Do your test.

☑ **4.** Follow your steps.

Collect and record data.

☑ **5.** Fill in the chart.

Tell your conclusion.

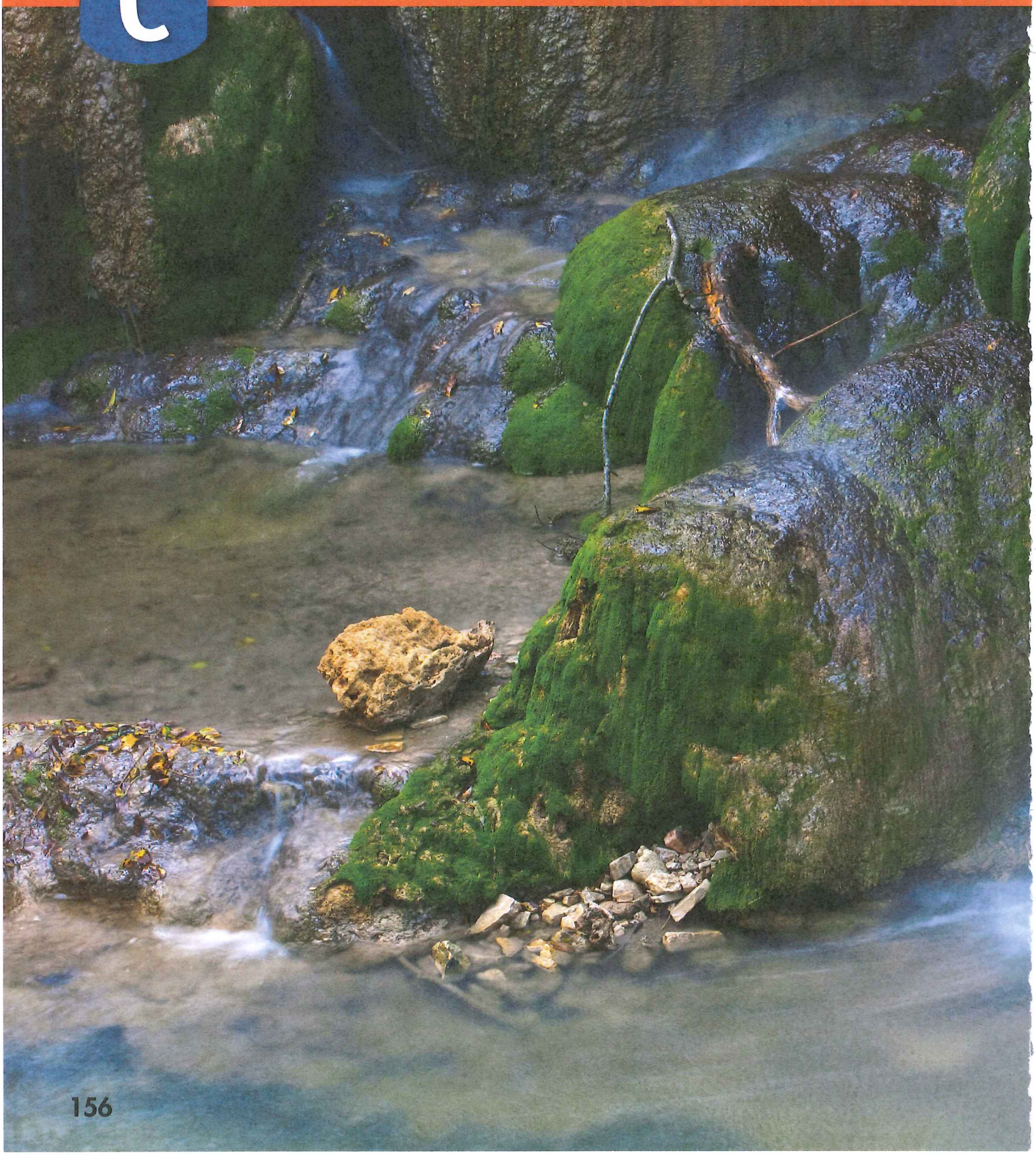
6. When did you use fewer pennies?

7. Communicate How can a smaller person lift a bigger person on a seesaw?

Texas

Unit C

Earth Science



Texas Essential Knowledge and Skills

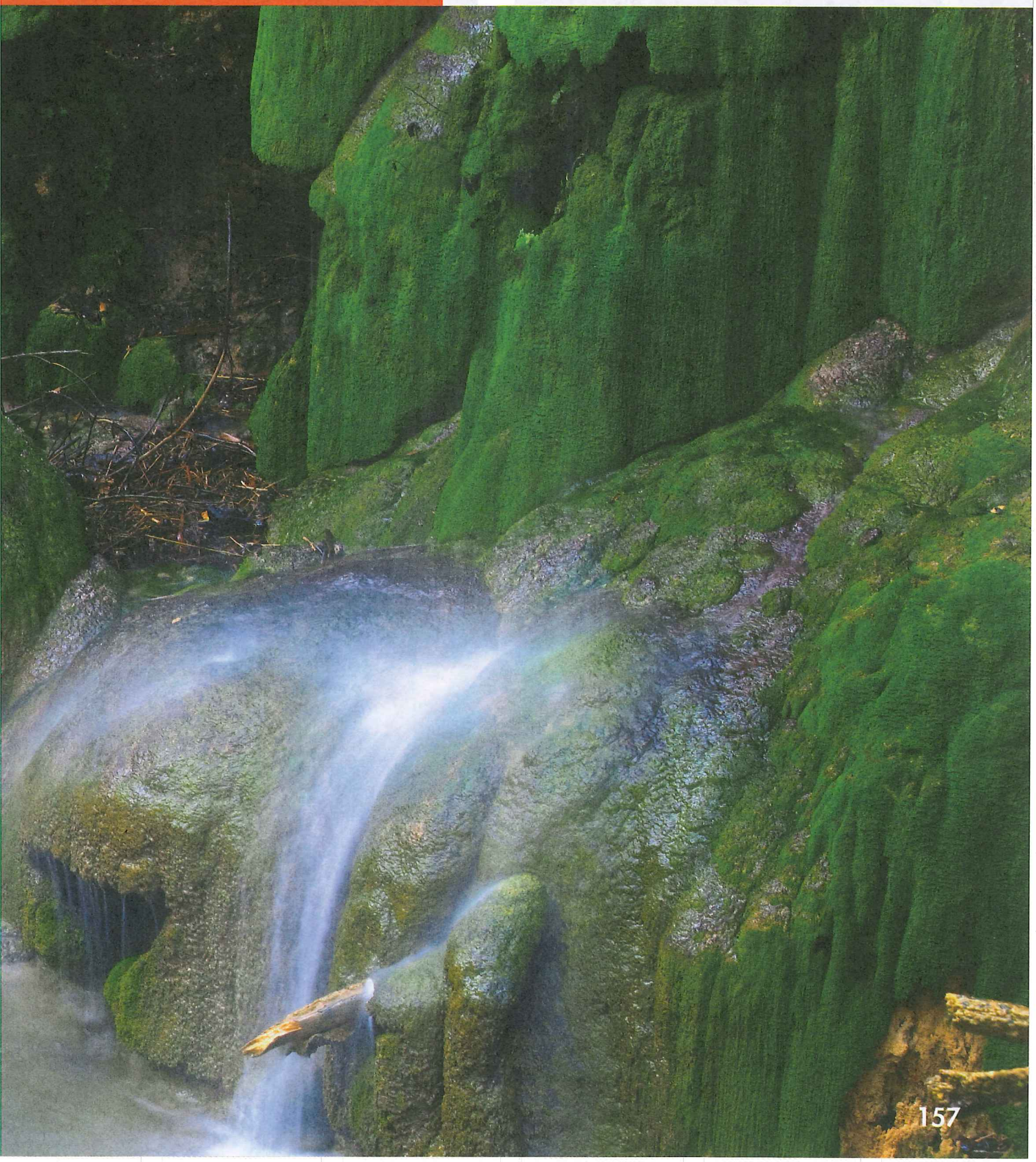
Content TEKS

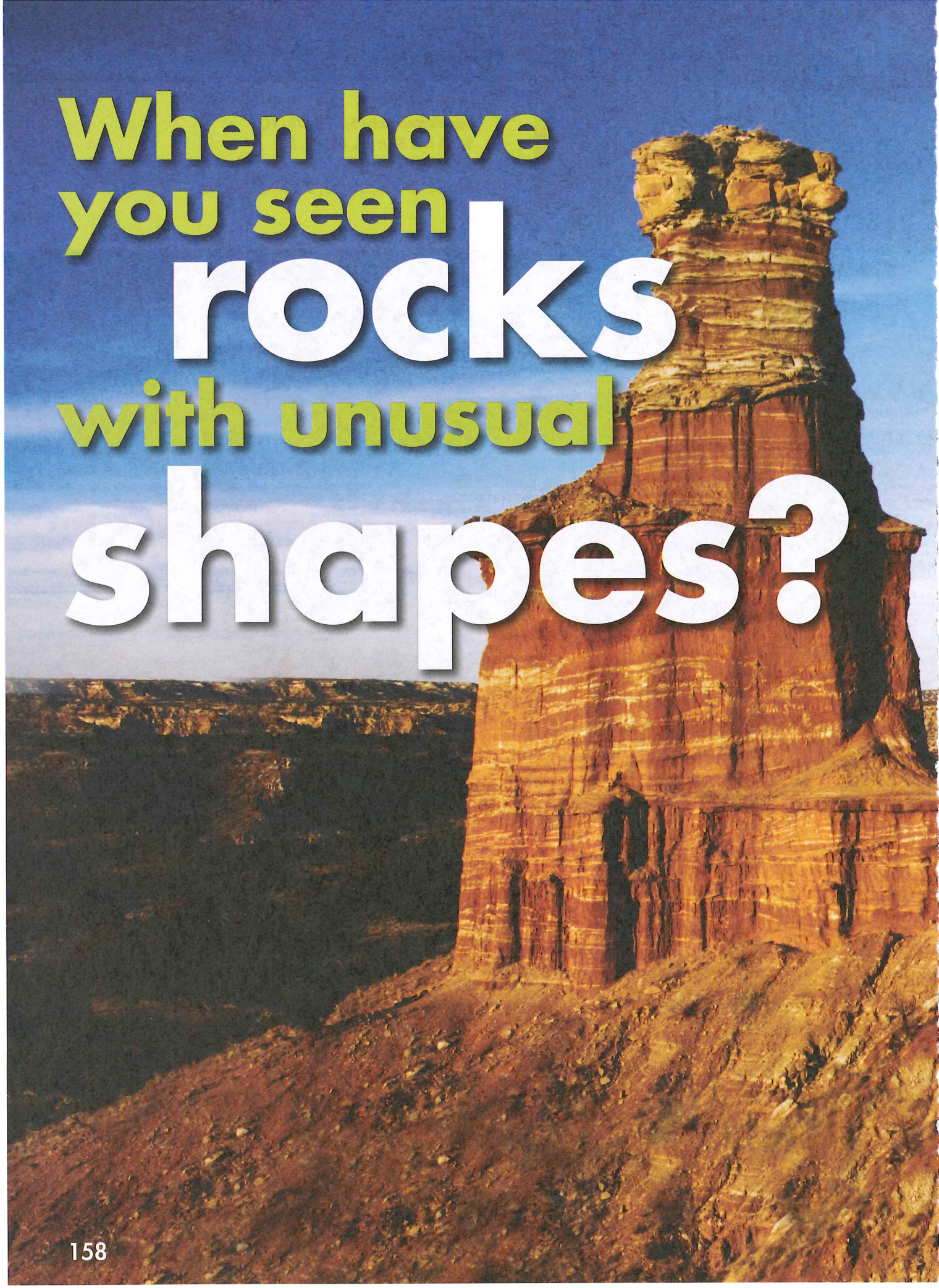
Earth's Materials: 5A, 7A, 7B, 7C

Earth and Sky: 8A, 8B, 8C, 8D

Process TEKS

1A, 1C, 2A, 2B, 2C, 2D, 2E, 2F, 3A, 3B, 4A

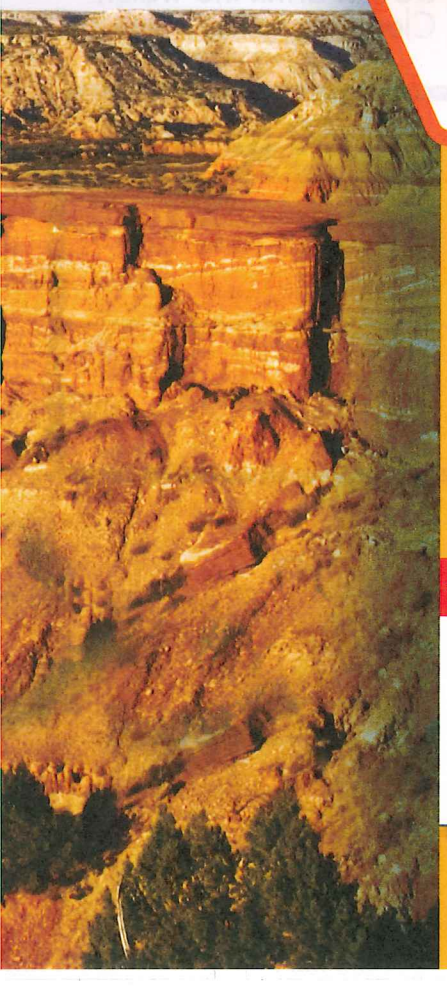



When have you seen rocks with unusual shapes?

Texas

Chapter 4

Earth's Materials



FOCUS ON TEKS 7A

What is Earth made of?

Tell how you think this rock became this shape.

Texas Essential Knowledge and Skills

TEKS 5A Classify matter by physical properties, including shape, relative mass, relative temperature, texture, flexibility, and whether material is a solid or liquid. **7A** Observe and describe rocks by size, texture, and color. **7B** Identify and compare the properties of natural sources of freshwater and saltwater. **7C** Distinguish between natural and manmade resources.

Process TEKS: 1A, 1C, 2C, 2D, 2E, 2F, 3A, 4A

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Lab zone Inquiry Warm-Up

TEKS 7B, 1A, 2D, 2E

Do salt water and fresh water freeze at the same time?

Materials

2 clear plastic cups with water

salt

plastic spoon

- ☐ 1. Add 3 spoonsful of salt to the water in the salt cup. Stir the water to mix the salt and water.
- ☐ 2. Put both cups in the freezer.
- ☐ 3. After 30 minutes, **observe** the cups every 10 minutes.
- ☐ 4. Record your observations in the chart.

Inquiry Skill
When you collect and record data, you show what you **observe.**

Texas Safety
LAB RULES
Do not taste the salt.
Do not drink the water.
Clean up spills.

	30 minutes	40 minutes	50 minutes
Fresh water			
Salt water			

Explain Your Results

5. **Compare** What is one way salt water and fresh water are different?

Connect to Reading

Read Together

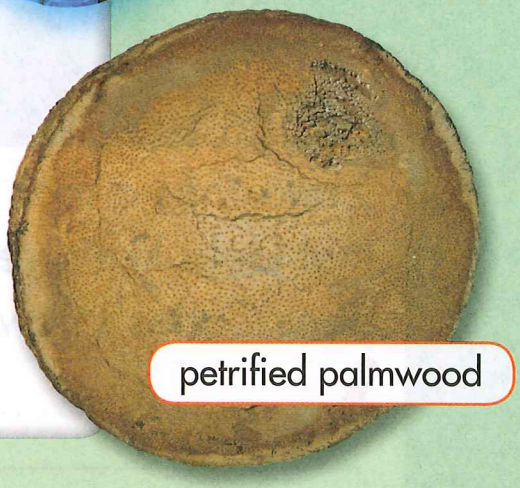
Focus on Main Idea and Details

You will practice the reading skill **main idea and details** in this chapter. The main idea is the most important idea in what you are reading. Details tell about the main idea.

blue topaz

Texas State Rocks

Texas has many state symbols. Two of the Texas state symbols are rocks. The state stone is petrified palmwood. The state gem is blue topaz. Both were named state symbols in 1969.



petrified palmwood

Practice It!

Write two details about the state rocks.

Two of the Texas state symbols are rocks.

Main Idea

Detail

Detail

Texas

Lesson 1

How can you describe rocks?

I will know TEKS 7A
I will know that I can describe rocks by their size, color, and texture. (Also **2C**, **2E**)

Vocabulary
rock
mineral

Connect to Math

Carlos has a rock collection. He found a rock that looks like a rectangle. How many sides does Carlos's new rock have? Math TEKS 8C

PEARSON Texas.com

Lab zone Quick Lab

TEKS 7A, 1A, 2E, 5A

Materials

rocks and sand

newspaper filter

How can you sort rocks?

- [ ] 1. Pour rocks and sand into the filter. Shake over the newspaper. **Observe.**
- [ ] 2. Sort the rocks by size.

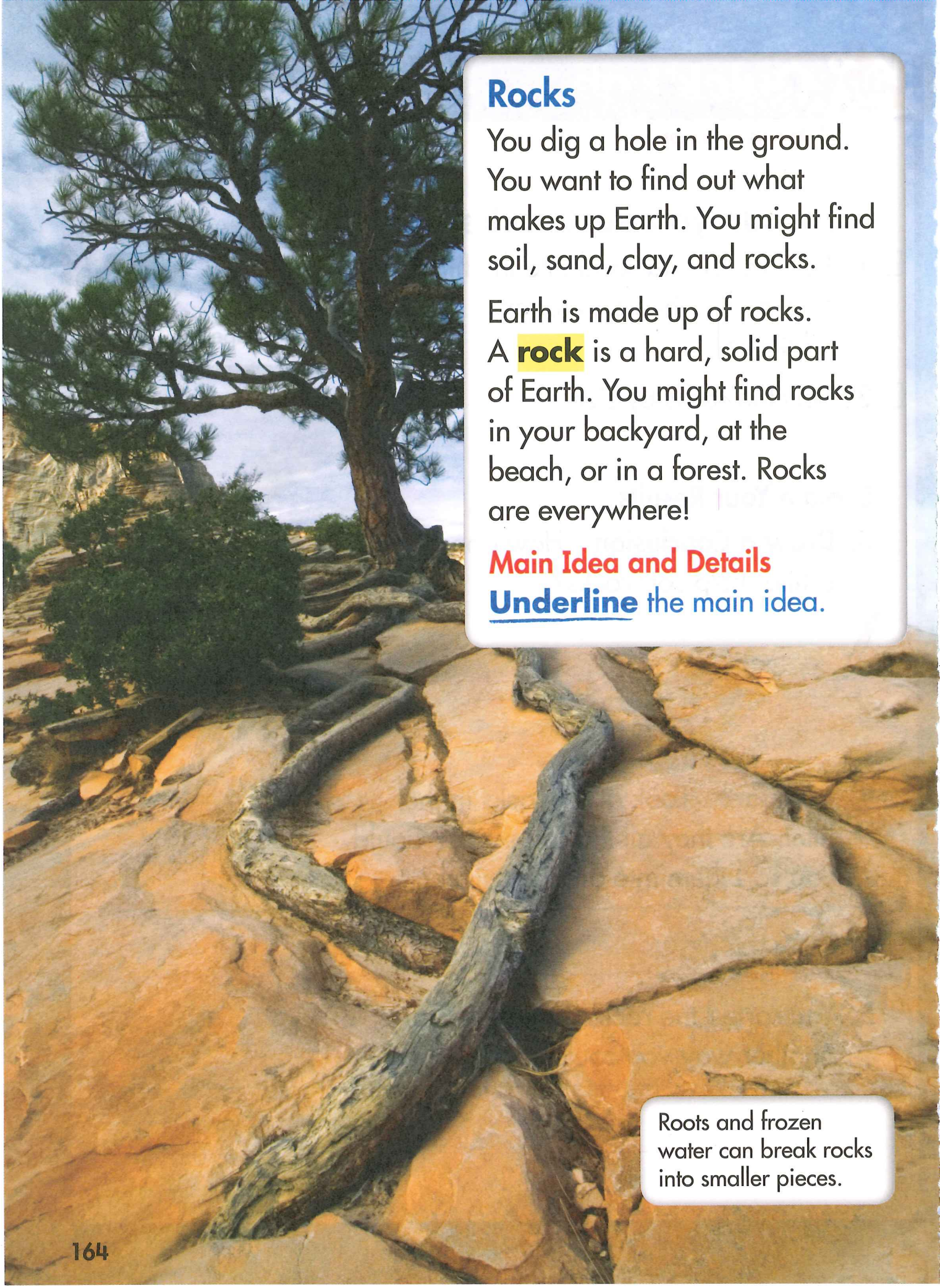
Explain Your Results

3. **Draw a Conclusion** How does a filter help sort rocks?

4. **Compare** Look at the rocks in the filter. Are they all the same size? Could you sort them into different sizes?

Texas Safety
LAB RULES
Wash your hands.

5. You sorted the rocks by size. What is another way you could sort them?



Rocks

You dig a hole in the ground. You want to find out what makes up Earth. You might find soil, sand, clay, and rocks.

Earth is made up of rocks. A **rock** is a hard, solid part of Earth. You might find rocks in your backyard, at the beach, or in a forest. Rocks are everywhere!

Main Idea and Details

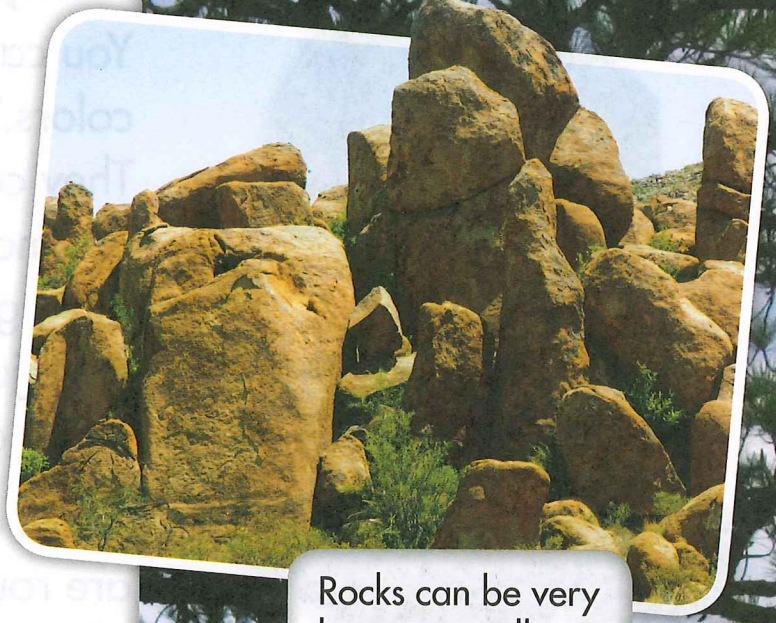
Underline the main idea.

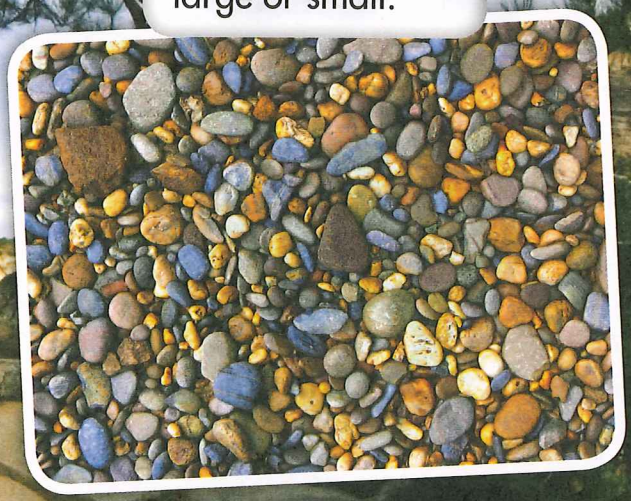
Roots and frozen water can break rocks into smaller pieces.

Size of Rocks

Rocks can be different sizes. Some rocks are as big as a mountain! They are very heavy. You can hold some rocks in your hands. They are light. Some rocks are very tiny. Sand is made of tiny pieces of rock. Some kinds of soil can have tiny bits of rock in it too.

Draw a picture of two rocks. Make one big and one small. **Label** each drawing "big" or "small."





Rocks can be very large or small.

Lab zone Quick Lab

Order Rocks

Use a pan balance. Compare the masses of four rocks. Order the rocks from heaviest to lightest. TEKS 2C, 4A

Many Different Rocks

You can find rocks in many different colors. Rocks can be gray or black. They can be brown. Some rocks are more colorful. They can be red, pink, green, and blue. A rock may have just one color, or it may have many different colors.

Rocks can be different shapes. Some are round and oval. Some have lots of corners and sides. The texture of rocks differs too. Some rocks are smooth. Some rocks are rough.

Look at these rocks.
Write three ways that they are different.

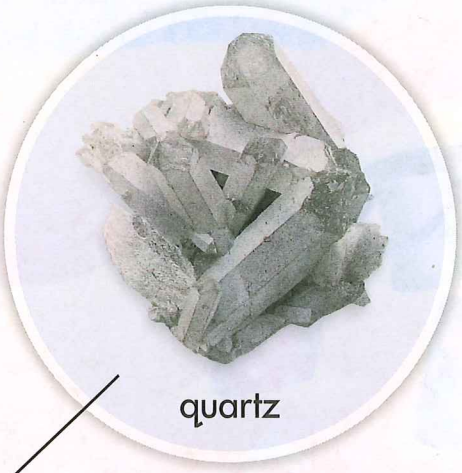
Minerals

Rocks are made of minerals. A **mineral** is a nonliving material that comes from Earth. Some minerals are gold, silver, and iron. Many things are made of minerals. Some rings are made from gold. Some coins have silver in them. Some nails are made from iron.

Most rocks are made up of more than one mineral. Look at the piece of granite. Granite is a rock. Three minerals in some kinds of granite are mica, quartz, and feldspar.

Main Idea and Details

Underline three kinds of minerals named above.



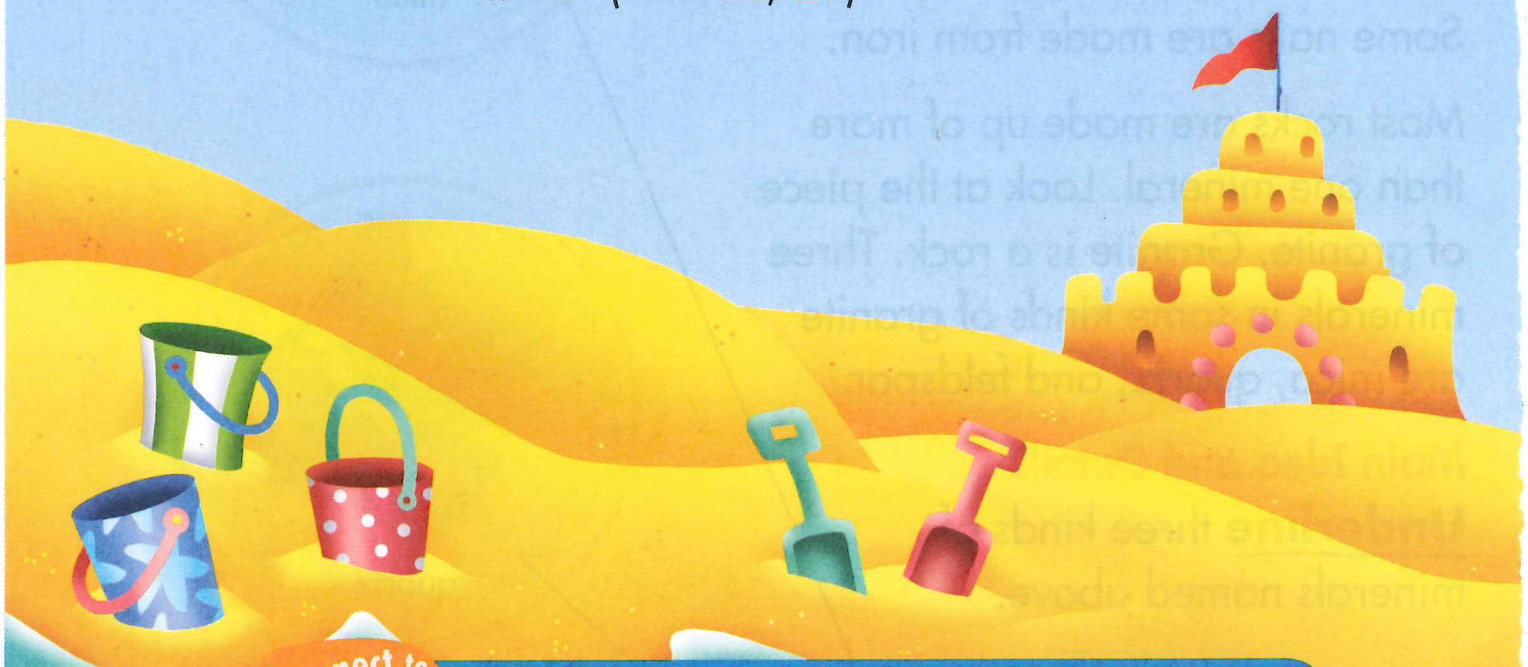
Texas

Lesson 2

Where can you find water on Earth?

I will know TEKS 7B
I will know how to compare sources of fresh water and salt water. (Also **2E**, **2F**)

Vocabulary
salt water
fresh water



Connect to Reading

Emily's family went to the beach. Emily had fun swimming in the salt water. Write what body of water Emily went swimming in. Explain your answer. ELA TEKS 19A

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Lab zone Quick Lab

TEKS 7B, 1A, 2E, 2F

Materials


plastic bowl


cardboard tube


plastic cup with water


plastic cup with gravel

How does a well work?

People need water. Some people get the water they need from wells.

☑ 1. Put a tube in a bowl. Pour gravel around the tube. The tube is a **model** of a well.

☑ 2. Make it rain. Pour water on the gravel. **Observe.**

Texas Safety
LAB RULES
Clean up spills.
Wash your hands.

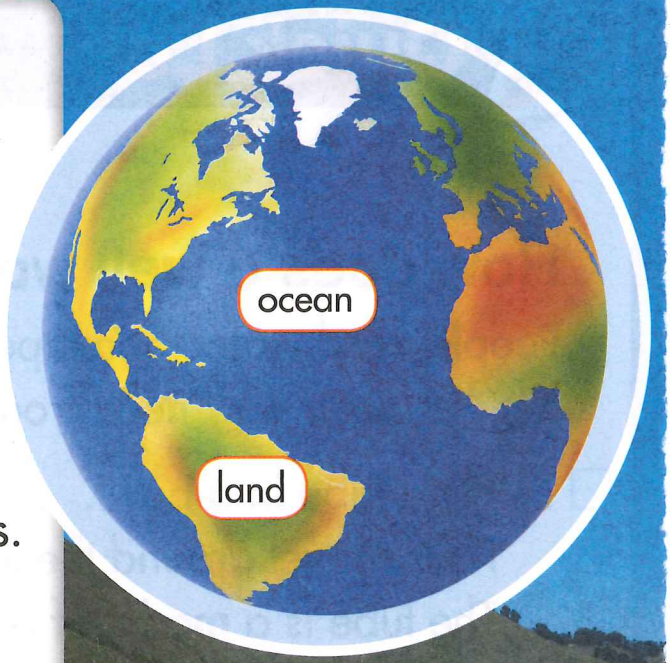
Explain Your Results

3. **Infer** How did the water move in your model?

4. **Infer** Where does well water come from?

Land and Water

What is Earth's surface like? Over two-thirds of Earth's surface is covered by water. Most of this water is in the ocean. Soil and plants cover much of the rest of Earth's surface. Rock is found beneath the water, soil, and plants.

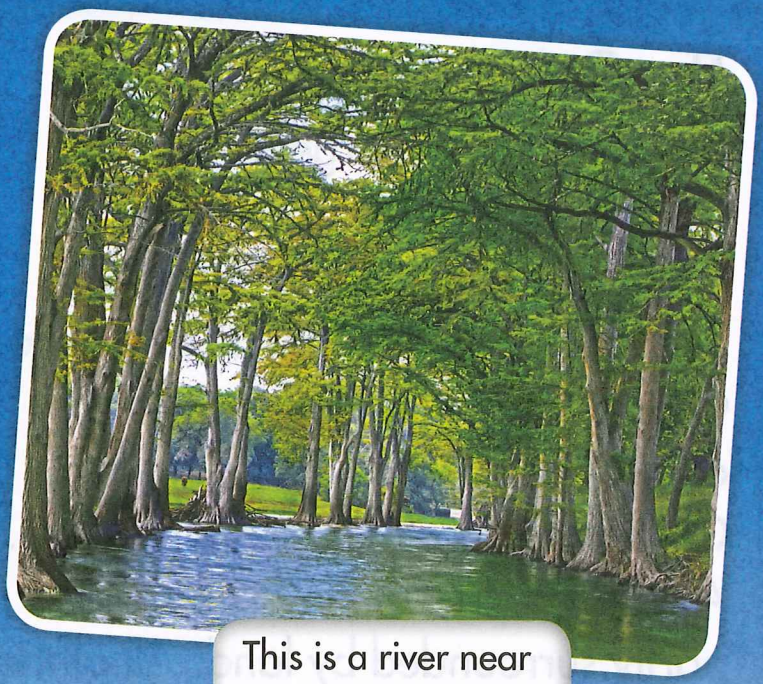


Main Idea and Details

Describe what covers most of Earth's surface.

Water on Earth

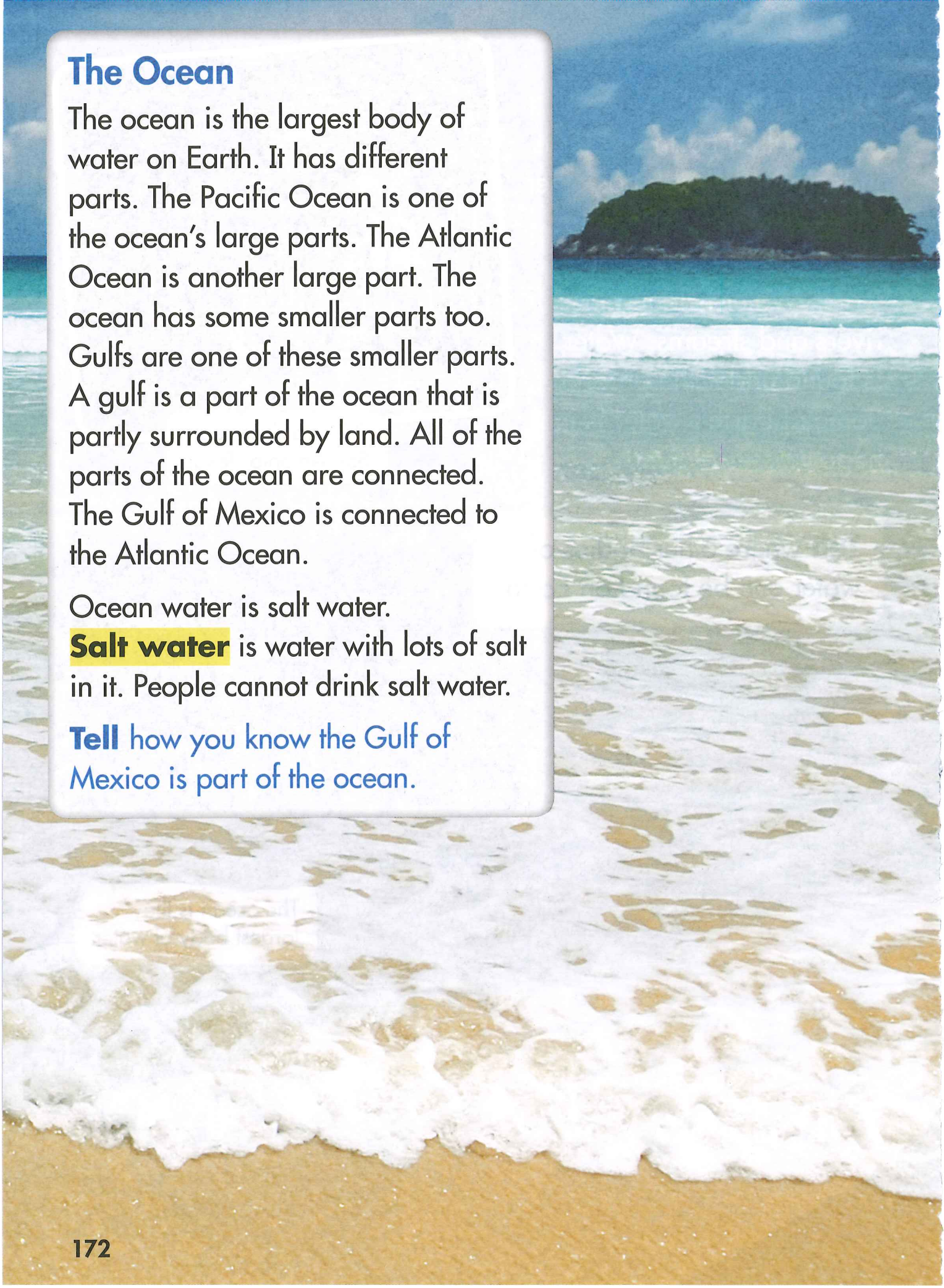
Almost all of Earth's water is in the ocean. Earth has other bodies of water too. Ponds and lakes are bodies of water. Water is found in rivers and streams. Water is found under the ground. Some of Earth's water is in huge masses of ice.



This is a river near San Antonio, Texas.

Tell where other bodies of water can be found on Earth.

The ocean is the largest body of water.



The Ocean

The ocean is the largest body of water on Earth. It has different parts. The Pacific Ocean is one of the ocean's large parts. The Atlantic Ocean is another large part. The ocean has some smaller parts too. Gulfs are one of these smaller parts. A gulf is a part of the ocean that is partly surrounded by land. All of the parts of the ocean are connected. The Gulf of Mexico is connected to the Atlantic Ocean.

Ocean water is salt water. **Salt water** is water with lots of salt in it. People cannot drink salt water.

Tell how you know the Gulf of Mexico is part of the ocean.

Lakes and Ponds

Lakes are much smaller than the ocean. Ponds are much smaller than lakes. Lakes and ponds form when water fills low places on land.

Most lakes and ponds are fresh water. **Fresh water** is water that is not salty. People can drink fresh water.

Complete the sentence.

A lake forms when water fills _____.

Salt Water and Fresh Water

Salt water differs from fresh water in many ways. People can drink fresh water. They cannot drink salt water. Salt water can make people sick. Salt water freezes at a lower temperature than fresh water. Salt water boils at a higher temperature. Swimmers can float more easily in salt water.

Tell one way salt water in the ocean and fresh water in a lake are different.

Rivers and Streams

Rivers and streams form when water runs downhill. Small streams join together to form rivers. Most rivers flow into lakes or into the ocean. In some rivers and streams, the water moves slowly. In other rivers and streams, the water moves fast. Most rivers and streams are fresh water.

Complete the sentence.

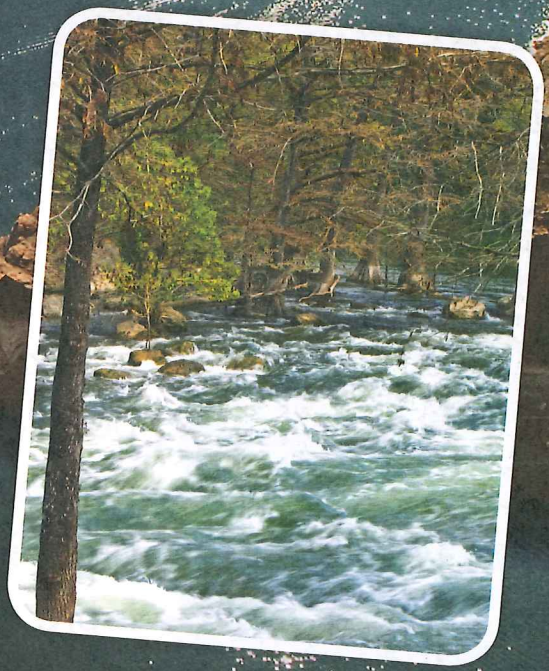
A river forms when water runs

_____

_____

_____.

The water in this river flows smoothly.



Water rushes over rocks in a Texas recreation area.

This glacier is moving in the ocean.

Glaciers

Glaciers form in very cold places. A glacier is a large body of moving ice. Glaciers move very slowly. Some move slowly down mountains. Others are in the ocean. Some glaciers are sheets of ice that spread across land in cold places. Some look like mountains of ice. Most of Earth's fresh water is frozen into glaciers. People cannot drink the frozen water.

Write one way that glaciers are like rivers and streams.

Lab zone Quick Lab

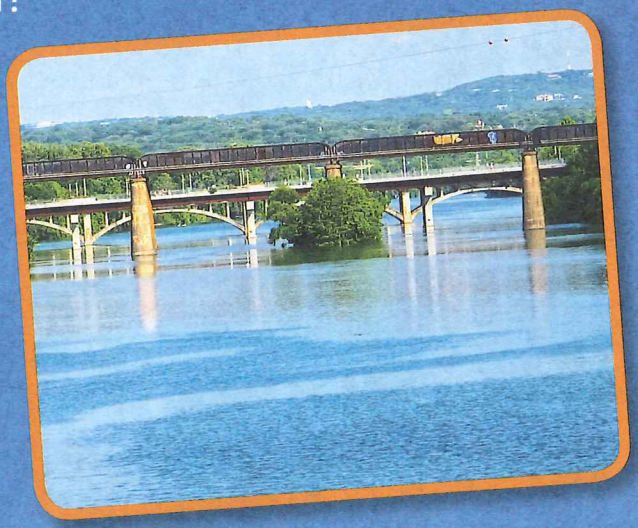
Compare Bodies of Water

Choose two bodies of water. Draw a picture of each. Write one way the bodies of water are alike. Write one way the bodies of water are different. TEKS 7B

Water in Texas

TEKS 7B

Where does your water come from? Texas gets some of its water from lakes, rivers, and streams. Texas also gets some of its water from under the ground. More than half of the water used in Texas is underground water. Where your water comes from depends on where you live. San Antonio uses mostly underground water. Austin uses lake water. Amarillo uses lake and underground water.



Lakes provide water for some Texas communities.

Where does Texas get its water?

TEXAS
MY PLANET DIARY

Fact or Fiction?

People in the United States use more than 400 billion gallons of water each day! Texans use almost 27 billion gallons a day! We drink it. We cook with it. We use it to brush our teeth and take a bath. But that is not how most water is used. About half is used by power plants to make electricity. Farmers use another third to water crops. Water is an important natural resource!

Name two ways water is used.

This is a dam on the Colorado River in Texas.

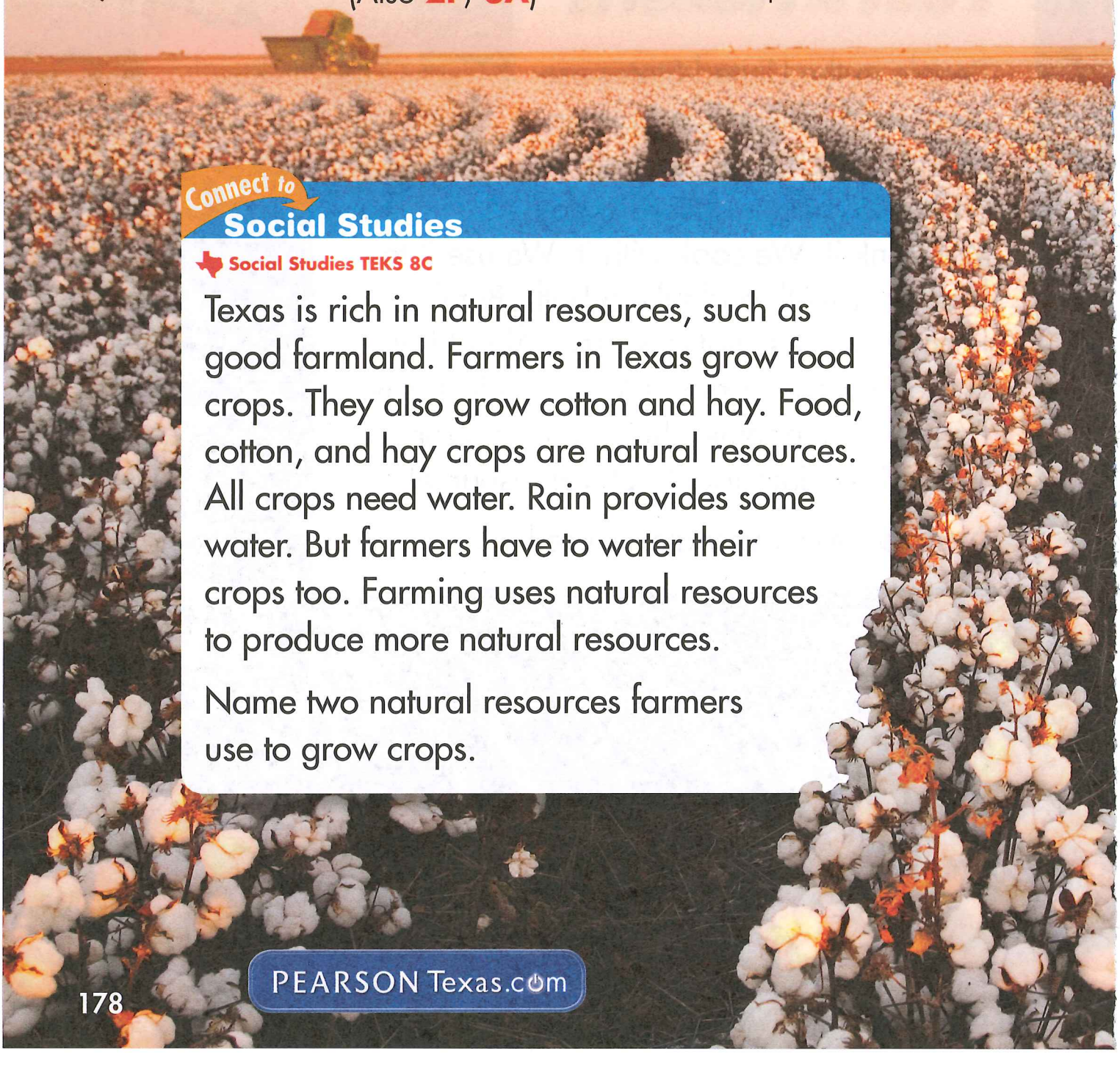
Texas

Lesson 3

What are natural and manmade resources?

I will know TEKS 7C, 1C
I will know how natural resources and manmade resources are different. (Also **2F**, **3A**)

Vocabulary
natural resources
recycle



Connect to Social Studies

Social Studies TEKS 8C

Texas is rich in natural resources, such as good farmland. Farmers in Texas grow food crops. They also grow cotton and hay. Food, cotton, and hay crops are natural resources. All crops need water. Rain provides some water. But farmers have to water their crops too. Farming uses natural resources to produce more natural resources.

Name two natural resources farmers use to grow crops.

Lab zone Quick Lab

TEKS 1A, 1C, 2F, 3A

Materials

plastic cup empty tub

Texas Safety LAB RULES

Make sure to clean up spills.

How can you save water?

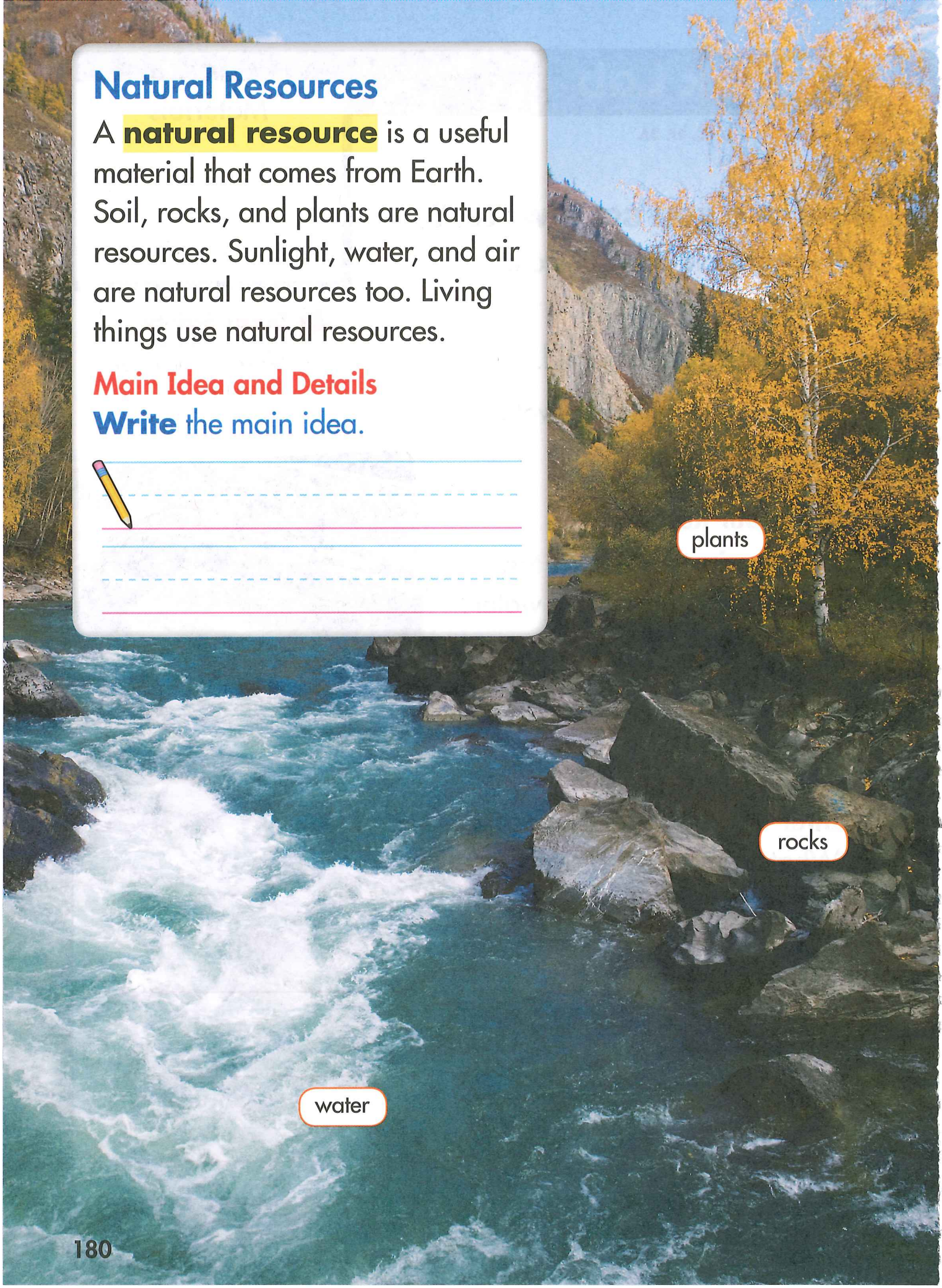
You want a cold drink of water.

- [ ] 1. Put the tub in the sink.
- [ ] 2. Run water until it is cold.
- [ ] 3. Fill the glass with cold water. Then turn the water off.

Explain Your Results

4. **Communicate** Why is the water in the tub wasted water?

5. **Infer** You want to drink cold water. What can you do to avoid wasting the water to get a cool drink?



Natural Resources

A **natural resource** is a useful material that comes from Earth. Soil, rocks, and plants are natural resources. Sunlight, water, and air are natural resources too. Living things use natural resources.

Main Idea and Details

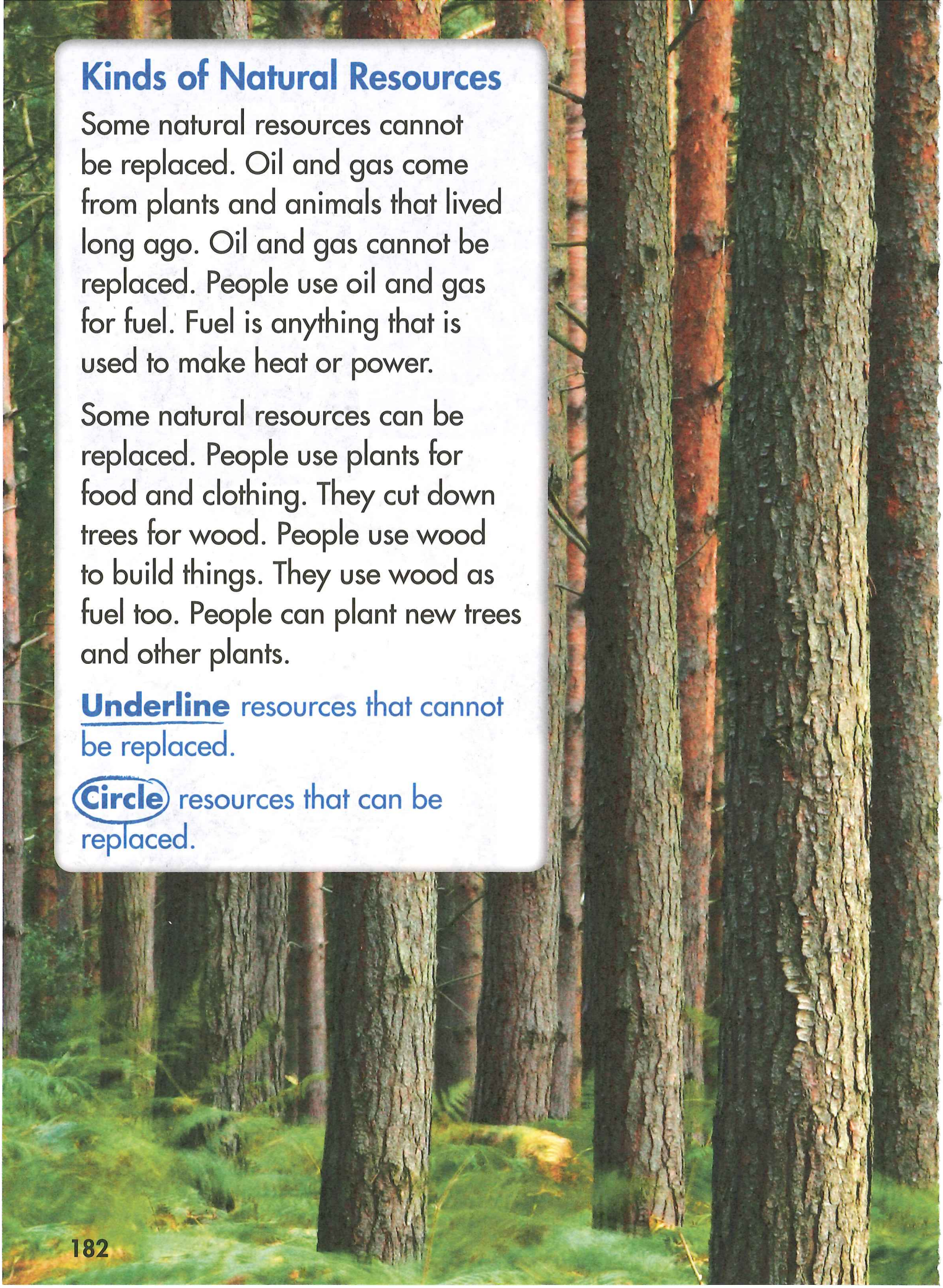
Write the main idea.

Using Natural Resources

Plants, animals, and people need natural resources. Plants need water and sunlight to grow. Animals that live on land need water to drink. Some kinds of animals live in the water. Fish and turtles live in the water.

Plants and animals use natural resources.

Draw a picture of a natural resource.
Label the picture with the name of the resource.



Kinds of Natural Resources

Some natural resources cannot be replaced. Oil and gas come from plants and animals that lived long ago. Oil and gas cannot be replaced. People use oil and gas for fuel. Fuel is anything that is used to make heat or power.

Some natural resources can be replaced. People use plants for food and clothing. They cut down trees for wood. People use wood to build things. They use wood as fuel too. People can plant new trees and other plants.

Underline resources that cannot be replaced.

Circle resources that can be replaced.

Manmade Resources

People use natural resources to meet their needs. People need a place to live. They need food and clothing. The things people make from natural resources are manmade resources.

Some breakfast cereals are made from corn.

Corn is a natural resource. Farmers grow corn. People can use corn in many different ways. Corn can be used to make cornflakes and a fuel for cars.

Oil is a natural resource with many uses too. Cars use gasoline as fuel. Gasoline is a manmade resource made from oil. Plastic is another manmade resource made from oil.

Choose a natural resource. **Name** manmade resources people make with that resource.

Corn is a natural resource.

Conserve Water

Plants, animals, and people all need water. You can help make sure water is available by conserving water. Conserve means to save. You can turn off the water while brushing your teeth.

Write about a way you can conserve water.

Reduce

You can conserve water. You can also reduce the amount of resources you use. Reduce means to use less. You can reduce your use of paper or plastic bags. Use a lunch box to take your lunch to school. Do not take a bag when you buy something. Put the item into a cloth bag or your backpack. That's one less bag used!

Tell about one way you can reduce your use of paper.

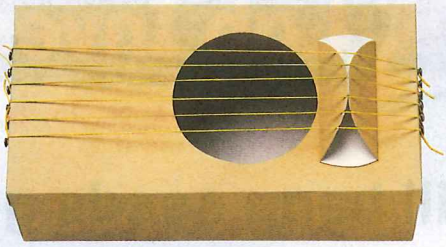
You can use a lunch box to carry your lunch to school.

Reuse and Recycle

People can reuse things too. Reuse means to use again. You can reuse paper by writing on both sides.

People can recycle. **Recycle** means to change something so it can be used again. Paper, plastic, metal, and glass can be recycled. Some parts of this playground are made from recycled plastic milk containers.

Tell a partner how reusing or recycling paper helps protect Earth.



Tell what you could reuse to make the musical instrument in the picture.

This boy is recycling milk containers.

Some playground equipment is made from recycled plastic.

Lab zone Quick Lab

New Uses for Old Cans

Demonstrate how to reuse an old can. Make a container out of an old can. Make sure the can is clean. Decorate the can. Use it to hold pencils or pens. TEKS 1C

Lab Investigation

TEKS 7B, 1A, 2C, 2D, 2E, 2F, 4A

Will bean seeds grow in fresh water and in salt water?

Materials


2 self-closing plastic bags


marker


2 bean seeds


2 cotton balls


hand lens

fresh water
salt water

Inquiry Skill
You gather and record data as you **observe**.

Texas Safety
LAB RULES

Do not drink the water. Be sure the bags are sealed. Clean up spills.

Follow a Procedure

- ☐ **1.** Label your bags A and B.
- ☐ **2.** Put 1 seed on a cotton ball in Bag A.
- ☐ **3.** Pour fresh water into the bag. Add enough water to cover the bean and cotton. Seal the bag.
- ☐ **4.** Repeat the process using salt water in Bag B.
- ☐ **5.** Use your hand lends to **observe** the beans. Make your observations every other day. **Record** your observations.

Data Table		
	Bean in Bag A	Bean in Bag B
Observation 1		
Observation 2		
Observation 3		
Observation 4		
Observation 5		

Analyze and Conclude

6. What happened to the bean in Bag A?
   What happened to the bean in Bag B?

7. **Infer** Should you water plants with salt water? Explain.

Science in Your Backyard

Read Together

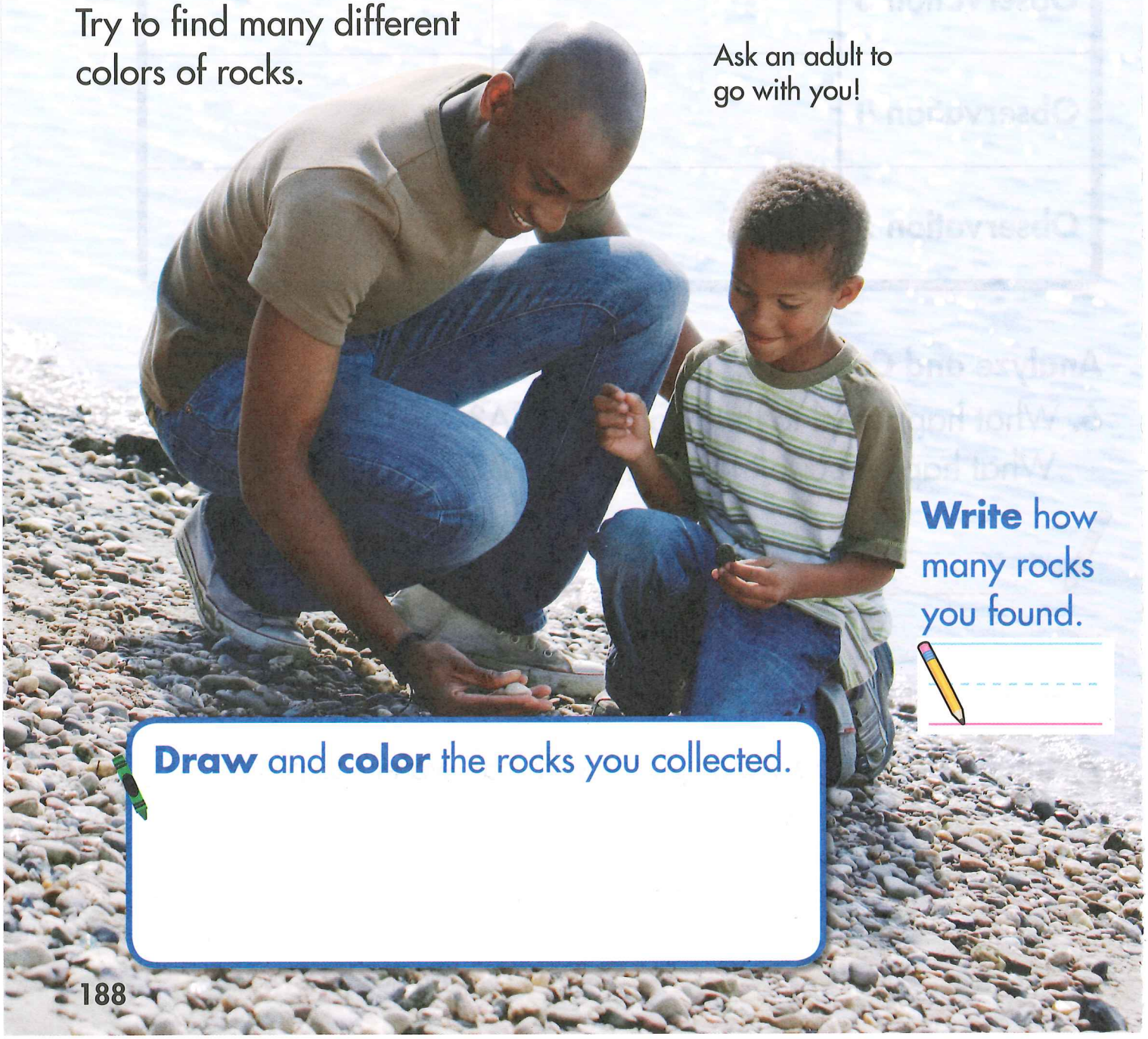
APPLY THE TEKS 7A

Collecting Rocks

You can go rock collecting where you live. Go to your backyard or a nearby park. Look around. Find as many different kinds of rocks as you can.

Try to find different sizes and shapes of rocks.
Try to find rough and smooth rocks.
Try to find many different colors of rocks.

Ask an adult to go with you!



Write how many rocks you found.

Draw and **color** the rocks you collected.

Vocabulary Smart Cards

fresh water
mineral
natural resource
recycle
rock
salt water

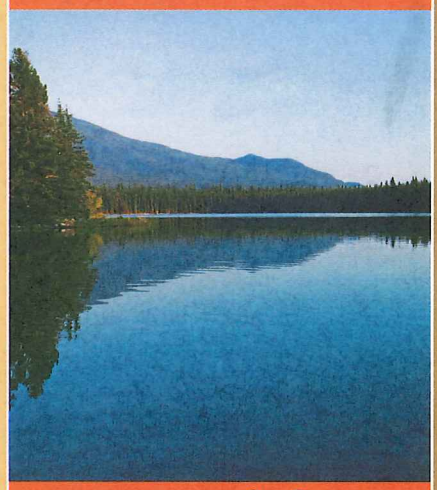
Play a Game!

Cut out the cards.

Choose a card and give your partner clues.

Have your partner guess the word.

fresh water

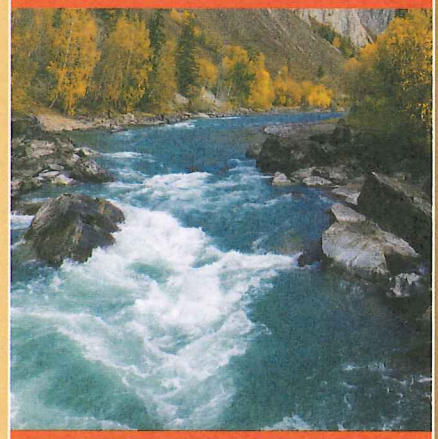


agua dulce

rock

roca

natural resource



recurso natural

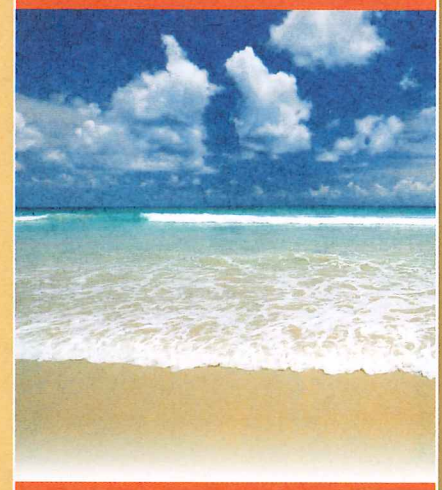
mineral

mineral

recycle

reciclar

salt water



agua salada

a hard, solid part of Earth that is not soil or metal

una parte dura y sólida de la Tierra que no es suelo o metal

water that is not salty

agua que no es salada

a nonliving material that comes from Earth

material inerte que viene de la Tierra

a useful material that comes from Earth

un material útil que proviene de la Tierra

water with lots of salt in it

agua con mucha sal

to change something so it can be used again

cambiar algo de manera que se pueda usar otra vez

TEKS Practice

Lesson 1 TEKS 7A

1. **Main Idea and Details** **Read** the paragraph below. **Underline** two details.

Diamonds are the hardest minerals on Earth. Diamonds can scratch glass. However, they can be broken with a hammer.

2. **Compare** **Look** at the rocks. **Write** two ways they are alike.

3. **Vocabulary** **Complete** the sentence.

A mineral is a _____ material that comes from Earth.

Lesson 2 TEKS 7B

4. Where is most of Earth's fresh water?

Circle the letter.

A in lakes
B in rivers
C in the ocean
D in glaciers

TEKS Practice

5. **Compare** **Write** how the ocean and a lake are different.

Lesson 3 TEKS 7C, 1C

6. **Classify** **Circle** two natural resources that cannot be replaced.

trees oil gas plants

7. **Name** one natural resource. **Name** two manmade resources made from it.

8. **Write** one way you can conserve water.

TEKS Practice

9. **Classify** Name three things that you can recycle.

Chapter 4

Lesson 1 How can you describe rocks?

TEKS: 7A

Lesson 2 Where can you find water on Earth?

TEKS: 7B

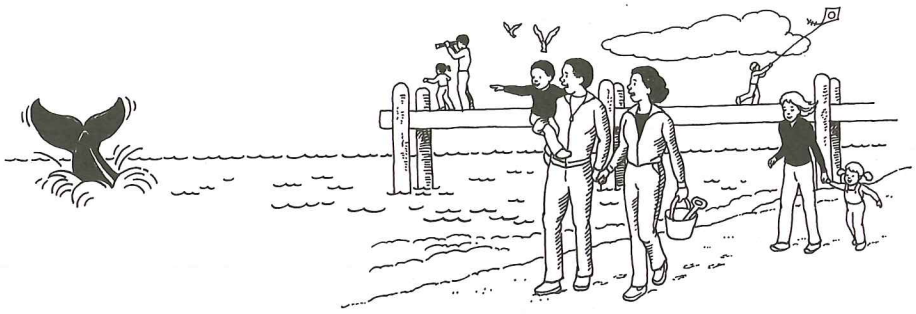
Lesson 3 What are natural and manmade resources?

TEKS: 7C, 1C

★ TEKS Practice: Chapter Review

Read each question and circle the best answer.

1 The picture shows the ocean.



What is true about the ocean?

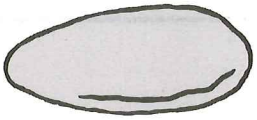
A It is where people get most of the water they need.

B It is the largest body of water on Earth.

C Some of its water helps fill rivers and streams.

D Most of this water is frozen into glaciers.

2 The picture shows a rock.



Which word best describes its texture?

F Heavy

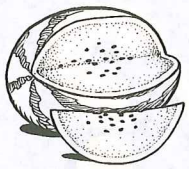
G Round

H Gray

J Smooth

★ TEKS Practice: Cumulative Review

3 Sometimes matter changes but does not become a new kind of matter. Which picture shows this kind of change?

A 

B 

C 

D All of these

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4 A red apple is on a table in a bright room. You slowly turn down the light in the room. What happens to the apple?

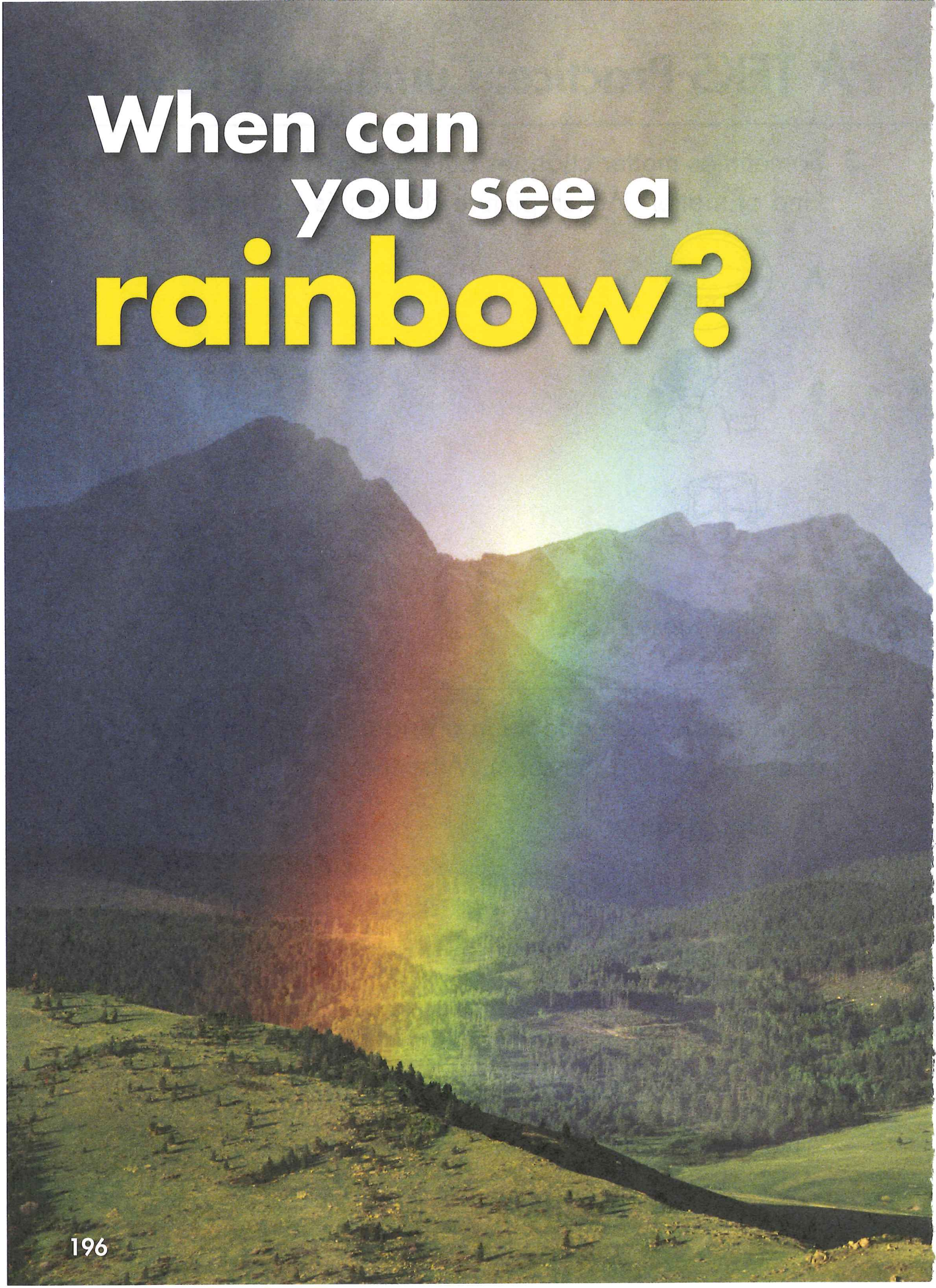
F It looks larger.

G Its color seems darker.

H It gets warmer.

J It gets more shiny.

If you have trouble with . . .				
Question	1	2	3	4
See chapter (lesson)	4 (2)	4 (1)	2 (3)	3 (1)
TEKS	7B	7A	5C	6A


When can you see a rainbow?