

16 Listen and read. TR: 12

The Flypaper Plant

The butterwort is a plant that can't get enough nutrients from the ground. So what does it do? It also eats insects! The flower of the butterwort is purple. It sits on a tall stem that has no leaves. All the leaves are near the ground. They are bright green with turned-up edges. The top of the leaf is shiny. It looks watery, but it's really sticky.

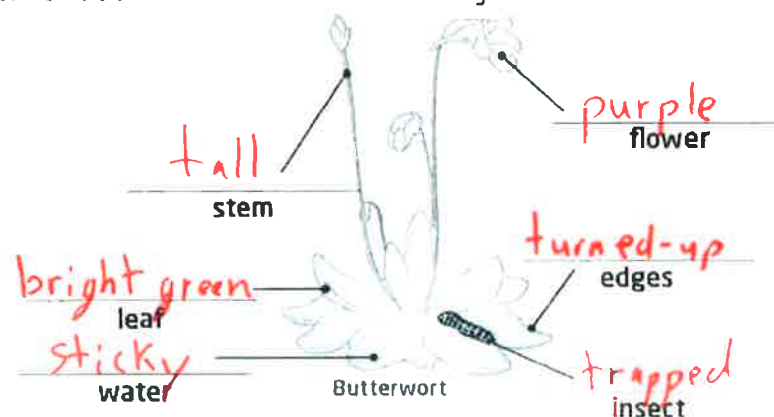
When an insect lands on a leaf, it is trapped. When it tries to get away, the butterwort makes more sticky water. The edges of the leaf turn up even more to hold the sticky water. Slowly, the soft parts of the insect are digested. It's a strategy for survival that works!



butterwort plant

17 Label the picture. Use information from Activity 16.

bright green
purple
sticky
tall
trapped
turned-up



18 Read and write. Number the order of events that happen when an insect is trapped.

- 2** The insect is trapped on the leaf.
- 4** The soft parts of the insect are digested.
- 3** More sticky water is made, and the edges of the leaf turn up.
- 1** The insect lands on the leaf.

Descriptive Paragraphs

A descriptive paragraph tells what you see, feel, taste, and hear. You can organize your description of a person, place, or thing in different ways. You can describe the big parts first and then the small parts. You can go from big to small, from top to bottom, from the inside to the outside, and so on.

19 Read. Read about the sensitive plant. How does the writer describe it? How does the writer organize the description?

The Sensitive Plant

Did you know that some plants can move? The sensitive plant moves when you touch it. The stem has tiny white hairs, and it stands straight up. It grows to about 50 centimeters. It has many thin green leaves. Each thin leaf is made of many tiny parts. The parts are like tiny leaves. These tiny leaves grow on both sides of each leaf stem.

When you touch a leaf, the tiny leaves fold. Two by two, starting from where you touch, they close down. The leaf stem hangs down, too. It looks like it is hiding and doesn't want you to touch it. After a half-hour the plant stands up—until you touch it again!



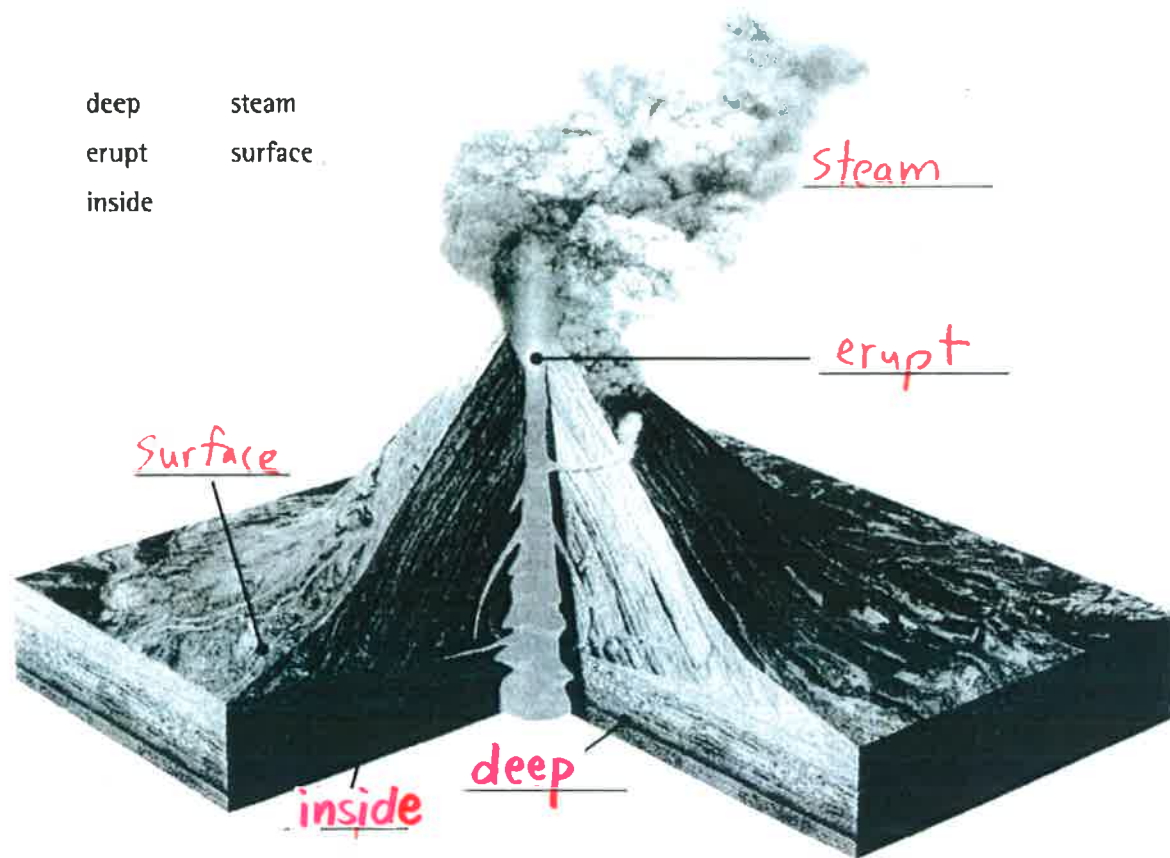
Sensitive plant

20 Write in your notebook. Write about a plant you invented. Describe it. Organize your description.

Unit 3

Volcanoes

1 Label the diagram. Use words from the box.



2 Label the pictures. Match each word to one of the pictures.

gas melts erupts inside



1. The volcano erupts.



2. The butterfly is inside the jar.



3. The snowman melts in the sun.



4. The balloons are filled with gas.

3 Listen. Check T for True and F for False. TR: 13

- Geysers don't erupt.
- Steam erupts from cracks on the surface of the ground.
- The water deep inside the ground is cold.
- The surface is covered in thick, white ash.
- The girl likes calm vacations.

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<input type="radio"/> T	<input checked="" type="radio"/> F
<input checked="" type="radio"/> F	<input type="radio"/> F
<input checked="" type="radio"/> F	<input type="radio"/> F



4 What can you say? Write a sentence.

- surface/cover/thick
- gas/erupt/deep
- heat/melt/inside
- steam/surface/gas

The surface is covered with thick ash.

Gas erupts from deep in the ground.
Heat melts the inside.
Steam erupts from the surface as gas.

GRAMMAR

- If the volcano erupts, ash **will fill** the air. Ash **will fill** the air **if** the volcano erupts.
 If water is heated very hot, it **will turn** to steam. Water **will turn** to steam **if** it is heated very hot.
 If I go to a volcano to take pictures, I **will stay** in a safe place. I **will stay** in a safe place **if** I go to a volcano to take pictures.

5 Read and write. Combine the two sentences into one sentence.

- I go to Goma. / I see a volcano.
 If I go to Goma, I will see a volcano.
- The ash is hot. / It burns everything it touches.
 The ash will burn everything it touches if hot.
- Animals run away. / A volcano erupts.
 If a volcano erupts, animals will run away.
- The scientist visits a volcano. / He climbs to the top.
 If the scientist visits a volcano, he will climb to the top.
- The people living near the volcano are safe. / The volcano is calm.
 The people living near the volcano are safe if it is calm.

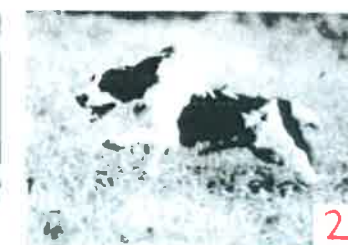
6 What about you? Write sentences that say what you will do.

- If it rains tomorrow, I will bring an umbrella.
- If my pencil breaks, _____.
- If I go to the park this weekend, _____.
- If I like this book, _____.
- If you come to my house, _____.
- If you win the game, _____.
- If I wake up early on Saturday, _____.
- If you have a birthday party, _____.



7 Read and look. Match each sentence to one of the pictures.

- This animal is dormant in winter.
- This animal is active.
- This animal is extinct.



8 Read and write. Complete each sentence.

active cone crater dormant extinct

- A(n) active volcano sends steam into the air.
- When a volcano erupts, it can leave a(n) crater at the top.
- Some trees are dormant in the winter and have no leaves.
- When no animals of a species are alive, that species is extinct.
- Volcanoes are often shaped like a(n) cone.

9 Complete the table. Write each phrase in the correct row.

Active	riding a bicycle playing football swimming in a pool	riding a bicycle every dinosaur a volcano not erupting
Dormant	a volcano not erupting sleeping all winter	a language no one speaks playing football
Extinct	every dinosaur a language no one speaks a volcano that will never erupt	a volcano that will never erupt swimming in a pool sleeping all winter

GRAMMAR

Airplanes could not fly **because of** the ash.

A forest fire started **because of** the lightning.

I ran into the house **because of** the rain.

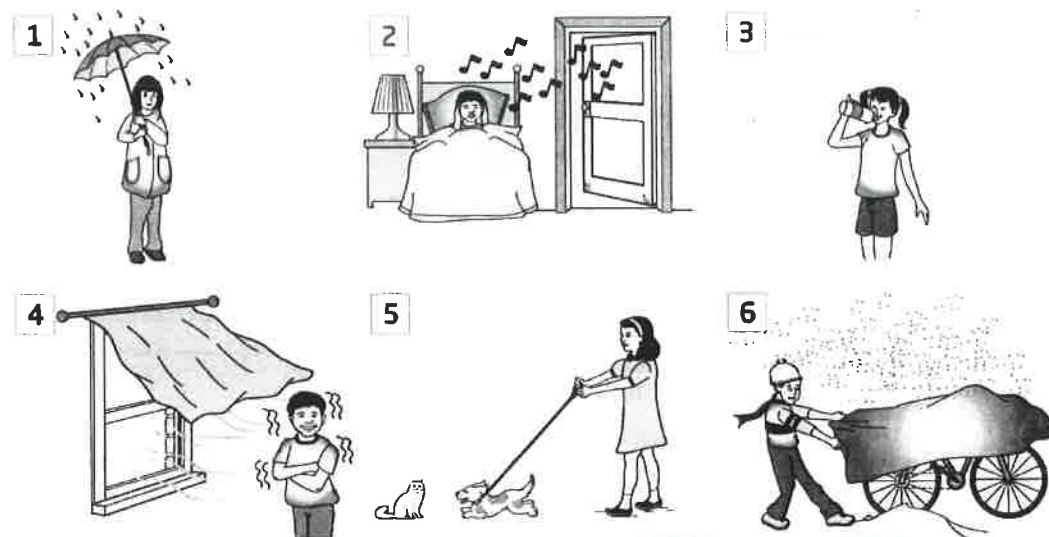
Because of the ash, airplanes could not fly.

Because of the lightning, a forest fire started.

Because of the rain, I ran into the house.

10 Look and write. Tell about the pictures.

cat / barking hot sun / water bike / snow
rain / umbrella cold / open window music / sleep



**unique answers*

1. Because of the rain, she had an umbrella.
2. *Because of the music, he couldn't sleep.*
3. *Because of the hot sun, she drank water.*
4. *Because of the opened window, he felt cold.*
5. *Because of the cat, her dog was barking.*
6. *Because of the snow, he covered his bike.*

11 Listen to the song. Match the phrases that are sung together. TR: 14

- | | |
|---------------------------------|----------------------------------|
| 1. Deep inside a volcano, | a. it's really just asleep. |
| 2. If they have no place to go, | b. will sleep for centuries. |
| 3. If a volcano is dormant, | c. the volcano will erupt! |
| 4. A dormant volcano | d. heat and gas are building up. |
| 5. If a volcano is active, | e. it's very wide awake. |

12 Read and match. Write a complete sentence from Activity 11 that describes each picture.



3 / 4
A dormant volcano will sleep for centuries.



1 / 2
Deep inside a volcano, heat and gas are building up.



2 / 5
If a volcano is active, it's very wide awake.

13 Listen to two words. Write the missing word with the same ee sound you hear in the word deep. Then write a sentence using the word you wrote. TR: 15

1. dip deep
The ocean is very deep.

2. hit heat

3. lid lead

4. bit beat

5. fit feet

Eruptions That Changed the World!

Volcanoes have the power to change the world. The island of Santorini, in Greece, is on one half of a volcano. The other half exploded and disappeared in 1600 BCE. Ash from the eruption has been found as far away as Egypt. Because of the explosion, crops died, and rain and temperature changed for years.

Today, three million people live near Vesuvius in Italy. However, in 79 CE, it erupted. The sky was dark because of the eruption. Hot ash ran down the cone and burned everything in its way. In two hours, two cities were gone.

Two eruptions in Indonesia changed the world. In 1815, Tambora erupted so much gas that Europe and North America had no summer in 1816! In 1883, Krakatoa caused Earth's temperature to drop for five years. It was the biggest eruption in history. If there is another big eruption, where will it be?

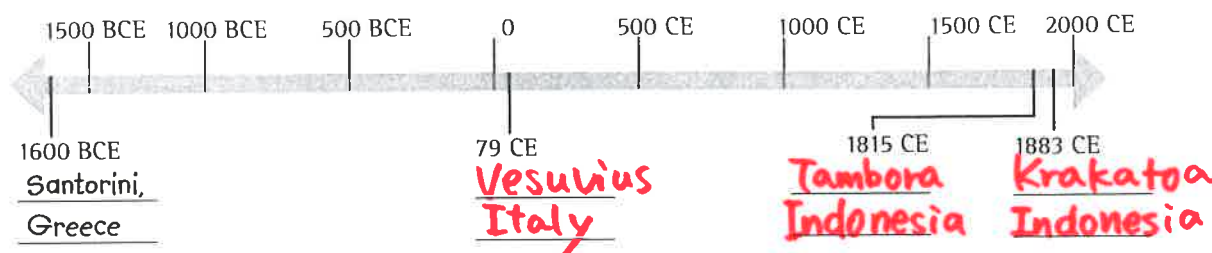


Mount Vesuvius

15 Read and write. Complete the sentences.

1. Ash found in Egypt came from the eruption of Santorini.
2. The biggest eruption in history was Krakatoa.
3. Because of the eruption of Vesuvius, the sky was dark.
4. There was no summer in Europe and North America in 1816 because of Tambora.

16 Complete the chart. Use information from the reading in Activity 14.



Process Paragraphs

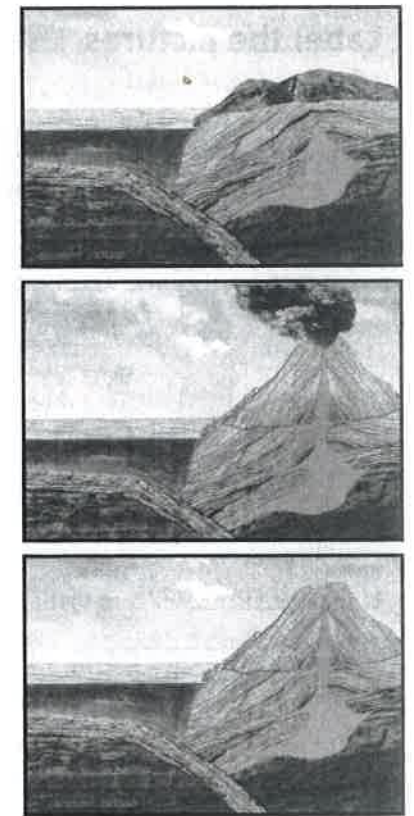
A process paragraph explains what happens in a sequence. It follows a series of actions from beginning to end. Use words such as *first*, *then*, *next*, *after*, *when*, *while*, *at the same time*, *now*, *before*, *as long as*, and *finally*. These words show the order in which actions or stages occur.

17 Read. Read the paragraphs about the stages of a volcanic eruption. How does the writer show the sequence of events? Underline the words.

How Volcanoes Explode

First, the heat deep inside the earth melts the rocks. Next, the trapped magma pushes on the top and along the walls of the volcano. At the same time, trapped gases push on the cone. There is no place for escape. When the pushing gets very strong, the walls get weak. After some time, the top of the volcano *blasts* away.

Finally, the magma and gases explode out the top. Gases and steam come out. The volcano throws ash high into the air. Lava flows down the sides. The volcano erupts for as long as the magma pushes. If there is a lot of magma, it can erupt for a long time.



18 Write in your notebook. Describe a process that you know. Explain the steps from beginning to end.

Reduce, Reuse, Recycle

1 Label the pictures. Use the words below to complete each sentence.

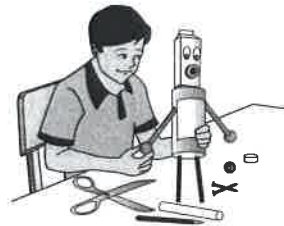
build conserve design environment trash
recycle reduce reuse throw-away



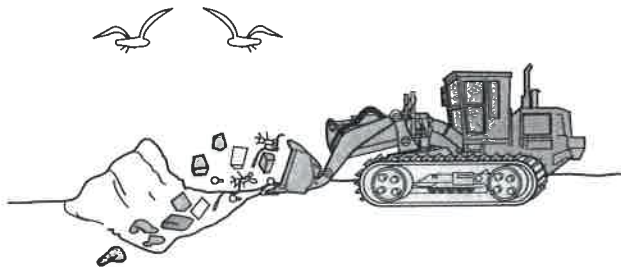
1. Don't throw away cans that you can recycle.



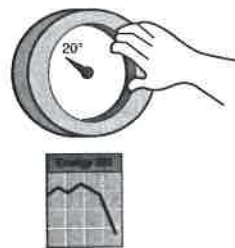
2. You can reuse some trash to make art.



3. You can design and build your own trash sculptures.



4. Putting trash in the ground is bad for the environment.



5. When you use a heater, reduce the temperature to conserve energy.

2 Complete the sentences. Use the words below.

build conserve environment natural trash

1. I like clothing made from cotton and other natural materials.
2. My father bought wood to build a doghouse.
3. Modern lightbulbs can help conserve energy.
4. Some people make art out of trash.
5. It's important to reduce, reuse, and recycle if we want a clean environment.

3 Listen and write. Answer the questions. TR: 17

1. What is the new library design good for?
It's good for the environment.
2. What does Takuya hope about the new library?
He hopes the world will be thick to conserve the energy.
3. What are the walls made of?
They are made of man-made materials.
(recycled glass) (unnatural materials).
4. What does Natsumi do with glass?
She recycles it.
5. What happens to glass that is thrown away?
It goes to the landfill.
6. What will the city reuse from the old library?
They reuse the old books.

GRAMMAR

Most paper **can be recycled**.

Energy in your home **can be conserved**!

Some trash **must be put** in landfills.

Clothing **may be made** from natural materials.

4 Read. Complete the sentences.

- Houses (*build*) can be built from recycled materials.
- New cars (*design*) can be designed to run more efficiently.
- Energy (*conserve*) can be conserved if we turn off lights we don't need.
- If you can't reuse or recycle a plastic, it (*throw away*) must be thrown away in the trash.
- Trash (*reduce*) must be reduced by recycling more things.
- Some trash (*reuse*) can be reused for other things. (*may*)
- The environment (*make*) must be made more beautiful. (*can / may*)
- Some materials (*recycle*) can be recycled

5 Complete the paragraph. Use the words below.

grow make recycled use wash

We use too many man-made materials. Natural materials must be used more often. They are renewable and often are grown on farms. For example, clothing must be made from cotton. Cotton is strong, and it feels good to wear. When it gets dirty, it can be washed. When it is too old, it can be recycled. It is a useful and practical natural material!

6 Read and look. Match each word to one of the pictures.

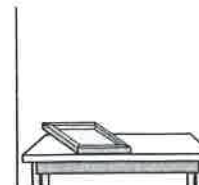
cardboard chemicals glass metal tools



1. Don't pour dangerous chemicals down the sink!



2. Use the right tools to put up a picture.



3. Use a can opener to open a metal can.



4. Windows are made of glass.



5. Store things in a cardboard box.

7 Read and match.

- | | |
|---------------------------|--|
| 1. Glass can be used | a. into chains and jewelry. |
| 2. Metal can be made | b. in closed bottles or cans. |
| 3. Tools can be designed | c. to make bottles. |
| 4. Chemicals must be kept | d. with scissors. |
| 5. Cardboard may be cut | e. to make work easier. |

8 What can be used? Use words from Activity 6.

This material can be used to make . . .

- boxes, paper plates Cardboard
- cleaning products, medicines, batteries, toothpaste Chemicals
- bottles, windows, jars, lightbulbs glass
- cans, cars, pots, bikes tools

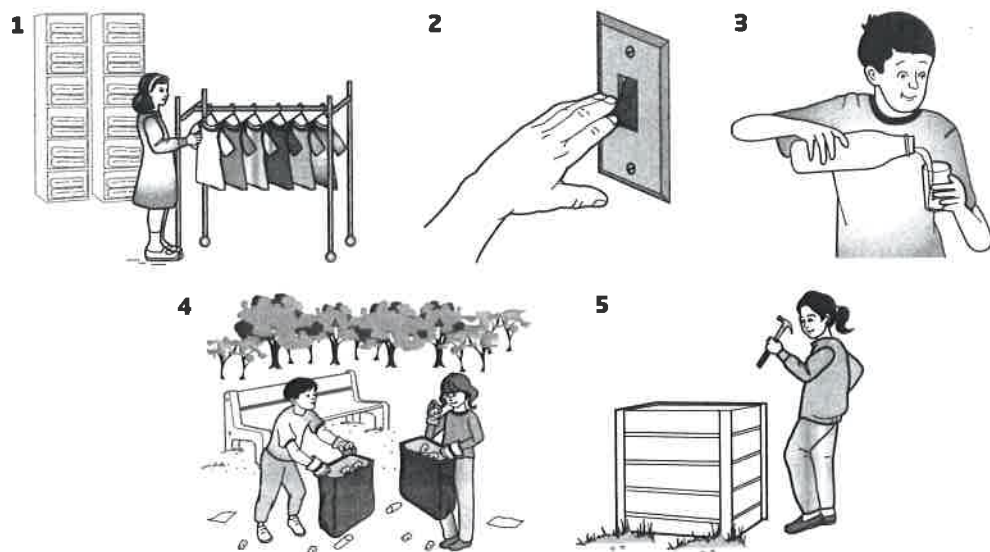
GRAMMAR

We help the environment **when we use natural materials**.
When we use natural materials, we help the environment.

We save trees **when we reuse a paper bag**.
When we reuse a paper bag, we save trees.

9 Look and write. Use the words in the box.

use a glass bottle ~~reuse things~~ turn off a light
 pick up trash from the ground build a compost bin



1. When we reuse things, _____ we are helping the environment.
2. We conserve electricity when we turn off a light.
3. We may be using recycled glass when we use a glass bottle.
4. When we pick up trash from the ground we make the environment cleaner.
5. We use a tool when we build a compost bin.

10 Listen to the song. Fill in the missing words to complete the song. TR: 18

recycling reduce reused trash

Reduce _____. Reuse. Recycle.

Do it every day.

Don't throw everything into the trash
 when clearly there's another way.

Recycling is easy when you know what to do.

Glass? Paper? Metal?

These things can be reused,
 again, and again, and again!

11 Listen to the song again. Check T for True or F for False. TR: 19

1. You should stop and think if trash can be reused.
2. You should do your part to keep the world green.
3. Composting is hard to do.
4. Natural things can't be reused.

<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input checked="" type="checkbox"/>

12 Listen and repeat. TR: 20

1. Help keep our world clean.
2. Don't pollute! Clearly, there's another way.
3. Recycling is important.
4. Compost your uneaten food.
5. Some things can be reused again and again.

E-waste Recycling

What do we do with broken TVs, computers, phones, and electronic parts? They become e-waste, or electronic waste. Most e-waste is thrown away in landfills. However, the useful parts in e-waste can be recycled.

Metals and chemicals must be removed from e-waste to protect the environment. The chemicals in e-waste can be bad for the water and the earth. Electronic parts often have dangerous metals. If these metals turn into chemicals in water, they are bad for people.

E-waste often has plastic. When we burn plastic, it lets off poisonous gases. When we recycle plastic, it is safer. It takes a lot of energy to make new plastic. Recycling plastic uses only about 70 percent of the energy.

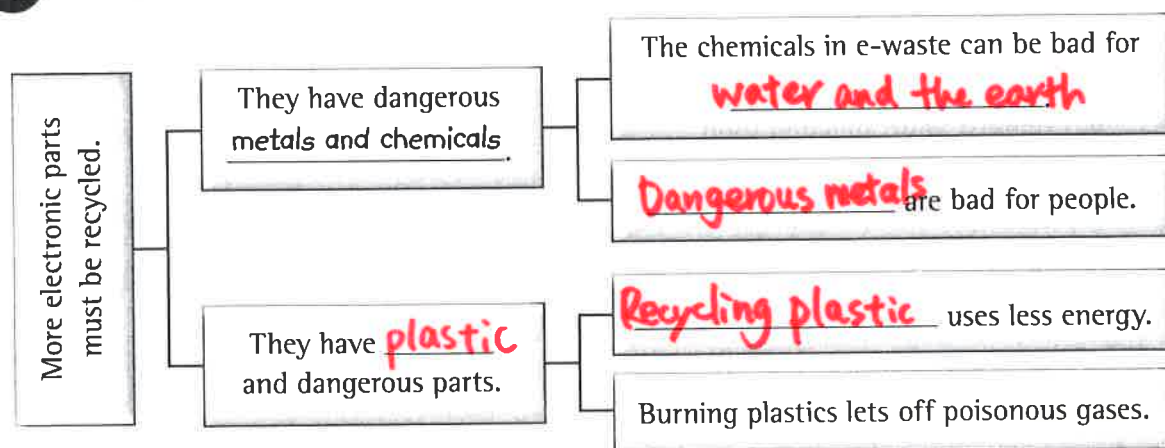
It's important to recycle e-waste and not throw it away in a landfill. We must also try to make electronic parts that use safer materials. Recycling is good, but reducing is better!

14 Check T for True and F for False.

1. Most e-waste is recycled.
2. Electronics often have dangerous metals.
3. Chemicals in e-waste can harm people.
4. The plastic in e-waste must be burned.

(T)	(✓)
(✓)	(F)
(✓)	(F)
(T)	(✓)

15 Complete the chart. Use information from the reading.



Biographical Paragraphs

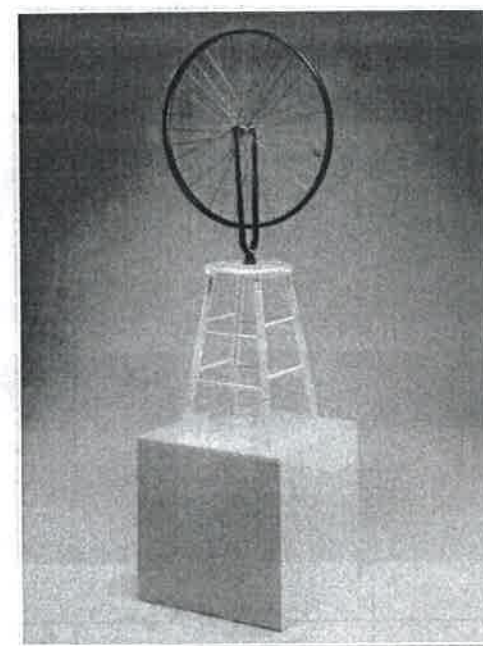
A biographical paragraph tells about the life and work of a person. You can include dates, such as birth date, important events, and interesting facts. Use expressions such as *one of the most*, *famous*, and *the first*.

16 Read. Read about Marcel Duchamp. Find facts about his life. Underline a reason why he was considered important.

Marcel Duchamp

Marcel Duchamp was born in France in 1887. He was one of the most important modern artists of the 1900s.

Duchamp was the first modern artist to make art from things he found. He called these objects "readymades." His first readymade was the "Bicycle Wheel." At first, other artists said this work was not art. Later on, artists understood what Duchamp was creating. A version of this work of art is at the Museum of Modern Art in New York City.



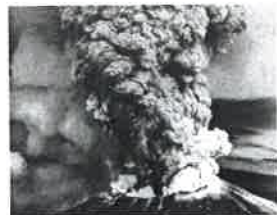
Bicycle Wheel by Marcel Duchamp 1913

17 Write in your notebook. Write about an important or interesting person. Include important details and dates about the person's life. Explain why he or she is important.

Review

1 Match. Connect the words that have opposite meanings. Then label the pictures.

1. active ~~_____~~ a. surface
2. deep ~~_____~~ b. ice
3. steam ~~_____~~ c. dormant



deep / surface

active / dormant

steam / ice

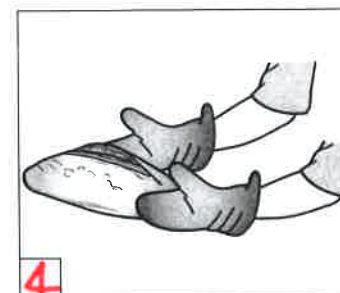
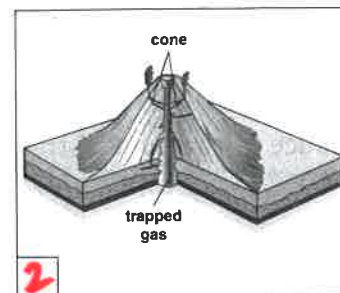
2 Read and write. Complete the sentences.

- If we recycle plastic, we will help conserve energy. (conserve)
- If we make art, _____. (tourists)
- If the water boils, _____. (steam)
- If they have the tools, _____. (build)
- If you eat a big dinner, _____. (digest)
- If you eat ice cream on a hot day, _____. (melt)

3 Write. Complete the sentences. ✖

- Recycling is a process that is helpful for the environment. (helpful/environment)
- We live in a community that is proud of its culture. (proud/culture)
- An extinct volcano is one that no longer erupts. (no longer/erupt)
- Trapping insects is a way that plants get food. (plants/food)
- Plants need light that comes from the sun. (come/sun)

4 Look and listen. Number the pictures. TR: 22



5 Read and write. Complete the sentences. ✖

- If a volcano is active, gas will escape through the cone. (gas/escape)
- If tourist money can protect the environment, animals don't go extinct. (animals/extinct) (become)
- If a car is energy-efficient, it will help environment. (help/environment)
- If people who work at a glass factory wear special clothes, it will protect them from the heat. (protect/heat)
- If bread is cooked in a hot oven, the heat will creat crust. (heat/crust)
- If the thorns on a rose's stem are touched by people, it will hurt their hands. (hurt/hands)

6 Read and answer.

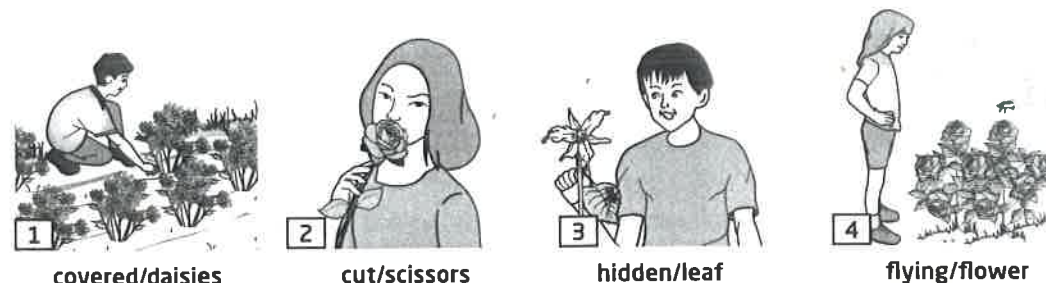
active volcano conserve water recycle plastic
reuse cardboard teach language trap food

1. We help keep the environment clean _____ when we recycle plastic _____.
2. We may be in danger when we have active volcano.
3. Some plants surprise us when they trap food.
4. When we conserve water, we protect it for our children and grandchildren.
5. When I teach language, I share my culture with others.
6. When I recycle plastic, I reduce the amount of trash I throw away.

7 Read and write. Choose the best word to complete the sentences correctly.

1. _____ Telling _____ stories is hard to do well. I like _____ listening _____ to stories! (listen/tell)
2. Eating soup on cold days can keep you warm. I also think putting on a sweater can help you keep warm. (put/eat)
3. I heard you laughing with Paula. She likes telling jokes. (laugh/tell)
4. Swimming is the best way to stay healthy. I like going to the pool. (go/swim)
5. Playing baseball taught me how to catch a ball. Hitting the ball is much harder. (hit/play)
6. Sharing your culture keeps it alive for people in the future. I think that learning about culture is important. (learn/share)

8 Complete the sentences. Use the words with each picture.



1. He has a garden that is covered with daisies.
2. She smells the rose that is cut by scissors.
3. He finds an insect that is hidden by the leaf.
4. She watches the bee that is flying above the flower.
(by)

9 Read. Underline the correct words.

1. A basket can be made by embroidering / weaving thin strips of plants.
2. It takes a long time to digest / trap food after you eat it.
3. People who live here speak the tourist / language.
4. A doctor is important to the community / storytelling.
5. It's important to design / reuse old materials instead of throwing them away.
6. I am handcrafted / proud of my cultural traditions.
7. We can remember the past as we build our share / future.
8. I think I'll go swimming today because of the calm / thick ocean waves.

10 Look and listen. Answer the questions. Check T for True and F for False. TR: 23

1. Because of the ash and gases in the sky, some eruptions hide light from the sun.
2. If an eruption is small, the temperature will get cooler.
3. Salma knows about Mount Pinatubo because of her reading.
4. The temperature dropped one degree Celsius because of the eruptions.
5. Scientists know about rainfall in China because of the trees they studied.



Exciting Sports

1 Find the secret message.

accident	extreme sports	kitesurfing	to crash
are	hang-gliding	length	to flip
cool	height	skiing	to land
equipment	injury	strength	to travel

1. Cross out the names of three sports.
2. Cross out four actions.
3. Cross out the nouns formed from *long*, *strong*, and *high*.
4. Cross out all the words with three syllables (for example, *e-quip-ment*).

Read the words that you didn't cross out. Write the message:

Extreme sports are cool.

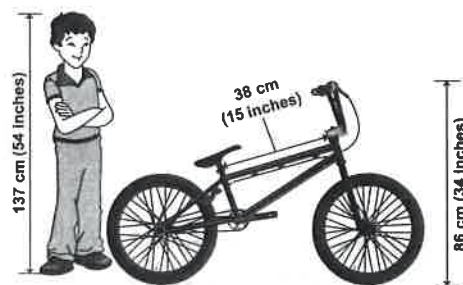
2 Look and write. Complete the sentences.

1. The height of this bike is 86 cm (34 inches).

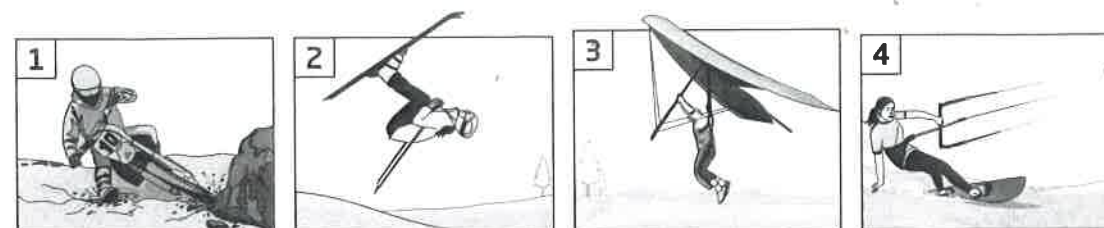
2. If you buy a BMX bike, you should always check the length of the "top tube."

The top tube is the bar that goes from the handlebars to the seat.

3. The length of this bike's top tube is 38 cm (15 inches).
4. The boy's height is 137 cm (54 inches). He's the tallest boy in my class.



3 Describe the pictures. Use the words in the box.



ride a motorcycle	crash	along the water	equipment
go hang-gliding	flip	in a field	injury
go kitesurfing	land	in the air	accident
go skiing	travel	into a rock	strength

1. He's riding his motorcycle. He's crashing into a rock. He may have an injury. ** unique answers.*
2. She is going skiing. She's flipping in the air. ()
3. He is going hang-gliding. He's landing in a field. ()
4. She is going kitesurfing. She's traveling along the water. ()

4 Read and match the questions and answers.

- | | |
|---|--|
| 1. My favorite sport is surfing. What about you? | a. I agree. I like how some of them flip in the air before landing. |
| 2. Have you ever had an accident while playing sports? | b. Yes, a year ago. I crashed into a rock on my bike and broke my arm. |
| 3. What kind of equipment do you need for swimming? | c. I've broken a finger, but that's all. I've been very lucky! |
| 4. I love to watch extreme sports on TV. Those athletes are so amazing. | d. Nothing expensive—just a swimsuit. |
| 5. What's the worst injury you've ever had? | e. I like skateboarding best of all, but I'm not very good at it! |

5 Listen and speak. Check your answers to Activity 4. Then listen and repeat. TR: 24

GRAMMAR

I **have lived** in this house **since** 2001. / **Since** 2001, I have lived in this house.

They **have not been** to this school **since** December.

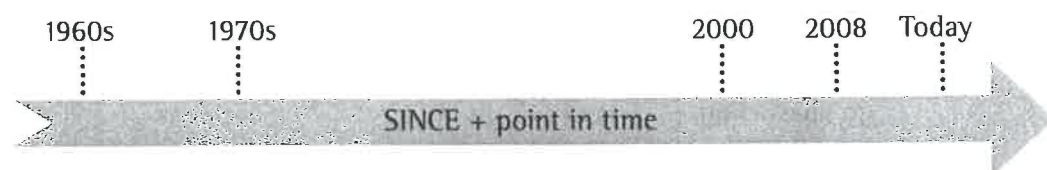
We **have not been** hang-gliding **for** three months.

She **has taken** classes **for** five years.

SINCE + point in time

FOR + length of time

6 Read and write. Look at the timeline. Write the sentences.



1. My friends / be / fans of hang-gliding / 2008.

My friends have been fans of hang-gliding since 2008.

2. People / enjoy / kitesurfing / 2000.

People have enjoyed kitesurfing since 2000.

3. Surfing / be popular / around the world / the 1970s.

Surfing has been popular around the world since the 1970s.

4. 1960s / more than 10 million people / try / skateboarding.

Since 1960s, more than 10 million people have tried skateboarding.

7 Read and write. Read the sentences in Activity 6 and do the math! Rewrite the sentences.

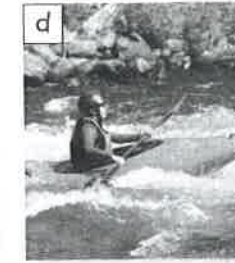
1. My friends have been fans of hang-gliding for more than six years.

2. People have enjoyed kitesurfing for more than ____ years.

3. Surfing has been popular around the world for more than ____ years.

4. More than 10 million people have tried skateboarding for more than ____ years.

8 Look and find. Look at the photos. Which ones have the following equipment?



brakes

b, c

elbow pads

a

a helmet

a, b, c, d

knee pads

a

a life jacket

d

9 Write. Describe the pictures in Activity 8. *unique answers

1. What is the boy doing to his brakes? Why are brakes so important?

2. How many people are wearing helmets? How will the helmets protect them?

10 Listen. Circle the safety equipment that Carla can borrow. TR: 25

a helmet a life jacket brakes elbow pads knee pads

11 Listen again. Complete the conversation. TR: 26

Carla: I'm going on an extreme sports course next weekend!

Can I borrow your helmet, Alex?

Alex: Of course you can. Do you want to borrow my knee pads and elbow pads, too?

Carla: That's a good idea. Thanks, Alex.

Alex: No problem!

Carla: Um, we're also going kitesurfing. Can I borrow your life jacket, too?

Alex: No. I'm sorry, Carla. It's brand new. I've only had it for three days!

Carla: That's OK. I understand.

GRAMMAR

I think skiing is

That sport is

Those tricks look

That boy's life jacket looks

extremely
incredibly
really
so
super
totally
very

boring.
cool.
dangerous.
difficult.
exciting.
funny.
old-fashioned.
scary.

12 What about you? Write your opinions.

1. A sport that looks really dangerous:

Skateboarding looks really dangerous!

2. A famous person who looks totally cool:

_____ looks totally cool!

3. A school subject that is extremely difficult:

_____ is extremely difficult!

4. A relative or friend who is super funny:

_____ is super funny!

5. A vacation that was very exciting:

_____ was very exciting!



13 Write. What is your favorite or least favorite thing? Why? Write five true sentences in your notebook. Use some words from the box.

extreme sport so movie totally book
incredibly TV program extremely musical group super

14 Look and listen. Check the sports that the singer has dreamed of doing. TR: 27

1



2



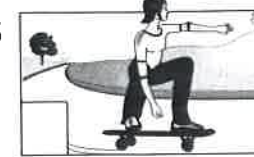
3



4



5



6



15 Write a new chorus for the song. Make an acrostic poem!

S _____
P _____
O _____
R _____
T _____
S _____

16 Listen and repeat. Which words rhyme with **air**? Which words rhyme with **ear**? Write. TR: 28

air / ear chair / cheer fair / fear
hair / here stair / steer wear / we're

air	chair fair hair stair wear
ear	cheer fear here steer we're