Easy Salt Concentration Analysis Challenge*

Prep:
Collect water samples in 1 liter bottles from the following sources (label bottles with the letters A, B, C, and D only)
A. Rainwater (either use real rain water from your rain gauge or use distilled water)
B. Groundwater (from well at Kaloko-Honokohau)
C. Anchialine pool water
D. Seawater
Cut 3" x 3" squares of aluminum foil
Get one clean thin-stem pipette for each bottle of water.
Get some magnifying lenses.

Procedure:
1. Write A, B, C, and D on the aluminum foil.
2. Use the thin-stem pipettes to place single drops of each sample by the appropriate letter.
3. Place in the sun and wait for the water to evaporate. (or place the aluminum foil on an electric coffee mug warmer to speed the process of evaporation)
4. Use the magnifying lens to compare the salt residue left by each of the four water samples.
5. Have your students match the letters to the source of each water sample.
6. Have your students draw and write about their experiment in their science notebooks.

Water that evaporates is pure. Anything dissolved in the water is left behind.

*Adapted from Dr. Stephen Thompson's lab activity in CHEMTREK, p. 186-187.
"The Evaporation of Water Samples to Give Total Dissolved Solids"
www.smallscalechemistry.colostate.edu/ChemtrekTextbook/Chapter10.pdf