A Salty Problem

For some people, a cool drink is as close as the nearest faucet. For others, though, getting clean, fresh water is not that easy. Some areas may not get enough rain. Wells that pump water from under the ground can run dry. Growing populations drain their water supply. Today, more and more places in the world do not have the drinking water they need.

Some people think our oceans might be the answer. In fact, oceans hold about 97 percent of all of the world's water. There is a big problem, though. Ocean water is full of salt, and drinking it makes us sick. Salt water is also unsafe for most plants, so farms cannot use it to water crops. Scientists have discovered ways to change salt water into fresh water. Called *desalination*, it was first done in ancient Greece. In the 1930s, desalination was finally tested on a larger scale.

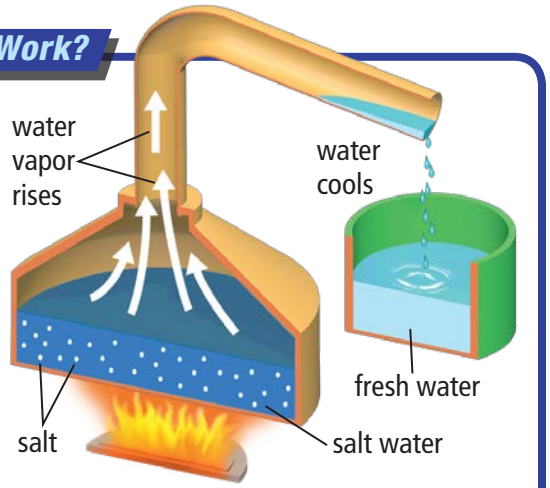
People around the world desalinate salt water. However, it makes less than 1 percent of the fresh water people need. There are two methods, and two main problems with both.

First, both methods require a lot of energy to remove the salt from the water. This makes them expensive. Second, both leave behind brine, a thick mixture of salt and water. Brine is sometimes dumped back into the ocean. This is terrible for the environment.

Someday, desalination may help meet our demand for fresh water. However, it still presents problems that scientists are working hard to solve.

How Does Desalination Work?

The first method boils salt water until the water turns into vapor. When the vapor cools, it turns back into water, leaving behind the salt.



The second method uses pressure to force salt water through a special filter that separates the salt from the water.