

GROW YOUR PALS PROGRAM GUIDE



THE NATIONAL FFA MENTORING PROGRAM

Sponsored by



LESSON 37

Understanding Evaporation

Unit:
ENVIRONMENTAL SCIENCE

PRECEPTS

- J. Mental growth
- J4. Solve problems

NATIONAL STANDARDS

NS.K-4.1 Science as Inquiry



Lesson Type:
One-on-One

STUDENT LEARNING OBJECTIVES

As a result of this lesson, the student will ...

1. Develop an understanding of evaporation.
2. Observe water evaporation through salt water.





TIME

Instruction time for this lesson: **30 minutes.**



RESOURCES

American Red Cross – Water Safety Tips



TOOLS, EQUIPMENT AND SUPPLIES

- ✓ salt
- ✓ water
- ✓ 4-5 small containers
- ✓ food coloring (2-3 colors)
- ✓ paintbrushes
- ✓ paper
- ✓ solid and liquid measuring cups

KEY TERMS



The following term is presented in this lesson and appears in ***bold italics***:
evaporation

INTEREST APPROACH



Think about the ways you use water every day.

Discuss with your mentee the ways he or she uses water at home and school.



How important is water to what you do every day?
What would life be like if you didn't have as much water to use?

SUMMARY OF CONTENT AND TEACHING STRATEGIES

OBJECTIVE 1. | Develop an understanding of *evaporation*.



After discussing water use, start a conversation about the water cycle.

I. Water cycle

- A. Water is always being evaporated from the Earth's surface.
- B. **Evaporation** is a process where water molecules change from liquid to water vapor. The water vapor is then taken up into the air as a gas.
- C. In the atmosphere, the gas becomes liquid again and falls back to Earth as rain.



Once your mentee understands some of the water cycle, begin to explain the Salt Water Painting activity.

OBJECTIVE 2. | Observe water *evaporation* through salt water.



Help your mentee get the materials and begin mixing paint colors for his or her drawing.



Since we know water can evaporate or disappear into the atmosphere, we are going to create a special picture with salt water to see what is left behind once all the water is gone.

What do you think will be left after we wait and the water evaporates?
Where are the places water evaporates at your house?

There are a lot of ways water evaporates, but it is really nice to know it always comes back in the form of rain. Water is able to continue on the cycle of constantly moving from liquid to gas and back again. Since we know there are areas of the country that do not always get enough water through rainfall, what are some ideas you have for people to conserve water? The water cycle is so important because we will always need water to live out our daily lives. Try to think of some more solutions to the problem of salt water or simply not having enough water coming down each year.





REVIEW / SUMMARY / EVALUATION

After waiting for your mentee's drawing to dry (or the water to evaporate), begin asking what he or she thinks happened?



Let's look at your drawing and see what happened.

What happened to the water in your drawing?

What is left on the paper?

Why did the salt stay behind?

Not everything in the water is able to evaporate so that material is left behind. Since we made salt water, the salt stayed behind. Salt does not evaporate. Be sure to take your drawing home and share the story of the water cycle with your family.

APPLICATION



Large Group Suggestion: *Observe the settlement of soil particles and think about how **evaporation** or water flow might have had something to do with the formation of mountains, hills and even the Grand Canyon.*



Continued One-on-One Discussion/Activity: *Identify how the process used on the painting (salt being left behind as the water evaporated) would affect clothes put outside to dry.*