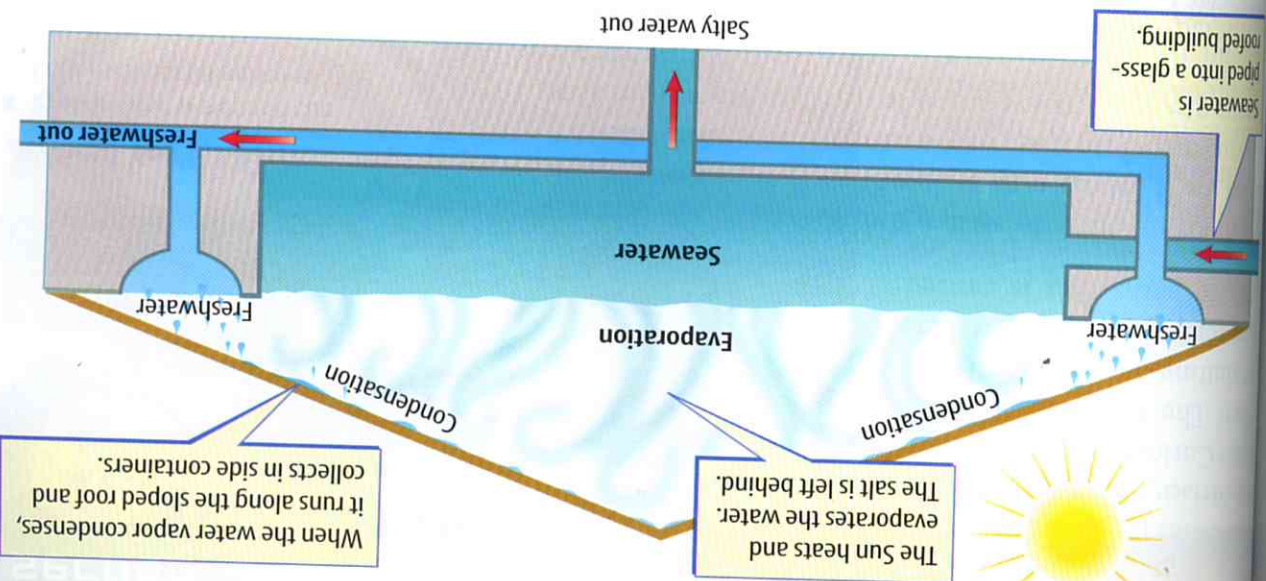


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passing it through a membrane that removes the dissolved salts.
freshwater also can be obtained by melting frozen seawater. As
seawater freezes, the ice crystals that form contain much less salt
than the remaining water. The salty, unfrozen water then can be
separated from the ice. The ice can be washed and melted to
produce freshwater.



Desalination Plants Some methods of desalination include evaporating seawater and collecting the freshwater as it condenses on a glass roof. **Figure 4** shows how a desalination plant uses solar energy to produce freshwater.

section 1 review

Self Check

1. Describe five ways Earth's oceans affect your life.
2. Explain the relationship between volcanic activity and the origin of Earth's oceans.
3. Identify the components of seawater. How do dissolved salts enter oceans? How does oxygen enter oceans?
4. Think Critically Organisms in the oceans are important sources of food and medicine. What steps can humans take to ensure that these resources are available for future generations?

Applying Math

5. Use Proportions If the average salinity of seawater is 35 parts per thousand, how many grams of dissolved salts will 500 g of seawater contain?

Summary

- #### Importance of Oceans
- Oceans are a source of food, energy, and minerals.
 - Oceans allow for the efficient transportation of goods such as oil, coal, and grains.

Origin of Oceans

- Scientists hypothesize that about 4 billion years ago, water vapor from volcanic eruptions cooled and condensed into storm clouds. Oceans formed as water from torrential rains filled Earth's basins.

Composition of Oceans

- Ocean water contains dissolved gases and salts.
- Oceans are considered to be in a steady state.