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# The Value of the Deep Sea and Its Resources

Read the information below. Highlight or underline any terms or phrases that are new to you.

The Mariana Trench lies almost seven miles below the surface of the ocean. In this trench and in other parts of the deep sea, scientists have discovered resources, such as bacteria, minerals, and animals. These resources may offer solutions to some of the problems humans face today.

## **A Source of Energy**

Scientists believe that the ocean floor may contain gas hydrates. Gas hydrates are ice-like substances. They form at high pressure and low temperatures. They are beneath the ocean floor and under Arctic permafrost. Scientists believe they could be used as a fuel alternative to oil. And there appear to be enough hydrates to make up a larger energy source than the world's gas, oil, and coal. Crude oil can also be found below the ocean floor.

## **A Source of Ingredients for Medicines and Health Products**

Scientists have found a variety of substances in deep-sea coral and sponges that may help to save lives. Scientists isolated discodermolide from a sponge. It may help cure cancers that are resistant to other drugs. Topsentin is another compound from sponges. It can be used to treat arthritis, inflammations, Alzheimers, and colon cancer. Deep-sea coral can be used for bone grafts in the human body. Bamboo corals are an important source of collagen. Collagen rebuilds tissues. It can also control the release of medications in your body. Scientists are also studying deep-sea animals that may provide other health benefits.

## **A Mining Area**

Hydrothermal vents shoot out boiling water. This water deposits silver, gold, copper, manganese, cobalt, zinc, and other minerals on the ocean floor. The high concentrations of minerals are prompting some companies to pursue deep-sea mining, despite the challenges and the likely environmental damage to the surrounding areas.

## **A Source of Drinking Water**

Private companies in Hawaii are pumping up water from the deep sea. They remove the salt so that it is drinkable. Then they sell it as bottled water. These companies boast that this water is rich with minerals and unpolluted. New technology is now making it cheaper to remove salt from water.

## **A Dumping Zone**

Every day, humans burn fossil fuels. This releases greenhouse gases, like carbon dioxide, into our atmosphere. This is the leading cause of global climate change. One way to reduce climate change without reducing energy consumption is to stop excess carbon dioxide from entering the atmosphere. Scientists believe that the deep sea could become a dumping ground for carbon dioxide produced from burning fossil fuels. This gas could be injected into seabed sediments. The high pressure and cold temperatures could trap the gas for millions of years.