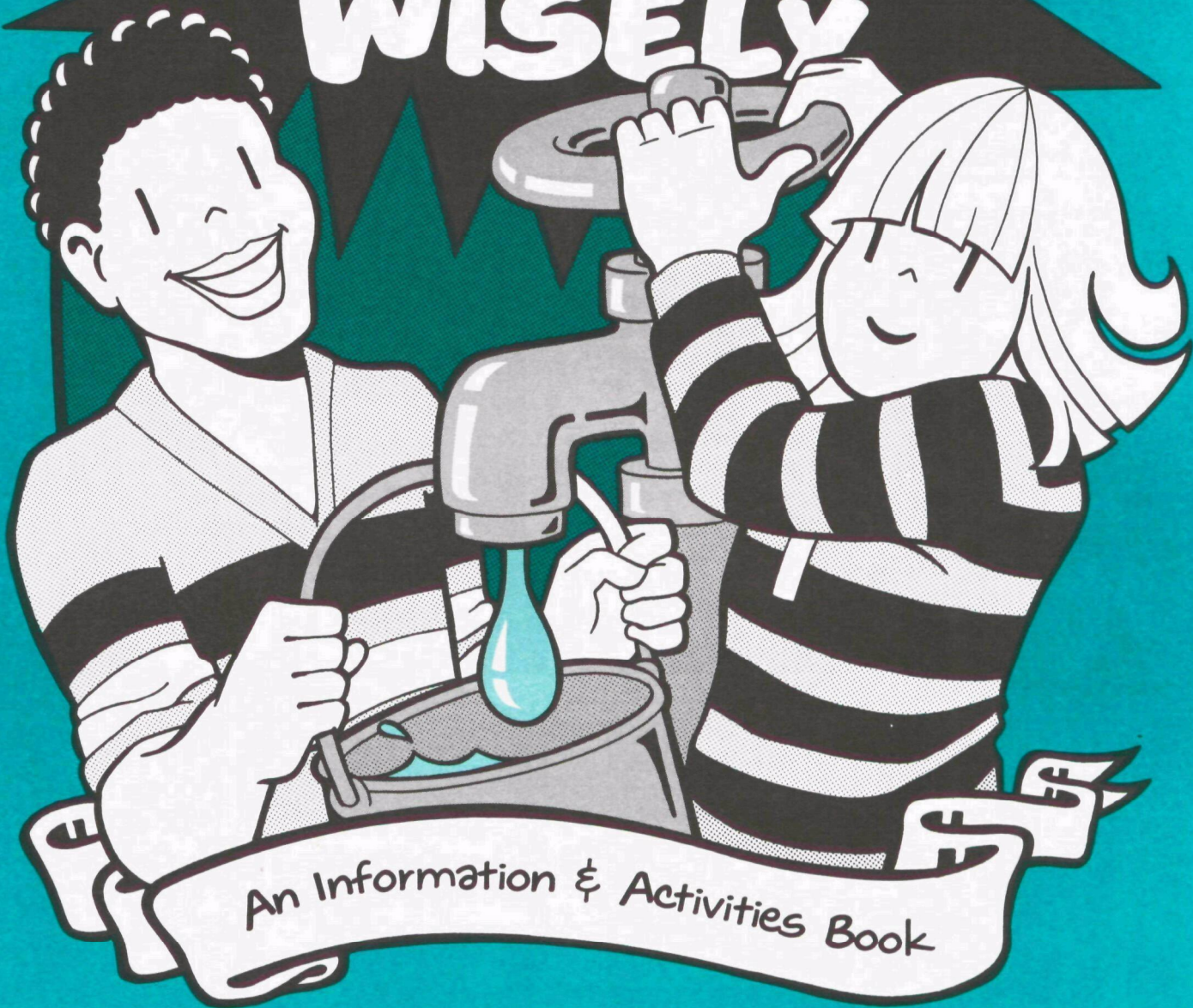


LET'S LEARN ABOUT

# USING WATER WISELY

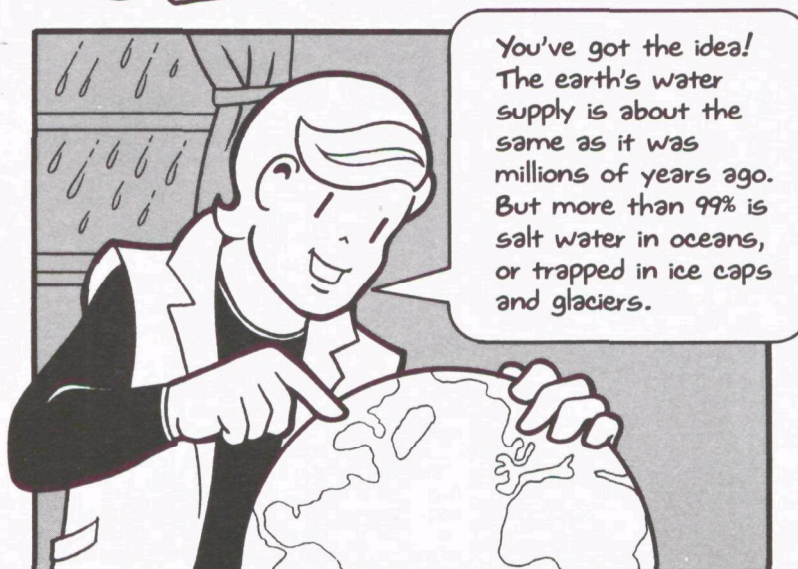
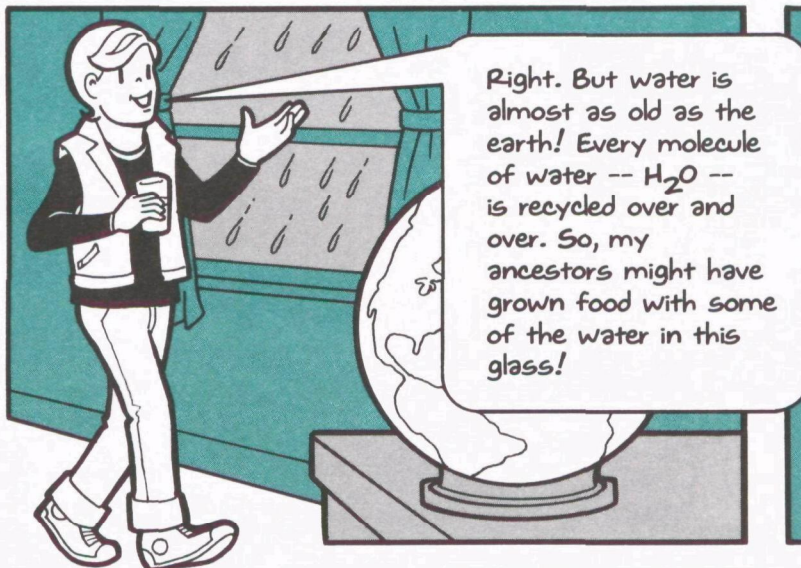
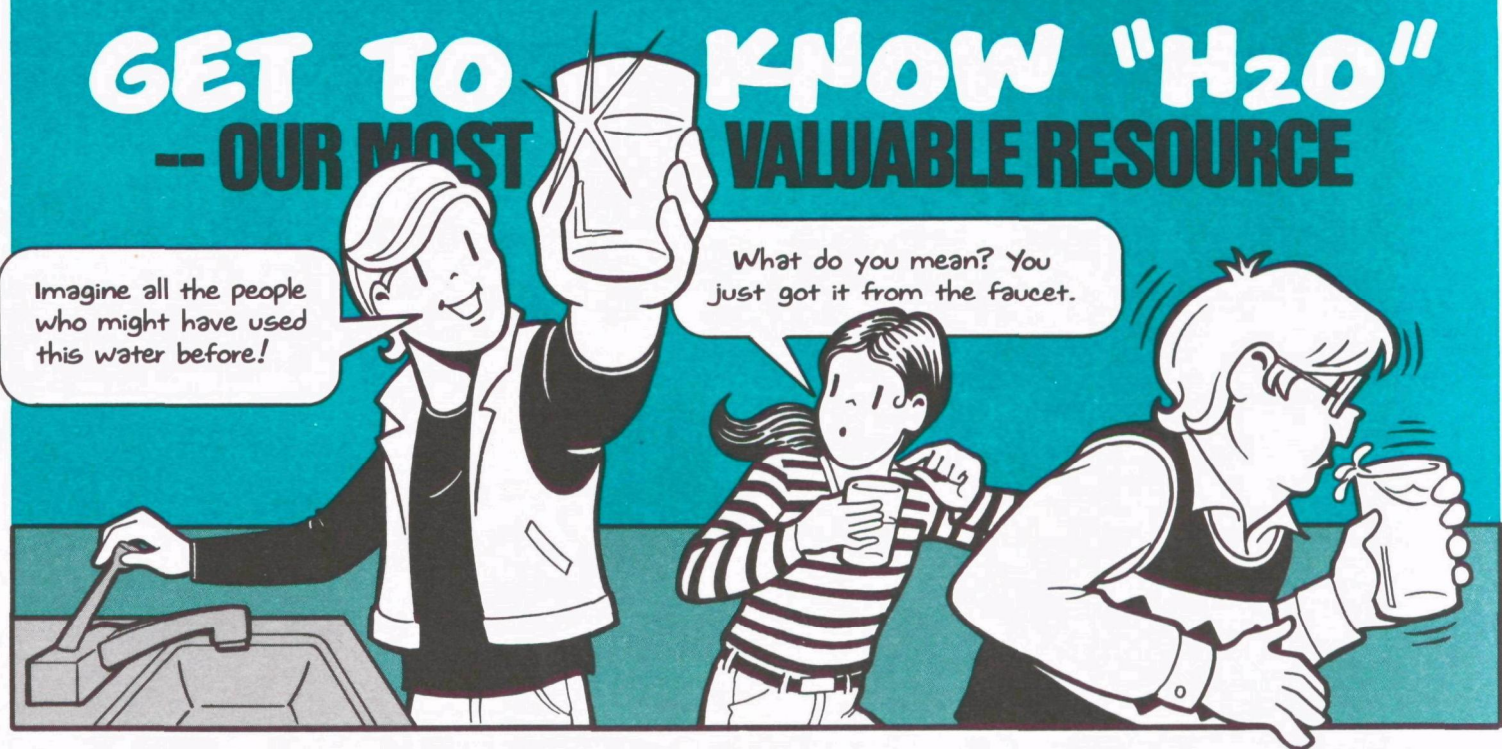


An Information & Activities Book



# GET TO KNOW "H<sub>2</sub>O"

## -- OUR MOST VALUABLE RESOURCE



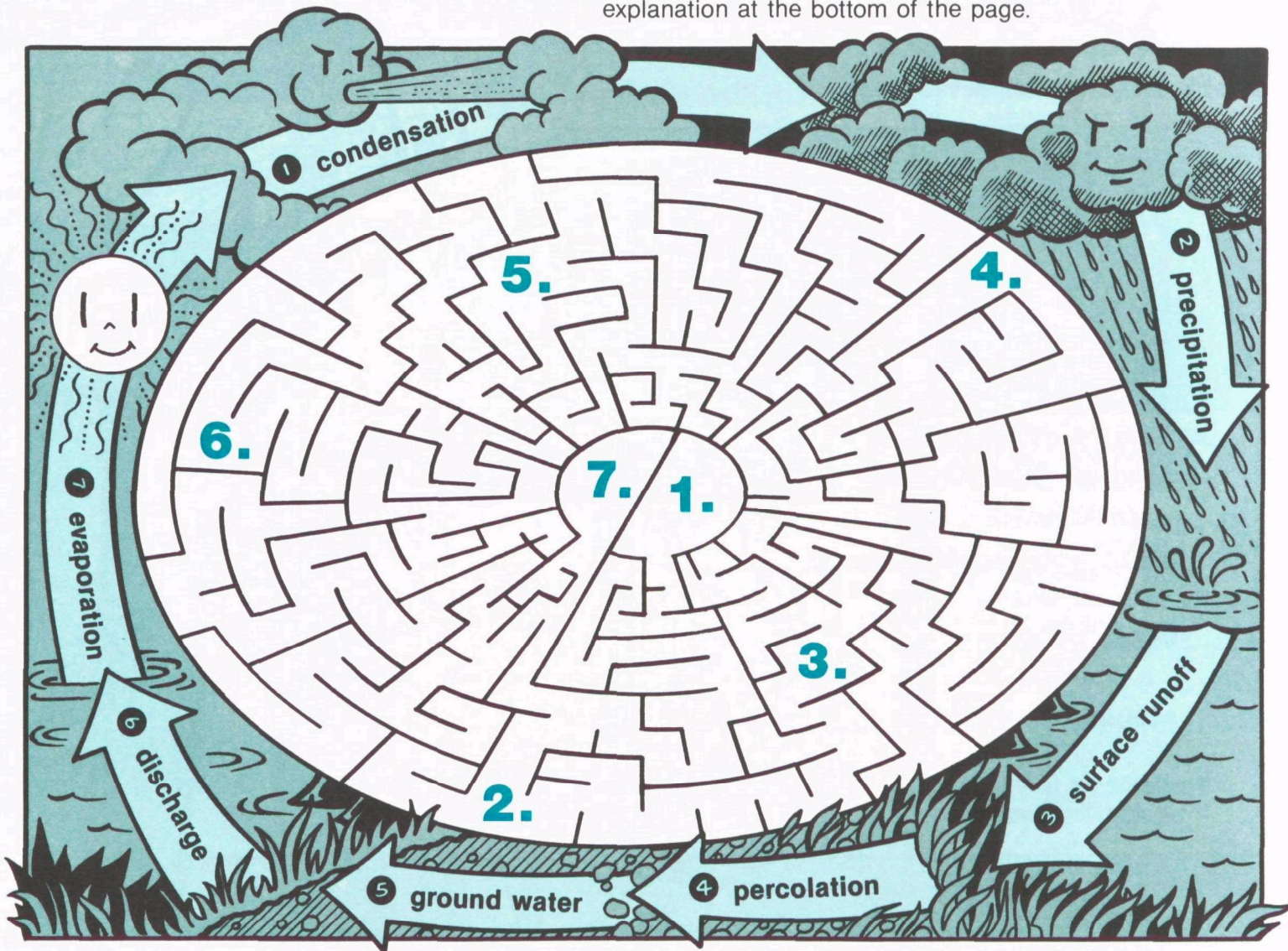


# THE WATER CYCLE

**A water molecule is called "H<sub>2</sub>O"**

because it's made of 2 hydrogen atoms (H + H) and 1 oxygen atom (O). H<sub>2</sub>O can be a VAPOR (a gas in the air), a LIQUID (what we usually think of as "water"), or a SOLID (ice).

The sun is the "pump" that keeps water going around and around. To learn more, find H<sub>2</sub>O's path through the water cycle, starting in the center at Number 1. When you get to each stage in the cycle, read its numbered explanation at the bottom of the page.



1. Water vapor gathers in clouds. Wind cools the vapor, turning it into a liquid (rain) or a solid (snow, hail and sleet).
2. Gravity makes the water fall to the earth.
3. Some water runs across the land into bodies of surface water – lakes, streams, oceans, etc.
4. Other water soaks ("percolates") into the ground.
5. Percolated water is stored in the ground in "aquifers" (layers of rock, gravel and sand). This water slowly moves through the aquifer toward the sea.
6. Eventually, ground water becomes surface water, too. For example, it may bubble up through the ocean floor, or appear on the land as a spring.
7. The sun heats surface water, turning it into vapor that rises into the sky. And the cycle begins again!

**Did you know? If all the water in the earth and sky were poured onto the U.S., it would be 90 miles deep!**



# WATER

## IS THE LIQUID OF LIFE

That's why it's important to use water wisely!

### PLANTS AND ANIMALS NEED WATER TO LIVE

For example, human beings need about 2 quarts a day to digest food, transport wastes, keep cells alive, make blood, and control temperature. We get some of this water by drinking, and some comes from food – an apple, for example, is about  $\frac{3}{4}$  water, and a ripe tomato is mostly water.

### NEARLY 2/3 OF YOUR BODY IS WATER!

This formula will tell you more.

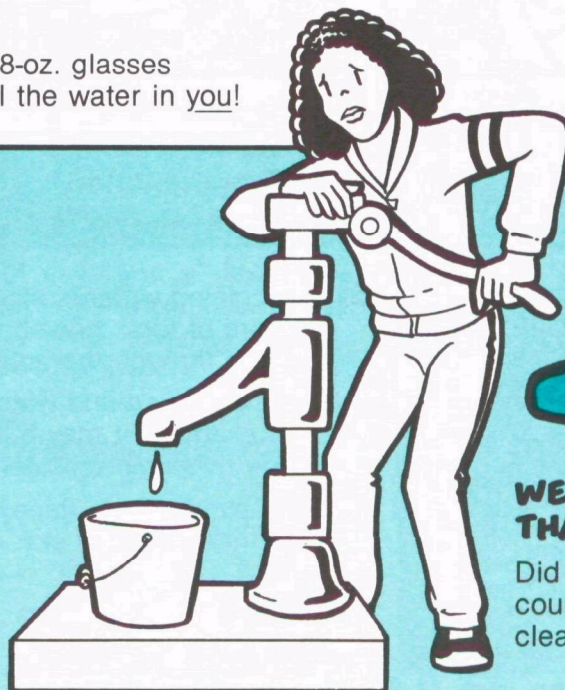
- 1 Write your weight here: \_\_\_\_\_
- 2 Divide by 3: \_\_\_\_\_
- 3 Multiply by 4: \_\_\_\_\_

That's about how many 8-oz. glasses it would take to equal all the water in you!

### PEOPLE ALSO USE WATER FOR:

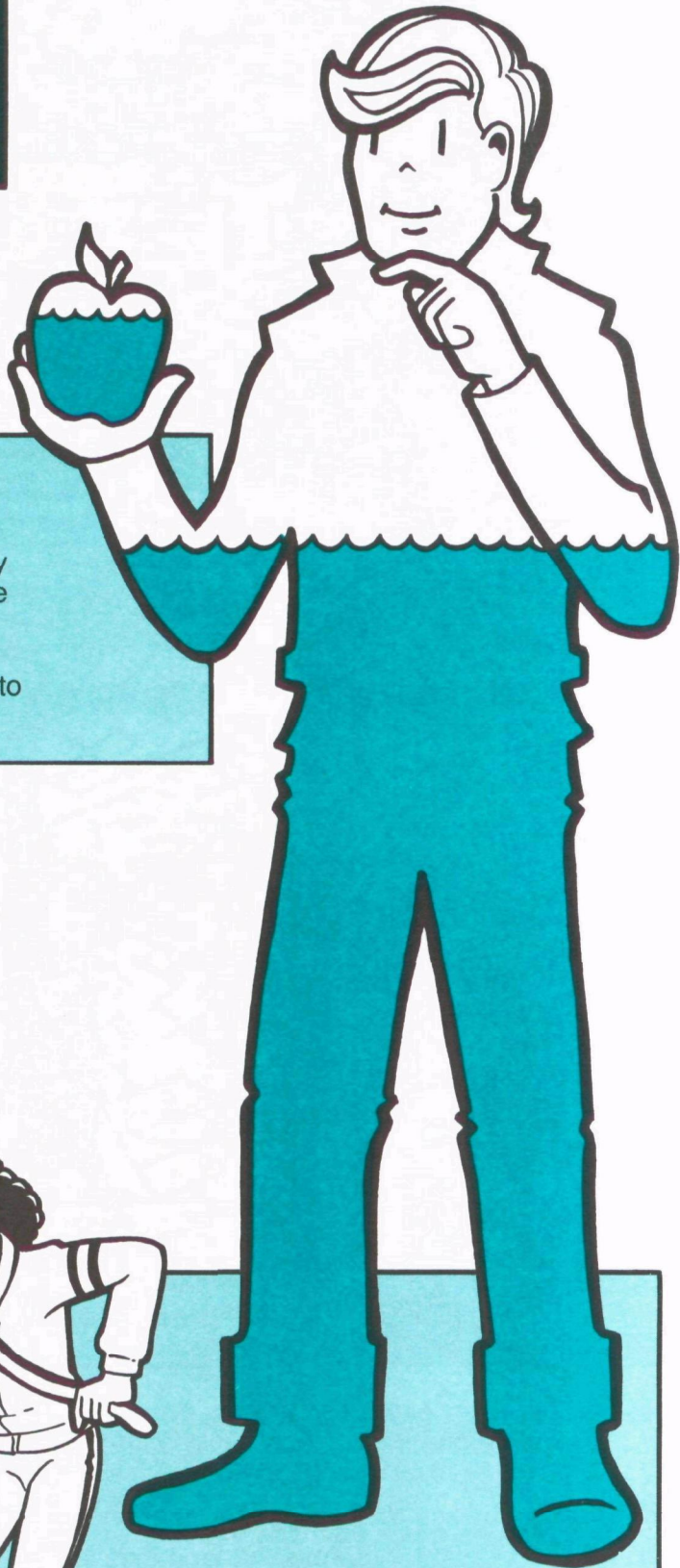
- cooking
- bathing
- cleaning
- flushing toilets
- growing food
- making paper, steel and other products
- making electricity
- having fun.

In too many cases, precious water is wasted in the process.



### WE'RE USING WATER FASTER THAN NATURE CAN RECYCLE IT!

Did you know that some parts of the country are actually running out of clean, drinkable water?



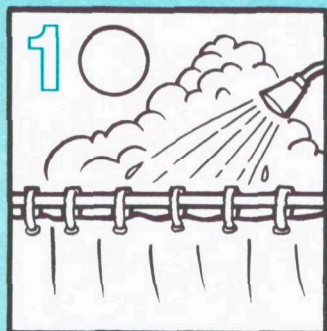


# WHERE DOES THE WATER GO?

The average American family of 4 uses 255 gallons of water a day inside the home!

But only a tiny amount (less than 13 gallons) is used for cooking and drinking. Here are some other ways that families use water. The amount used depends on how long the water is turned on, and whether the family uses water-saving appliances, shower heads, toilet tanks and faucets.

Match each picture with one of the water-saving tips below. Write the letter of the tip in the circle provided.



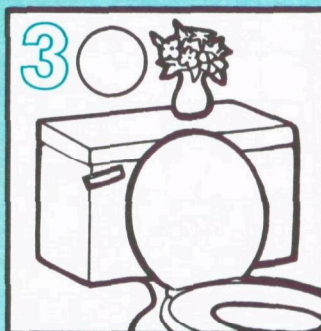
## SHOWER:

5-10 gallons a minute



## BATHROOM SINK:

4-5 gallons a minute



## TOILET:

5-7 gallons a flush



## DISHWASHER:

5-25 gallons a load



## KITCHEN SINK:

4-5 gallons a minute



## WASHING MACHINE:

35 gallons a load

## WATER-SAVING TIPS

- A. Turn this off while you brush your teeth.
- B. Don't use this as a wastebasket (or to flush away spiders!).
- C. Keep a container of water in the refrigerator, instead of running the faucet to get a cold drink.
- D. If that shirt is fairly clean, you could wear it another day.
- E. You may not need to rinse most cups and plates before filling this – check with a parent.
- F. Take a short one of these instead of a bath.

## USING WATER WISELY

“saves” in more ways than one! Energy – such as from electricity, oil, and natural gas – heats water for washing, and runs appliances that use water. So, when you save water, your family spends less money on energy!

## LOOK OUT FOR LEAKS!

Dripping faucets and whistling or hissing toilets waste water, even when no one is using them! Toilets often have “silent” leaks, too. Here's a handy way to tell (do this with an adult):

1. Carefully take off the top of the toilet tank.
2. Put 12 drops of red food coloring into the tank.
3. Wait 15 minutes. If any red dye appears in the toilet bowl, water is leaking from the tank. Ask an adult to fix it.

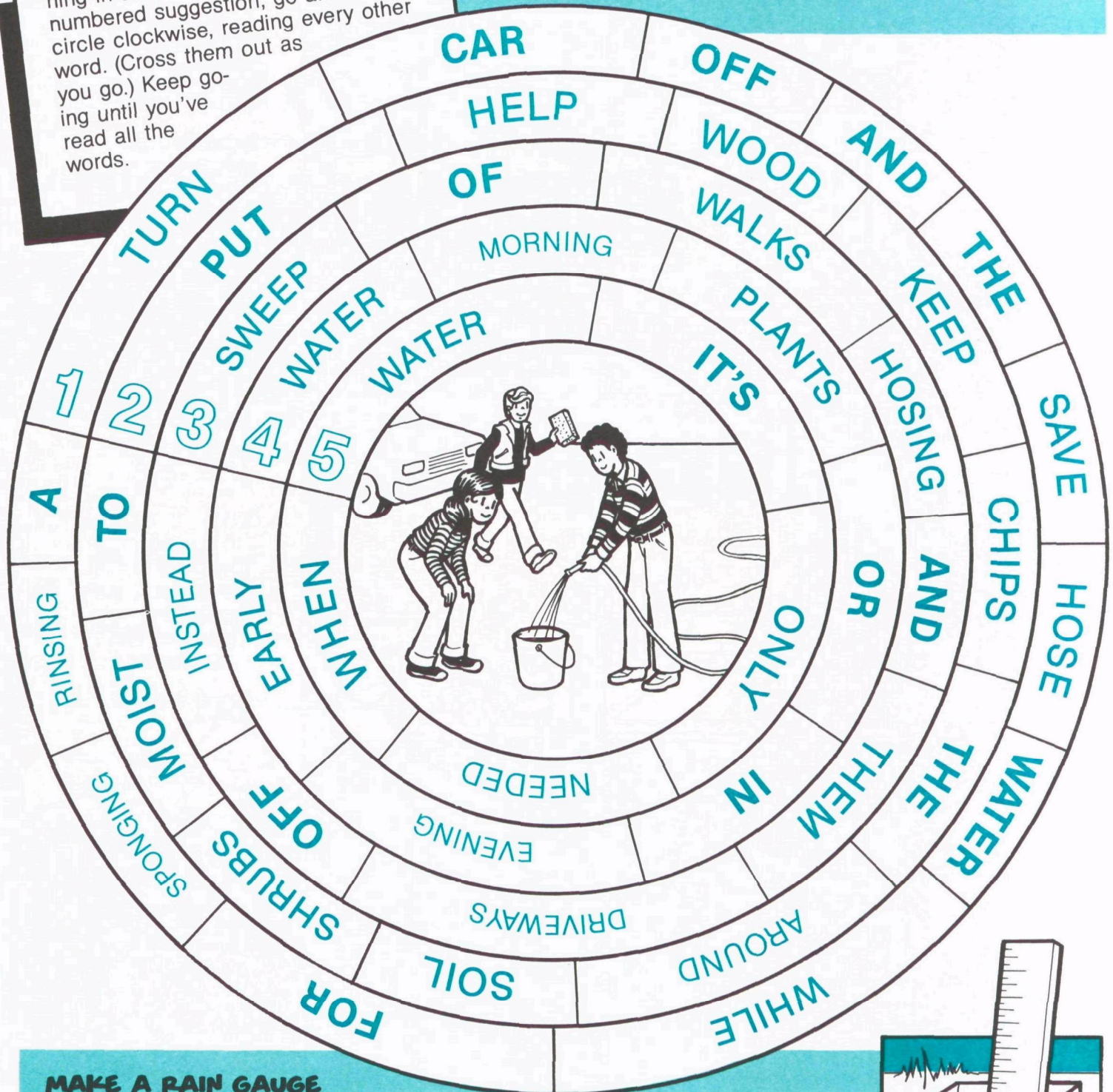




# USE WATER WISELY OUTDOORS

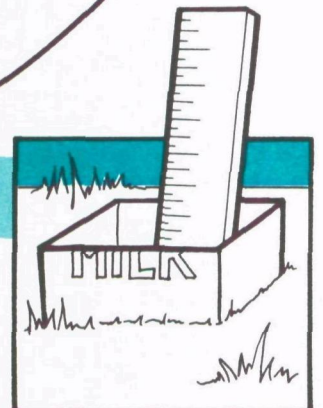
Some water-saving ideas are spinning in this "water wheel." For each numbered suggestion, go around the circle clockwise, reading every other word. (Cross them out as you go.) Keep going until you've read all the words.

1000 gallons can run through an outdoor hose in an hour! So, it's no wonder so much water is wasted outdoors.



## MAKE A RAIN GAUGE

Take a milk carton and cut off the top with a pair of scissors. Then, bury the carton in the ground so that it just sticks out. After the next rainfall, measure the water in the carton with a ruler to see how many inches of rain fell. Do you know how many inches of rain fall every year in your area? Look up your state in an encyclopedia to find out. (It may be less than you think!)





You know, people really can do a lot to help use water wisely!

No kidding! Here are more things we can do -- and some fun facts to know about H<sub>2</sub>O!

# CROSSWORD PUZZLE

First, finish the sentences by choosing the correct words from the list. Then fit the words into the crossword puzzle.

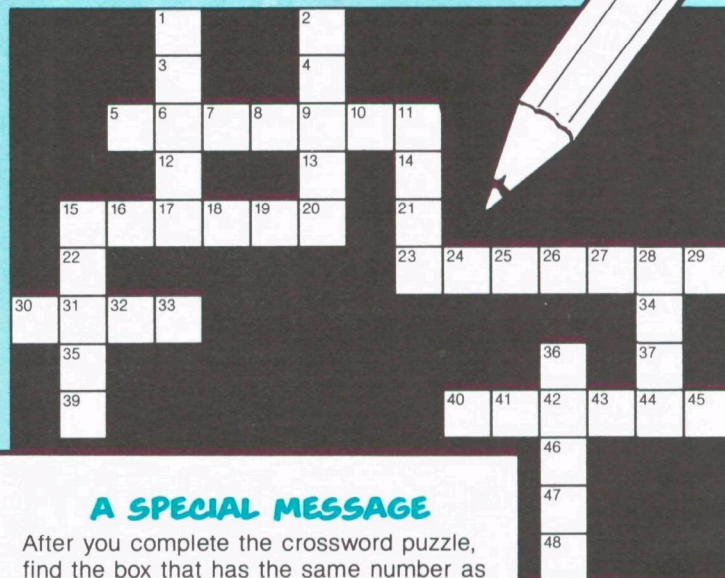
GRASS	SNOW	SAVE
POOLS	BREAD	MILK
WETTEST	DISHES	GARDEN
DRINK	GALLONS	

## ACROSS

5. More than 100,000 \_\_\_\_\_ of water are needed to make an automobile.
15. Rinse dirty \_\_\_\_\_ in a basin of water instead of under a running faucet. Use a basin to wash them, too.
23. Mount Waialeale in Hawaii is the \_\_\_\_\_ place in the world.
30. A cow needs to drink 3 gallons of water to make a gallon of \_\_\_\_\_.
40. Choose plants that don't need much water for your \_\_\_\_\_.

## DOWN

1. Don't water \_\_\_\_\_ unless it stays flat after you walk on it.
2. Cover swimming \_\_\_\_\_ to reduce evaporation when they're not being used.
11. If you melted 10 inches of \_\_\_\_\_, you'd get about 1 inch of water.
15. It takes 1,400 gallons of water to grow and process the ingredients for a hamburger, french fries and soft \_\_\_\_\_.
28. Low-flow shower heads can \_\_\_\_\_ water.
36. A slice of \_\_\_\_\_ is  $\frac{1}{3}$  water.



## A SPECIAL MESSAGE

After you complete the crossword puzzle, find the box that has the same number as the one below each blank. Fill in the blank with the letter from the box.

2 44 21 2 32 24

23 18 9 48 4 45 29

17 41 37 19 23 6 25 27 42

9 22 46 41 8 32 23 44 26

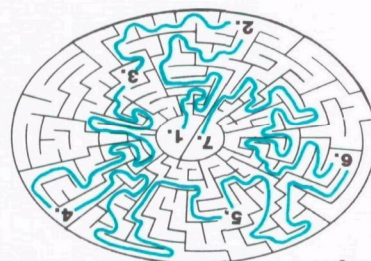
People who don't save water are all wet!

WETTEST  
DISHES  
GALLONS  
MILK  
GARDEN  
SNOW  
BREAD  
GRASS  
POOLS  
DRINK

Page 7

# ANSWERS

- Page 6  
1. Turn off the hose while sponging a car, and save water for rinsing.  
2. Put wood chips around shrubs to help keep the soil moist.  
3. Sweep walks and driveways, instead of hosing them off.  
4. Water plants in early morning or evening.  
5. Water only when it's needed.
- Page 5  
1-f, 2-a, 3-b, 4-e, 5-c, 6-d.



Page 3



Soo--

# WATER IS A PRECIOUS RESOURCE

- ✓ Conserve water indoors and out.
- ✓ Show others how they can save water.
- ✓ Remember how important water is to your life -- and all life.



**USE  
WATER  
WISELY!**

