

OCEAN DIVE

MATERIALS

- 2 small containers (e.g. test tubes, small salad dressing size containers, mason jars or shot glasses. 2 identical items are ideal)
- Red and blue food coloring
- Large clear container (e.g. large vase, empty fish tank)
- Water



ACTIVITY

1. Fill vase or fish tank with room temperature water and let sit on a counter.
2. Using one small container, add four drops of red dye and fill to the top with very hot water from the tap. Mix well (*you want a strong color*).
3. In the second small container add four drops of blue dye and fill to the top with very cold water from the tap. Mix well.
4. Gently lower the red container inside the vase, keeping the water in the container. Tip over the red container once it is all the way to the bottom.
5. Next, gently lower the blue container inside the vase, keeping the water in the container. Slowly pour the blue colored water in near the top of the vase.
6. Observe! What do you notice?

WHAT HAPPENED?

The sun is part of the reason we have different zones in the ocean. The sunlight zone is the top zone close to the surface. This is where most of the animals live and is only a small part of the total ocean volume. The sun warms the water near the surface. In our activity, this is represented by the red water at the top of the vase. Warm water is less dense than cold water and rises to the top.

The cold, dark zone at the bottom is referred to as the midnight zone. Animals here never see daylight and have to deal with lots of pressure and cold. In our activity, this is represented by the blue water at the bottom of the vase. Cold water is more dense and sinks to the bottom.

And at the middle, we have our twilight zone! Not quite dark, but not very light either.

Can you connect each animal to the zone where it lives?

SUNLIGHT

TWILIGHT

MIDNIGHT

Turtle
Sea star

Shark
Stingray

Octopus
Eel

Lobster
Isopods

Angler fish

Where do the most animals live? Why?
