Eric Hamilton (top illustration); courtesy of Ian Skipworth (bottom photo)

Name: _____ Date: _____

1. If you dive deeper into the ocean will you find more life or less life?

2. Eighty percent of all sea life is found in ecosystems along the continental shelves. Why is this the case?

Support your answer with evidence from the text.

3. What is the main idea of this text?