

Name: _____ Class: _____ Date: _____

Salt into Fresh Water

Learner Outcomes:

- Describe in general terms, methods for generating fresh water from salt water, based on evaporation, distillation and reverse osmosis.

Key Terms:

Distillation

Evaporation

Reverse Osmosis

Condensate

Background Information:

Salty water can be turned into fresh water using energy from the sun. The sun's energy converts salt water from the oceans into the fresh water of rain. Heat from the sun causes ocean water to evaporate, leaving the salt and dissolved minerals behind. When the water droplets cool and condense, they fall as rain or snow.

Purpose: In this investigation you will make salt water into fresh water using energy from the sun.

Materials:

Clear plastic bag

Table salt

Twist tie

Glass bowl

Procedure:

1. Dissolve approximately 1 tablespoon of salt into about 250 mL of water in the bowl. Taste the water by touching it and tasting it off your fingertip.
2. Place the bowl inside the plastic bag and close the top of the bag tightly with the twist tie.
3. Set the bag and bowl in a sunny location and leave it there for at least 24 hours.
4. After 24 hours, open the bag and touch the liquid that has condensed on the sides of the bag. Taste it with your finger and record your observations.

This investigation / activity has been adapted from:

Mah K, Martha J, McClelland L, et al. *Science in Action 9*. Toronto, ON: Addison Wesley.