

STEP-BY-STEP EXPERIMENTS WITH THE WATER CYCLE

By Shirley Duke

Illustrated by Bob Ostrom



The sun, clouds, and rain make up the water cycle.

CHAPTER ONE

Study the Water Cycle!

Did you know Earth recycles its water? All the water in the world has been here a long time. You might be drinking the water a dinosaur once drank! The amount of water on Earth does not change. That is because it moves in a cycle.

The sun shines on oceans, ponds, lakes, and rivers. Its heat changes the water from a liquid to **water vapor**. Tiny drops of water move into the air. Water in the air rises high into the sky. This makes clouds. Water falls from clouds as rain, hail, or snow. It falls on all parts of the earth. Water on Earth's surface forms streams and rivers. The water collects in ponds, lakes, and oceans. Some water soaks into the ground. This is **groundwater**.

This cycle keeps going as water moves from air to land and back. How can you learn more about the water cycle?

CHAPTER TWO

Seven Science Steps

Doing a science **experiment** is a fun way to discover new facts! An experiment follows steps to find answers to science questions. This book has experiments to help you learn about the water cycle. You will follow the same seven steps in each experiment:



Seven Steps

- 1. Research:** Figure out the facts before you get started.
- 2. Question:** What do you want to learn?
- 3. Guess:** Make a **prediction**. What do you think will happen in the experiment?
- 4. Gather:** Find the supplies you need for your experiment.
- 5. Experiment:** Follow the directions.
- 6. Review:** Look at the results of the experiment.
- 7. Conclusion:** The experiment is done. Now it is time to reach a **conclusion**. Was your prediction right?

Are you ready to become a scientist? Let's experiment to learn about the water cycle!



Does water from a lake go into the air?

CHAPTER THREE

Water on the Move

Water is a liquid, but it can change forms. How does this happen? Try this experiment to see.

Research the Facts

Here are a few. What else do you know?

- Water in the air is water vapor. It is so small you cannot see it.
- Water **evaporates** to become water vapor.

Ask Questions

- Where does water go when it dries up?
- Is a certain temperature needed for water to evaporate?

Make a Prediction

Here are two examples:

- Water evaporates faster in the heat.
- Water evaporates faster in the shade.

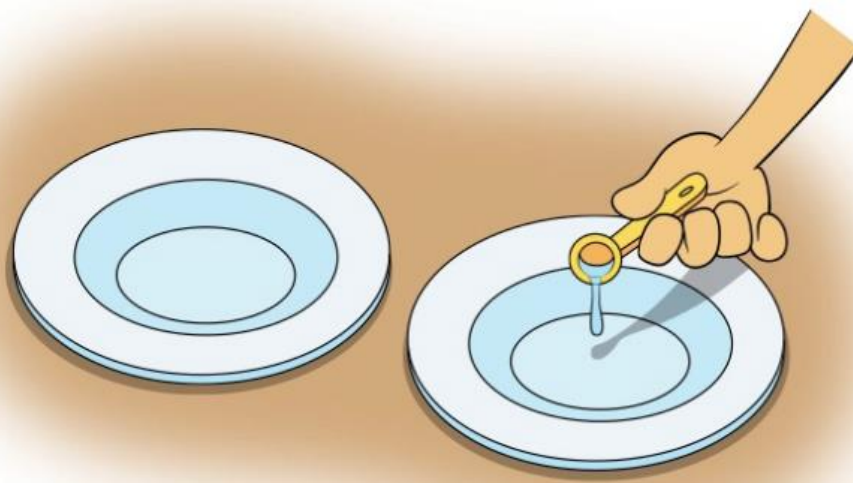


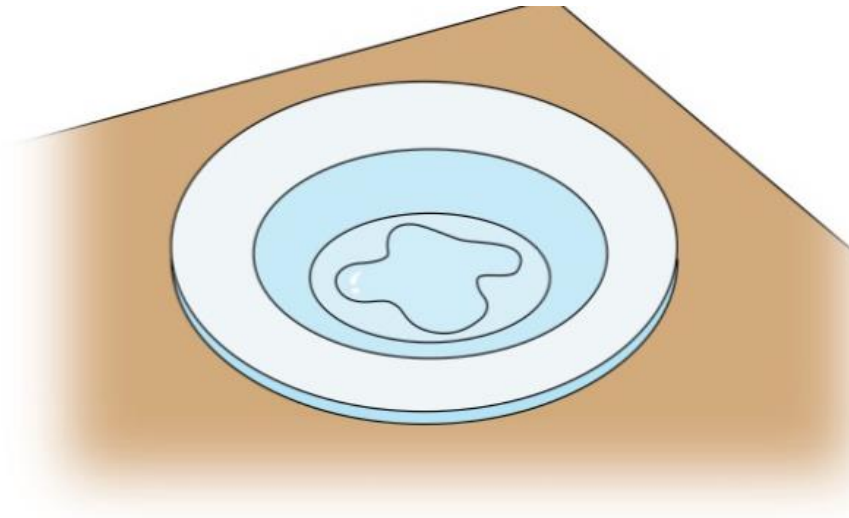
Gather Your Supplies

- 2 small flat bowls
- Water
- Teaspoon
- A sunny window
- A shady spot
- Pencil or pen
- Paper

Time to Experiment!

1. Set out the small, flat bowls. Put them side-by-side.
2. Add 2 teaspoons of water to each bowl.
3. Put one bowl in direct sunlight.





4. Put the other bowl in a shady spot.
5. Check the bowls every four hours until you go to sleep.
Write down what happens.
6. Check the bowls in the morning. Write down what you see.

Review the Results

Read your notes. What did you notice about the water? There was less water in the bowl in the sunny window. There was more water in the bowl in the shady spot.

What Is Your Conclusion?

The water in the sunny bowl evaporated. The sun's heat made it change to water vapor. The shady spot had a lower temperature. High temperatures make water evaporate faster than low temperatures.

Have you dried your hands on a blow dryer? The hot air speeds up the evaporation. This dries them quickly.