

SAVE OUR SALT SAMPLES!

Time: 1-2 hours.

State Standards: Standard 5d: Students know properties of ocean water such as temperature and salinity can be used to explain layered structure of the oceans.

Topical Objectives:

- * Learn about varying salinity in ocean water.
- * Learn how to determine salinity of a sample by mass evaporation

Safety Rules:

Goggles must be worn when heating liquids.

Materials:

Different types of salt water
Beaker
Petri dishes
Scale
Pipette
Oven or hot plate

Preparation:

Scientists at the Oceanside Marine Lab are asking for your help. They have experienced a disaster. A hurricane hit the marine lab. All the water samples they had collected from their last three research trips have been soaked as they blew off into the forest behind the lab. The labels they had pasted on the plastic jars came off when they got wet. They have searched through the forest behind the lab and picked up as many intact sample jars as they could find. Most of their lab equipment was damaged in the hurricane. They need suggestions from you as to how they can identify and label the water samples once again. The samples had small amounts of toxic substances added to them at the time they were collected to prevent bacterial growth, so you cannot taste the samples. One of the research trips was to Antarctica (34.2 ppm), One was to the Mid-Atlantic ridge (37 ppm), One was to the Black Sea (22 ppm), And the last was to the Red Sea (40 ppm).

Procedure:

Go to: www.saddleback.edu/faculty/thuntley/ms20labs/MS20salinityLAB.pdf
(Pages #1-4)

Students will be given 4 unidentified water samples (#1-4) they must determine the source of each sample as given in the Preparation section.