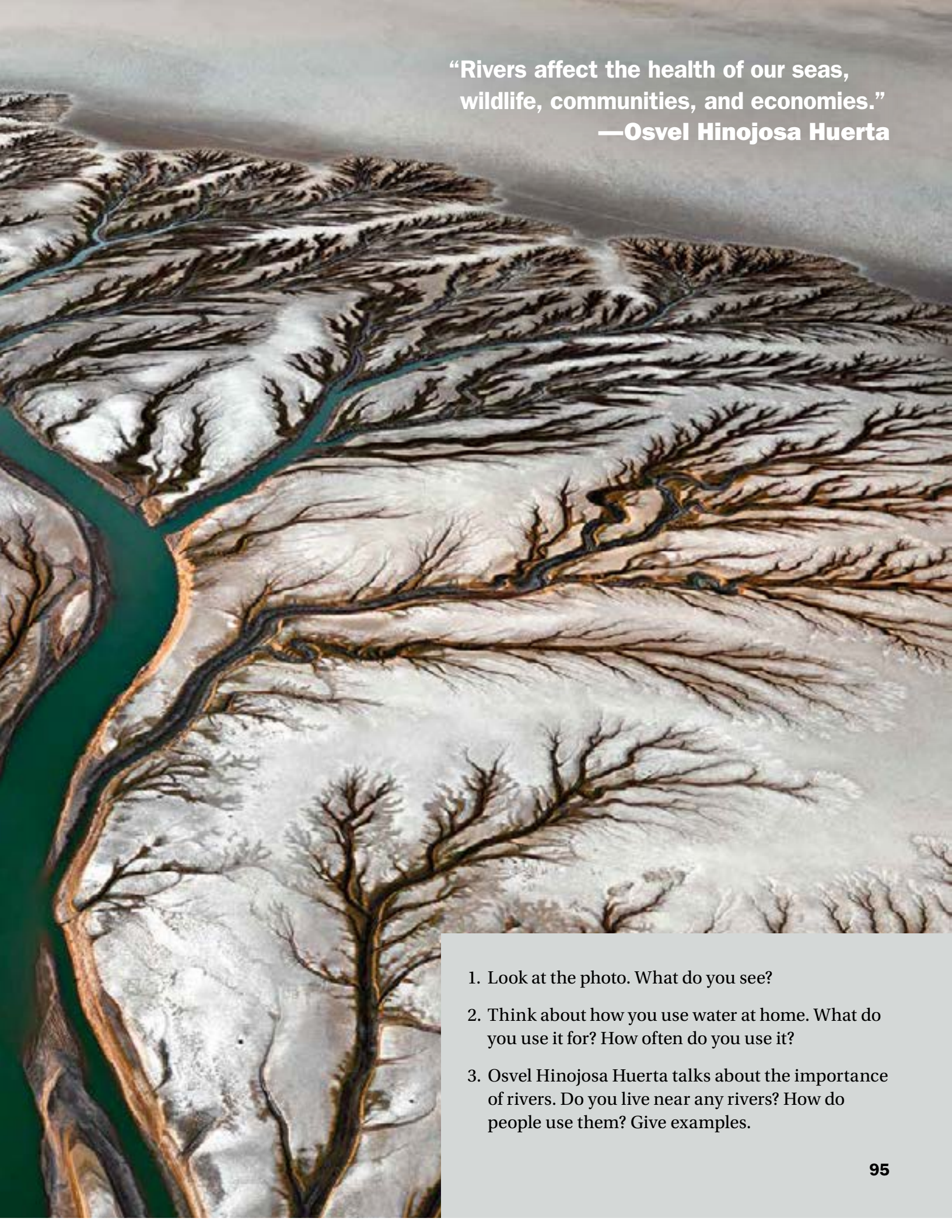


Water

The Colorado River Delta, from
a thousand feet above

**“Rivers affect the health of our seas,
wildlife, communities, and economies.”
—Osvel Hinojosa Huerta**



1. Look at the photo. What do you see?
2. Think about how you use water at home. What do you use it for? How often do you use it?
3. Osvel Hinojosa Huerta talks about the importance of rivers. Do you live near any rivers? How do people use them? Give examples.

1 Where does your water come from?

Discuss. Then listen and read. **TR: 79**

You turn on a faucet and water comes out of it. But do you know where your water comes from? Earth is sometimes called “The Blue Planet” because 71 percent of its surface is covered in water. This water is in a continuous cycle. It is always moving on, above, and below the surface of the earth. Let’s look at the water cycle.

Water in the sky cools down a little and becomes **clouds**.

Water in the clouds cools down more and falls from the sky as **rain, snow, or hail**.

There is **salt water** in the oceans and **freshwater** in the rivers. Most lakes are freshwater, but there are saltwater lakes, too. Water on the surface of the rivers, lakes, and oceans heats up. Then it evaporates and rises up into the **sky**.



WATER GIVES LIFE, BUT IT IS ALSO A KILLER!

Less than 1% of the water on Earth is freshwater, and not all of that water is clean and safe to drink.

- Unsafe water is one of the top ten killers in the world.
- Dirty water causes 80% of all diseases in some parts of the world.



There is snow on the mountains. Some snow turns into **ice**.

Sometimes the ice and snow on the mountains **melts**. Then it runs down the side of the mountains and onto the **ground**.

Some of the water goes **underground**. Some water flows from the ground into **oceans, lakes, and rivers**.

2 Learn new words. Listen and repeat. **TR: 80**

3 Work in pairs. Talk about why the water cycle is important to us.

4 Read and write the words from the list.

cloud freshwater ground ocean rain river salt water sky

The Colorado _____ is 2,330 km (1,448 mi.) long. It flows from the Rocky Mountains in the United States of America, through five U.S. states and into Mexico. It finally flows out into the Delta wetlands. The _____ in the wetlands is very important for wildlife and plants. From the wetlands, the river then joins the _____ of the _____ in the Gulf of California.

But there's a problem. Factories, farms, and cities are using a lot of water from the Delta wetlands. There is also less _____ than there was in the past. This means that the _____ in some parts is now completely dry. Dr. Osvel Hinojosa Huerta is a National Geographic Explorer and conservationist. He's working with business owners, farmers, and city officials to save the Delta wetlands. He wants to put water back into the wetlands.

5 Learn new words. Listen for these words and match them to the definitions. Then listen and repeat. **TR: 81 and 82**

clean dirty safe unsafe

- _____ 1. not safe, dangerous
- _____ 2. free from dirt or marks
- _____ 3. not dangerous
- _____ 4. covered with dirt or marks



Sandra Postel and Osvel Hinojosa Huerta

6 Choose an activity.

1. **Work independently.** Find different bodies of water near where you live. Look for rivers, lakes, or ponds. Draw and label a map to show where they are.
2. **Work in pairs.** How much water do you use in your daily life? Talk about an average day, and make a list of every time you use water.
3. **Work in groups.** Research groups that help people find clean, safe water. Learn about where they work and what they do. Share what you learn with the class.

SPEAKING STRATEGY TR: 83

Brainstorming solutions

How can we save water?

What about young people? **What can they do?**

What can we do in the garden to save water?

Do you have any other ideas?

Maybe we can take shorter showers?

What if they learn about the water cycle at school?

I think we should collect rainwater for the plants.

Sorry, **I can't think of anything.**

7 Listen. How do the speakers brainstorm solutions?

Write the phrases you hear. TR: 84

8 Read and complete the dialogue.

Stefan: _____ we do at school
to save water?

Frieda: At school? _____ put some
posters up in the bathrooms about saving water.
Then people will remember to turn the faucets off.

Stefan: Good idea. _____ teachers?
What can they do?

Frieda: _____ they show us some videos about
saving water and ask us to research other ways?

Stefan: Yes, OK. And _____ we save water in the school
kitchen?

Frieda: Sorry, I can't think of anything.

Stefan: OK, never mind. _____ any other ideas?

Frieda: Yes. _____ plant more trees in the school garden.
Trees don't need that much water.

Stefan: Great idea. Thanks Frieda.



9 Work in pairs. Take turns. Choose a card.
Brainstorm solutions.



Go to p. 179.

GRAMMAR TR: 85

Present progressive:

Talking about what is happening now

How **are we trying** to save water?

People **aren't wasting** as much water as they used to.

They're keeping water cold in the fridge.

Apps **are helping** people to save water in the garden.

Talking about things that always happen

My brother **is always taking** long showers!

Our neighbor **is always washing** his car.

10 Listen. You will hear six ways that people are trying to save water. Number the words in the order you hear them. Then write them out in the correct form. TR: 86

- _____ buy My parents are buying _____
- _____ put We _____
- _____ help We _____
- _____ keep I _____
- _____ plant I _____
- _____ talk My sister _____

11 Read. Complete the text with the correct form of the verb in parentheses.

What _____ (you / do) today?

We're on Day 1 of our Water Saving Plan at home. Mom and Dad _____ (try) really hard to save water right now, but Hugo, my little brother, _____ (not help) us at all. He _____ (always play) with the hose in the garden, and his friends _____ (always turn) on the faucet in the kitchen and then running away. We _____ (get) very annoyed with them! Do you have any advice for us?



12 Learn new words. Listen to learn about other ways of saving water. Then listen and repeat. **TR: 87 and 88**



Find a **reusable** object, such as a brick. Put it in the tank of your **toilet**. Now your toilet uses **less** water.



Collect the water from your roof. Water runs through your gutter, and a special container collects it. Now you can **water** your garden!

13 Work independently. Imagine that you're trying to save water at home. Write a list of the things you're doing to help. Use words from the box.

faucet	garden	less	plants	reusable
shower	toilet	wash	waste	water

14 Work in pairs. Compare your lists from Activity 13. Do you have similar ideas?

15 Before you read, discuss in pairs.

Based on the title and the photo, what do you think the reading is about?

16 Learn new words. Find these words in the reading. Which two words are types of material? Which two words mean to do something again? Then listen and repeat. **TR: 89**


cloth plastic recycle reuse

17 While you read, look for examples and explanations. **TR: 90**

Keep our oceans clean!

Look around you. Do you see anything made with plastic? We use plastic in our computers, in our phones, in our homes, in our cars, and even in our clothes!

We make 300 million tons of plastic every year. That's about the same weight as 30 million elephants! Plastic is very useful, but there's a problem. When we don't want things made of plastic anymore, we often throw them away.


An underwater photograph showing a large, clear plastic bottle floating horizontally in the center. The bottle is surrounded by a thick layer of brown, fibrous seaweed or algae. In the lower right corner, a large, dark-colored fish is swimming towards the left. The background is a deep blue ocean with some light filtering through the water.

An Ocean of Plastic

A lot of that plastic ends up in our oceans. In fact, every year, at least 8 million tons of plastic goes into our oceans. This plastic breaks up into very small pieces called *microplastics*. Sea animals and fish eat the microplastics and may die.

Microplastics are not the only problem. Other tiny pieces of plastic, called *microbeads*, are added to many types of toothpaste and shampoo. When we use these products, the microbeads go into the water and fish eat them. However, because microbeads are not food and are not nutritious, the fish then die. Microbeads can also pass into our systems when we eat fish.

There are things we can do to stop plastic from reaching the ocean. Some countries have now banned the use of microbeads in products. We can also reduce the amount of plastic we use and find ways to recycle it. Don't use plastic bags. When you go shopping, take cloth bags to the store with you and reuse them. Recycle your plastic bottles at home and at school. If you live near a beach, join or start a cleanup group. Let's all work together to keep our oceans clean!



A gray triggerfish below trash floating in the Atlantic Ocean, Palm Beach, Florida

18 After you read, work in pairs to answer the questions.

1. How much plastic do we make every year?
2. What do we sometimes do when we don't want our plastic?
3. How much plastic goes into the ocean every year?
4. What happens when fish eat microplastics?
5. What kinds of products have microbeads in them?
6. Why are reusable bags better than plastic bags?

19 Work in pairs. How does the author give examples or explanations to answer these questions? Underline the sentences.

1. Three hundred million tons of plastic is the same weight as how many elephants?
2. What happens when we use products with microbeads?
3. Give an example of how people can reuse or recycle plastic.

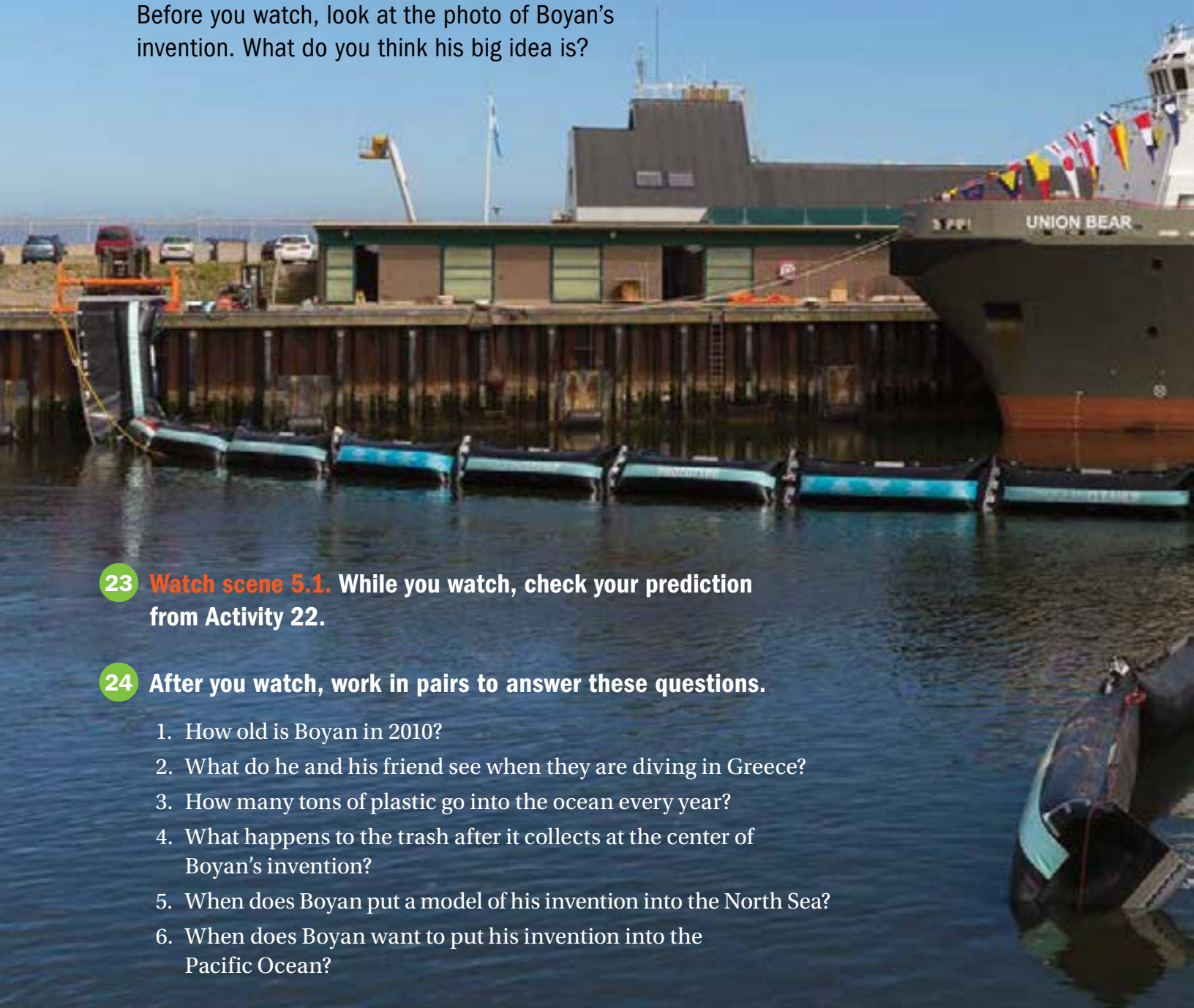
20 Discuss in groups.

1. How does the reading change the way you feel about plastic? Explain.
2. How much plastic is in your classroom? Make a list of all the plastic things you can see. Compare your list with other groups.
3. What happens when people eat fish that eat plastic?

21 Before you watch, discuss in pairs.

1. How often do you go swimming? Where do you go swimming?
2. Do you ever find plastic bags or other trash in the water?
How do you feel when you find litter in the water?

22 Work in pairs. You are going to watch *Boyan's Big Idea*. Before you watch, look at the photo of Boyan's invention. What do you think his big idea is?



23 Watch scene 5.1. While you watch, check your prediction from Activity 22.

24 After you watch, work in pairs to answer these questions.

1. How old is Boyan in 2010?
2. What do he and his friend see when they are diving in Greece?
3. How many tons of plastic go into the ocean every year?
4. What happens to the trash after it collects at the center of Boyan's invention?
5. When does Boyan put a model of his invention into the North Sea?
6. When does Boyan want to put his invention into the Pacific Ocean?



25 Work in groups. What do you think about Boyan's idea? Discuss any possible problems.

26 Work in pairs. Plastic isn't the only problem in our ocean. What other environmental problems are there? Discuss your ideas together.

The Ocean Cleanup North Sea Prototype in The Hague, Netherlands

27 Choose an activity.

1. **Work independently.** Look for ways to reduce plastic pollution. Make a list of your ideas.
2. **Work in pairs.** Design a poster to tell people not to use plastic bags. Include some information about plastic in the oceans.
3. **Work in groups.** Create a commercial for Boyan's Ocean Cleanup system. Use music and images. Act it out for the class, or make a video.

GRAMMAR TR: 91

Talking about the past: *There was* and *There were*

The Han River, South Korea

In the 1970s . . . → **Now . . .**

There was pollution in the water.

There isn't any pollution in the water.

There were lots of dead fish in the river.

There aren't any dead fish in the river.

There wasn't any food for wildlife.

There's plenty of food for wildlife.

There weren't any birds near the water.

There are many types of birds in and near the water.

28 Read. Complete the paragraph with *there was*, *there were*, *there wasn't*, or *there weren't*.

In the 1950s and 1960s, in Singapore, _____ a big problem with the Singapore River. _____ a lot of trash in the water. _____ farms and factories very close to the river, and _____ a lot of pollution from these places. _____ many tourists near the river because it was dirty. _____ any clean water in the river. Then, in 1977, _____ a big cleanup project. Now the Singapore River is clean and beautiful. Many tourists come to visit the parks and museums near the river.



The Singapore River in the 1960s



The Singapore River, 2016

29 Work in pairs. Toss a coin and move ahead. (Heads = 1 space; tails = 2 spaces) When you land on a space, make a sentence about how the park was in the past and how it is now.

In the past there was trash on the grass, but now there's no trash on the grass.



WRITING

In persuasive writing, we try to make the reader think or do something. We can give advice with phrases, such as:

It's really important to save water.

It's a good idea to take a quick shower instead of a bath.

You should use a reusable water bottle.

You shouldn't leave the faucet on.

- 30 Read the model.** Work in pairs to identify and underline the phrases that persuade the reader.

Save Water!

Water is very important. We drink it, we wash in it, we swim in it, and we cook with it. It's very important to save water at home and at school. How can you help? In the classroom, you should use reusable water bottles. In the school bathrooms, you should remember to turn off the faucet after you wash your hands.

Teachers can also help. They should teach us about the water cycle in school. We should have posters about water in our classrooms. For example, it's a good idea to collect rainwater in a special container and use it to water the trees and plants in the schoolyard.

- 31 Work in pairs.** Do you already do things to save water at your school? What do you do?
- 32 Write.** Write a paragraph to persuade people to save water at home. Include some ideas from pages 99 and 101 to give advice.





NATIONAL
GEOGRAPHIC

Protect Our Water

“We turn on our tap, but we don’t know where the water comes from.”

—Osvel Hinojosa Huerta

National Geographic Explorer, Conservationist

1. **Watch scene 5.2.**
2. Read Osvel’s quote. Do you know where your water comes from? How can knowing where your water comes from change the way you use water every day?
3. Choose a local lake or river. Find out about the plants and wildlife there. How can you help to protect this place or to clean it up?

Make an Impact

A Make a cleanup day poster.

- Imagine that a local park, river, or lake is holding a cleanup day.
- Create a poster to advertise the day. Include information about why the cleanup project is important.
- Display your poster in the classroom. Talk to your classmates about the day and answer their questions.

B Create a comic strip.

- Think of a short story about trash in a river.
- Design a comic strip to illustrate the story.
- Share your comic strip with the class.

C Give a presentation.

- Find information about different ways that a city can save water.
- Make a list of the most useful advice and find pictures to illustrate your ideas.
- Present your advice to the class.

Volunteers from a school
collect trash along
Manila Bay, Philippines

