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Get Ready for an Adventure! 

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**An Indonesian Folktale: *A Legend of Komodo Island***

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| A: Move as Millions, Survive as One  | A: Relative clauses with *that* | Monarch Migration    |
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**A Mayan Folktale: *The King of the Birds***

| A: Through the Camera Lens          | A: Using *let*          | The Senses             |
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**An Italian Folktale: *A Happy Man’s Shirt***

| A: The Lantern Festival              | A: Using *by* to talk about time | Mardi Gras             |
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| A: Sylvia Earle: Oceanographer       | A: Using *must*               | Bluefin Rescue         |
| B: Saving the Animals and the People | B: Past perfect continuous    |                        |

**An Indian Folktale: *The Boy and the Drum***
Unit Walkthrough

Before You Read tasks encourage students to think about the ideas in the reading.

Move as Millions, Survive as One

Grammar activities practice important grammar structures introduced in the reading passage.

Vocabulary Builder boxes highlight common collocations, affixes, and usage notes.

Graphic organizers help students understand the organization of the text and the connections between key ideas.

Reading Comprehension questions check students' understanding of the reading passage.
Review Unit Walkthrough

**Vocabulary Review**
Activities reinforce the vocabulary from earlier units.

**World Heritage Site**
Pages highlight important cultural and natural places around the world, and recycle vocabulary and structures from earlier units.

**World Heritage Notes**
Preview content of World Heritage Site pages.

**Folktales**
From areas related to the World Heritage sites in the preceding spread introduce students to stories from cultures around the world.

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**A MAYAN FOLKTALE**
**The King of the Birds**

One day, the Great Spirit who governed the world told the birds that they should choose a king.

Wise old bird thought it should be the king. The only bird that served him was the spider. The spider stood in the line, but the birds were all afraid.

He asked, "Who will be the next king of the birds?"

"I can help you," said the spider. "But you must trust me."

The spider climbed to the top of a tree, and then he dropped it from a height. The birds were so scared that they flew away.

Then the spider climbed to the top of another tree, and this time he dropped it from a higher height. The birds were even more scared.

But the spider proved to them that he was the best choice for the king of the birds.

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**Reading Comprehension**
Questions check students' understanding of the folktales.

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**Vocabulary Extension**
There are many words we can use to talk about colors. Circle the words in the folktales that describe colors which are positive and which are negative.

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Make reading an adventure online—anywhere, any time! Visit www.HeinleELT.com/readingadventures for self-study grammar, vocabulary, and reading activities. Watch the National Geographic videos from the series either inside or outside the classroom.
Angel Falls is the tallest waterfall in the world. It is in Canaima National Park, Venezuela.

Warm Up

Talk with a partner.

1. Do you think there are places on Earth people haven’t been?
2. Imagine one of these places. What do you think it’s like?
A Hidden World

The Foja Mountains of New Guinea. In the highest parts of these mountains, there are no people at all. Some of the animals here live nowhere else on Earth.

Before You Read

A Discussion. In 2008, a group of scientists found a "lost world" in the Foja Mountains of New Guinea. "It really was like crossing [back in time] . . . We were like kids in a candy store," said one member of the group. What do you think they found? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. explore  2. hardly ever  3. unique  4. impact
5. discover  6. species  7. member  8. international

_____ a. scientists use this word to talk about a group of animals or plants
_____ b. to travel to a place to learn about something
_____ c. the effect made by something
_____ d. with or about two or more countries
_____ e. to be the first to find something or know about something
_____ f. the only one of something
_____ g. a person in a group or on a team
_____ h. almost never; rarely
DISCOVERY IN THE FOJA

In 2008, a group of scientists went to the Foja Mountains in New Guinea. “The mountains are unique. There are no roads, no people—and almost no human impact,” one group member said. In just a few weeks, the international team found at least 12 different new species. These species live only in the Foja Mountains. Here are a few of the animals they discovered.

Biologist Kristofer Helgen found this tiny tree mouse, which travels from one tree to another. “It uses them almost like a highway in the forest. It hardly ever goes down and touches the ground,” he says.

The blossom bat is a bat with a really long tongue. It uses it to drink nectar from flowers. It’s “kind of like the hummingbird of the bat world,” says Helgen.

The scientists also found a frog, which they called the Pinocchio frog because of its long nose. They were very lucky—they caught one in the camp kitchen. During the whole trip, this was the only one they saw.

The group found many amazing things. However, there are still many more mysteries waiting for the next team of explorers.

1 A biologist is a scientist studying things like plants and animals.
2 A highway is a big road.
3 A hummingbird has a long nose.
4 Pinocchio has a long nose.
Reading Comprehension

A Circle the correct answer.

Detail 1. Why are the Foja Mountains unique?
   a. People have not really affected the area.
   b. Animals use the trees like roads.
   c. There are only 12 animal species living there.

Reference 2. In line 11, them means the _____.
   a. trees    b. tree mice    c. highways

Vocabulary 3. According to the passage, the tree mouse is very _____.
   a. long    b. small    c. heavy

Inference 4. What does Helgen mean when he says that the blossom bat is “the hummingbird of the bat world”?
   a. It uses its tongue to drink, like a hummingbird.
   b. It’s colorful, like a hummingbird.
   c. It’s actually a kind of bird.

B Strategy: Summary completion. Complete the diagram with words and names from the passage.

1. _______ discovered in Foja Mountains

2. _______

3. _______ found it

4. _______

5. _______ like a

6. _______ has a long

7. _______ found only during trip
Language Practice

A  Vocabulary: Completion. Complete the sentences using a word from the box.

explorer
discover
hardly ever
species
unique
member
impact
international

1. We call the human _______________ Homo sapiens.
2. In 1953, James Watson and Francis Crick were the first scientists to _______________ the shape of DNA.
3. Singapore is _______________ because it is the only place that is an island, a city, and a country.
4. Vatican City is not a(n) _______________ of the United Nations.
5. Christopher Columbus was a famous _______________ in the 15th century.
6. Tigers _______________ attack people.
7. Cutting down trees is having a big _______________ on the rain forests of the world.
8. _______________ air travel is easier and less expensive than it was 50 years ago.

B  Grammar: Relative clauses with which. Read the example sentences. Sentence b is from the passage.

a. The scientists also found a frog. They called the frog the Pinocchio frog.
b. The scientists also found a frog, which they called the Pinocchio frog.
c. The blossom bat is unique. It drinks like a hummingbird.
d. The blossom bat, which drinks like a hummingbird, is unique.

Use which to join sentences 1 to 3. Then make one more sentence using which.

1. The team found a tiny tree mouse. The mouse travels from one tree to another.

2. New Guinea is the world’s second largest island. It has many unique species.

3. The Earth is becoming more crowded. It has about 7 billion people on it.

4. _______________
Sir Arthur Conan Doyle (1859–1930) was a Scottish doctor and author. He is most famous for his stories about the detective Sherlock Holmes. His novel *The Lost World* (1912) is also popular. Many movies, books, and other novels use the ideas from *The Lost World*.

**Before You Read**

**A Discussion.** The passage on the next page is from *The Lost World*. In the story, three men go to South America. While they are there, they discover a hidden forest. What do you think happens next? Look at the picture and talk about your ideas with a partner.

**B Definitions.** Match the words with their meanings.

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<td>1. follow</td>
<td>2. track</td>
<td>3. stay</td>
<td>4. enormous</td>
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<td>5. fake</td>
<td>6. extraordinary</td>
<td>7. truth</td>
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_____ a. to be in one place and not leave
_____ b. very unusual
_____ c. very, very big
_____ d. the possibility of something happening

_____ e. a mark left on the ground by an animal or person’s feet
_____ f. real; not a lie
_____ g. to go or come after a person or thing
_____ h. not real
Reading

Strategy: Skimming. Read the passage quickly. How many animals did they find? _____

An Extraordinary Find

1 It took us almost no time to find some signs. When we found them, we knew there were amazing things close by. Suddenly, Lord John stopped walking.
   "Look at this!" he said.
   There was an enormous three-toed track in the soft mud in front of us. What animal leaves such a mark? Whatever it was, it was in the forest.
   "This is new—the animal walked here less than ten minutes ago. And look!" Lord John said excitedly. "This is from a little one!"
   "But what animal?" I asked.
   "A dinosaur. Nothing else can leave such a track."

10 We stood, amazed, and then we followed the tracks through the trees and into an open area. There we found five of them—two big and three little ones. They were enormous, with the babies as big as elephants. They were gray and had scales, like a lizard, so in the sun, they shimmered.¹ They all had powerful tails, huge² three-toed back feet, and small five-fingered front feet. They were the most extraordinary animals, and we stayed low in the bushes, watching them.
   "What will the people in England say?" I asked
   "They will say you are not telling the truth," Lord John replied.
   "But with photos?"
   "They will say they are fakes!"

20 "What about taking the animals?"
   "Ah. Then we might have some chance!"

¹ When something shimmers, it shines with an unclear light, not brightly.
² If something is huge, it is very big, or enormous.
Reading Comprehension

A  Circle the correct answer.

Vocabulary 1. In line 1, signs means _____.
   a. tracks       b. animals       c. dinosaurs

Reference 2. In line 6, the word this means the _____.
   a. forest       b. mark          c. mud

Detail 3. Which of these sentences is true?
   a. They found five adult dinosaurs.
   b. All five dinosaurs were very big.
   c. The dinosaurs had three fingers on each front foot.

Inference 4. The people in the story will probably ____ next.
   a. try to catch a dinosaur
   b. try to leave the forest
   c. run away from the dinosaurs

B  Strategy: Sequencing. Read the story again. Put the pictures in order
from 1 to 5.

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Unit 1 Secret Worlds
Language Practice

A  **Vocabulary: Matching.** Match the two halves of the sentences. Then check (✓) the sentences you agree with. Share your answers with a partner.

1. Some people can’t tell   a. the truth is important.
2. Most people think telling   b. almost as big as the U.S.—it’s enormous!
3. A good way to learn a language is   c. without leaving tracks.
4. Teachers often tell us   d. the chance to study English.
5. The Sahara Desert is   e. when something is fake.
6. Not everyone has   f. was an extraordinary event.
7. It isn’t possible to walk in a forest   g. to stay in another country for a year.
8. Going to the moon for the first time   h. to follow the rules.

B  **Grammar: Making predictions with might.** Read these sentences. Sentence a is from the passage.

a. Then we **might** have some chance!

b. I **might** go to Australia next year.

c. I **might** not go to work next Monday morning. My grandfather is coming to visit.

Complete the sentences with your ideas. Share your answers with a partner.

1. Next year I might ____________________________.

2. In the next 5 years, cell phones might ____________________________.

3. In 20 years, computers might ____________________________.

4. I might not ____________________________.

**Word Partners**

*Use chance with:*

(n.) chance of success, chance of winning

(v.) give someone/something a chance, have a chance, miss a chance, get a chance
A  Preview. Read the quote below. What do you think Michael Fay means by “we can forget about it”?

“What I’m trying to do . . . is to show the world that we’re just about to lose [the forest] . . . [and], if we don’t do something now . . . we can forget about it.”

B  As you watch. Circle the correct answer in each sentence.

1. Michael Fay’s trip was called the (Megatransect / Congo Trek).
2. Michael Fay’s team walked (about 1,000 / over 1,900) kilometers.
3. The Congo Basin contains about half of Africa’s (plant and animal species / forests).
4. The trip took about (8 / 15) months.

C  Talk with a partner. What can you do to help save the plants and animals in Africa?
Warm Up

Talk with a partner.

1. What job(s) do you want to do?
2. Some jobs are not very safe. Can you think of any?
Before You Read

A Discussion. Wildfires are fires in places like forests. The fires move very quickly. Firefighters cannot stop the wildfires very easily. Does your country ever have wildfires? Talk about them with a partner.

B Definitions. Match the words with their meanings.

1. drop  2. heat  3. especially  4. difficult
5. reach (v.)  6. destroy  7. fight  8. nature

_____ a. to try to stop something or someone
_____ b. more than usual; very
_____ c. to get to a place
_____ d. to let something go from a high place

_____ e. not easy
_____ f. everything not made by humans (e.g. plants, animals, rivers)
_____ g. the energy to make things hotter
_____ h. to kill or hurt something
Fighting a Wildfire

Smoke fills the sky. The day is as dark as night. Heat makes it hard to breathe. This is the world of a wildfire fighter!

Wildfires are a part of nature. But, as one firefighter says, “Fire is not a problem. People living near fire—that’s the problem.” A wildfire can destroy everything in its way. But there are ways to fight it.

By air
Smokejumpers are often the first firefighters to reach a fire. To get closer, they jump from a plane. They are especially important when the area is difficult to walk to. If smokejumpers can’t stop a fire in 24 hours, other firefighters join them. This second group drops water on the fire from an airplane.

On the land
On the ground, firefighters work together to stop the fire. First, one group digs a fire line. This is a long deep ditch. It is difficult for the fire to cross this line.

Then, while those firefighters dig, others start a backfire. They burn the dry grass and leaves between the wildfire and the fire line. When the wildfire comes, there is nothing for it to use as fuel.

Other firefighters cut down dead trees. That way the fire can’t move to other trees. Firefighters risk their lives to keep people safe. Their job takes hard work, and it takes courage.

1 When you breathe, you take air in and out of your body.
2 When you risk your life, you do something unsafe, where you might die.
3 You show courage by doing something even though you know it is difficult or unsafe.
Reading Comprehension

A  Circle the correct answer.

Vocabulary  1. In line 1, the phrase dark as night means it was _____.
   a. a very dark night
   b. very early morning
   c. day time but dark

Inference  2. When the firefighter says, “Fire is not a problem. People living near fire—that’s the problem,” what does he mean?
   a. Fire is natural, but it’s dangerous to people living near it.
   b. Fires in forests are not a big problem, but fires in cities are.
   c. Fighting fires should be the job of people living near fires.

Paraphrase  3. In line 19, the phrase use as fuel can be replaced by _____.
   a. drop        b. fire        c. burn

Purpose  4. Which of these statements about the purpose of the passage is correct?
   a. It tells us why fires aren’t a problem.
   b. It shows us how fires destroy everything.
   c. It explains how firefighters fight wildfires.

B  Strategy: Labeling. Read the passage again. Complete the labels with words from the passage.

1. Firefighters ________
   from an airplane.

2. Firefighters start
   a(n) ________ by
   burning ________
   and leaves.

3. Firefighters dig
   a(n) _________. It is
   difficult for the fire
   to _________ it.

4. Some firefighters
   cut down ________
   so the fire can’t
   _________.

Unit 2 Dangerous Jobs
Language Practice

A Vocabulary: Words in context. In each sentence, circle the best answer.

1. The (hot / heat) from the sun makes life on Earth possible.
2. In the 18th century, it took several months for travelers from Europe to (reach / follow) North America.
3. Everyone knows it is (difficult / unique) to climb Mount Everest.
4. In many parts of Australia, wildfires are a problem, (especially / very) in summer.
5. Lions from different groups often (fight / chance) each other.
6. In many sports, when you (drop / fall) the ball, the other team gets it.
7. Many people worry that we are (fighting / destroying) too many forests.
8. The Grand Canyon* shows us how beautiful (heat / nature) can be.

B Grammar: Showing cause and effect using if.
Read the example sentences. Sentence a is from the passage.

a. If smokejumpers can’t stop a fire in 24 hours, other firefighters join them.

b. If other firefighters cut down dead trees, the fire can’t move to other trees.

Complete the sentences with your own ideas. Share your answers with a partner.

1. If people destroy forests, ____________________________.
2. If you study English hard, ____________________________.
3. If ____________________________.

Word Partners

Use fight with:
(n.) fight crime, fight fire, fight a war
(v.) stay and fight, join a fight, lose a fight, win a fight, have a fight, start a fight
Before You Read

A Discussion. On the next page is an interview with a scientist, Dr. Robert Rogers. He is a meteorologist—he studies the weather. Do you think his job is exciting? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. article  2. average  3. dangerous  4. depends  
5. fly (v.)  6. location  7. exactly  8. measure

____ a. to go through the air
____ b. usual, not special
____ c. not safe
____ d. to find out how big something is
____ e. a story in a newspaper or magazine
____ f. A meter is ____ 100 centimeters.
____ g. a place
____ h. When one thing changes if another thing changes, the first thing ____ on the second.
Reading

Strategy: Predicting.
Quickly read only the interviewer's questions below. How do you think Dr. Rogers answered? Read the passage and check your predictions.

Meet a Meteorologist

An airplane goes into the middle of a hurricane.

Dr. Rogers studying hurricanes

Interviewer | What is an average day at your job like?
--- | ---
Rogers | That depends on what time of year it is. For most of the year, I work in my office. I do research on the computer and read and write scientific articles. But, during hurricane season, I get the chance to fly into hurricanes.

You fly into hurricanes?

Rogers | Yes. We fly into storms to measure them. One of our jobs is to find out exactly the location of the center of storms. In a storm, it's really exciting. In one 2005 hurricane, I had a clipboard and a can of soda. Suddenly they were flying in the air—near my face!

Is it only you on the airplane?

Rogers | No, there are usually 15 to 18 people on the plane. These include pilots, engineers, and the scientific crew. I'm part of that last group, which usually has two to five people.

Are hurricanes always bad?

Rogers | Hurricanes are very dangerous, but they are also important. They move heat from the warm oceans toward the north and south poles. No hurricanes means some parts of the world don't get rain. So we need hurricanes, too.

---

1 Hurricane season is the time of year when most hurricanes happen.
2 When a group includes something or someone, then that thing or person is part of the group.
3 Something warm has some heat, but not enough to be hot.
**Reading Comprehension**

**A** Circle the correct answer.

**Vocabulary**

1. In line 3, the phrase do research means to _____.
   - a. write articles
   - b. find information
   - c. fly on planes

**Detail**

2. How many scientists are on the airplane?
   - a. 2–5
   - b. 10–16
   - c. 15–18

**Detail**

3. According to Rogers, hurricanes help move _____ to other parts of the world.
   - a. oceans
   - b. the poles
   - c. heat

**Inference**

4. Which statement is probably true?
   - a. Rogers wants people to know hurricanes are safe.
   - b. The interviewer wants to be a meteorologist.
   - c. The interviewer is surprised to hear that Rogers flies into hurricanes.

**B Strategy: Notes completion.**

Complete the notes below with one or two words from the passage.

**A Meteorologist's Main Work**

Do (1) ________.

Read and (2) ________ scientific articles.

Study hurricanes by (3) ________ into them.

**On the Plane**

Goes with (4) ________ (5) ________, and the scientific crew.

Finds the center of the (6) ________.

**Hurricane Facts**

Although a hurricane is not safe, it is also (7) ________.
Language Practice

A  Vocabulary: Words in context. In each sentence, circle the best answer. The words in blue are from the passage.

1. Which of these has articles?
   a. a newspaper  b. an airplane

2. Which of these is more dangerous?
   a. a cow  b. a tiger

3. When something is cut exactly, it ______ cut carefully.
   a. is  b. isn’t

4. Which of these can fly?
   a. a boat  b. an airplane

5. An average thing is usually _____ to find.
   a. easy  b. difficult

6. You use a _____ to measure things.
   a. ruler  b. notebook

7. You can find the location of something on _____.
   a. a mark  b. a map

8. The language a person speaks usually depends on ______.
   a. their name  b. where they come from

<table>
<thead>
<tr>
<th>Word Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use average with:</td>
</tr>
</tbody>
</table>

B  Grammar: Using do with nouns. Read these sentences.

a. Rogers researches hurricanes on the computer.

b. Rogers does research about hurricanes on the computer.

c. I read last night.

d. I did some reading last night.

Answer these questions so they are true for you.

1. Who does the cleaning in your house?

2. Did you do any studying last night?

3. How often do you do exercise?

4. Which do you enjoy more: doing the ironing, or doing the dishes?
Video
Smokejumper School

A Preview. Read the quote below. What do you think the speaker means?

“A smokejumper’s job is dangerous three times. First, when they fly. Second, when they jump. Third, when they go to the fire.”

B As you watch. Are these statements about the video true (T) or false (F)?

1. There are only a few wildfires in the U.S.A. every year.  
2. At smokejumper school, firefighters learn how to jump from planes.  
3. Smokejumpers are often scared when jumping from a plane.  
4. Small wildfires are just as bad for nature as large fires.  
5. Smokejumpers work in teams.  
6. People usually become smokejumpers for the money.

C Think about it. Why do you think some people choose to do dangerous jobs?
Vocabulary Review

A  **Odd word out.** One word in each group is a different part of speech to the others. Circle the different words.

1. impact / unique / explorer / species
2. travel / international / drink / discover
3. chance / truth / follow / fake
4. scales / enormous / huge / extraordinary
5. difficult / join / destroy / burn
6. location / article / measure / nature
7. track / especially / exactly / hardly ever

B  **Word search.** Now look for the words you circled, and circle them in the puzzle.

---

World Heritage Notes

**Notes completion.** Scan the information on pages 32 and 33 to complete the notes.

---

**What:** Komodo National Park

**Where:** East Nusa Tenggara Province, __________________________

**Data:**

- Komodo National Park was founded in ______________________, to protect the ___________________ living on Komodo Island.

- What is left of the Ata Modo culture is known only through ________________________ and ________________________.

- The Komodo dragon is the world’s largest ________________________.
  An adult can grow up to ________________________ meters long, and weigh more than ________________________ kilograms.

- Komodo dragons are good at ________________________ and ________________________.

- When hunting, a Komodo dragon waits until its prey is close. Then it attacks, using its ________________________ to jump forward. It has ________________________ teeth.

- Today there are only ________________________ Komodo dragons in the park.
Komodo National Park is located in Indonesia, between the islands of Sumbawa and Flores. When it was founded in 1980, the park’s main purpose was to protect the unique Komodo dragons living on the island of Komodo. However, over the years, the park has become bigger. Now, it protects other islands as well as the beautiful coral reefs that surround them.

Today, more than 45,000 people visit the park every year. However, only about 4,000 people actually live within the park. Most of these people are fishermen, originally from surrounding islands. Descendants of the original people of Komodo, the Ata Modo, still live in Komodo. But, sadly, their culture and language is slowly disappearing. What is left of the Ata Modo culture is known only through stories and legends told to each new generation of Komodo islanders.
The Komodo Dragon

The Komodo dragon is the world’s largest living lizard. An adult can grow up to three meters long, and weigh more than 130 kilograms.

They will eat almost anything, including dead animals, smaller komodos, and even large water buffalo. They have even been known to attack humans. When hunting, a Komodo dragon often lies down and waits until its prey is close. Then it attacks, using its powerful legs and sharp teeth. Komodo dragons will often attack an animal, and then let it go. Then, they will quietly follow the hurt animal for a long time, waiting for the dangerous bacteria in the dragon’s saliva to kill it.

Today, there are about 3,000 to 5,000 Komodo dragons in the park. However, they are endangered because the areas where they live are being destroyed as more people come to live on the islands.
An Indonesian Folktale

A Legend of Komodo Island

Once upon a time, on Komodo Island, there lived a princess called Putri Naga. Some called her the Dragon Princess. Putri Naga and her husband, Najo, had two children, a pair of twins.¹

Putri Naga’s children were special. The first was a boy, and she named him Si Gerong. However, Si Gerong’s twin was not a human child, but a dragon. Putri Naga named her Orah. To keep her dragon daughter safe, Putri Naga took her away. So Orah grew up in the forests, far away from her brother.

One day, many years later, Si Gerong was hunting in the forests. He was a good hunter, and soon he had killed a deer with his spear. He was about to pick the deer up when a huge dragon came out of the trees and started to eat it.

Si Gerong was surprised, but he didn’t back away. He lifted his spear to fight the dragon. Suddenly, a spirit came out of the forest and held him back. It was the spirit of his mother, Putri Naga, who had died many years before. “Stop, Si Gerong!” she said. “Do not kill the dragon. That is your sister. Her name is Orah.” Putri Naga told Si Gerong and Orah that they should live on the island together in peace.

That is why, from that day, the people of Komodo Island have always protected these huge dragons. It is also said that no dragon on Komodo Island has ever killed a person living on the island.

¹ Twins are two children born at the same time to the same mother.
Reading Comprehension

Circle the correct answer.

**Detail** 1. Who was Najo?
   a. Putri Naga’s dragon    b. Putri Naga’s son    c. Putri Naga’s husband

**Vocabulary** 2. What is a *spear* (line 9) usually used for?
   a. hunting and fighting    b. cooking food    c. making music

**Inference** 3. Why did Putri Naga need to take her daughter away?
   a. The people on Komodo Island would kill the child.
   b. Si Gerong didn’t like his sister.
   c. She thought her daughter would kill Si Gerong.

**Detail** 4. What was Si Gerong doing in the forest?
   a. looking for Orah    b. hunting deer    c. talking to his mother’s spirit

**Purpose** 5. What is the purpose of this folktale?
   a. It teaches brothers and sisters not to fight.
   b. It teaches children to live in peace with the dragons.
   c. It teaches children how to hunt in the forests.

**Vocabulary Extension**

**Vocabulary: Phrasal verbs.** Choose the correct preposition to complete each phrasal verb. Then circle the phrasal verbs in the folktale.

1. If they are well trained, dogs and cats can live (*together / away / out*) without fighting.
2. That box is really heavy. Could you help me pick it (*out / back / up*)?
3. I was born in the U.S., but I grew (*out / up / away*) in Indonesia.
4. If you see a bear in the woods, you should back (*out / away / together*) very slowly.
5. After the show was over, the people came (*away / back / out*) of the theater smiling.
6. When famous people arrive at the airport, police officers often have to hold (*on / up / back*) their fans.
7. My mother said that if I don’t do my homework, she’s going to take (*away / off / after*) my video games.
Warm Up

Talk with a partner.

1. What do you know about crystals? What colors can crystals be?
2. How big do you think the biggest crystals are?
The Cave of Crystals is deep inside a mountain in northern Mexico. Until 2000, no one knew about it. But then people discovered it—and its amazing crystals!

Before You Read

A Discussion. Look at the photograph above. Would you like to visit this cave? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. prepare  2. wear  3. conditions  4. protection
5. visitor  6. across  7. temperature  8. enough

_____ a. from one side to the other
_____ b. a person going to a place or to see another person
_____ c. as much as you need
_____ d. something to keep someone from getting hurt

_____ e. You can _____ a shirt, shoes or a hat.
_____ f. how hot or cold something is
_____ g. to do what you need to do before you start something
_____ h. how something is
An explorer wears a protective suit in the cave.

Reading

Strategy: Predicting.
Which is hotter, the Cave of Crystals or the Sahara Desert in Africa?

Read the passage to check your answer.

Preparing for the Cave of Crystals

1. The Cave of Crystals is an amazing place. One visitor described it as "like a child's dream." The huge crystals are possible because of the hot, wet conditions in the cave. However, those same conditions also make it impossible for humans to stay in the cave for very long.

5. The temperature of the Cave of Crystals is 45°C. That is almost as hot as the hottest days in the Sahara Desert! You can't just walk in. You need to prepare carefully and wear special clothes. First, you have to put on a vest, which has more than 12 ice packs across the front and back. After this comes another vest. This keeps the heat away from the ice. Over this, you have to wear a bright orange caving suit. You also need a mask that blows ice-cooled air. Then there is the helmet with a headlamp. Finally, you need to put on gloves and boots.

Even with all this protection, being inside the cave is very tiring. Most people don't go inside for more than 20 minutes. Even a few minutes can be enough.

15. However, visitors to the cave think its beauty is worth the difficulty. In the words of another explorer, it's as though you are "standing inside a star."

1. 45°C = 113°F
2. a vest
3. an ice pack

3A Crystal Palace
**Reading Comprehension**

**A** Circle the correct answer.

**Gist** 1. Which of these is a possible title for this passage?
   a. Like a Child’s Dream
   b. How the Crystal Cave was Made
   c. Who Found the Crystal Cave?

**Inference** 2. From the passage, we can infer that _____ the cave.
   a. many tourists go into
   b. no one lives in
   c. animals live in

**Reference** 3. In line 15, the difficulty means the difficulty of _____ the cave.
   a. going inside
   b. traveling to
   c. discovering

**Sequence** 4. Which of the following do explorers put on last?
   a. a vest
   b. a caving suit
   c. gloves

**B** **Strategy: Identifying true, false, or not given.** Are these sentences about the passage true (T), false (F), or is the information not given in the passage (NG)?

1. The crystals needed heat to grow. T F NG
2. The air in the cave is difficult to breathe. T F NG
3. With special clothes, people can stay in the cave for days. T F NG
4. The ice packs are orange. T F NG
5. It is very dry inside the cave. T F NG
6. Only two explorers can visit the cave at one time. T F NG

---

The Cave of Crystals has about 170 huge crystals.
Language Practice

A Vocabulary: Words in context. Answer the questions below. Share your answers with a partner.

1. What is something you have to prepare for? 
2. What are you wearing now? 
3. What are the weather conditions today? 
4. What are some jobs you need to wear protection for? 
5. What can visitors do in your city? 
6. What is across from your house? 
7. What is the hottest temperature in your city in summer? 
8. What don’t you have enough of right now? 

Word Partners
Use protect with:
( prep.) protect against attacks, protect children,
protect the environment, protect people
(adj.) designed to protect, supposed to protect,
necessary to protect

B Grammar: Using as though. Read the example sentences. Sentence b is from the passage.

a. Standing in the Cave of Crystals, it’s as though you are standing in an oven.
b. . . . it’s as though you are “standing inside a star.”

Complete the sentences using as though.

1. He talks to people as though he’s ____________________________.
2. The car looks as though ____________________________.
3. It seems ____________________________.
4. It’s ____________________________.
The British Museum in London bought this crystal skull in 1881.

Before You Read

A Discussion. Look at the picture. Where do you think this skull is from? Who do you think made it? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. source  2. believe  3. ability  4. modern
   5. technology  6. certain  7. evidence  8. debate

_____ a. machines and ways of making things by using science
_____ b. where something is from
_____ c. a discussion between people with very different ideas
_____ d. When someone can do something, they have this.
_____ e. something showing another thing is true
_____ f. new
_____ g. When you are 100% sure about something, you are _____.
_____ h. to think something is real or the truth
The 2008 movie *Indiana Jones and the Kingdom of the Crystal Skull* was about the mystery of the crystal skulls.

**Reading**

**Strategy: Scanning.** Read the text quickly. How many crystal skulls have the British Museum's archeologists excavated?

---

**The Mystery Goes On**

For years, a few famous crystal skulls have been a source of mystery and discussion. Even now, no one knows exactly who made them, and no one can say when.

Some people believe the Mesoamerican people\(^1\) made the skulls thousands of years ago. Some stories say they have special powers, such as the ability to make sick people well.

Moviemakers love these stories. In the 2008 movie *Indiana Jones and the Kingdom of the Crystal Skull*, the skulls had great power. In the movie, a crystal skull is actually the head of an alien.\(^2\)

However, most scientists don't believe these stories. They think the skulls are more modern. Scientists have found marks on the skulls that they believe only more modern technology could make. Because of this, scientists are certain the skulls are not thousands of years old. Instead, they think the skulls are from the 19th century. Scientists also point to the British Museum's excavations.\(^3\) The museum's archeologists\(^4\) have found many Mesoamerican objects, but they have never found a crystal skull. Scientists say this is more evidence to show they are fakes, and not really Mesoamerican.

Until we know more about the skulls, the mystery—and the debate—will keep going.

---

\(^1\) The Mesoamerican people lived in Central America before the 16th century.

\(^2\) An alien is a person or animal from space.

\(^3\) An excavation is a place where people dig in the ground to find old things.

\(^4\) An archeologist is a scientist studying people, events, and things from a long time ago.
Reading Comprehension

A  Circle the correct answer.

Gist  1. What is this passage mainly about?
   a. what the crystal skulls are
   b. who made the skulls
   c. the debate about the skulls

Detail  2. Some people believe the skulls help people _____.
   a. get better
   b. make other people sick
   c. become famous

Inference  3. Which of these statements about Indiana Jones and the Kingdom of the Crystal Skull is correct?
   a. It is about the British Museum.
   b. Scientists think it is not true.
   c. It gives evidence about the crystal skulls.

Paraphrase  4. In line 12, the phrase point to means _____.
   a. use your finger to show something
   b. give as an example
   c. choose something

B  Strategy: Identifying supporting ideas. Most scientists think the crystal skulls are not thousands of years old. Which of these ideas from the passage supports this view? Check (✓) them.

1. Mesoamericans might have made the skulls.

2. Humans need modern technology to make the skulls.

3. People think the skulls have special powers.

4. There are marks on the skulls.

5. Some people say that the skulls can help people feel better.

6. Archeologists have not found a crystal skull during an excavation.

▲ archeologists at a Mesoamerican excavation in Guatemala
Language Practice

A Vocabulary: Completion. Complete the sentences using a word from the box.

<table>
<thead>
<tr>
<th>source</th>
<th>technology</th>
<th>believing</th>
<th>certain</th>
<th>ability</th>
<th>evidence</th>
<th>modern</th>
<th>debate</th>
</tr>
</thead>
</table>

1. Scientists today are _________ that the Earth is round.
2. All humans have the _________ to learn languages, but some people are better at it than others.
3. Not having enough money can be the _________ of many problems.
4. There is a popular English saying, “Seeing is _________.”
5. Scientists believe you need _________ technology to make crystal skulls.
6. Because _________ is always changing, today's computers will seem really old in five years.
7. Some people can't have a(n) _________ without getting angry.
8. Archeologists look for _________ to show they are correct.

B Grammar: Present perfect. Read these sentences. The first two are from the passage.

a. For years, a few famous crystal skulls have been a source of mystery and discussion.

b. . . . they have never found a crystal skull.

c. Scientists have found evidence to show the skulls are modern.

Complete the sentences with your ideas. Share your answers with a partner.

1. I have studied English for _____ years.
2. I've been to ____________________________.
3. My teacher has ____________________________.
4. I've never ____________________________.

Word Partners

Use debate with:
(v.) open to debate
(adj.) ongoing debate, televised debate, major debate, political debate
(n.) debate over something, debate the issue
A Preview. Look at the pictures above and read the information below. Look up the words in blue in a dictionary. Do you know any other minerals? Discuss with a partner.

There are thousands of different minerals on Earth, and each one has a unique form. For example, salt (NaCl) is made of atoms from two elements: sodium (Na) and chlorine (Cl). These atoms join in a unique pattern to form salt crystals.

B As you watch. Are these statements about the video true (T) or false (F)?

1. Each mineral on Earth is made of two substances. T F
2. The process of making a crystal is called crystallization. T F
3. Some people believe that crystals have the ability to change their feelings. T F
4. There are about 6,000 different minerals in the world. T F
5. You can tell what family a crystal comes from by looking at its color. T F
6. There are seven unique crystal systems in the world. T F

C Think about it. Why do you think people are interested in crystals?
Warm Up

Talk with a partner.

1. When animals migrate, they move from one place to another place. Why do you think animals migrate?
2. Which animals do you know migrate?
Before You Read

A Strategy: Reading a map. Look at the map. How does each animal migrate—by air, sea, or land? Which animal travels the longest distance? Talk about your answers with a partner.

B Definitions. Match the words with their meanings.

1. completely  2. in common  3. swim  4. survive
5. face (v.)  6. challenge  7. avoid  8. in addition

____ a. also
____ b. to move through the water
____ c. a problem, or difficult thing
____ d. to try not to be near a person or thing
____ e. having something the same
____ f. to keep living
____ g. 100%
____ h. to meet and try to fix a problem or bad condition
Move as Millions, SURVIVE AS ONE

Great white sharks in the Pacific Ocean. Wildebeest in Africa. Arctic terns in the Atlantic. At first, these animals seem completely different. One swims, one walks, and the other flies. But they all have one thing in common. They all migrate.

Some migrating animals move to a place with a better temperature. Some go to find food or water. The groups travel as one, trying to survive. During the trip, they face many different challenges.

One challenge is distance. Some migrating animals take very long trips. They go far away from their home areas. For example, one great white shark swam from Australia to South Africa and back. In nine months, it swam about 20,000 kilometers.¹

Another challenge is finding enough food and water during the journey. For example, each Malác elephant needs over 200 liters of water each day. To get this, they need to go from one waterhole to another.

In addition, migrating animals have to avoid other animals that want to eat them. For example, the zebra has to stay away from lions. Traveling as a group helps keep them safe. All the zebras in the group can watch for danger. When one zebra is in trouble, the other members make a circle around it.

By working as a group, migrating animals can survive some of the world's most extraordinary journeys.

¹ 20,000 kilometers = 12,500 miles

4A Animal Migration
**Reading Comprehension**

**A** Circle the correct answer.

**Main Idea** 1. The main idea of the first paragraph is that _____ animals migrate.
   a. not all kinds of  
   b. only similar  
   c. different kinds of

**Detail** 2. The passage talks about _____ big challenges for the animals.
   a. two  
   b. three  
   c. four

**Detail** 3. Which of the following statements is NOT true?
   a. It’s about 20,000 kilometers from South Africa to Australia.  
   b. An elephant needs more than 100 liters of water a day.  
   c. Zebras help each other when they are in trouble.

**Inference** 4. From the passage, we can infer that _____.
   a. lions may eat zebras  
   b. lions travel in groups  
   c. lions try to avoid zebras

**B Strategy: Summary completion.** Complete the word web using words from the passage.

sharks, 1. ________,  
and 2. ________

to find a better  
3. ________

to find  
4. ________  
and 5. ________

distance—one shark traveled 6. ________!

Why?

examples of animals

Migration

challenges

need to  
7. ________

other dangerous animals

finding food and water
Language Practice

A Vocabulary: Words in context. Answer the questions below.

1. Who is completely different from you? Why?

2. What do you have in common with your parents?

3. Do you know how to swim? When did you learn?

4. What is one dangerous situation that is difficult to survive? Why?

5. What is one problem you have faced in the past? What did you do?

6. What is one challenge you have now?

7. What is something that you want to avoid? Why?

8. In addition to English, are there any languages you want to learn? What are they?

B Grammar: Relative clauses with that. Read these sentences. Sentence b is from the passage.

a. The animals also have to avoid other animals. Those animals want to eat them.
b. . . . the animals have to avoid other animals that want to eat them.
c. There are marks on the skulls. Scientists believe only modern technology can make these marks.
d. There are marks on the skulls that scientists believe only modern technology can make.

Word Partners

Use common with:
(n.) common belief, common language, common problem
(adj.) more/most common
(v.) have something in common

Join the sentences. Use that.

1. The team discovered a tiny tree mouse. This animal travels from one tree to another.

2. First, you have to put on a vest. It has more than 12 ice packs across the front and back.

3. Migrating sharks make a 20,000-kilometer trip. The trip takes nine months.

4. Archeologists have found evidence. The evidence shows the skulls are probably fakes.
Butterfly Migration

Before You Read

A Quiz. How much do you know about monarch butterflies?
Take the quiz. Circle True (T) or False (F). Then check your answers below.

1. Monarchs weigh less than a penny.  
   T F

2. A monarch butterfly can only fly 10 kilometers a day.  
   T F

3. Monarch butterflies migrate further than any bird.  
   T F

B Definitions. Match the words with their meanings.

1. everywhere  2. in fact  3. somehow  4. arrive
5. gather  6. young  7. smile  8. encourage

_____ a. to reach a place  
_____ b. in all places  
_____ c. 😊
_____ d. not old  
_____ e. in a way that is surprising or hard to explain  
_____ f. the following is true or gives more information  
_____ g. to make someone feel more like doing something  
_____ h. to bring people or things together

Monarch butterflies rest on a tree on their migration to Mexico.
Reading

Strategy: Predicting. Look quickly at the title, headings, pictures, and captions and answer the questions below. Then read the passage to check your answers.

1. Do monarch butterflies prefer warm or cool temperatures? 
2. How do people feel when they see the monarchs?

Heading South for the Winter

One monarch butterfly flies by. Then another, and another. As they fly, the butterflies seem to float in the sky. They make beautiful shadows on the ground below. They seem to be everywhere. In fact, there are so many butterflies that the groups look like beehives in the trees. And when they fly, the sound of 150 million monarchs' wings creates a soft sound, as though it is raining. People say Mexico is the only place in the world where you can hear the sound of butterflies' wings moving.

The Migration

Every year, millions and millions of monarch butterflies migrate from the U.S.A. and Canada. They go to a place high in the mountains of Mexico. There, they can escape from North America's cold winter temperatures. To get there, the monarchs often travel over 80 kilometers a day. But what's really amazing is that the butterflies make the trip only once. Somehow they know exactly where to go.

The Effect on People

After the butterflies arrive in Mexico, people gather to watch. The effect on people is amazing. Young and old, men and women, locals and people from far away—everyone is smiling and friendly. It's as though the butterflies encourage people to be their best.
Reading Comprehension

A Circle the correct answer.

Inference 1. According to the passage, the sound of the butterflies moving is _____.
   a. something people want to avoid
   b. easy to imagine
   c. nice to listen to

Vocabulary 2. Each monarch butterfly joins the migration _____.
   a. just one time
   b. a few times
   c. one time a year

Detail 3. According to the passage, _____ will like watching the butterflies.
   a. almost everyone
   b. mainly butterfly experts
   c. mainly young people

Inference 4. The writer probably _____ the butterflies know where to go.
   a. understands exactly how
   b. thinks it's extraordinary that
   c. has written a book about how

B Strategy: Summary completion. Use no more than two words in each blank to complete the summary about the passage.

- Every year, 1. ________________ of monarch butterflies leave North America before it gets too 2. ________________. They travel to 3. ________________ where the temperature is warmer. It's a long trip, and they sometimes fly more than 4. ________________ every day. Not one of the butterflies has been there before, but 5. ________________ they go to the same place each year. There, people 6. ________________ to see them. Maybe the butterflies make everyone happy, because everyone seems to be 7. ________________ as they watch them.
Language Practice

A  Vocabulary: Words in context. In each sentence, circle the best answer.

1. Everywhere on Earth, people wear _____.
   a. gloves    b. clothes
2. At which of these places might people **gather**?  
   a. a bed       b. a stadium
3. If you **somehow** pass a test, it is _____ for you.  
   a. easy       b. difficult
4. When do most people **arrive** at school?  
   a. in the morning b. in the afternoon
5. Which of these is **young**?  
   a. a puppy†   b. a grandparent
6. People usually **smile** when they are _____.  
   a. happy      b. unhappy
7. When someone **encourages** you to do something, they want you to _____. it.  
   a. try        b. avoid
8. When you say **in fact**, you are usually _____ information.  
   a. asking for b. giving

B  Grammar: Relative clauses with **where**. Read these sentences.  
Sentence a is from the passage.

   a. Mexico is the only place in the world **where** you can hear the sound  
      of butterflies’ wings moving.
   b. Sometimes they move to a place **where** there is a better temperature.

Complete each sentence using **where** and information that is true for you.  
Share your answers with a partner.

1. I want to go to a country **where** _______________________.
2. Last week I went to ______________________ where I _____________________.
3. I love places **where** I can _______________________.
4. _______________________.

**Word Partners**

*Use smile with:*  
(v) smile and laugh, make someone smile,  
see someone smile  
(adj.) big/little/small smile, friendly smile,  
sad smile, shy smile, warm smile, wide smile
A  Preview. The video discusses some problems that monarch butterflies face when they reach Mexico. Which do you think are some of these problems?

☐ cold temperatures  ☐ too many tourists
☐ hot temperatures  ☐ people cutting down trees
☐ storms  ☐ people catching butterflies

B  As you watch. Circle the correct answer in each sentence.

1. Every year, 300 ( million / billion ) butterflies travel from North America to the butterfly sanctuary.

2. In 2002, a ( rain storm / wildfire ) killed millions of monarch butterflies.

3. Mike Quinn is worried about ( the number of tourists / the loss of trees ).

4. In 30 years, the number of ( trees / butterflies ) in the area has gone down 50 percent.

5. The Mexican government is paying money to ( land owners / butterfly farmes ) to help the butterflies.

C  Think about it. What else can people do to help the butterflies?
Vocabulary Review

Crossword. Complete the crossword puzzle with words from Units 3 and 4.

Across
1. to meet a difficult situation you have to deal with
3. to get ready or make something ready
5. how hot or cold something is
7. the things that affect someone or something
10. new and using the latest ideas
11. sure, having no doubts
12. the cause of something
13. not old
14. equal to what is needed or wanted

Down
2. shared by two or more people or groups
4. from one side to the other
5. the use of science in solving problems
6. something that shows that something else exists or is true
8. to come to or reach a place after traveling
9. to use or have something (such as clothing) over part of your body

World Heritage Notes

Notes Completion. Scan the information on pages 58 and 59 to complete the notes.

What: Tikal National Park
Where: El Peten, Guatemala

Data:
- Tikal was once the largest city of ________________.
- By A.D. 950, all the people had ________________.
- There were once about 3,000 ________________ at Tikal, including six ________________.
- The ________________ on the buildings help us understand what the Maya were like and how they lived.
- Experts believe people left the city because there was not enough ________________, and too many ________________ with other cities.
- The Tikal National Park contains the largest area of ________________ in Central America.
Site: Tikal National Park
Location: El Peten, Guatemala
Category: Natural and Cultural
Status: World Heritage Site since 1987

3114–3113 B.C.
According to the Mayan calendar, the four original gods create the Earth.

400–300 B.C.
The Maya build pyramids at Tikal.

A.D. 500
Tikal becomes the first great Mayan city.

A.D. 899–950
The Maya abandon Tikal.

A.D. 1517
The Spanish arrive in South America. They bring with them new diseases which kill 90 per cent of the native people.
In the heart of the jungles of Central America is one of the most important sites of the Mayan civilization—the ruins of Tikal. Tikal was once the largest city in the Mayan world. Experts think 90,000 people used to live here. However, by A.D. 950, all the people had left the city. Then the rain forests returned to completely cover the land.

Today, historians and tourists can visit Tikal and see some of the 3,000 ancient structures that once stood there. Among the ruins are six huge pyramids. Some are more than 60 meters (200 feet) high. On these pyramids are carved pictures. They help us understand what the Maya were like and how they lived. The ruins of Tikal also give us important clues to solve the mystery of why they left and never returned.

Experts believe there were a few reasons the Maya left Tikal. It didn’t rain very often, so there was not enough water to drink or to grow food. Also, Tikal was always at war with other cities, and some people may have left to avoid the war.

Today, in addition to its important ruins, Tikal National Park contains the largest area of wild rain forest in Central America. It protects thousands of unique plant and animal species.

A.D. 1695
While lost in the jungle, a Spanish priest discovers the ruins of Tikal.

A.D. 1839
Explorer John Lloyd Stephens and artist Frederick Catherwood discover more Mayan ruins. Their maps and drawings show the whole world how amazing the ancient Mayan civilization was.

A.D. 1956–1980
American and Guatemalan archeologists dig up more ruins at Tikal. They clean up many of the structures we can see at Tikal today.
A MAYAN FOLKTALE

THE KING OF THE BIRDS

1 One day, the Great Spirit who guarded the Mayan world told the birds that they must choose a king.

Almost every bird thought it should be king. The only bird that stayed quiet was the quetzal. The quetzal wanted to be king, but his feathers were a dull brown, and he looked quite plain. He didn’t think anyone would choose him.

The quetzal went to the road-runner, a very colorful bird, and said, “Your feathers are beautiful, but you are too busy being the messenger of the roads to become king. Lend me your feathers. I’ll return them after I become king, and I’ll share the wealth and fame with you.”

10 At first, the road-runner said no. But the quetzal would not stop asking him. At last, the road-runner agreed.

One by one, the road-runner’s feathers magically disappeared and then appeared on the clever quetzal’s body. Soon, the quetzal’s body and tail were a rich blue-green, his chest was bright red, and his beak had turned a lovely glowing yellow.

15 The Great Spirit was very surprised by the quetzal’s new beauty and chose him to be king of all the birds. From that day on, the quetzal was so busy being king, he had no time to return the road-runner’s feathers. He soon forgot all about his promise to the road-runner.

Days later, the other birds found the road-runner hiding deep in the forest.

20 He had no feathers, and he was very cold. He told the birds about the quetzal’s promise.

The birds felt sorry for the road-runner, and each gave up a few feathers to cover him. That is why, today, the road-runner’s feathers are such an odd mix of drab and faded colors, and why he always watches the Mayan roads. He is still looking for the quetzal that took away his feathers.
**Reading Comprehension**

**Strategy: Sequencing.** Number the events in the story on pages 60 and 61 from 1 (the first) to 8 (the last).

a. _____ The Great Spirit spoke to all the birds.
b. _____ The quetzal stayed quiet.
c. _____ The road-runner agreed.
d. _____ The quetzal went to see the road-runner.
e. _____ The road-runner looked for the quetzal.
f. _____ The quetzal’s feathers became beautiful.
g. _____ The birds found the road-runner hiding in the forest.
h. _____ The quetzal became very busy.

**Vocabulary Extension**

**Vocabulary: Describing color.** There are many words we can use to talk about colors. Circle the words in the folktale that describe color. Which are positive and which are negative?

1. Cathy’s hair was very (dull / beautiful). So she brushed it every day to make it shiny.
2. The colors of a peacock’s feathers are usually very (rich / plain).
3. That shirt was originally (bright / drab) red. But after it was washed many times, it became so (colorful / faded), it was pink.
4. Sam’s room has a big rainbow on the wall. It’s so (dull / colorful).
5. We wanted the school to look warm and friendly, so we painted it a (drab / glowing) yellow.
The Senses

Warm Up

Talk with a partner.

1. Can you name the five senses?
2. Which sense is the most important to you?
   Which is the least important?
A Discussion. How is the photograph above unusual? Why do you think the photographer took it like that? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. **blind**  
2. **age (n.)**  
3. **experience**  
4. **grow up**
5. **neighbor**  
6. **opening (n.)**  
7. **decision**  
8. **ignore**

_____ a. the start of something; a way into something
_____ b. Someone's ____ is how old they are.
_____ c. unable to see
_____ d. to become older

_____ e. to act as though you don’t see or hear something or someone
_____ f. a choice, often made after thinking about something
_____ g. something that you do or that happens to you
_____ h. a person who lives near you

Unit 5 The Senses
Through the Camera Lens

When you stand outside at night, what do you see? The stars? Maybe a planet? Bruce Hall can't see any of these things. That's because Hall is almost blind. Even though he can't see more than a few centimeters in front of him, he's a photographer. When he looks through the lens of the camera, he sees the world—sometimes for the first time.

Discovering Another World

It all started at the age of nine when Hall had an eye-opening experience. He grew up hearing about stars. However, he had never seen them. All he saw was darkness. Then one night a neighbor let him look through his telescope. "It was like an opening into another world!" He decided to become a photographer. The decision changed his life. He discovered how to see the world! Now he can't live without photographs. "I think all photographers take pictures to see, but I can't see without cameras," he says.

"Seeing"

When Hall looks through his camera, the lens makes things look bigger. Then he sees things again through the pictures he takes. Using modern technology, Hall can look at them closely and examine all the detail that most of us see—but ignore—every day. And through his pictures, we can learn new things about the world around us.

1 Something that is eye-opening is surprising and teaches you something.
Reading Comprehension

A  Circle the correct answer.

Main Idea  1. The main idea of the second paragraph is that, using technology, Hall became able to see _____.
   a. everything  b. the night sky  c. photographs

Detail  2. How is Hall different from other photographers?
   a. He uses a special camera.
   b. Only Hall uses a camera to be able to see.
   c. He only takes photographs of other blind people.

Inference  3. Which of these sentences about Bruce Hall is most likely true?
   a. He is happy he is blind.
   b. He lives in the same house he lived in when he was nine.
   c. He is happy he started taking photos.

Detail  4. Hall’s pictures help us _____.
   a. think about things in a new way
   b. understand how technology works
   c. picture ourselves as blind

B  Strategy: Identifying cause and effect. Match the causes and effects to make sentences.

1. Hall looked through a telescope and  o  a. learn new things about the world.

2. Hall decided to become a photographer and  o  b. everything looks bigger to him.

3. Hall looks through a camera and  o  c. now he can’t live without cameras.

4. Hall looks at pictures closely and  o  d. sees things that other people ignore.

5. We look at Hall’s pictures and  o  e. saw stars for the first time.
Language Practice

A Vocabulary: Words in context. In each sentence, circle the best answer.

1. Scientists can use science to tell the (age / years) of things.
2. An eye-opening (experience / experiment) is something amazing.
3. Choosing a job is a difficult (debate / decision) for most people.
4. Hall probably doesn’t (experience / ignore) small details.
5. Most countries want to live happily with their (experiments / neighbors).
6. Humans (grow / age) up throughout elementary school.
7. The Olympics have (an opening / a beginning) event to start the games.
8. (Blind people / Neighbors) sometimes use a white stick when walking outside.

B Grammar: Using let. Read these sentences. Sentence a is from the passage.

a. Then one night a neighbor let him look through his telescope.

b. Our teacher lets us use our notebooks during the test.

The sentences below all have mistakes. Rewrite the sentences, correcting the mistakes.

1. Hall lets we learn new things about the world around us.

2. Migration lets survive animals.

3. Their problems monarch butterflies let people forget.

4. Scientists let modern technology understand more about crystal skulls.

Word Partners

Use experience with:
(adj.) professional experience, valuable experience, past experience, shared experience, learning experience
(n.) work experience, life experience
Before You Read


1. Look up these words in a dictionary. With which senses do you use each word? Check (✓) all the senses each word matches.

2. Is each word positive (+), negative (−), or neither (N)? Write the best answer for each word. Talk about your answers with a partner.

<table>
<thead>
<tr>
<th></th>
<th>touch</th>
<th>taste</th>
<th>sight</th>
<th>hearing</th>
<th>smell</th>
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</thead>
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<td>mmm</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>whiff</td>
<td></td>
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</tr>
</tbody>
</table>

B  Definitions. Match the words with their meanings.

1. translate  2. arm  3. embrace  4. lick  5. pick (v.)  6. lovely  7. tasty  8. action

- a. beautiful; very nice
- b. to have someone or something in your arms
- c. to touch something with your tongue
- d. something that someone or something does
- e. 
- f. (for food) very nice to eat
- g. to change something from one language to another
- h. to choose; to take a flower or other plant
Reading

Strategy: Scanning. A stanza is a paragraph from a poem. With which words do almost all of the stanzas in this poem start? _____________

Five Senses

1 Paul Scott is deaf. He can’t hear, but he writes poems. His poems are usually “said” using sign language. This poem was translated from British Sign Language by Rachel Sutton-Spence.

Excuse me, but who are you?
Who am I? Come with me and see.

5 Feel your arms tingle at my embrace.
Reach out—oh, that’s cold!
Reach out—oh, that’s hot!
So, now you know me.

Excuse me, but who are you?

10 Who am I? Come with me and see.
A lick of ice-cream—mmm!
A scoop of that—yuck!
A scoop of this—yum!
So, now you know me.

15 Excuse me, but who are you?
Who am I? Come with me and see.
Pick a flower and sniff—lovely!
Take some cheese[ from the fridge[—whiffy!

Pop this tasty morsel[ in your mouth,

20 Yes, and it smells good too.
So, now you know me.

Excuse me, but who are you?
Excuse me?

Excuse me, but what’s wrong with him?

25 Oh, we’re together.
Together?
Yes, come with us and see.
Eyes wide open, seeing and understanding.
Information and learning,

30 Colors, speed, action.
Learning and drinking in the world through the eyes.
So now you know us.
And now you know me.

3 A morsel is a small piece of food.
Reading Comprehension

A Circle the correct answer.

Gist 1. The poem is mainly about how deaf people _____.
   a. use their other senses to learn about the world
   b. feel sad because they can't hear
   c. have better sight and taste than people who can hear

Inference 2. In the poem, the cheese probably has a(n) _____. smell.
   a. strong
   b. terrible
   c. lovely

Vocabulary 3. In line 19, the word pop means to _____.
   a. come in from
   b. put into
   c. suddenly open

Paraphrase 4. In line 31, the phrase drinking in the world through the eyes means _____.
   a. looking at the world's different drinks
   b. really enjoying what you are seeing
   c. the action of drinking with your eyes closed

B Strategy: Identifying the main idea. In each stanza of the poem, the author says Who are you? before talking about the senses. Write the number of the stanza with each sense. Why is the fourth stanza shorter than the others? Discuss with a partner.

Five Senses

1. sight
2. hearing
3. touch
4. taste
5. smell

Paul Scott is deaf. He can't hear, but he writes poems. His poems are in American Sign Language. This poem was translated from British Sign Language by Ray baker.

Excuse me, but who are you?
Who am I? Come with me and see.
Feel your arms tingle at my embrace.
Reach out—oh, that's cold!
Reach out—oh, that's hot!
So, now you know me.
Excuse me, but who are you?
Who am I? Come with me and see.
A lick of ice cream—mmm!
A scoop of that—yuck!
A piece of this—yum!
So, now you know me.
Excuse me, but who are you?
Who am I? Come with me and see.
Pick a flower and sniff _______.
Take some cheese* from the fridge—what's this?
Pop this tasty eraser* in your mouth.
Yes, it's worth good tea.
So, now you know me.
Excuse me, but who are you?
Focuss me.
Excuse me, but what's wrong with him?
Oh, we're together.
Together?
So, come with us and see.
Eyes wide open, seeing and understanding.
Information and learning.
Colors, sound, action.
Learning and drinking in the world through the eyes.
So now you know us.
And now you know me.
Language Practice

A Vocabulary: Words in context. Answer these questions. Share your answers with a partner.

1. What is something that you have never licked?

2. When do people in your country embrace each other?

3. Have you ever read a book that was translated from English? Which one?

4. Would you rather have strong arms or legs? Why?

5. What is the tastiest thing you’ve ever eaten?

6. What is one thing you think is lovely?

7. Do you enjoy picking flowers? Why?

8. An English expression says “Actions speak louder than words.” Do you agree?

B Grammar: Repetition. In poetry, words or phrases often repeat. Authors also use words with opposite meanings. Read these lines from the poem.

a. Reach out—oh, that’s cold! Reach out—oh, that’s hot!

b. A scoop of that—yuck! A scoop of this—yum!

On a piece of paper, write a short poem. Use repetition and opposites. Then read it to a partner.

Word Partners

Use arms with:
(v.) arms crossed, arms folded, hold in your arms, join arms
(adj.) open arms

5B Senses in Poetry
A **Preview.** Label each picture above with the name of a sense and the part of the body used for that sense.

- **Senses:** smell, taste, touch, sight, hearing

- **Parts of the body:** skin, eye, ear, nose, tongue

B **After you watch.** Which sense does each of these statements talk about? Write the correct sense next to each statement.

1. Cells in the retina turn light into nerve signals.
   - **Sight**

2. The part of the brain that controls this sense is near the part that helps us remember things.
   - **Hearing**

3. This sense feels temperature or pain.
   - **Touch**

4. This sense uses tiny bumps that identify sweet, sour, salty, and bitter.
   - **Taste**

5. Vibrating hairs create nerve signals which then travel to the brain.
   - **Hearing**

C **Think about it.** Do you think people have more than the five senses discussed in the video? If so, what other senses do people have?
Warm Up

Talk with a partner.

1. A museum is a place where you can see art. Do you like to look at art in museums?
2. What famous paintings do you know? What do you think is the most famous painting in the world?
Before You Read

A Quiz. *Mona Lisa* is one of the most famous paintings in the world. What do you know about it? Circle **True** or **False** for the sentences below. Then check your answers at the bottom of the page.

1. Leonardo da Vinci painted *Mona Lisa*. **True**  **False**
2. *Mona Lisa* is a painting of Leonardo da Vinci’s wife. **True**  **False**
3. *Mona Lisa* is unfinished. **True**  **False**
4. *Mona Lisa* is about 500 years old. **True**  **False**

B Definitions. Match the words with their meanings.

1. wait  2. steal  3. pay attention  4. incredible
   5. continue  6. original  7. pass (v.)  8. deal (v.)

   _____ a. to carefully watch or listen
   _____ b. to do nothing; to stay in a place until something happens or someone comes
   _____ c. the first one; the thing made first
   _____ d. really amazing; almost impossible to believe
   _____ e. to buy and sell things as a job
   _____ f. to take something without asking and without paying
   _____ g. to go by (a place); (for time) to go by
   _____ h. to not stop doing something

Crowds of people take photos of *Mona Lisa*. Six million people see the painting in the Louvre every year.
As he walked out of the Louvre Museum in Paris, France, he looked like an average repairman. But what he carried was very unusual. Under his jacket, Vincenzo Perugia was carrying Mona Lisa, one of the most famous paintings in the world. And he was stealing it!

It sounds incredible, but it's a true story. On August 20, 1911, Perugia went into the museum and hid. He waited 15 hours until the next morning. On the day of the crime, the museum was closed for repairs. Perugia walked out into the museum wearing the same kind of clothes as the other repairmen. No one paid attention to him as he walked out the door!

Police looked all over the world—Russia, Japan, and Brazil. They even interviewed Perugia, but they let him go! Police continued to look for the painting. Two years passed before Perugia brought Mona Lisa to a man in Florence, Italy, who dealt in art. Florence is the city where Leonardo da Vinci painted Mona Lisa. Unfortunately for Perugia, the art dealer called the police, who arrested him.

Perugia said he wanted to return Mona Lisa to its "real" home. The police believed he wanted to sell copies of the painting and keep the original for himself. To this day, nobody really knows why he did it.

---

1. A crime is an action that is wrong or illegal.
2. A repairman makes broken things work again.
3. Police arrest someone when they catch them for a crime.
Reading Comprehension

A Circle the correct answer.

Reference 1. In line 15, **no one** refers to _____.
   - a. other repairmen
   - b. the police
   - c. museum visitors

Detail 2. The police got **Mona Lisa** back because _____.
   - a. an artist
   - b. an art dealer
   - c. da Vinci

Inference 3. Perugia said that he wanted to return **Mona Lisa** to Florence because _____.
   - a. da Vinci painted it
   - b. his real home was
   - c. art dealers lived

Detail 4. The author probably thinks it’s amazing that _____.
   - a. Perugia waited to steal the painting
   - b. the dealer called the police
   - c. the police interviewed Perugia, but let him go.

B **Strategy: Sequencing.** Put these events in order.
   - a. Police looked for **Mona Lisa** for two years.
   - b. The police arrested Perugia.
   - c. **Mona Lisa** went back to the museum in Paris.
   - d. Perugia stole **Mona Lisa**.
   - e. Perugia took the painting to an art dealer.
   - f. Perugia went to the Louvre and hid somewhere so that no one could see him.

---

Workmen at the Louvre clean **Mona Lisa**'s frame.
Language Practice

A Vocabulary: Words in context. In each sentence, circle the best answer. The words in blue are from the passage.

1. When you continue to do something, you _____ doing it.
   a. keep  
   b. stop

2. You should say _____ if you don’t pay attention when someone is talking.
   a. “Sorry”  
   b. “Thank you!”

3. Which of these can people steal?
   a. money
   b. air

4. Which of these passes?
   a. a clock
   b. an hour

5. You might be _____ if someone makes you wait for an hour.
   a. happy
   b. unhappy

6. You describe something as incredible when you can’t _____ it.
   a. believe
   b. see

7. You can see originals in a _____.
   a. museum
   b. book

8. When you deal in art, you _____ it.
   a. keep
   b. buy and sell

B Grammar: Using nobody. Read these sentences. Sentence a is from the passage.

a. To this day, nobody really knows why he did it.

b. Until 2000, nobody knew about the Cave of Crystals.

c. Even now, nobody knows exactly who made the crystal skulls.

Complete the sentences with your ideas. Share your answers with a partner.

1. Nobody can _________________________________.

2. Nobody has ever _______________________________.

3. Nobody should _________________________________.

4. _________________________________

Word Partners

Use attention with:
(prep.) attention to detail
(adj.) careful/close attention, special attention, unwanted attention, medical attention
(iv.) catch someone’s attention, focus attention, call someone’s attention to something, pay attention
(n.) center of attention
Before You Read

A  Discussion. What do you know about Leonardo da Vinci’s inventions? Look at the inventions on this page and the next. Do you think they would work? Discuss with a partner.

B  Definitions. Match the words with their meanings.

1. complete  2. artist  3. invent  4. future
5. knowledge  6. draw  7. design (n.)  8. model
   a. a person who makes art  e. to finish
   b. information  f. the time after now, often much later
   c. a plan for something  g. to create things for the first time
   d. a small copy of something  h. to make a picture with pens, pencils, etc.
Inventor of the Future

1 Leonardo da Vinci once said, “Art is never finished.” So it may not be surprising that he only completed about 12 paintings. These, however, include Mona Lisa and The Last Supper, two of the world's most famous paintings. Today, everyone knows about Leonardo the artist. But he was more than that. He was also a scientist.

Leonardo da Vinci is often called one of history’s greatest thinkers. Imagine the world of 500 years ago. At that time, few people were inventing new things. Bulent Atalay, who wrote a book about Leonardo, says, “He invented the future.” Leonardo studied engineering and physics. He was also interested in the science of flight. With all of that knowledge, he imagined flying machines—400 years before the first airplane!

Leonardo drew many of his ideas. They had incredible detail. Other people have used his designs to make parachutes, and inventions similar to today's submarine and telescope.

20 Leonardo's drawings showed all these things hundreds of years before anyone else! His drawings also showed how the machines of his day worked. In fact, today we can still use them to make models that work!

1 Physics is the science of energy, light, and sound.
Reading Comprehension

A  Circle the correct answer.

Reference  1. According to the passage, Leonardo is best known today for his _____.
   a. inventions   b. paintings   c. scientific research

Detail  2. Who made a submarine from Leonardo’s drawings?
   a. Leonardo da Vinci   b. Bulent Atalay   c. other people

Detail  3. Which of these statements about Leonardo’s inventions is true?
   a. They have few things in common with today’s technology.
   b. They were extraordinary for the time.
   c. They can’t be understood by most people, even today.

Inference  4. According to the passage, Leonardo was _____.
   a. less experienced in painting than inventing things
   b. very good at making working models of his drawings
   c. very careful when he drew and painted

B  Strategy: Identifying supporting ideas. Match each of the topics (1–3) with two supporting ideas (a–f).

<table>
<thead>
<tr>
<th>1. Leonardo the artist</th>
<th>2. Leonardo the scientist</th>
<th>3. Leonardo the inventor</th>
</tr>
</thead>
<tbody>
<tr>
<td>___ a. He wanted to understand how things work.</td>
<td></td>
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<tr>
<td>_ b. He created a flying machine hundreds of years before an airplane flew.</td>
<td></td>
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<tr>
<td>___ c. He used his drawing ability to show others his ideas.</td>
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<tr>
<td>___ d. He made designs of things no one had seen before.</td>
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<tr>
<td>___ e. He wanted to know more about energy and light.</td>
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<tr>
<td>___ f. He painted extremely famous paintings.</td>
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</table>

Leonardo da Vinci kept many notebooks of ideas. To keep his writing secret, he used mirror-writing.
Language Practice

A Vocabulary: Words in context. Answer the questions below so they are true for you. Share your answers with a partner.

1. What is something you want to complete this year?

2. Other than Leonardo da Vinci, who are two other famous artists you know?

3. What is one thing you would like to invent? Why?

4. What is one thing you think will be different in the future?

5. What is a subject you have a lot of knowledge about?

6. What is one thing you are able to draw?

7. Imagine you can design your perfect bedroom. What is in it?

8. Do you like to make models? Why or why not?

B Grammar: Talking about interests. Read these sentences. Sentence a is from the passage.

a. He was also interested in the science of flight.

b. The scientists were very interested in the animals they discovered.

c. Dr. Rodgers is interested in finding out where hurricanes are.

Complete the sentences with your ideas. Share your answers with a partner.

1. Two years ago, I was interested in ________________, but I'm not now.

2. Most people I know are interested in ________________.

3. I'm interested in ________________.

4. I'm not interested in ________________.

Word Link
-ist = a person who does something: artist, tourist, scientist, violinist, guitarist
The Renaissance

The Creation of Adam is part of the famous ceiling of the Sistine Chapel, Vatican City.

A Preview. The Renaissance started in Italy in the late 1300s and continued until the 17th century. During this time, people became more interested in books and poems. What else do you think they became interested in? Discuss with a partner.

B After you watch. Match the people to their descriptions.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>d. Nicolaus Copernicus</td>
<td>e. The Medici family</td>
<td></td>
</tr>
</tbody>
</table>

___ a. an artist who made the statue of David and painted the Vatican’s Sistine Chapel
___ b. an artist, scientist, and inventor
___ c. inventor of the thermometer and the first to use a telescope to look at the sky
___ d. one of the powerful families that ruled Italian cities
___ e. the first person to say that the Earth goes around the sun

C Think about it. We remember Galileo, Michelangelo, and Leonardo da Vinci more than 500 years after they died. Are there people living today who will be famous 500 years from now?
Vocabulary Review

Words in context. Unscramble the words to complete the sentences.

1. In the past, many __________ (Indbi) people __________ (grwe) up without books to read. But since now many books are __________ (tteadaslrn) into Braille, they can enjoy the __________ (ecernpxiee) of reading.

2. Leonardo da Vinci was not just a(n) __________ (saiitr), he had a lot of __________ (kelgedwon) about many things. He __________ (nvienetd) many machines that looked like they came from the __________ (utfreu). Today, we can see drawings and __________ (emosdl) of his inventions in museums.

3. The thief had a(n) __________ (eicnlbrdie) plan. He dressed up like a policeman, so no one paid __________ (nioaenntt) to him when he __________ (sdsepa) them carrying the painting. They had no idea he was __________ (ingsleta).

4. While we __________ (dtiwea) for our parents to make a __________ (iodcsein) about where to go for dinner, we helped our __________ (igehorbn) with her garden.

5. At the __________ (ega) of five, Mozart was already writing __________ (inroailg) pieces of music.

World Heritage Notes

Notes Completion. Scan the information on pages 84 and 85 to complete the notes.

What: Historic Center of Florence
Where: Tuscany, Italy
Date:
• Florence was once a small village for Roman soldiers.
• The Palazzo Vecchio is the __________ of Florence.
• The Uffizi Gallery is one of the oldest and most famous __________ in the world.
• The Ponte Vecchio (or old bridge) is special because it’s the last bridge in Italy that is __________ .
• The Duomo’s dome is the largest __________ ever made.
• The Bargello is the oldest public building in Florence. In the past, it was a police station and __________ .
Florence, Italy

Site: Historic Center of Florence
Location: Tuscany, Italy
Category: Cultural
Status: World Heritage Site since 1982

The Palazzo Vecchio is the town hall of Florence. In the square below stands Michelangelo’s David, Florence’s most famous sculpture.

The Ponte Vecchio (or old bridge), built in the 14th century, was the only bridge in Florence that was not destroyed in World War II. It is unique because it’s the last bridge in Italy that is lined with shops.

The Uffizi Gallery used to contain the offices for the city’s government. Today, it is one of the most famous art museums in the world. Artists like Leonardo da Vinci and Michelangelo often came to the Uffizi to work and enjoy the art.
From street artists to world-famous art galleries, Florence has always been a city of art. In ancient times, it was once a small village for Roman soldiers. However, in the 14th and 15th centuries, the Medici family became rulers of the city. They ordered and paid for many of the buildings and works of art that the city is now famous for, and it became the birthplace of the European Renaissance. Today, it is one of the world’s loveliest cities.

The **Bargello** is the oldest public building in Florence. During the Middle Ages and Renaissance periods, it was a police station and prison, but it is now an art museum.

Reaching 90 meters into the air, the **Duomo** was once the largest dome in the world, and is still the largest brick dome ever constructed.
An Italian Folktale

A Happy Man's Shirt

Once upon a time, there lived a good and honest king. But he was very unhappy. He was so sad, he wouldn't eat, and couldn't sleep. So the queen called for the best doctor in the kingdom.

The wise doctor said, "To be happy again, the king must find and wear the shirt of a happy man."

The king looked up from his bed. "That's all?" he asked. "Ask the prime minister to give me his shirt. He is very powerful, and his wife is very beautiful. He must be a very happy man."

But the prime minister said, "Oh, no. I'm not a happy man. My son doesn't want to be a minister like me. He wants to run away to be a treasure hunter."

He began to cry.

So the queen called all the rich people in the kingdom to come to the castle. All were healthy, and most had big houses and a lot of expensive things. Their families were clever and beautiful. But not one of them could say they were really happy.

But the queen would not give up. She asked her soldiers to look all over the kingdom for a happy man. All the soldiers came back with the same story. They couldn't find a man who was really happy.

Then one day, a young soldier saw a man sitting in a field. The man was singing a loud happy song. "Why are you singing? You are poor and dirty, and you have nothing," the soldier said.

"I am happy because I have everything I want, and I've never wanted what I couldn't have," the cheerful man said.

The soldier did not believe him. But when he told the queen about it, she asked the soldier to bring the happy man to the castle.

At last, the happy man arrived at the castle. When the king saw him, he was surprised. Then he started to laugh. The happy man wore no shirt.

* In some countries, the leader of the government is called the prime minister.
Reading Comprehension

**Strategy: Sequencing.** Number the events in the story on pages 86 and 87 from 1 (the first) to 8 (the last).

a. ______ The king was unhappy, and couldn’t sleep.
b. ______ The king was happy once more.
c. ______ The queen called for the doctor.
d. ______ A young soldier found a poor, dirty, but cheerful man.
e. ______ The cheerful man came to see the king.
f. ______ The unhappy prime minister began to cry.
g. ______ All the rich people came to the castle.
h. ______ The queen’s soldiers searched the whole kingdom.

Vocabulary Extension

**Vocabulary: Describing people.** Circle the words in the folktale that are used to describe people. Then match the describing words below with their definitions. Which are positive and which are negative?

1. cheerful ○ ○ very strong; able to control people and events
2. clever ○ ○ usually happy
3. dirty ○ ○ smart; intelligent
4. honest ○ ○ not clean
5. poor ○ ○ having little or no money
6. powerful ○ ○ having a lot of money or things
7. rich ○ ○ fair; not lying or cheating
8. wise ○ ○ able to use their experience to make good decisions
Men form a human pyramid at the festival of Saint Felix in Vilafranca del Penedes, Spain.

Warm Up

Talk with a partner.

1. What festivals are important in your country? Make a list.
2. What do people do during those festivals?
Before You Read

A Discussion. Look at the photos above and on the next page. This passage is about a famous Korean festival. What do you think people do for this festival? Discuss with a partner.

B Definitions. Match the words with their meanings.

1. activity  2. instrument  3. metal  4. miss
5. sight  6. site  7. suggest  8. traditional

_____ a. a hard thing like gold, silver, iron, or tin
_____ b. to say something so another person thinks about doing it
_____ c. something to see
_____ d. to not do or see

_____ e. a place where something is or happened
_____ f. something that has been the same way for a long time
_____ g. something used to make music
_____ h. something people do
Reading

Strategy: Scanning. What are three things people do at the festival?

SEOUl, KOREA: THE LANTERN FESTIVAL

1 Seoul is the site of one of the most amazing festivals in the Korean calendar—the Lantern Festival. Look for it in April or May. Here are a few of the fantastic sights you can see.

5 Women wear traditional Korean clothes in bright greens, pinks, peaches, and purples. Some of them carry fans with bright pink flowers on them. The fans can be longer than their arms! Other women carry lanterns of all shapes and sizes.

Regular visitors to the festival suggest going to the music and dance shows to see poongmulnori. Poongmulnori is a traditional Korean drum music. It mixes dancing, acting, and acrobatics all in one. In the past, people used the music to celebrate. They also used it to frighten away demons. The show starts with the sounds of instruments. At first, you may think the noise of metal hitting metal can’t get louder—but it will! And the excitement grows as the music and dances continue. By the end of the show, it’s hard not to join in!

10 During the festival, painting on wood is a popular activity. Try painting lotus flowers. They are both beautiful and the symbol of the festival.

The lantern festival really is a must-see for any tourist to Korea. You don’t want to miss it!

---

1 Acting is when someone tries to be like another person, for example, in a movie.

2 people doing acrobatics

3 a lotus flower
**Reading Comprehension**

**A** Circle the correct answer.

**Detail** 1. According to the passage, which of these come in many different sizes.
   a. fans  
   b. lanterns  
   c. drums

**Inference** 2. In everyday life, Korean women _____ wear the bright clothes discussed in the passage.
   a. rarely  
   b. always  
   c. usually

**Detail** 3. The poongmulnori is probably _____.
   a. loud at first but then gets quiet  
   b. quiet at first but then gets loud  
   c. loud from beginning to end

**Vocabulary** 4. In line 22, the word *symbol* means a(n) _____.
   a. act  
   b. thing  
   c. event

**B** **Classification.** Which activity do these things match?
Write a to f in the correct place in the chart.

a. traditional clothes  
b. loud noise  
 c. lotus flowers  
d. tourists can take part  
e. mostly women  
f. a traditional activity
Language Practice

A Vocabulary: Words in context. Answer the questions below. Talk about your answers with a partner.

1. What shouldn’t people miss in your area?

2. Is your area more traditional or more modern?

3. What is one activity you do every day?

4. Do you like to drink from metal or plastic bottles? Why?

5. Can you suggest a good place to eat near your home?

6. What is your favorite musical instrument? Why?

7. Are kangaroos a common sight in your area?

8. What is a famous site in your country?

B Grammar: Using by to talk about time. Read these sentences. Sentence a is from the passage.

a. By the end of the show, it’s hard not to join in!

b. The shark had swum 20,000 kilometers by the time it got back to Australia.

Complete these sentences. Share your answers with a partner.

1. The teacher said, “Turn in your homework by ___________________. ”

2. I want to ___________________ by the time ___________________.

3. By the time ___________________.

4. ___________________.

Usage

A site is a place where something happens or happened, e.g. campsite, historical site, archaeological site.

A sight is something you see, e.g. a beautiful sight, an amazing sight.
The "Running of the Bulls." Runners race around a corner to escape galloping (running) bulls during the Festival of San Fermin in Pamplona, Spain.

Before You Read

Ernest Hemingway (1899–1961) was a famous American author. The Sun Also Rises (1925) was his first novel. Hemingway wrote many other books, including A Farewell to Arms and The Old Man and the Sea.

A Discussion. The passage on the next page is from Hemingway’s novel The Sun Also Rises. In the story, a man is watching the Festival of San Fermin. Look at the picture above. What do you think happens during this festival? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

1. behind  2. space  3. edge  4. notice
5. announce  6. empty  7. wake (up)  8. release

_____ a. the place or line where something stops
_____ b. to say, usually in an important way
_____ c. something with nothing in it is
_____ d. not in front of
_____ e. to stop sleeping
_____ f. to see or pay attention to
_____ g. to let go of
_____ h. an area

Unit 7 Festivals
The Bulls Run

When I woke it was the sound of the rocket exploding that announced the release of the bulls from the corrals at the edge of town. They would race through the streets and out to the bullring.

Down below, the narrow street was empty. All the balconies were crowded with people. Suddenly a crowd came down the street. They were all running, packed close together. They passed along and up the street toward the bullring and behind them came more men running faster, and then some stragglers who were really running. Behind them was a little bare space, and then the bulls galloping, tossing their heads up and down. It all went out of sight around the corner. One man fell, rolled to the gutter, and lay quiet. But the bulls went right on and did not notice him. They were all running together.

After they went out of sight, a great roar came from the bullring. It kept on. Then finally the pop of the rocket that meant the bulls had gotten through the people in the ring and into the corrals.

- A corral is an area with a fence around to keep in animals like horses or cows.
- Stragglers are people who are slower than the rest of the group.
- If a room or area is bare, it is empty.
- When someone tosses their head, they move it quickly, often angrily.
- The gutter is the edge of the road, where rain flows away.
## Reading Comprehension

### A

**Detail** 1. What woke the man up?  
   a. an announcement  
   b. an explosion  
   c. the bulls

**Reference** 2. In line 16, the words *It all* refer to the _____.  
   a. bulls  
   b. stragglers  
   c. race

**Vocabulary** 4. A *great roar* (line 23) and a *pop* (line 24) are both a kind of _____.  
   a. sight  
   b. sound  
   c. event

**Detail** 3. Where did the race finish?  
   a. at the edge of town  
   b. at the bullring  
   c. under the writer’s balcony

### B

**Strategy: Identifying True, False, or Not Given.** Are these statements about the reading true (T), false (F), or is the information not given in the passage (NG)?

<table>
<thead>
<tr>
<th>Statement</th>
<th>T</th>
<th>F</th>
<th>NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The writer heard two rockets.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
<tr>
<td>2. Before the race, the streets were crowded.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
<tr>
<td>3. The writer’s friends were in the race.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
<tr>
<td>4. The bulls killed one man.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
<tr>
<td>4. The stragglers were behind the bulls.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
<tr>
<td>5. There are corrals at the start and finish of the race.</td>
<td>T</td>
<td>F</td>
<td>NG</td>
</tr>
</tbody>
</table>

---

The fireworks bull, or *Toro de Fuego*, is part of Pamplona’s Festival of San Fermin.
Language Practice

A Vocabulary: Summary completion. Use the words in the box to complete the summary of the story.

**empty** noticed edge announced space behind released woke

As I was sleeping, a loud sound 1. ______________ me. The bulls had been 2. ______________! They were running! I quickly got up and went to the balcony. Below, the race hadn’t arrived yet, so the streets were still 3. ______________.

“It won’t be long,” I thought. The other balconies were already filled with people. There wasn’t enough 4. ______________ for even one more person on some of them. Suddenly, I heard them below. A large group of people was running fast. Soon, I saw more people, running more quickly. And then 5. ______________ them, I 6. ______________ some people who looked afraid. Why? Suddenly, the bulls came running through the street. That’s why they looked so afraid! One man fell, but he moved to the 7. ______________ of the road, and was OK. Then, as quickly as they came, they left.

Then I heard the rocket which 8. ______________ that the day’s run was over.

B Grammar: Past perfect. Read these sentences. Sentence a is from the passage.

a. Then finally the pop of the rocket that meant the bulls had gotten through the people in the ring and into the corrals.

b. When I went out, I saw that people had already started standing on their balconies.

Complete the sentences using the past perfect form of the words in the box.

**arrive** drop leave study

1. I got to school and discovered I __________ my homework at home.

2. I was late to school—when I got there, everyone else __________ already __________.

3. On the ground, I found a wallet† that someone __________.

4. I __________ for the test, but I didn’t pass it.

Word Partners

Use wake with:
(phrases) wake up during the night, wake up in the middle of the night, wake up in the morning
(adv.) wake (someone) up

† a wallet
A  **Preview.** You will hear these words in the video. Match the words in the box to the correct pictures.

- costume
- float
- king cake
- parade

B  **As you watch.** Number these events in order.

a. ___ A million visitors come to see Mardi Gras every year.

b. ___ A secret club, called the Mystick Krewe of Comus, held a parade with floats.

c. ___ Christianity grew in Europe and old festivals became Church holidays.

d. ___ French people came to live in New Orleans.

e. ___ In ancient Rome, people celebrated the arrival of spring.

f. ___ Other groups added their own floats.

g. ___ The Roman festival of spring became Carnival.

C  **Think about it.** What do you know about the history of a festival in your country? Tell a partner.
Heroes for the World

Jane Goodall (left) has spent her life fighting for the protection of chimpanzees.

Warm Up

Talk with a partner.

1. What makes a person a hero?
2. Name a few of your heroes. Why are they your heroes?
A Discussion. Sylvia Earle is one of the world's best known marine scientists (people who study the oceans). She said, "The next ten years is likely to be the most important time [for the sea] in the next 10,000 years." What do you think this means? Talk about your ideas with a partner.

B Definitions. Match the words with their meanings.

<table>
<thead>
<tr>
<th></th>
<th>spend</th>
<th>solve</th>
<th>attach</th>
<th>inspire</th>
<th>improve</th>
<th>leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>a. to join two or more things together</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>g. to use time or money</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>e. to tell someone what you think they should do</td>
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<tr>
<td>4</td>
<td>f. the person who is above the other people in a group</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>b. to make better</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>h. to find an answer to a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>c. an ability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>d. to help make a person want to do something</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reading

Strategy: Predicting. Which questions do you think this passage will answer? Read the passage to check.

☐ Why is Sylvia Earle famous?
☐ Why is the ocean important for life?
☐ What can people do to help the ocean?

Sylvia Earle: Oceanographer

1 A living **legend**. A hero for the planet. These are just two of the many descriptions of Sylvia Earle and her love for the ocean. It’s a love that started when she was a child, and has continued her whole adult\(^1\) life.

**A Woman of Firsts**

5 For over 40 years, Earle has been a **leader** on deep ocean expeditions\(^2\) around the world. Earle says that the great thing about exploration is that it’s never over. Even so, **spending** 6,000 hours underwater—like she has—is amazing!

Earle wasn’t happy to just follow others. She was the leader of the first team of women to live underwater. And in 1979, she walked on the ocean floor. **Unattached** to any boat, she walked deeper in the ocean than any woman before or since.

**Inspiring Others**

Being a marine scientist isn’t Earle’s only job. She believes she must **inspire** people to **solve** the ocean’s problems. She wants people to use their **talents** to **improve** the world.

“Don’t take no for an answer,” she **advises** people. “Find out what you want to do. Then find a way to make it happen . . . If you have a dream of your own, don’t wait!”

\(^1\) An **adult** is someone who is no longer a child.

\(^2\) An **expedition** is a trip to do something (for example, to study new animals).
Reading Comprehension

A  Circle the correct answer.

Vocabulary 1. In line 1, the word legend means _____.
   a. an old story   b. information on a map   c. a famous person

Detail 2. According to the passage, how many hours has Earle spent underwater?
   a. 40   b. 1,979   c. 6,000

Inference 3. Which of these statements does Earle probably NOT believe?
   a. People should always have a dream.
   b. Women should avoid challenges.
   c. Anyone can make a difference.

Detail 4. Which of these statements about Earle is true?
   a. She led the first team of women to live underwater.
   b. She was the first woman to scuba dive.
   c. She has gone deeper in the ocean than any other person.

B  Strategy: Identifying fact or opinion. Which of these statements about Earle are facts (F) and which are opinions (O)?

a. ______ Earle is a hero.

b. ______ Earle has explored oceans all over the world.

c. ______ Earle is a marine scientist.

d. ______ Earle has loved the sea for over 40 years.

e. ______ Earle’s advice is very useful.

f. ______ Earle is an inspiration.

Sylvia Earle (right) and another scientist in 1971. Earle has been doing underwater research for over forty years.
Language Practice

A Vocabulary: Words in context. Answer the questions below so they are true for you. Share your answers with a partner.

1. How do you usually spend the weekend?

2. When you have a problem, how do you solve it?

3. How often do you attach pictures to emails?

4. Who is one person that inspires you? Why?

5. What are two talents you have?

6. What do you think of Earle’s advice in the last paragraph of the passage?

7. What can you do to improve the world?

8. Would you like to be a leader? Why or why not?

B Grammar: Using must. Read these sentences. Sentence a is from the passage.

a. She believes she must inspire people to solve the ocean’s problems.

b. To go into the Cave of Crystals, you must wear a lot of protective clothing.

Complete these sentences using must. Then share your sentences with a partner.

1. A good leader _________________________________.

2. To protect our oceans, we _________________________________.

3. _________________________________.

Usage

advice and advise
Be careful not to confuse advice and advise. Advice is a noun, and the c is pronounced like the ss in less. Advise is a verb, and the s is pronounced like z in size. Hiroko advised Paolo not to give people advice.
A Namdapha National Park is the largest national park in India.

Aparajita Datta doing research in the forests of Namdapha National Park

Before You Read

A Discussion. What do you think life is like for people who live in a forest? Do you think those people hurt or help the forests? Talk with a partner.

B Definitions. Match the words with their meanings.

1. enter  2. environment  3. national  4. natural
5. region  6. thick  7. variety  8. wildlife

____ a. the opposite of thin
____ b. about or by a country
____ c. from nature; not made by humans
____ d. an area, often different than other areas near it
____ e. the animals living in nature
____ f. to go into a place
____ g. many kinds
____ h. the conditions of an area that affect the animals, plants, and people there
Saving the Animals and the People

In Namdapha National Park, in northeast India, Aparajita Datta moves slowly across a bridge high above the river. On the other side, she enters the thick tropical forest. Later, Datta calls the variety of wildlife in the area “mind-boggling.”

This area is the most species-rich environment in India. There are over 100 mammal species here. There are 500 species of birds and more than a thousand different plants. For about eight years, Datta has worked to protect the region. After two years in the area, she understood something important—she needed the support of the local people to protect the forest. Ever since then, she has been focusing her attention on the people of the Lisu tribe.

The Lisu people have lived in the area of the Namdapha National Park since before it was protected in 1983. The Lisu are far from everything. They need to walk four days to reach the nearest town. They have to hunt and grow their own food. With little land to grow rice, they have to cut down the trees in the forests. But this destroys the plants’ and animals’ natural habitats.

Datta started working with the Lisu. She started a program which reduces hunting, and helps save wildlife. It also tries to find solutions that can help protect for the future the diversity that makes the area so special.

1 A bridge lets people cross a river, road, or other place that cannot be crossed easily.
2 A tribe is a group of people with the same language, history, and general ideas.
Reading Comprehension

A  Circle the correct answer.

Detail 1. After Datta had worked in the area for a few years, she believed the Lisu _____.
   a. wanted a national park to protect the area
   b. had to change their way of living
   c. needed roads to get to town more easily

Detail 2. According to the passage, there are more kinds of bird species in the area than kinds of _____.
   a. mammals  b. animals  c. plants

Inference 3. The author probably ____ the importance of having the Lisu protect the forest.
   a. agrees with  b. doesn’t understand  c. disagrees with

Vocabulary 4. Examples of the area’s diversity (line 15) are all of the _____.
   a. Lisu people  b. plants and animals  c. forest trees

B  Strategy: Sequencing. Number these statements in order from 1 to 5.

   a. ____ Datta started trying to save the wildlife.
   b. ____ India made the Namdapha area a national park.
   c. ____ The Lisu started living in the area.
   d. ____ Datta slowly went across the bridge in the story.
   e. ____ The Lisu stopped some of their hunting.
Language Practice

A Vocabulary: Words in Context. In each sentence, circle the best answer. The words in blue are from the passage.

1. When a book is thick, it usually has ____ pages.
   a. few  b. many

2. When you enter a room, you ____.
   a. go in  b. go out

3. A place with diversity has ____ variety.
   a. little  b. lots of

4. A ____ is an example of wildlife.
   a. cat  b. monkey

5. Which of these is natural?
   a. a desert  b. an elevator

6. In which region is Namdapha National Park?
   a. northeast India  b. beside a river

7. Which of these is an example of an environment?
   a. a forest  b. an insect

8. Who owns a national museum?
   a. a business  b. a country

B Grammar: Present perfect continuous. Read these sentences. Sentence a is from the passage.

   a. She has been focusing her attention on the people of the Lisu tribe.
   b. I've been studying English since 9:00 this morning.
   c. I've been studying French for two years.

Complete the sentences. Share your answers with a partner.

1. Our class has been studying this book since ____________________________.

2. I've been wanting to ____________________________ for a long time.

3. I've been ____________________________.

4. ____________________________.

Word Partners

Use thick with:
(n.) thick glass, thick ice, thick smoke, thick hair
(adv.) so thick, too thick, very thick

8B Saving India's Forests
A **Preview.** What food do you eat that comes from the oceans? Talk about your ideas with a partner.

B **After you watch.** Circle the correct answer in each sentence.

1. On average, wild bluefin tuna are becoming (larger / smaller).

2. When Masuma finds tuna eggs, he moves them to (small tanks / the sea).

3. When the baby tuna grow up, Masuma will (return them to the sea / sell them to restaurants).

4. Sylvia Earle is impressed with Masuma's work because (he is fighting tuna predators / he is the first scientist to grow baby bluefins on a farm).

5. Scientists say that we must (reduce the number of bluefin tunas humans catch / only catch young tuna).

C **Think about it.** What do you think of Masuma's work? Do you think that one scientist can save an endangered species?

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1 A tank is a container for holding liquids, such as water.
Vocabulary Review

Words in context. Unscramble the words to complete the sentences.

1. Although Death Valley ________ (Nnotiaa) Park is in the hottest and driest ________ (goreni) of the United States, it has a wide ________ (taiveyr) of unique desert ________ (fwiidell).

2. Even archeologists who have a(n) ________ (aenltt) for ________ (lovgins) mysteries need to ________ (dneps) many years working to ________ (imrpeov) their skills.

3. Many animals live in unique ________ (reonnivsmnte). So, animal experts often ________ (sveadi) people not to remove animals from their ________ (tnluaar) habitats.

4. During the festival, people gather at the ________ (tise) of the old temple. They play musical ________ (usntsrenitm), and eat many ________ (tiadaotilndn) sweets.

5. Once the monkeys were healthy again, the staff at the shelter ________ (dsaeelr) them at the ________ (eged) of the rain forest.

World Heritage Notes

Notes Completion. Scan the information on pages 110 and 111 to complete the notes.

What: The Jantar Mantar

Where: Jaipur, India

Data:

• A Jantar Mantar is actually a huge _________. There were originally ________ Jantar Mantars.
• The Jantar Mantar in Jaipur was made a World Heritage site because it is the ________ and ________ of all the Jantar Mantars.
• Maharaja Jai Singh II built the giant Jantar Mantars because he believed that if the instruments were much bigger and ________, people could ________.
• The Jantar Mantar includes two _________. These helped people to ________.
• The Rassivalaya Yantra contains smaller instruments used to find and follow the Western ________.
• The Ram Yantra and Digansa Yantra helped astronomers note the ________ of objects in the sky.
In the early 18th century, Maharaja Jai Singh II built five huge parks where people could go to study the skies. He called them Jantar Mantars. The name Jantar Mantar means calculation instrument.

The Jantar Mantar in Jaipur is the largest and the best preserved of the five. It has 20 different stone structures used to find out the position and movement of the sun, stars, and planets.

Before the giant Jantar Mantars were built, the kingdom’s official stargazers would use smaller, often handheld instruments to study the skies. However, they often had arguments about whose measurements were correct. Maharaja Jai Singh II built the giant Jantar Mantars because he believed that if the instruments were much bigger and carefully fixed in position, people could take better measurements. The Jantar Mantar at Jaipur is considered one of the Maharaja’s greatest achievements.²

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¹ When you make a calculation, you use math to find out something or to solve a problem.

² An achievement is something you have succeeded in, usually after a lot of work.
The Jantar Mantar at Jaipur includes two massive sundials which were used to tell the time. At 27 meters high, the **Samrat Yantra** is the largest sundial in the world—its shadow moves at one millimeter a second!

The **Rashivalaya Yantra** contains twelve smaller sundial-like instruments. Each one is carefully positioned so that stargazers of the time could find and follow one of the twelve western zodiac signs.

The spaces between the columns of the **Ram Yantra** let in sunlight. By examining the shadow of a stick in the center, astronomers could note the exact position of the sun in the sky.

The **Digansa Yantra** had two wires across its top, which held a metal plate with a small hole in the center. At night, astronomers used to lie down on the floor, and look at a star or planet through the hole to calculate its position.
An Indian Folktale

The Boy and the Drum

1 There was once a poor woman with only one son. One day, she asked her son if there was anything he wanted. The boy said he wanted a drum. The mother left for the market, feeling very sad, because she did not have enough money to buy a drum.

5 On the way home, she found a piece of wood and gave it to her son to play with. Later that day, the boy went outside to play. Along the road, he saw an old woman crying. The old woman was trying to start a fire to cook some food, but she didn't have any wood. Hearing this, the boy gave her his piece of wood. The old woman gave him a piece of the bread she had made.

10 Then, further down the road, the boy met a pot maker's wife and her crying child. The boy asked her what was wrong. The woman said she had no food to give to her hungry child. The boy gave the woman the piece of bread, and she gave him a pot. The boy walked on.

Before long, he saw a husband and wife arguing. He asked them why they were arguing. They said, "We have broken our pot and have nothing to clean our clothes in." The boy gave his pot to them, and they gave the boy a new coat.

Next, the boy saw a man who had no shirt. The man said he had been robbed on his way home. The robbers had taken his money, and his shirt. The boy gave the man his new coat. The man was so happy, he gave the boy his horse.

20 Finally, on his way home, the boy met a huge group of people going to a wedding. There were musicians, the bridegroom, and his family. Everyone looked sad. The bridegroom's father said, "We are waiting for a horse. If it doesn't come soon, we will be late for the wedding." The boy gave them his new horse. The group asked the boy what they could give him, and he replied, "A drum." So, the musicians gave him their drum. The boy ran home to tell his mother how he had at last gotten the drum he had wanted.

1 If two people **argue**, they speak angrily to each other about something they disagree about.

2 A **bridegroom** is a man who is getting married.
Reading Comprehension

Match the words from the three columns below to complete the sentences.

_The boy met . . . _ He/She/They needed . . . _ He/She/They gave the boy . . ._

1. the sad old woman
   ____________________________________________

2. the pot maker’s wife
   ____________________________________________

3. the arguing couple
   ____________________________________________

4. the man who had been robbed
   ____________________________________________

5. the bridegroom
   ____________________________________________

Vocabulary Extension

_Vocabulary: Expressing time._ A number of words and phrases are used to show
the order of events in a story. Complete the sentences with the correct words from the
box. Then circle the words and phrases in the folktale that are used to discuss time or
describe the sequence of events.

   _before long_ _later_ _finally_ _one day_ _next_

1. ________________________, I’m going to be a rock star. I’ll be rich and famous then.

2. Pam went to school in the morning. ________________________, that day, she met some
   friends for tea.

3. First you must mix the milk, eggs, and butter. ________________________, you put in the
   flour.

4. When school ended, he ran out to meet his sister. ________________________, they
   were on their way home.

5. Tony worked hard on his project for days. ________________________, it was finished.
1 Exploring The Congo

**Narrator:** It’s September in the Congo, just north of the Equator. An international team of scientists is exploring an extraordinary place. The team members are walking more than 1,900 kilometers across an enormous forest. They want to record all the animals and plants they discover here. This is the lead explorer, Dr. Michael Fay. He is here to do what he calls a Megtransect.

**Michael Fay, Wildlife Conservation Society:** What I’m trying to do in a desperate way is to show the world that we’re just about to lose the last little gem in the African continent, and if we don’t do something now, if we don’t do it today, we can forget about it.

**Narrator:** The Congo Basin contains about one-quarter of the world’s rain forests, and about half of all of Africa’s plant and animals species. People hardly ever come so deep into the forest. There are many species which are unique to this area. Dr. Fay has spent eight months in the forest studying them. At last, the track they are following leads them out of the forests of Gabon. They climb onto mountains that rise high above the trees. This might be the scientists’ last chance to explore this amazing land.

**Michael Fay:** We can see a long way here, you know, 70 or 80 kilometers in every direction, we can see 360 degrees around. There are no humans. There’s not a single village, there’s not a single road. It’s an amazing place.

**Narrator:** Now, the team has to cross the Kongou Chutes, a big, fast river.

**Michael Fay:** Okay, wow!

**Narrator:** It is this river and waterfall that keep this land alive. But if nothing is done to protect the forests, they might all be cut down. Here, the river is only a few hundred meters wide. But the water is still very strong and fast. The team moves slowly and carefully. Over a year after they started, the team walks out of the forest.

**Michael Fay:** We’d been walking in the woods in our own little world for fifteen months and now it was over.

**Narrator:** The Megtransect is over, but the impact of the team’s discoveries on helping to save the forest has just begun.
Smokejumper School

Narrator: This is the smokejumper school in Montana, U.S.A. Here, people learn how to be smokejumpers, special firefighters trained to fight wildfires. On average, there are about 100,000 wildfires in the U.S. every year. And in the summer heat, these fires can become very big. Every year, more people want to be smokejumpers. Most of the students are already firefighters.

Smokejumper: I don’t know, I mean, it’s the upper level of firefighting, it’s the crème de la crème, it’s the, you know, those are the cool guys, the smokejumpers.

Narrator: Smokejumpers don’t just learn to fight fires. To reach the fires, they have to be able to jump from airplanes flying far above the forest. It is especially difficult to land safely in the forests if strong winds are blowing.

Every day, for about a month, the students run and jump to get ready for the real fires.

All of the firefighters know how dangerous the job is. This memorial is for the many brave firefighters who have died fighting wildfires.

Jumping from a plane is scary. But the firefighters know they’re doing important work.

Fighting forest fires is important for nature and for people. Small forest fires can be good. They burn away dead plants and help new plants grow. They make the forest a better place for animals to live. But if a forest fire is too big, it can become dangerous for people who live nearby. It is a smokejumper’s job to stop that from happening.

When a wildfire happens deep in the forests, smokejumpers are the only people that can get to it. Each smokejumper team must learn to work as a team, as well as with other teams. In the middle of a wildfire, each person has to know exactly what to do.

Smokejumper: The smokejumpers at any given time on the airplane, you have to be able to jump a 4, 6, 8, 10 person fire, and pull together as a team even though you’re from different bases in different parts of the country.

Narrator: It is a smokejumper’s job to stop these fires from burning out of control, and keep the land and its people safe. The smokejumpers are people who want to be part of something special. They know how difficult and dangerous it is, but they want to be here to help the forest and to save lives.
**Narrator:** The Earth’s surface is made out of rocks. These rocks are made out of different minerals. Each mineral is made of only one substance.

Minerals usually come in the form of crystals. Crystals like quartz, olivine, and diamond. Crystals usually form when rocks melt at high temperatures and gradually cool down.

Salt crystals, for example, are made from chlorine and sodium atoms. These atoms make a very small cube. It’s called a unit cell. When many unit cells come together, as though making a bigger cube, they make a crystal. This process is called crystallization.

Crystals come in all kinds of different shapes and colors. And they have many uses. Some crystals, like diamonds, rubies, and topaz, are hard to find, and beautiful to look at. People wear them as jewelry. Some people believe that crystals have the ability to change our feelings and provide protection from bad energy. People use other crystals as parts of modern machines. They make certain types of technology, like solar cells, work.

There are about 3,500 different minerals in the world. Each of them comes in the form of a crystal. At first, they all look different. However, minerals belong to different families. A crystal’s family depends on the shape of the mineral’s crystals. To tell them apart, we have to look at the shape of each crystal’s unit cell.

These unit cell patterns are called crystal systems. So far, scientists have only found evidence of seven unique crystal systems. In perfect conditions, the crystal follows one of these patterns exactly. But in the real world, crystals all have a unique look.
4 Monarch Migration

**Narrator:** Every year, 300 million monarch butterflies somehow travel more than 3,000 kilometers from northern America to forests west of Mexico City. When they gather here, they completely cover some of the trees. It's one of the most extraordinary sights in nature.

The monarchs are beautiful. But to survive the long trip, they have to face many challenges. Then, even after they arrive safely at the El Rosario butterfly sanctuary, they aren't always safe. In 2002, a rainstorm hit the forest. The temperature dropped. It was too cold for the butterflies, and many died. Their bodies fell everywhere across the forest floor.

This is Mike Quinn, a biologist with Monarch Watch. He thinks that in addition to the cold weather, the loss of trees in the area has made the problem worse.

Quinn says people have been cutting down trees around the forests where the butterflies stay. And that lets the cold air come into the forest. When there are enough trees around the sanctuary, the forest protects the butterflies. In the past thirty years, almost 50 percent of the trees in the area have been cut down.

The Mexican government and the World Wildlife Fund are trying to save the monarchs. They are encouraging people NOT to cut down trees. In fact, they are paying the people who own the land money to protect the trees. But the money isn’t enough. So the monarchs are still in danger. The 2002 storm wasn’t the first big storm in the area. And it won’t be the last.

But for now, millions of monarchs will still fly to Mexico each year.
5
The Senses


In our daily lives, these five senses work together, and so do the different parts of our bodies, or organs, that control the senses.

Sight
Sight is our most highly developed sense. It lets us learn different shapes, types of movement, distances, and colors. The eye is the main organ of sight. An opening in the front of the eye, the pupil, lets light through to the retina, which senses light. Millions of cells in the retina turn the light into nerve signals. These nerve signals then travel to the brain. When this process has a problem, people can become short-sighted, or even blind.

Hearing
The ear has three different parts which work together so we can hear. The outer ear, its opening, picks up sound waves. When these sound waves reach the middle ear, they touch the eardrum, and make the eardrum vibrate. When the eardrum vibrates, sound reaches tiny hairs in the cochlea, the inner ear. These tiny hairs then move. This creates nerve signals that the brain understands as sound.

Smell
Humans can smell over 10,000 different smells. We do this with millions of smell sensors inside the nose. When smells come into the nose, the sensors pick up the information and then the nervous system takes the message to the brain. All this happens in under a second. The brain translates it, so we can understand what the smell is. Some of the “smelling” areas in the brain are the same areas that help us remember things.
Taste
The tongue is the main organ of taste. This is because tiny bumps called taste buds cover the tongue. These taste buds contain many taste receptors. When we lick something, or pop a morsel of food into our mouths, the receptors send a message to the brain that tell us exactly what we are eating, and if it’s tasty. However, we can only taste four different tastes: sweet, salty, sour, and bitter.

Touch
Our skin protects us from things outside our body. It also lets us feel touch. We have more than four million touch receptors. These receptors help us feel things like a poke on an arm, or a friend’s embrace. Other receptors feel temperature or pain. As with all our senses, the information is taken to the brain which makes decisions and tells the body to ignore the information or to take action.

The skin. The ears. The nose. The eyes. And the tongue. With the help of the brain, it is these body parts that help human beings keep safe and fully experience the world around us.
The Renaissance

Narrator: Florence, Italy. The birthplace of an incredible period of history we call the Renaissance. In fact, everywhere you look in Italy, you can find reminders of the Renaissance and its impact on the modern world.

By the late 1300s, Italy was enjoying a time of health and wealth. Nobody really worried about war and survival. They began to be interested in the future and paid more attention to the arts. By 1434, powerful families, like the Medici family, ruled Italian cities.

Italy grew in wealth and fame, and soon became the center of art, literature, and culture in Europe.

In the past, the work of great scholars and artists mainly dealt with ideas about God. But during the Renaissance, many people became interested in the art of the ancient Greeks and Romans. A new, original, way of thinking was born, focused on humans themselves.

In this time, Italian artists created extraordinary art that showed the beauty of man and nature, and the challenges of the human experience. One of these artists, Michelangelo, completed the lovely statue of David, and covered the Vatican’s Sistine chapel with amazing stories and designs.

Then there was Leonardo da Vinci—artist, scientist, and inventor. To make his art feel more real, Leonardo studied the human body carefully. The faces he drew were both life-like and mysterious.

By the 1500s, Italy had become a model for the rest of Europe and other countries became interested in building knowledge as well. For example, all over Europe, people wanted to know more about the world. So, they looked at science and reason for answers.

For example, the Polish astronomer Nicolaus Copernicus was the first to say that the Earth goes around the sun. Galileo Galilei, who invented the thermometer, was the first to use a telescope to look up at the skies, and saw that Copernicus’s ideas were right.

It is great minds like Copernicus and Galileo that began the scientific revolution and a thirst for knowledge that has continued until our modern times.
Mardi Gras

Narrator: Every year, New Orleans, Louisiana, is the site of a world-famous party called Mardi Gras.

The history of Mardi Gras actually began a long time ago, in ancient Rome. As Christianity grew in Europe, some ancient festivals were changed into Church holidays, and the original Roman festival of Spring became Carnival.

Carnival’s a chance for people to have fun, before Lent begins. During Lent, many Catholics avoid eating rich foods like fat, butter, and meat. In 1718, French people came to live in New Orleans. They brought these traditions with them. Today, every year, the people of New Orleans gather in the streets to play instruments and celebrate Mardi Gras.

In French, the name Mardi Gras means Fat Tuesday. It comes from the tradition of using all the butter and other fats in the kitchen before Lent begins the next day. Across Europe, Mardi Gras celebrations were usually costume parties, where people wore masks and danced.

But New Orleans soon started its own traditions. In 1857, a secret club, called the Mystick Krewe of Comus, held a parade with floats. Soon, other groups added their own floats and the modern Mardi Gras was born.

Today, the New Orleans’ Mardi Gras celebration is the biggest in the U.S. Then, you can see the traditional colors of Mardi Gras everywhere. There’s purple, green, and gold. Each color has a different meaning.

You can also see these colors on the tops of king cakes. A long time ago, bakers baked a little coin or bean inside these tasty cakes. In New Orleans, bakers continue the tradition. They hide a small toy baby in each cake. Whoever gets the baby in their piece of cake, has to buy the next king cake.

Although there are many people still in the streets on Mardi Gras, the celebration actually ends at midnight. And the people of New Orleans have to put away their colorful costumes until Carnival season comes again next year.
**Bluefin Rescue**

**Narrator:** This is Japanese scientist Shukei Masuma, a leader in tuna research. He is worried because too many tuna fish are being killed.

Today, bluefin tuna have become rare. Some people spend hundreds of thousands of dollars for one fish. And on average, the fish they can get are getting smaller. This means that bluefin tuna are being killed before they're old enough to have babies.

To help solve this problem, Masuma has been breeding bluefin tuna on his fish farm. Masuma says he is trying hard to learn about the tuna, and how to help them.

Every evening, Masuma waits at the edge of the breeding pool to see if there are any new tuna eggs. If there are new eggs, Masuma must carefully catch them and move them to small tanks in the main house, where they will be safe and he can take care of them. Here he can watch the tuna grow up, and learn more about them.

Masuma is afraid that if people don't do something, the groups of tuna in the region may soon be destroyed. His goal is to keep these tiny tuna alive until they are big enough to be returned to the sea.

It's a difficult job. Many of the baby tuna in Masuma's farm don't survive to become adults.

But after spending years trying, Masuma has found the right combination of food and temperature to keep the baby tuna alive in large numbers.

Today, Masuma has a visitor. Talented oceanographer, Dr. Sylvia Earle, studies ocean wildlife. She is worried about improving the tuna's chances of survival, and wants them to be safe in their natural environment. Dr. Earle is very impressed with Masuma's work. She can see that the baby tuna at his farm are healthy. Masuma is the first scientist who is able to grow baby bluefin tuna in a farm. Masuma's work is very inspiring.

Someday these tuna might swim in the wild, and from them may come a completely new population of bluefins. But first they must survive a variety of dangers, especially human predators.

Scientists say the Atlantic bluefin tuna population is now only about 20 percent of what it was in the 1970s. In the Mediterranean, the species is in great danger as well. And in the Pacific, scientists have been reporting that the bluefin has almost disappeared. But there is hope. Scientists' advice is that we must have stricter rules on the size and number of fish humans can catch each year.