

**Title:**

COLLECTING SALT

**Author:**

Leslie Repp, Eulalie P. Rivera

**Grade Level:**

K-3

**Concepts:**

1. The Sun
4. Clean Water
6. Natural Resources

**Disciplines:**

1. Science
2. Social Studies
3. Mathematics

**Objectives:**

Students shall demonstrate, by weighing and recording, the daily loss of seawater to evaporation over a period of a week and that the salt crystals in the residue are cube shaped.

**Rationale:**

Collecting salt by evaporation has been practiced in many lands bordering the seas for centuries. Salt was used to preserve food before the widespread use of refrigeration. Long ago ponds on our islands functioned to provide salt to their communities.

**Materials Needed:**

Shallow container (aluminum pie or cake pan) for salt water, scale, microscope or hand lens.

**Directions/Activity:**

Ask a student to bring sea water in a quart plastic container to class. Place the water in a shallow container such as in aluminum pan provided by bakeries. Use a scale to record the initial weight of the water and container. Place the pan with the water in a window or area exposed to sunlight, keeping it in the same area until all the water is evaporated. On the Experimental Record Form each day record the weight of the water and container and determine how much evaporation took place. When all the water has evaporated, examine the salt crystals that remain. NOTE: Additional activity on work sheet.

**Discussion Questions.**

What is evaporation? What causes it? Where does the water go? What is left when seawater has evaporated?

How was pond salt collected on the islands long ago? (By picking the crystals out of the water by hand, during a dry spell).

Why is pond salt desirable? (For the trace elements it contains).

What happened to the islands salt ponds? (Only one on St. John is still functioning).

CLASS

1. Date Experiment Began: \_\_\_\_\_

2. Weight of seawater and container: \_\_\_\_\_

3. Daily evaporating record:

	Weight of Water And Container	Amount Evaporated	Weather Conditions
A. Day 1	_____	_____	_____
B. Day 2	_____	_____	_____
C. Day 3	_____	_____	_____
D. Day 4	_____	_____	_____
E. Day 5	_____	_____	_____

4. Date all water evaporated? \_\_\_\_\_

5. A. What remained in the bottom of the pan? \_\_\_\_\_

6.

7. B. What is the weight of the residue?

C. Look with a hand lens at the residue. What is the shape of the crystals left in the pan?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

---

A comparative experiment could be done by placing another seawater container, similar in weight, in a place not exposed to sunlight and record the length of time. This would demonstrate the evaporative power of the sun.