NATIONAL SCIENCE EDUCATION STANDARDS

A. Science as Inquiry

Abilities necessary to do scientific inquiry
Understanding about scientific inquiry

B. Physical Science

K–4

Properties of objects and materials

- Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. These properties can be measured using tools, such as rulers, balances, and thermometers.
- Materials can exist in different states—solid, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling.

5–8

Properties and changes of properties in matter

- A substance has characteristic properties, such as density, a boiling point, and solubility.

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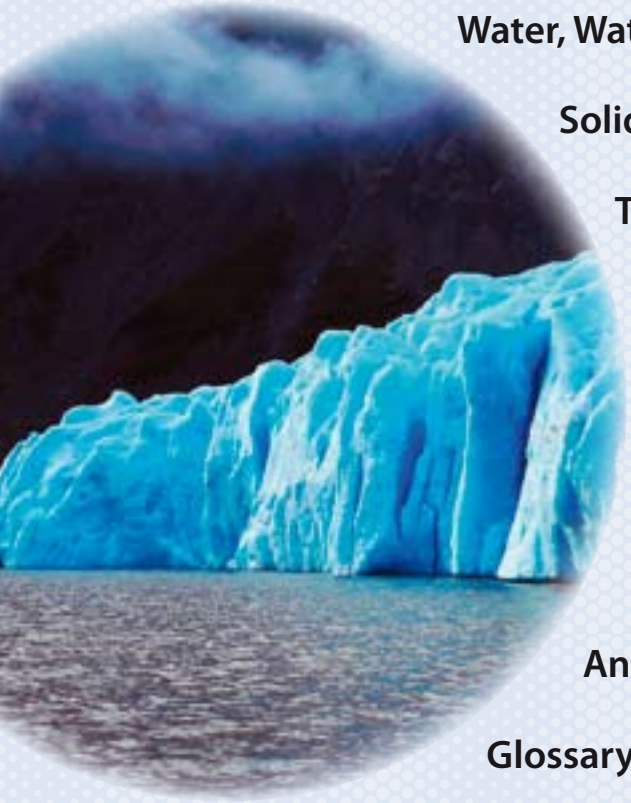


Evaporation in the Dark

Can water evaporate in the dark?

You will need:

- 3 or 4 washcloths
- water
- dark places, such as a closet or a cupboard

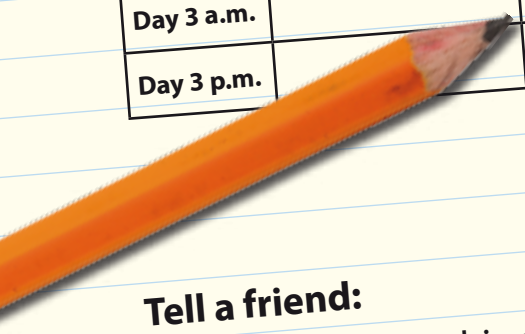
What to do:

1. Soak the washcloths in water.
2. Wring them out so that water doesn't drip from them.
3. Put each one in a different place away from sunlight.
4. Check them twice a day.

Turn the page to see what to do next.

5. Keep a record of what happens.

	Washcloth 1 in a closet	Washcloth 2 in a kitchen drawer	Washcloth 3 in the refrigerator
Day 1 a.m.	Wet	Wet	Wet
Day 1 p.m.	Still damp	Still a little damp	Still very wet
Day 2 a.m.			
Day 2 p.m.			
Day 3 a.m.			
Day 3 p.m.			



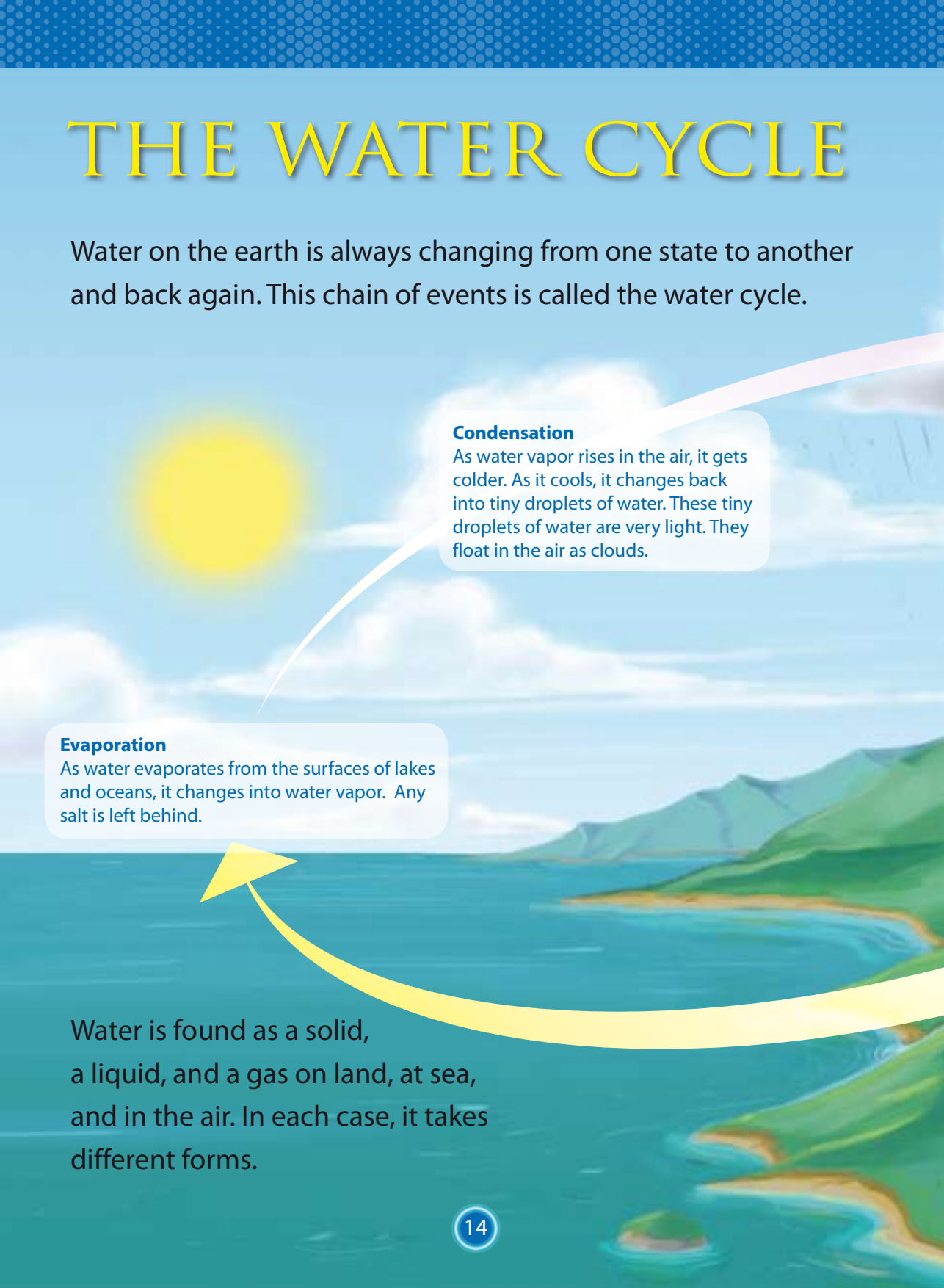
Tell a friend:

Ask a friend to do this experiment as well. Tell your friend what to do. Check to see whether he or she gets the same result.

As this experiment shows, under the right conditions, water evaporates even when it's not in sunlight.

THE WATER CYCLE

Water on the earth is always changing from one state to another and back again. This chain of events is called the water cycle.



Condensation
As water vapor rises in the air, it gets colder. As it cools, it changes back into tiny droplets of water. These tiny droplets of water are very light. They float in the air as clouds.

Evaporation
As water evaporates from the surfaces of lakes and oceans, it changes into water vapor. Any salt is left behind.

Water is found as a solid, a liquid, and a gas on land, at sea, and in the air. In each case, it takes different forms.

Precipitation
In clouds, the tiny droplets of water can join to make bigger drops of water. When these become too heavy to float in the air, they fall to the ground as rain. If it gets cold enough, rain turns solid and falls as hail. Snow forms directly from freezing water vapor. It doesn't change to a liquid first.

Rain and melted hail and snow form streams and rivers. These flow into lakes and oceans.

In 1986, hailstones weighing 2.2 pounds (1 kilogram) fell in Bangladesh. They were as big as honeydew melons.

Transpiration
Transpiration is the evaporation of water from plants.