Environmental Science AMI 4

Features of the Ocean

People usually think of land as making up most of the Earth. Yet 70 percent of the Earth is covered by water. Most the Earth's organisms live in the ocean.

An ocean current is a mass of water that flows like a river through an ocean. Most currents are caused by winds that blow steadily in the same direction. These winds push water along with them. The rotation of the Earth also affects the direction of currents. It causes them to move in circular patterns.

A current of warm water flows through the Atlantic Ocean. This current is 30 miles wide. It is a different color than the ocean water around it. It is also warmer because it flows from the Gulf of Mexico, near the equator. This river of water is the Gulf Stream.

The Gulf Stream current sweeps north along the eastern coast of the United States to Newfoundland. There it meets the North Atlantic Current, which moves east across the Atlantic Ocean toward Europe.

Currents that are formed by winds are all surface currents. They flow near the surface of the oceans. Another kind of current is an undersea current. An undersea current is caused by a difference in the densities of ocean water.

A density current is caused by cold, salty water sinking below warmer water. Cold water is denser than warm water. Salt water is denser than fresh water. Water that is cold and salty is very dense and sinks. Warner, less salty water rises.

1. How much of Earth is covered by water?

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2. What is an ocean current?

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3. What causes currents to move in circular patterns?

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4. How does the Gulf Stream current move? (describe in full detail)

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5. What causes an undersea current?

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