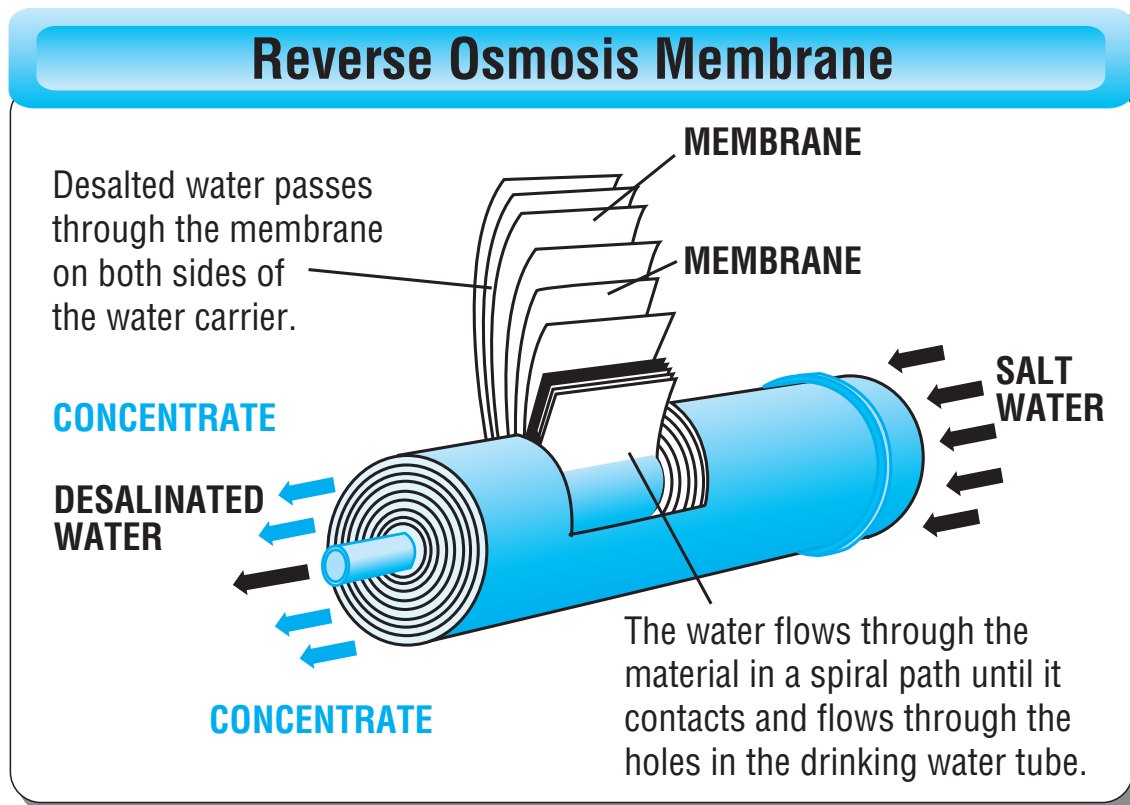


What is desalination?

Finding new sources of water to meet our area's increasing water needs is a challenge. One option to meet this challenge in the future is saltwater desalination. Basically, desalination is the process of removing salt and other minerals from water. Through the removal of these elements, we could develop a droughtproof water supply.

What technology is used for desalination?

The leading technology used in desalination of seawater is called reverse osmosis. This process uses high pressure to force salt water through long, tubelike membranes. Several layers of material located in the membranes remove salt as the water passes through, leaving behind only the salty concentrate.



The Gulf of Mexico will not dry up even during droughts, so seawater desalination is one possible solution to west-central Florida's need for water.

Classroom Activity

Not all people are in favor of seawater desalination. List three reasons that could be used to persuade people that desalination is a good way to provide an alternative drinking source. Create a classroom poster that promotes desalination as an alternative resource.

Create Your Own Desalination Plant

Learning Goals

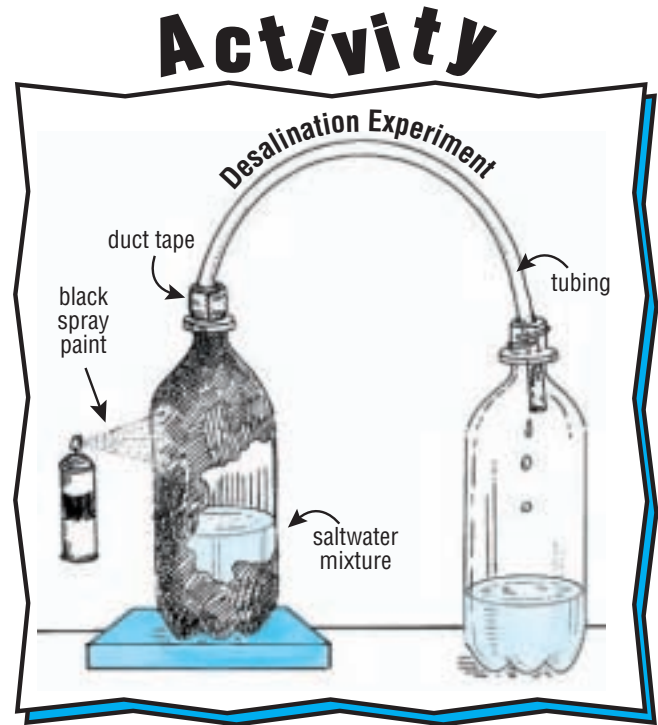
- To learn about desalination through an experiment
- To stimulate thought about alternative sources of drinking water

Subjects

- Science
- Social Studies

Activity

1. Spray paint one of the bottles black.
2. Pour 1 quart of water in a pitcher and stir in 1/2 cup salt.
3. Pour the saltwater mixture into the black bottle.
4. Attach tubing to both of the bottles and secure with duct tape.
5. Set both bottles in a sunny window. Be sure to place the black bottle higher than the clear bottle.
6. For the next few weeks, examine the bottles each day and record your observations. (See sample observation chart below.)
7. Discuss the results.



Adapted from *The Water Sourcebook*

Materials

- two 2-liter bottles
- black spray paint
- duct tape
- one foot of 1/2" diameter clear plastic tubing
- water
- salt
- pitcher

Desalination Experiment



Date	Weather Conditions	Observations

SAMPLE

Discussion Questions

1. How long did it take for water to begin moving through the tube and into the clear bottle? What conditions would have caused the water to move sooner?
2. How many days did it take for all of the water to move into the clear bottle? What substance remained in the black bottle?
3. What suggestions can you give to improve this experiment?