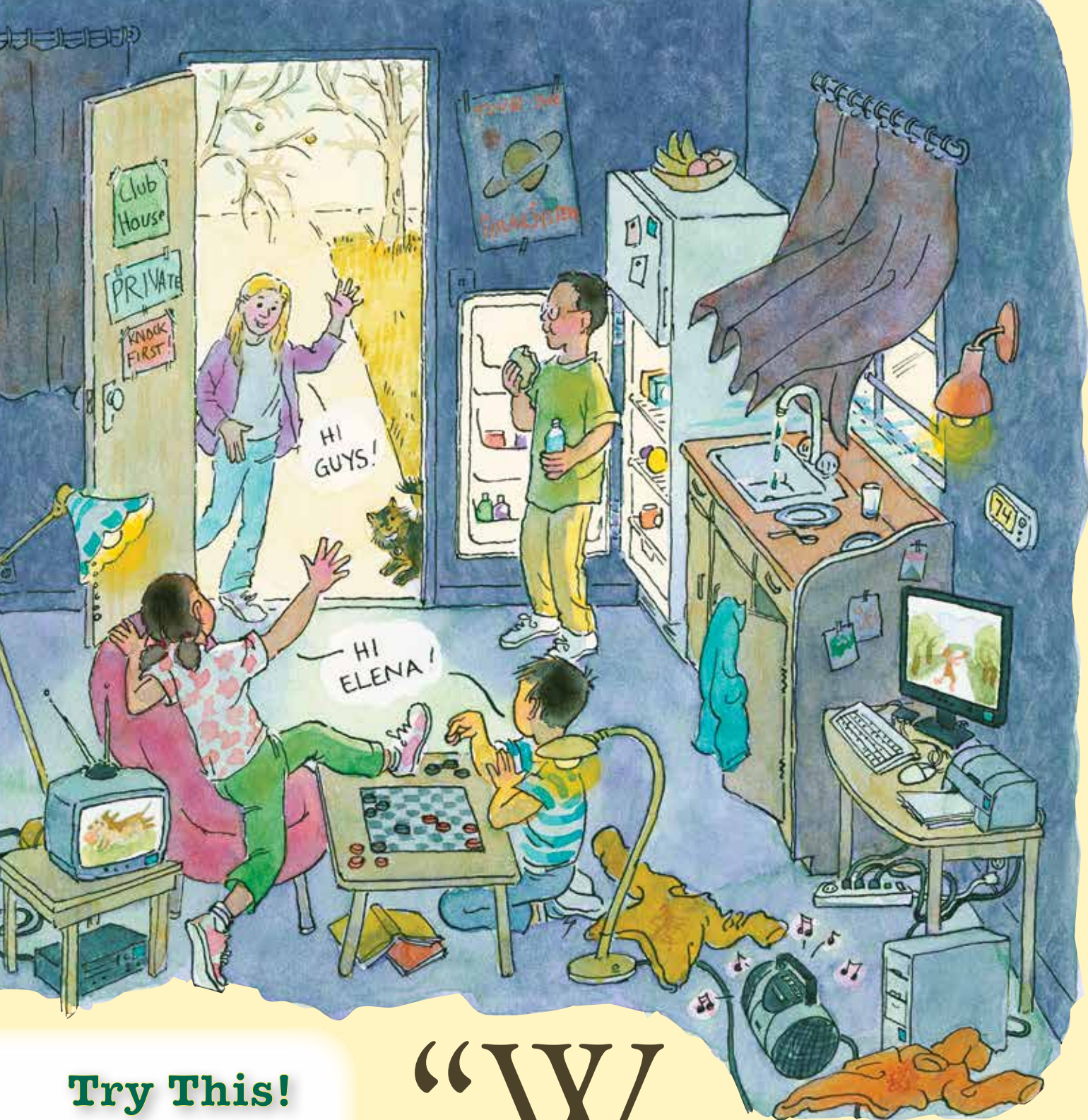


The Clubhouse Kids Make a Big Difference

An Energy-Saving Adventure



santee cooper®

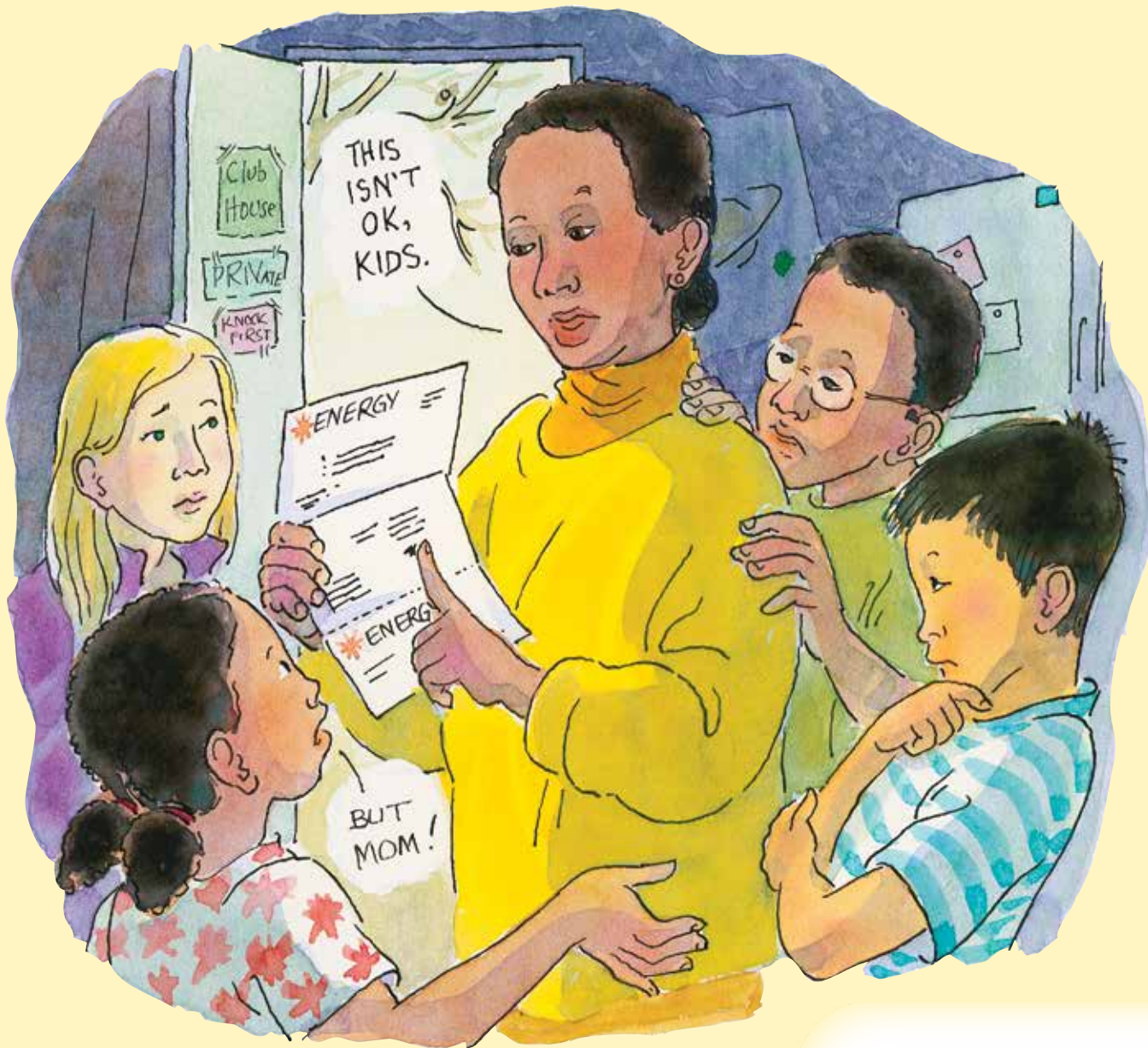


Try This!

Look at the picture. Find and circle at least four ways the Clubhouse Kids are wasting energy on a cold winter afternoon.

“What’s this emergency club meeting all about?” Elena asked Jenna.

“Mom said she has something really important to discuss with us,” Jenna said. Jenna and Jared were twins, and the clubhouse was in their garage. “Jared and Ray are here, so I’ll go get Mom.”



“The Clubhouse Kids have a problem,” Mom said. “Ever since you made this place into your clubhouse, our energy bills have gone way up. I’m sorry kids, but unless you can use less energy, you’ll have to find another place for your club.”

Mom left, closing the door firmly behind her.

The kids looked at each other sadly. Ray said, “We must be using a lot of energy for the bill to go up so much.”

“But how?” asked Elena. “By turning on too many lights?”

Did You Know...?

Every month, your family gets one or more energy bills. These bills explain how much energy you have used, and how much you must pay.



KEEP THE COLD
WHERE IT
BELONGS!



“L ights aren’t the only things that use energy,” said Jared, looking around the room. “Let’s see...the TV, DVD player, radio, computer, refrigerator, and the heater all use energy, too.”

“Well, what can we do about that?” asked Elena. “If we lose our clubhouse, we won’t be the Clubhouse Kids anymore.”

“That’s right,” laughed Jenna. “We’d just be the Kids.”

“I have an idea,” said Ray. He grabbed a pencil and paper. “If we look at all the ways we waste energy, maybe we can make a list of ways to save energy. Let’s start with the lights. Do we need to have all the lights on, all the time?”

Try This!

Look around the room you are in right now. Count all the things that use energy.

"It's a sunny day," said Elena, "I guess we really don't need all these lights on."

"We're not using the radio, TV, and DVD player," said Jared. "We could turn them off."

"You can put the computer to sleep if you're going to need it later, or turn it off if you're finished using it," Ray said. He showed them how.

"That's cool!" said Jared.

"Speaking of cool," said Jenna, "leaving the fridge door open while you eat is totally UNcool. It lets all the cold air out. Then the fridge has to use energy to cool down again."

"You know what else is uncool?" asked Ray.

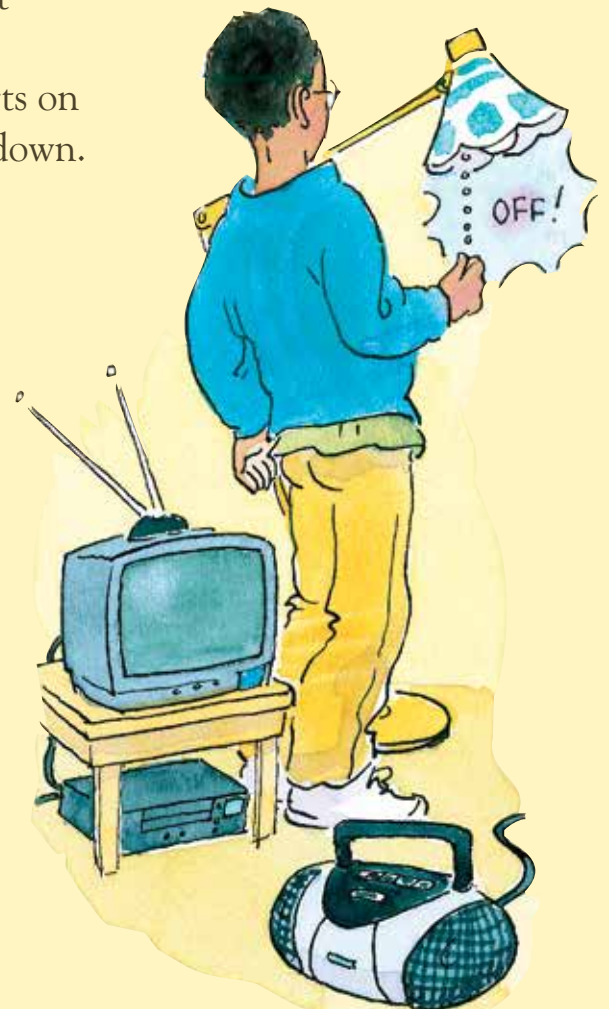
"Keeping the heat up so high."

"Hey, I'm not a polar bear!" said Jenna. "I don't have fur to keep me warm!"

"No," said Jared, "but if we leave our sweatshirts on and keep the door closed, we could turn the heat down. That would save a lot of energy."

Did You Know...?

If your parents plug all your computer equipment into a power strip, you can turn everything off at once when it won't be used for an hour or more. (Shut down the computer by itself first.)



Try This!

Turn the cold water on so it drips slowly, and place a bucket under the drip. Set a timer for 30 minutes. When the timer rings, turn off the faucet, then see how much water was wasted. (Use it for plants.) Imagine how much would be wasted if the dripping went on all day! How do you think a dripping faucet might waste energy?

“H ow does our list look?” asked Jenna. Elena held it up.



Jared nodded. “That ought to help a little. Any other ideas?”

Elena said, “Somebody left the water dripping. Does that waste energy?”

“I think so,” said Jared, “but I’m not sure how.”



"We need to find some answers about saving energy," said Elena. "We love this clubhouse, and it's up to us to keep it!"

"We can look for answers at the library," said Ray.

"We can talk to other kids. I bet they've heard some tips about saving energy," said Jared.

"We can invite every kid who gives us a new tip to join our club!" said Jenna.

"Great ideas," said Elena. "Let's meet back here after school tomorrow!"

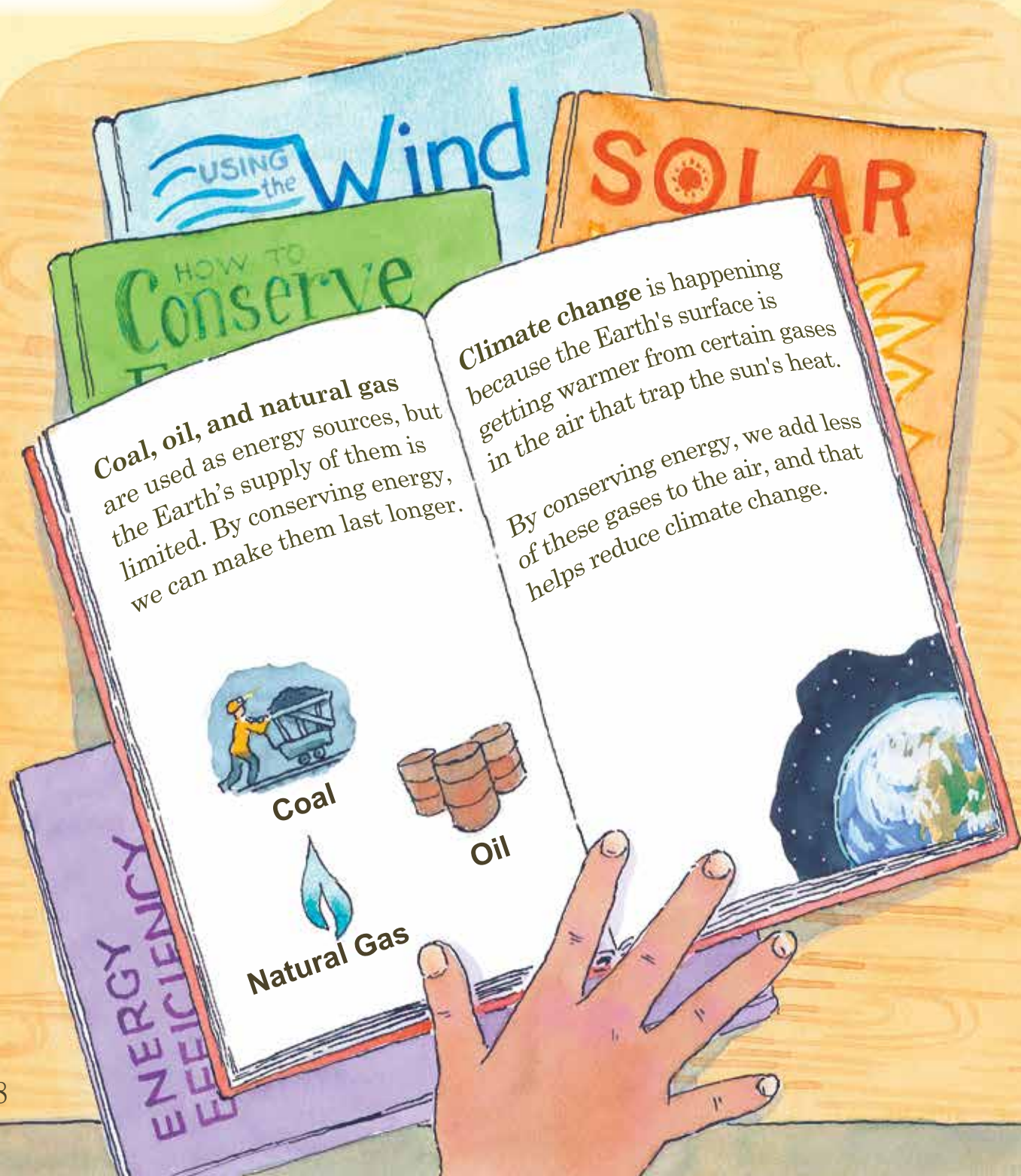
Did You Know...?

Large-screen TVs and computers create heat when they are on. When the weather gets hot, you can help cool your home by turning them off.

Did You Know...?

To conserve means to use less of something, or to use it more carefully so it lasts longer.

Jared and Ray headed straight for the library. "Have a look at this," Jared said. "Conserving energy helps the Earth in two ways."



“Check this out!” said Ray. “People are making electricity from energy sources that will never run out and can help keep the Earth healthy. This is called ‘renewable’ or ‘green’ energy.”



Sunlight
solar power



Wind
wind turbines



Falling Water
hydropower



Ocean
wave energy



**Geysers &
Underground
Steam**
geothermal energy



Farm & Lumber Scraps
biomass

Try This!

After your shower or bath, hang your wet towel outside so energy from the wind and the sun can dry it.

Try This!

Use the curtains or blinds to let in the sun or block it out. When it's cold outside, open them to let the sun heat up your room. When it's hot outside, close them to keep the room cool.

Jared's friend Noah came over. "Hi, guys," he said. "What's up?"

"We need to find out about saving energy," said Jared. "Too bad we can't use renewable energy to make electricity for our clubhouse."

"Well, you can use the sun's light and heat," said Noah. "If you open the curtains when it's sunny, the sun will help light the room and warm it up."

"Great idea!" said Jared. "That would save energy in two ways!"

"What's this club you're talking about?" asked Noah. "Can I join?"

"You just gave us an energy tip," said Jared and Ray together. "That makes you an honorary member!"





Did You Know...?

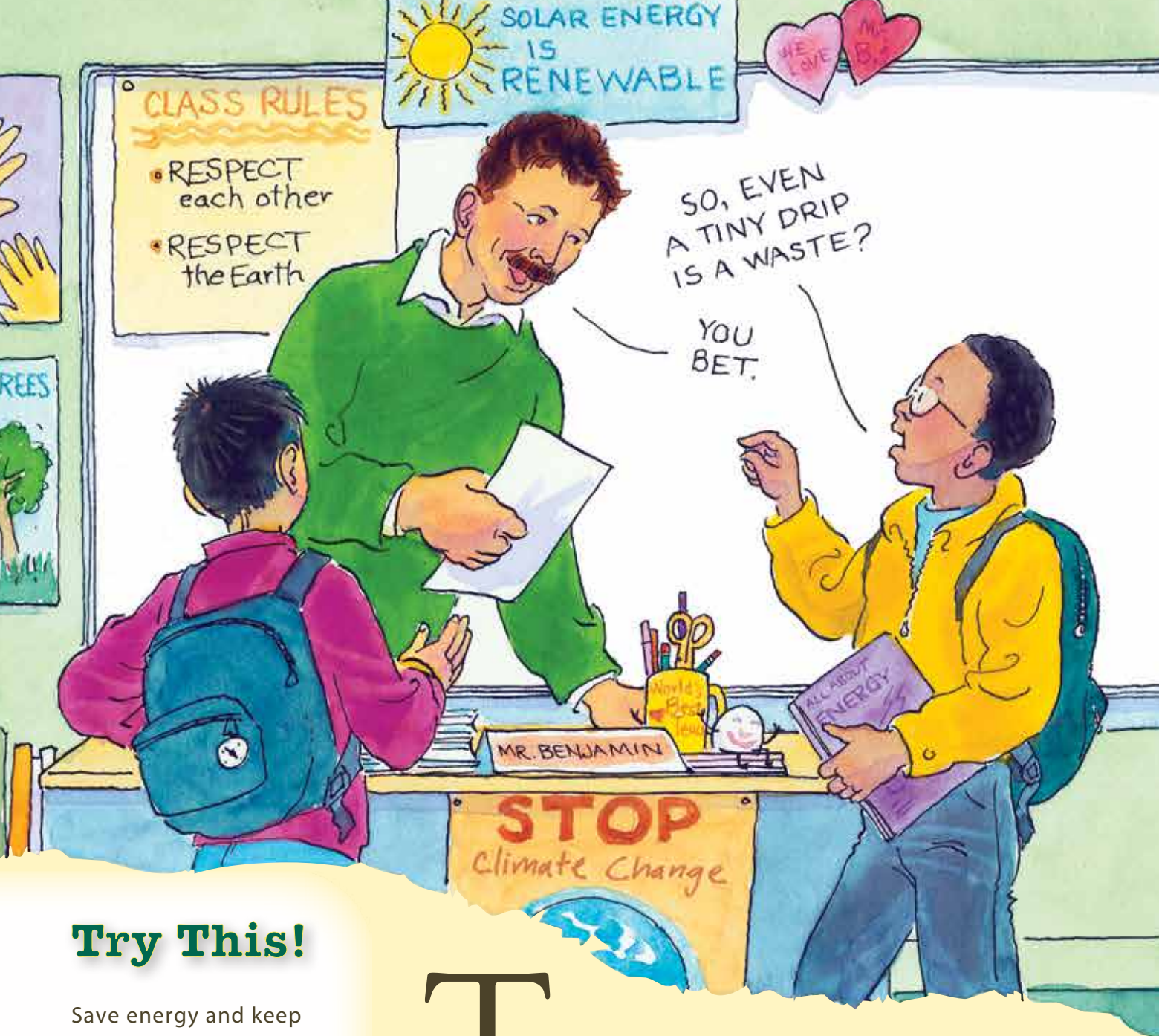
Most homes and businesses get their energy from a company that delivers electricity and/or natural gas (also known as a “utility”). Some utilities offer electricity that is made from renewable or “green” energy sources.

Meanwhile, Elena and Jenna went to Elena’s house. “Mom, who knows a lot about saving energy?” asked Elena.

“Our local utility, I suppose,” she answered. “They often send us energy-saving tips. I’ll call to see if we can visit and get more information.”

At the utility, the girls found a whole shelf of energy-saving booklets.

“Good deal!” said Elena. “We can take these to our next club meeting!”



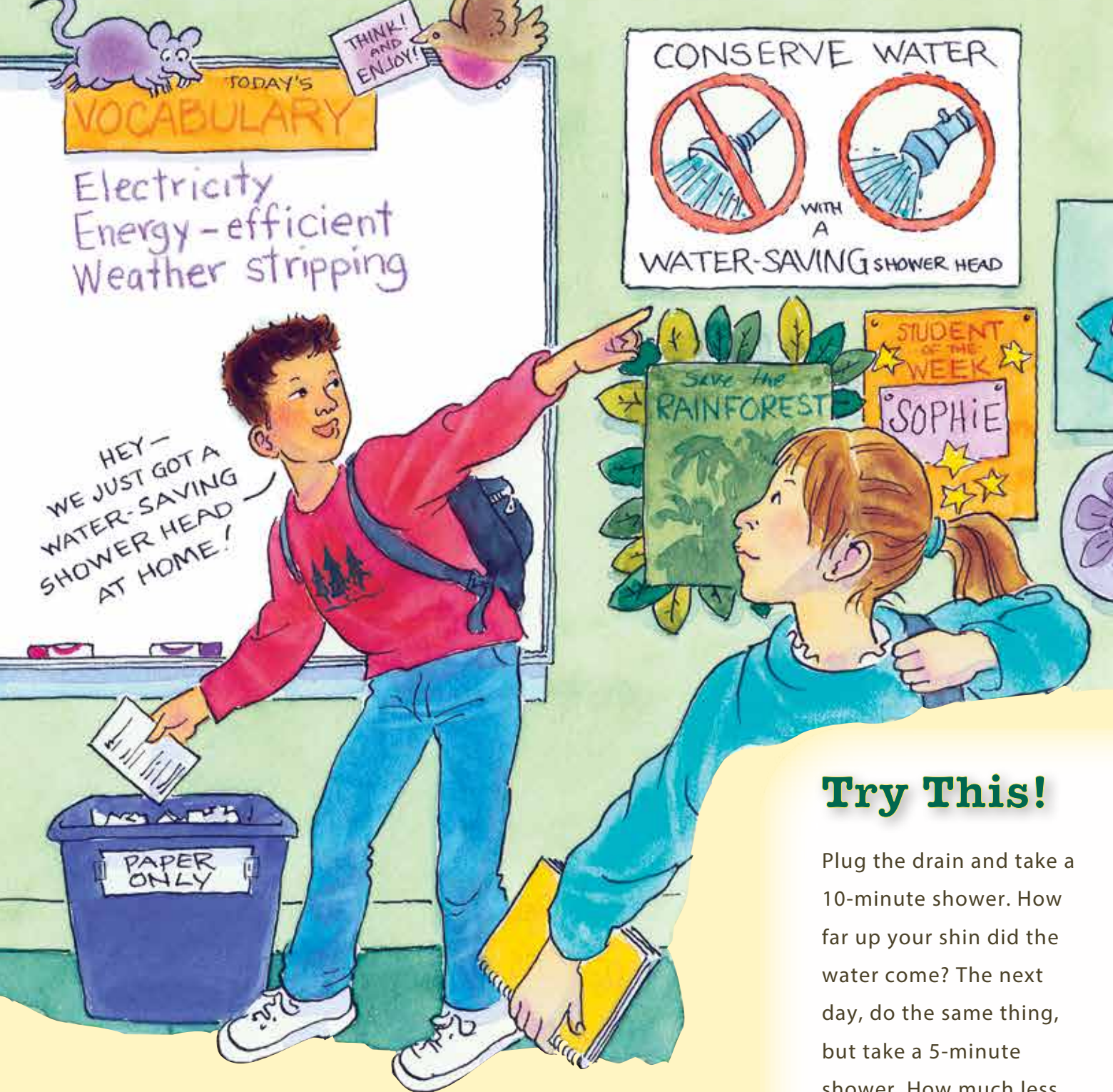
Try This!

Save energy and keep cool in hot weather with refrigerator tea. Instead of boiling water, place six tea bags in a quart of cold water and refrigerate overnight. Remove them, sweeten, and enjoy.

The next morning before school, Jared and Ray asked their teacher, “Mr. B, does a dripping water faucet waste energy?”

“It sure does,” said Mr. B. “A hot water drip is the worst, because it means the energy that was used to heat the water goes to waste. But even cold water wasted down the drain has to be cleaned at a water treatment plant—and that uses energy, too.”

“Sheesh,” said Ray. “Everything uses energy!”



HEY —
WE JUST GOT A
WATER- SAVING
SHOWER HEAD
AT HOME!



Try This!

Plug the drain and take a 10-minute shower. How far up your shin did the water come? The next day, do the same thing, but take a 5-minute shower. How much less water did you use? Imagine how much water would be saved in a year if everyone in your family took 5-minute showers!

Their friend Miguel was listening in. “My dad is always telling us not to waste water,” he said. “Last weekend I helped him take off our old showerhead and put on the water-saving kind. It will use less water and save us some money.”

Ray and Jared slapped high fives and turned to Miguel. “Thanks for the tip. You want to join our club?”

Did You Know...?

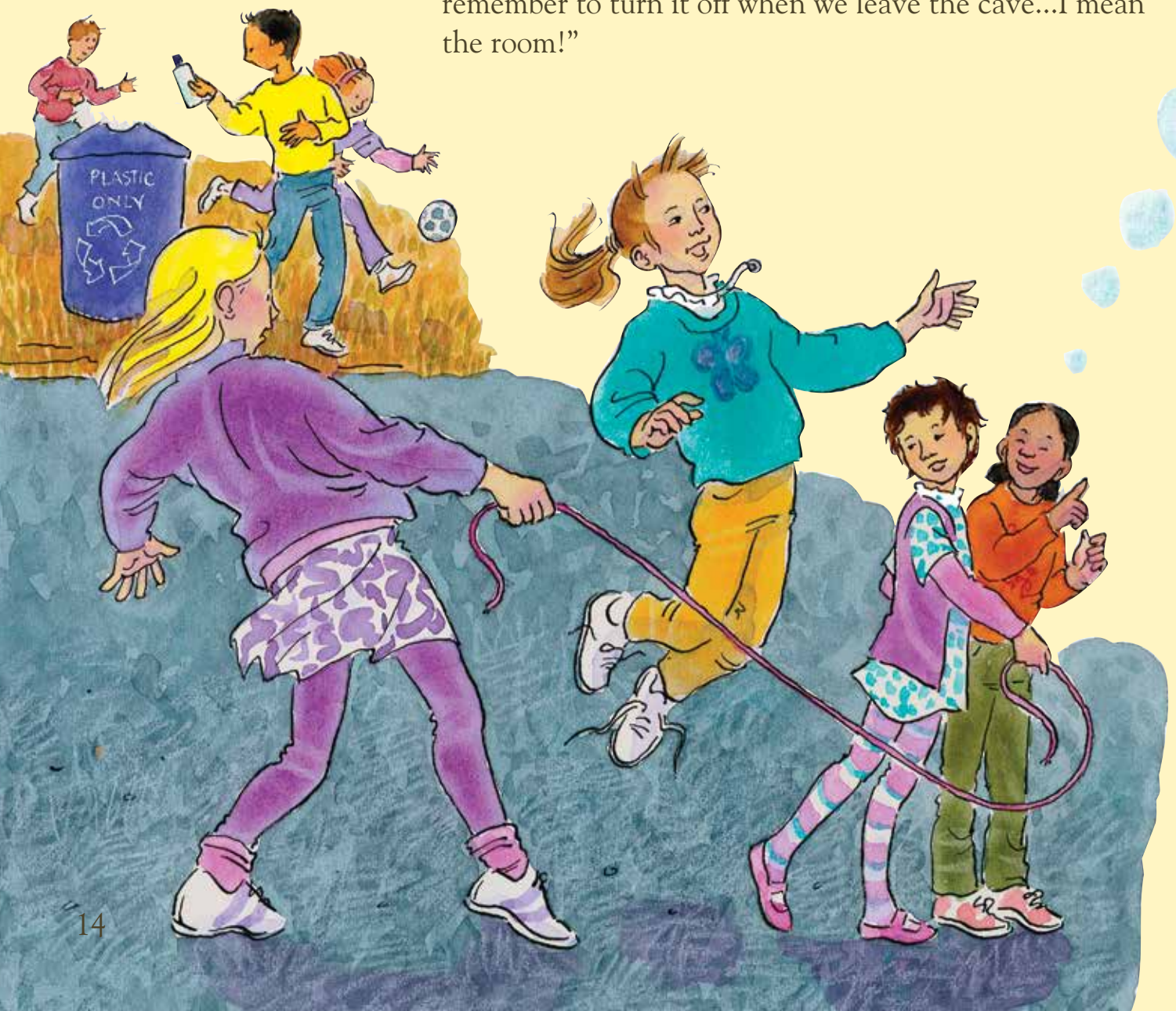
LEDs (light-emitting diodes) give off as much light as ordinary bulbs, but they use much less energy and last much longer!

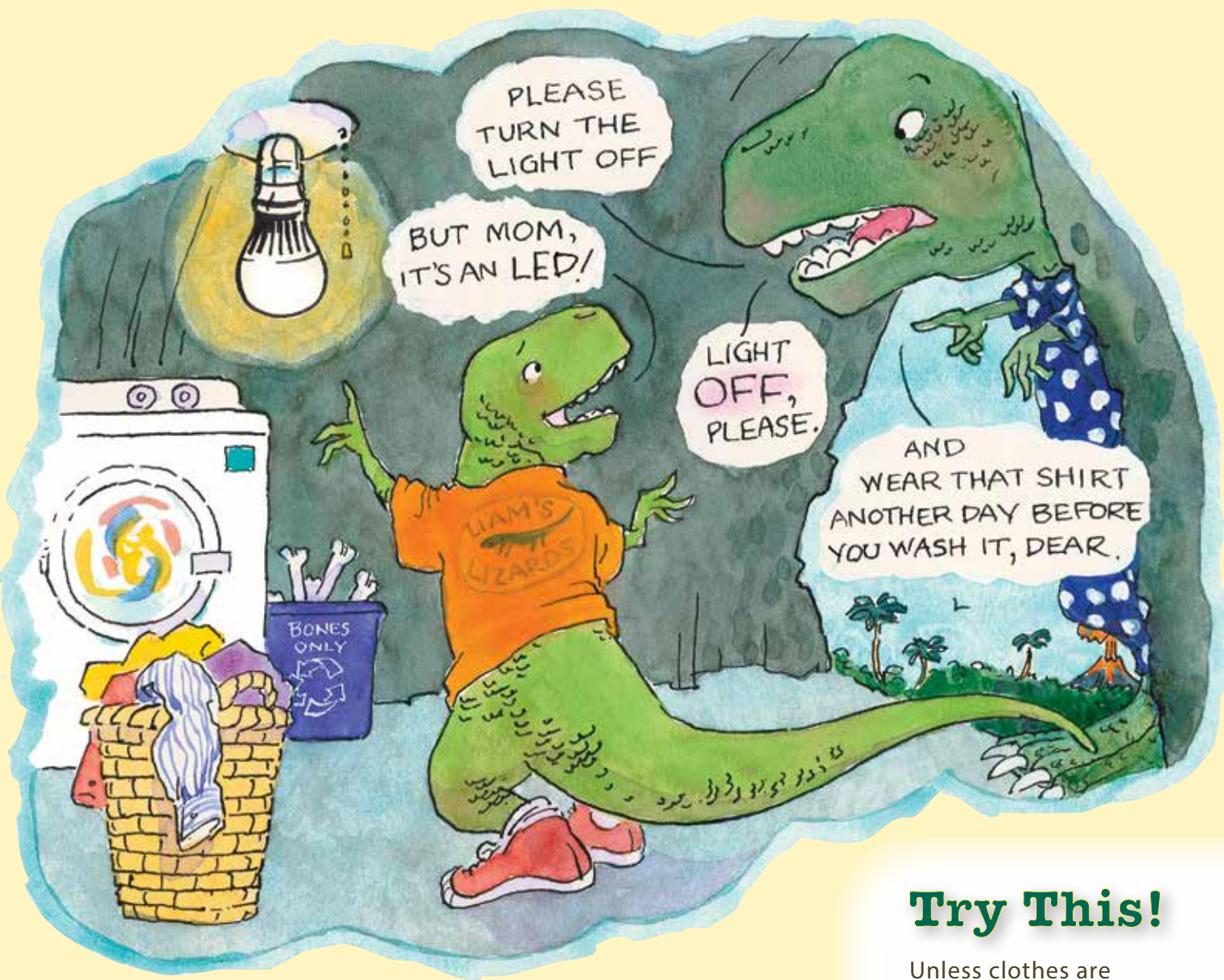
At recess Elena said, “Jenna and I need some ideas about how to save energy.”

Rachel said, “At home we have a rule about turning lights off when you leave the room.”

“That rule has been around forever,” Jenna groaned. “I’ll bet baby dinosaurs got told, ‘Turn off the light when you leave the cave.’ ”

“My mom bought a new kind of energy-saving light bulb called an LED.” said Rachel. “It looks funny—super modern, with stripes. And we still have to remember to turn it off when we leave the cave...I mean the room!”





Try This!

Unless clothes are super dirty, washing them in cold water works just as well as using hot or warm—and it uses less energy. Ask your parents to wash a load of laundry using only cold water, then to wash a load in warm or hot water. Can you see a difference?

“I’m not allowed to just wash and dry my favorite shirt by itself,” said Lily. “My parents say it takes the same amount of energy to run a small load as it does to run a full load, so it’s wasteful for the washer to use all that energy for just a few things. And Dad washes our clothes in cold water to save energy.”

“My mom is always reminding me not to throw clothes in the laundry hamper until they’re actually dirty,” said Rachel. “It just wastes energy to wash clean clothes!”

“Hey,” said Elena, “you two just got elected to join our club!”

Did You Know...?

The biggest air leaks in most homes are found in the attic and basement.

Or, in homes without attics and basements, along the highest ceilings and lowest floors.

In class Mr. B passed out wooden sticks, tissues, and glue sticks.

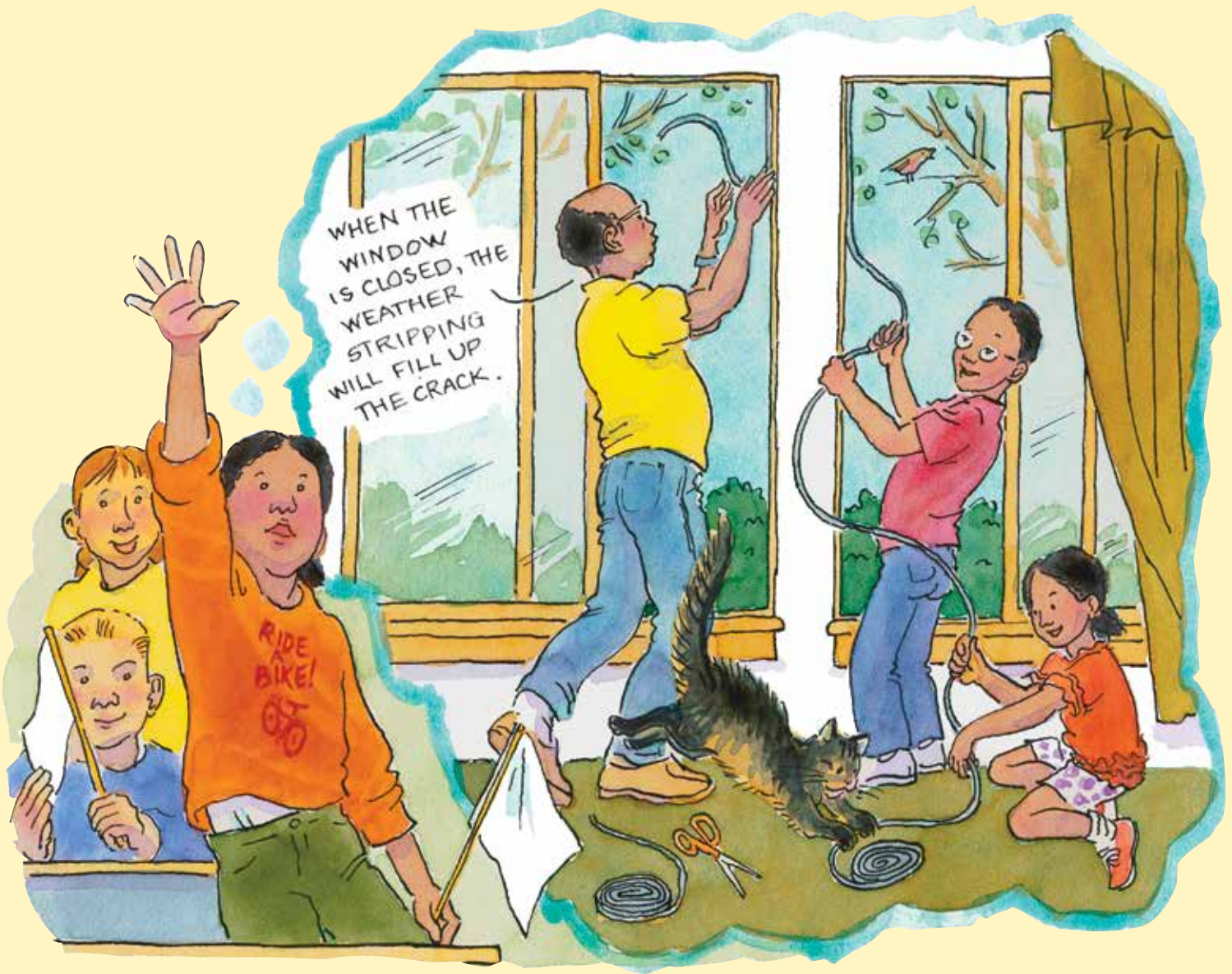
"I've heard several kids talking about saving energy, so we're going to make leak detectors," he said. He showed them how to glue the tissue to the stick so that it hung down like a flag.

"One way to save energy in cold weather is to keep the heat inside and the cold air outside," he said. "In hot weather, you want to do the opposite: keep the hot air outside and the cool air inside."

Mr. B held his leak detector up to the edge of the window, then to the crack of the door. "See the tissue move?" he asked. "This means air is going where it shouldn't, which makes the heating or cooling system work a lot harder. That wastes energy."

"Uh-oh," said Ray. "I wonder if our clubhouse is that leaky. We'd better check it!"





"Now," said Mr. B, "how would you fix a leak?"

Jenna raised her hand. "We helped Dad put this squishy foam strip around our leaky bedroom windows."

"That's called weather stripping," said Mr. B, "and it works very well to seal the cracks around windows and doors."

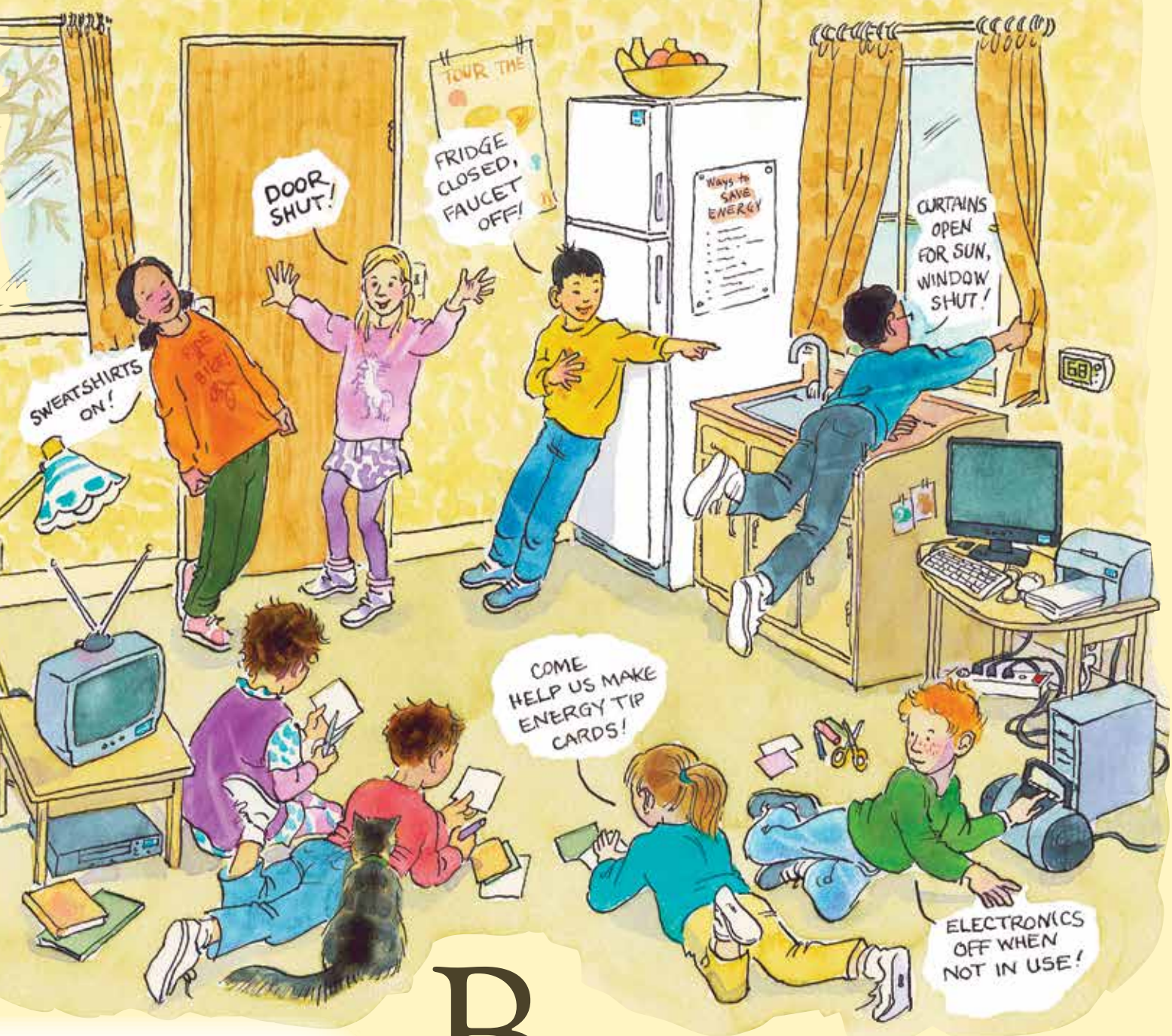
"But does stopping that little bit of air really make a difference?" asked Jenna.

"You bet it does," said Mr. B. "Everything we do to save energy makes a difference."

"Hey, Ray," Elena giggled. "We might have to make Mr. B an honorary club member!"

Try This!

Make your own leak detector. Check for leaks around the windows and doors at your house. If you find a leak, report it to your parents, then offer to help fix it.



Try This!

Make your own Energy Tip cards. Color and cut out the ones in the back of this book, then ask your parents if you can post them around your house.

Back at the clubhouse, Elena said to the new kids, “Rule number one, keep your sweatshirts on.”

“And always keep the door shut,” said Ray.

Jenna and Jared posted the list of energy-saving tips and added the new ideas from their friends.

Ray passed out note cards and colored pencils.

“Let’s put up notes to help us remember to save energy every day. We’ll make one for the refrigerator door...one for the desk lamp...one for the light switch...”

When all the signs were up, Jenna and Jared called their Mom up to the clubhouse.

“Hi, kids,” Mom said. “So, what’s the big news?”

“We really want to keep our clubhouse,” Jared said, “so we started a list of ways to save energy.”

“We did research at the library and the utility,” said Jenna.

“We talked to our teacher,” added Ray.

“And we asked our friends for ideas,” said Elena, smiling at the new club members. “See the tips we’ve posted all around?”

Mom looked impressed. “You’ve done an incredible amount of work, kids. But you’ll have to show me that you’ll really use what you’ve learned. If our next bills are lower than the last ones, then you can keep the clubhouse. If not, then I’m really sorry...but the club will have to go.”

Did You Know...?

If every home in this country replaced just one light bulb with a bulb that has earned the ENERGY STAR®, we would save enough energy to light more than 2 million homes for a year!





The Clubhouse Kids got to work!

They asked each parent to donate one LED, and changed all the clubhouse light bulbs.

They used the leak detectors they had made at school, and Jenna and Jared's parents helped them seal the cracks they found.

They kept the heat in the clubhouse at 68° or lower.

They even convinced all their parents to wash laundry in cold water, and to install water-saving showerheads. Little by little, their parents began to use all the energy tips.

"But I'm still worried about that next bill," said Jenna. "What if our plan doesn't work?"



“Clubhouse Kids,” said Mom, “The bills came today. I’ve called an emergency club meeting. All the other parents are coming, too.”

“Oh no!” Elena whispered. “That can’t be good!”

“After all our work,” Ray said sadly. “I can’t believe it!”

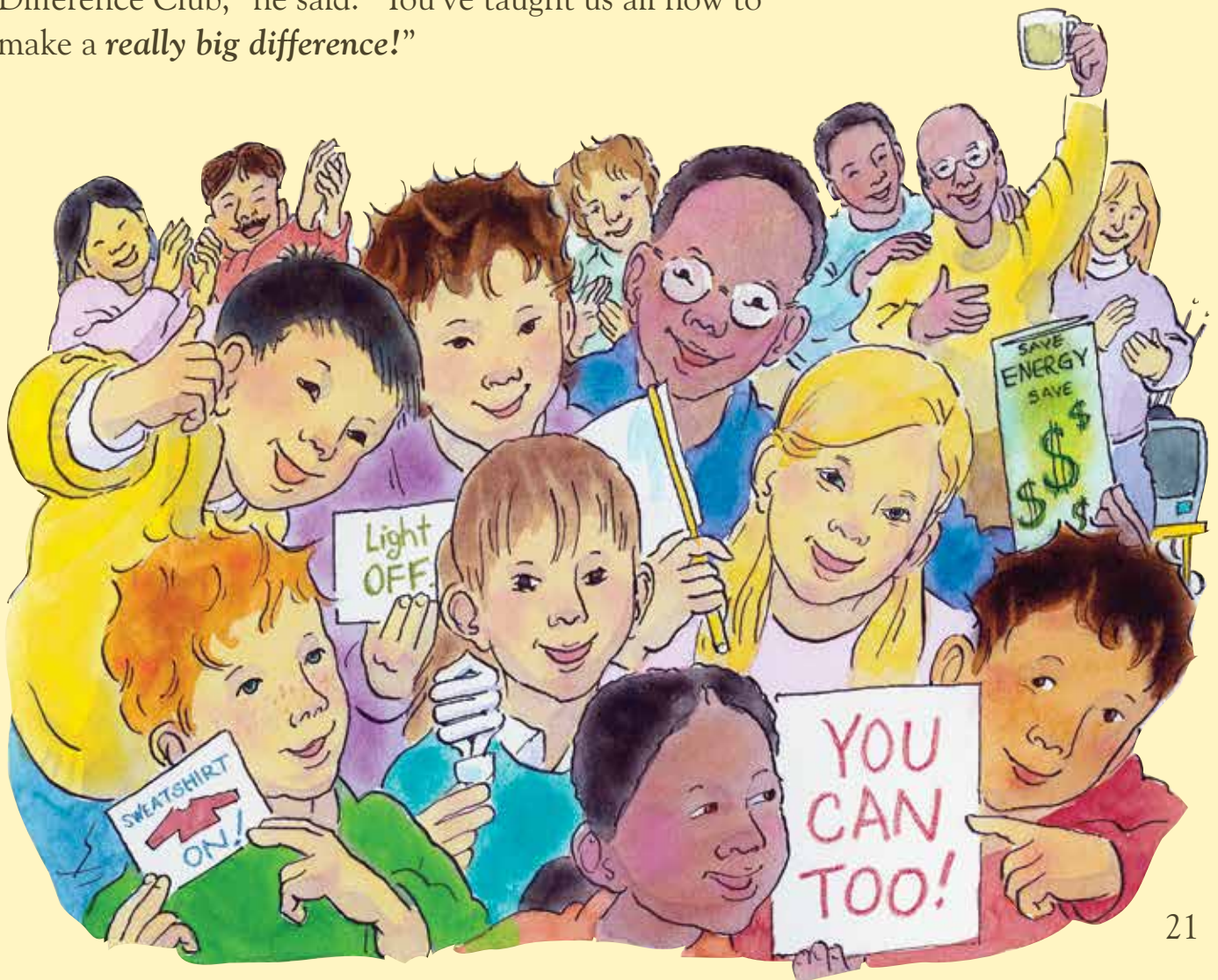
But, as the meeting opened, Mom waved the bills happily. “Great news!” she said. “You kids did it! You made your clubhouse much more energy-efficient. We saved money on our energy bills this month, and with the new changes we’ll save money every month from now on. The club can stay!”

The Clubhouse Kids cheered.

Jared’s dad raised his cup of refrigerator tea. “Here’s to all you great kids! We should call you the Make a Difference Club,” he said. “You’ve taught us all how to make a *really big difference!*”

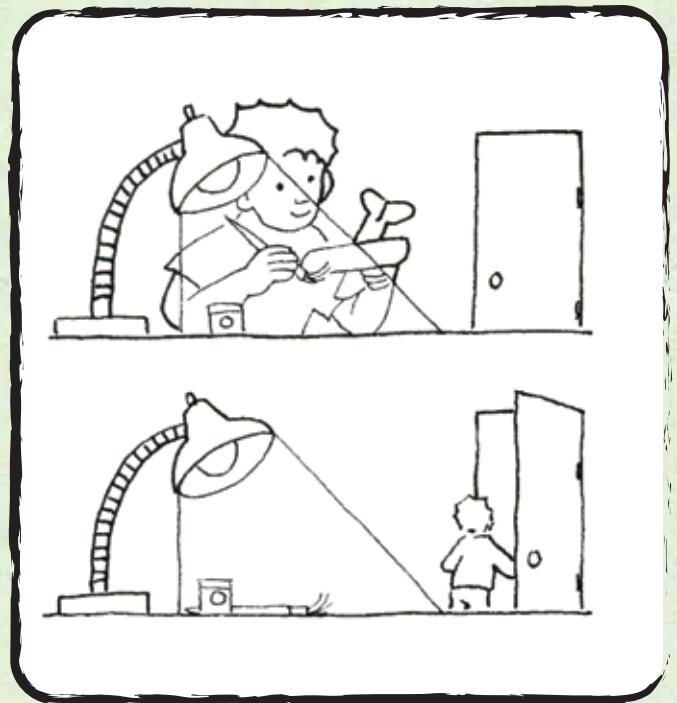
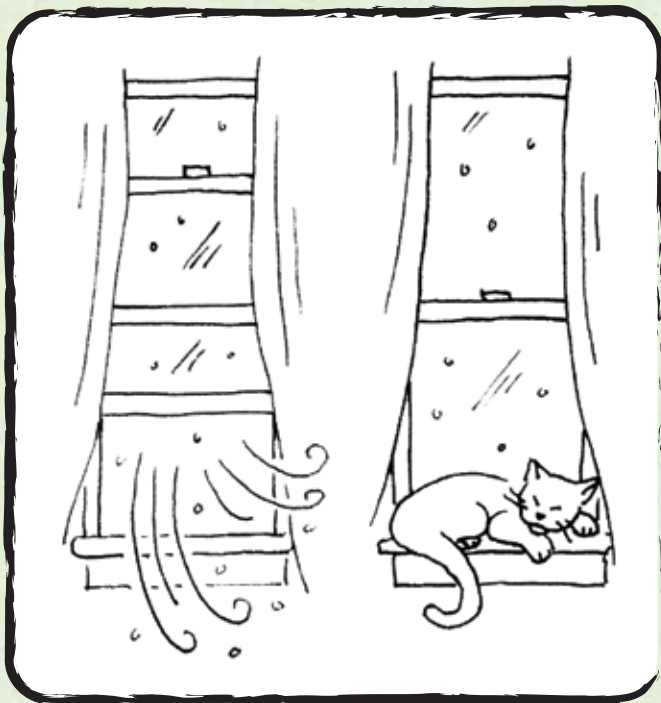
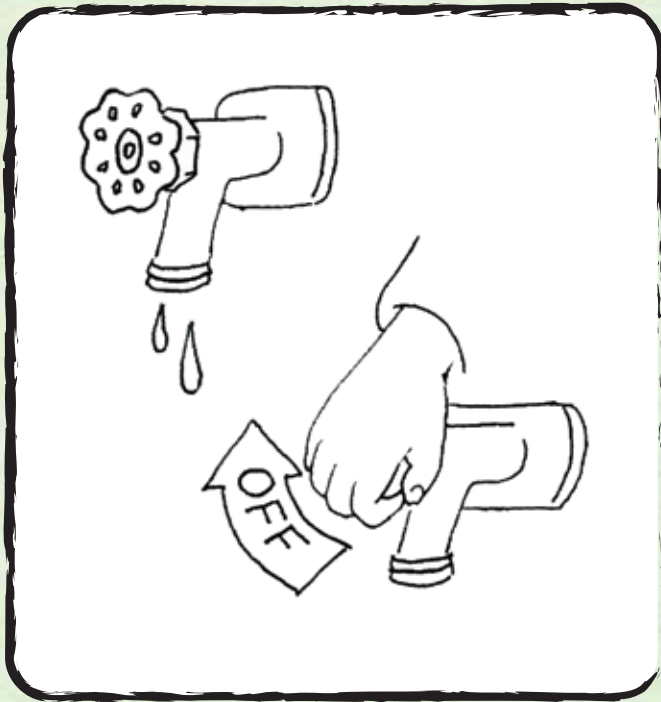
Did You Know...?

You can make a big difference for your family and for the Earth, just the way the Clubhouse Kids did. Turn the page for more ideas and activities about how YOU can use energy more wisely.



Savers & Wasters

Directions: In each box, circle the picture where energy is being wasted. Color it red.



WORLD PUZZLER

Directions: Start with the letter "S" and go around the circle clockwise. Skip two letters at a time, and write down every third letter until you complete the secret message below. The first two are done for you.



We SH

help the Earth.

Renewable Energy Matching

Directions: Draw a line to match each energy source with its picture.
Circle the renewable energy pictures. If you need help, see pages 8 and 9.

Solar Power

Coal

Wind Turbines

Oil

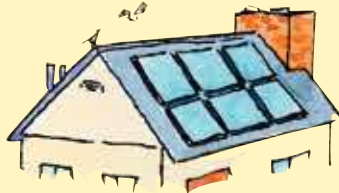
Wave Energy

Hydropower

Natural Gas

Geothermal

Biomass



MATH DECODER



Directions:

1. Find the answers and write them in the empty boxes beside each problem.
2. For each of your answers, find the letter in the box right next to it.
3. Write each letter under the number it goes with at the bottom of the page.
(The first one is done for you.)

$66 - 2 =$	64	= L
What is the sum of 6 pennies, 5 dimes, and 1 quarter?		= W
How much is $30 - 12$?		= S
What is the next number in the pattern? 212 214 216		= I
$97 - 86 =$		= N
How many hours are there in a day?		= R
$87 + 12 =$		= O
How many inches are there in a foot?		= D
What is the sum of 10 pennies, 2 nickels, 2 dimes, and 2 quarters?		= A

Renewable Energy Sources Such As

18	99	64	90¢	24
		L		

&

81¢	218	11	12

P	O	W	E	R

Help Keep The Earth Healthy.

Energy Scramble

Directions: Unscramble the words, using the sentences for clues.

1. LORAS

_____ energy comes from the sun.

2. NIWD

Renewable energy sources include _____, sun, and falling water, and can never be used up.

3. SUE ESLS

To conserve means to _____ of something, or to use it more carefully so it lasts longer.

4. EGERYN

The Clubhouse Kids' efforts made their clubhouse more _____ - efficient.

5. THEA

The climate is changing because certain gases in the air trap _____ from the sun.



Club Certificate

Energy Saver Pledge

- ☐ I promise to use energy wisely in my home, school, and community.
- ☐ I promise to turn off lights, TVs, computers, and appliances when I am not using them.
- ☐ I promise to not waste water.
- ☐ I promise to use the power of the sun and the wind when I can.
- ☐ I promise to help others learn about saving energy.

My name: _____

My teacher's name: _____

My parent's names: _____

What I do makes a big difference—Saving energy helps the Earth!



Club Certificate

I am a proud member of the
Make a Difference Club. I help the
Earth by using energy wisely in
my home, school, and community.



Signed,

What I do makes a big difference—
Saving energy helps the Earth!

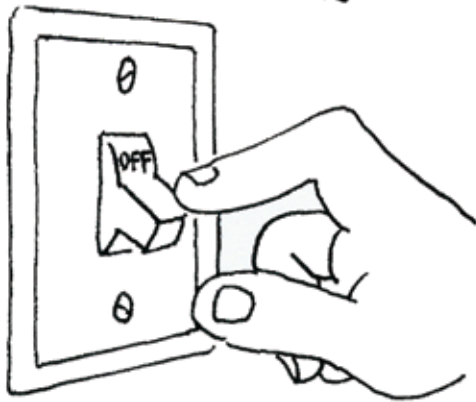


Energy TipCards

Directions:

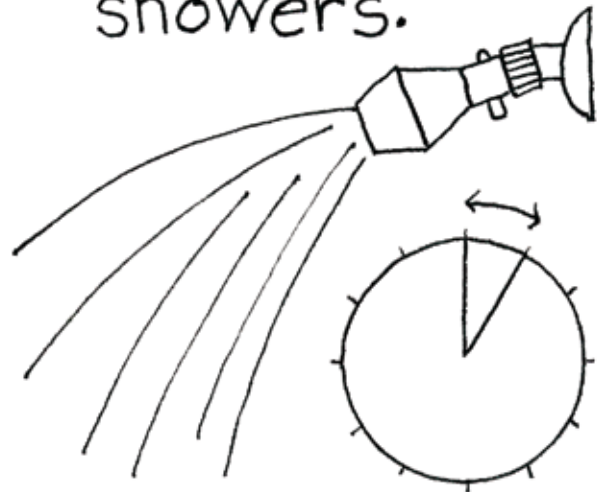
1. Color these cards (front and back), then cut them out.
2. Ask your parents if you can tape them up where they will be most useful to your family.

Turn off lights



when not in use.

Take five-minute
showers.



Keep doors
and windows
CLOSED



when heat or
air conditioning
is on.

Turn off
radio



TV



computer

when not in use.

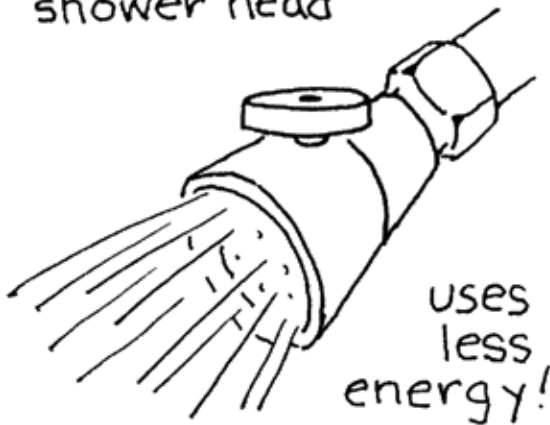
Energy TipCards

Directions:

1. Color these cards (front and back), then cut them out.
2. Ask your parents if you can tape them up where they will be most useful to your family.

Remember

A water-saving
shower head



uses
less
energy!

Remember



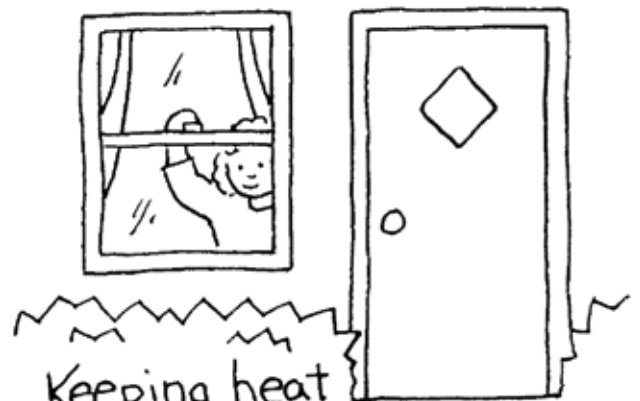
An LED bulb
uses less energy!

Remember



Turning electronics OFF
uses less energy,
than standby!

Remember



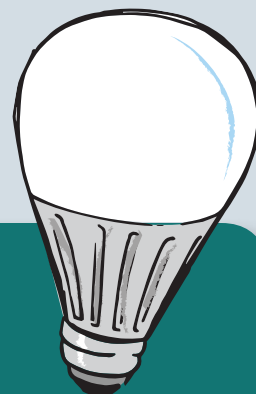
Keeping heat
or cool air in
uses less energy!

Home Energy Inspection

Directions: With an adult, use this checklist to examine your home energy use. Then check your score.

NOT
YES YET

- ☐ ☐ Do you turn the heat down to 68° in winter, wear sweatshirts, and keep doors and windows closed?
- ☐ ☐ Do you keep air conditioning at 76-78° during the hot months?
- ☐ ☐ Do you turn off your computer or put it to sleep when not in use?
- ☐ ☐ Have you replaced your ordinary light bulbs with LEDs?
- ☐ ☐ Do you turn off your radio and CD player when you're not using them?
- ☐ ☐ Are water-saving showerheads used in your bathrooms?
- ☐ ☐ Do you limit your showers to five minutes?
- ☐ ☐ Do you wash only full loads of clothes?
- ☐ ☐ Do you dry your clothes on a clothesline or rack?



Your Score — Score 5 points for every "Yes" and 0 points for every "Not Yet."

0 There's a lot more you can do to save energy.

5 to 15 Good. You're on your way!

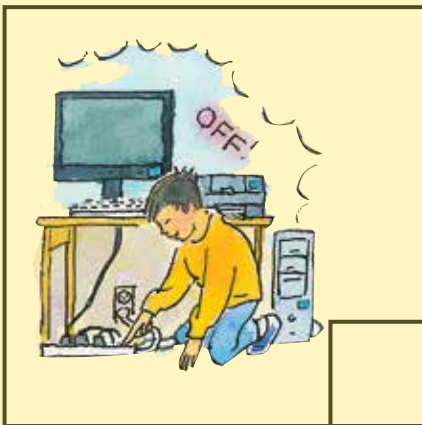
20 to 30 Very Good. You're obviously doing a lot to save energy.

35 to 45 Excellent. Congratulations on your super energy savings!

Share your energy smarts with family and friends.

Search & Find

Directions: Search inside this booklet for these examples of the Clubhouse Kids and their friends learning to save energy. Write the page numbers in each box.



The Clubhouse Kids Make a Big Difference

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