

TEDTALKS

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WORLD ENGLISH 3

مرجع زبان ایرانیان

SECOND EDITION

WORLD ENGLISH3

SECOND EDITION

Real People • Real Places • Real Language

Kristin L. Johannsen and Rebecca Tarver Chase, Authors

Rob Jenkins, Series Editor



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Renata Cardoso, Universidade de Brasília, Brasília
 Gladys De Sousa, Universidade Federal de Minas Gerais,
 Belo Horizonte
 Marilena Fernandes, Associação Alumni, São Paulo
 Mary Ruth Popov, Ingles Express, Ltda., Belo Horizonte
 Ana Rosa, Speed, Vila Velha
 Danny Sheps, English4u2, Natal
 Renata Zainotte, Go Up Idiomas, Rio de Janeiro

Colombia

Eida Caicedo, Universidad de San Buenaventura Cali, Cali
 Andres Felipe Echeverri Patiño, Corporación Universitaria Lasallista,
 Envigado
 Luz Libia Rey, Centro Colombo Americano, Bogota

Dominican Republic

Aida Rosales, Instituto Cultural Dominicano-Americano,
 Santo Domingo

Ecuador

Elizabeth Ortiz, COPEI-Copel English Institute, Guayaquil

Mexico

Ramon Aguilar, LEC Languages and Education Consulting,
 Hermosillo
 Claudia Garcia-Moreno Ávila, Universidad Autónoma del Estado
 de México, Toluca
 Ana Maria Benton, Universidad Anahuac Mexico Norte, Huixquilucan
 Martha Del Angel, Tecnológico de Monterrey, Monterrey
 Sachenka Garcia B., Universidad Kino, Hermosillo
 Cinthia I. Navarrete Garcia, Universidad Autónoma del Estado
 de México, Toluca
 Alonso Gaxiola, Universidad Autonoma de Sinaloa, Guasave
 Raquel Hernandez, Tecnológico de Monterrey, Monterrey
 Beatriz Cuenca Hernández, Universidad Autónoma del Estado
 de México, Toluca
 Luz Maria Lara Hernández, Universidad Autónoma del Estado
 de México, Toluca
 Esthela Ramirez Hernández, Universidad Autónoma del Estado
 de México, Toluca
 Ma Guadalupe Peña Huerta, Universidad Autónoma del Estado
 de México, Toluca
 Elsa Iruegas, Prepa Tec Campus Cumbres, Monterrey
 Maria del Carmen Turrul Maya, Universidad Autónoma del Estado
 de México, Toluca
 Lima Melani Ayala Olivera, Universidad Autónoma del Estado de
 México, Toluca
 Suraya Ordorica Reyes, Universidad Autónoma del Estado de México,
 Toluca
 Leonor Rosales, Tecnológico de Monterrey, Monterrey
 Leticia Adelina Ruiz Guerrero, ITESO, Jesuit University, Tlaquepaque

United States

Nancy Alaks, College of DuPage, Glen Ellyn, IL
 Annette Barker, College of DuPage, Aurora, IL
 Joyce Gatto, College of Lake County, Grayslake, IL
 Donna Glade-Tau, Harper College, Palatine, IL
 Mary "Katie" Hu, Lone Star College – North Harris, Houston, TX
 Christy Naghitorabi, University of South Florida, St. Petersburg, FL

ASIA

Beri Ali, Cleverlearn (American Academy), Ho Chi Minh City
 Ronald Anderson, Chonnam National University, Yeosu Campus,
 Jeollanam
 Michael Brown, Canadian Secondary Wenzhou No. 22
 School, Wenzhou
 Leyi Cao, Macau University of Science and Technology, Macau
 Maneerat Chuaychoowong, Mae Fah Luang University,
 Chiang Rai
 Sooah Chung, Hwarang Elementary School, Seoul
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 Jeollanam
 Edward Tze-Lu Ho, Chihlee Institute of Technology,
 New Taipei City
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 Chaiyathip Katsura, Mae Fah Luang University, Chiang Rai
 Byoung-Kyo Lee, Yonsei University, Seoul
 Han Li, Aceleader International Language Center, Beijing
 Michael McGuire, Kansai Gaidai University, Osaka
 Yu Jin Ng, Universiti Tenaga Nasional, Kajang, Selangor
 Somaly Pan, Royal University of Phnom Penh,
 Phnom Penh
 HyunSuk Park, Halla University, Wonju
 Bunroeun Pich, Build Bright University, Phnom Penh
 Renee Sawazaki, Surugadai University, Annaka-shi
 Adam Schofield, Cleverlearn (American Academy),
 Ho Chi Minh City
 Pawadee Srisang, Burapha University, Chanthaburi Campus,
 Ta-Mai District
 Douglas Sweetlove, Kinjo Gakuin University, Nagoya
 Tari Lee Sykes, National Taiwan University of Science and
 Technology, Taipei
 Monika Szirmai, Hiroshima International University,
 Hiroshima
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 Chris Wilson, Okinawa University, Naha City, Okinawa
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 Macau
 Juan Xu, Macau University of Science and Technology,
 Macau
 Florence Yap, Chang Gung University, Taoyuan
 Sukanda Yatprom, Mae Fah Luang University, Chiang Rai
 Echo Yu, Macau University of Science and Technology, Macau

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WORLD ENGLISH Philosophy Statement by Rob Jenkins

BACKGROUND – LEARNING AND INSTRUCTION

Learning has been described as acquiring knowledge. Obtaining knowledge does not guarantee understanding, however. A math student, for example, could replicate any number of algebraic formulas, but never come to an *understanding* of how they could be used or for what purpose he or she has learned them. If understanding is defined as the ability to use knowledge, then learning could be defined differently and more accurately. The ability of the student to use knowledge instead of merely receiving information therefore becomes the goal and the standard by which learning is assessed.

This revelation has led to classrooms that are no longer teacher-centric or lecture driven. Instead, students are asked to think, ponder, and make decisions based on the information received or, even more productive, students are asked to construct learning or discover information in personal pursuits, or with help from an instructor, with partners, or in groups. The practice they get from such approaches stimulates learning with a purpose. The purpose becomes a tangible goal or objective that provides opportunities for students to transfer skills and experiences to future learning.

In the context of language development, this approach becomes essential to real learning and understanding. Learning a language is a skill that is developed only after significant practice. Students can learn the mechanics of a language but when confronted with real-world situations, they are not capable of communication. Therefore, it might be better to shift the discussion from “Language Learning” to “Communication Building.” Communication should not be limited to only the productive skills. Reading and listening serve important avenues for communication as well.

FOUR PRINCIPLES TO DEVELOPING LEARNING ENVIRONMENTS

Mission: The goal or mission of a language course might adequately be stated as the pursuit of providing sufficient information and practice to allow students to communicate accurately and effectively to a reasonable extent given the level, student experiences, and time on task provided. This goal can be reflected in potential student learning outcomes identified by what students will be able to do through performance indicators.

World English provides a clear chart within the table of contents to show the expected outcomes of the course. The books are designed to capture student imagination and allow students ample opportunities to communicate. A study of the table of contents identifies the process of communication building that will go on during the course.

Context: It is important to identify what vehicle will be used to provide instruction. If students are to learn through practice, language cannot be introduced as isolated verb forms, nouns, and modifiers. It must have context. To reach the learners and to provide opportunities to communicate, the context must be interesting and relevant to learners' lives and expectations. In other words, there must be a purpose and students must have a clear understanding of what that purpose is.

World English provides a meaningful context that allows students to connect with the world. Research has demonstrated pictures and illustrations are best suited for creating interest and motivation within learners. National Geographic has a long history of providing magnificent learning environments through pictures, illustrations, true accounts, and video. The pictures, stories, and video capture the learners' imagination and “hook” them to learning in such a way that students have significant reasons to communicate promoting interaction and critical thinking. The context will also present students with a desire to know more, leading to life-long learning.

Objectives (Goals)

With the understanding that a purpose for communicating is essential, identifying precisely what the purpose is in each instance becomes crucial even before specifics of instruction have been defined. This is often called “backward design.” Backward design means, in the context of classroom lesson planning, that first desired outcomes, goals, or objectives are defined and then lessons are mapped out with the end in mind, the end being what students will be able to do after sufficient instruction and practice. Having well-crafted objectives or goals provides the standard by which learners’ performance can be assessed or self-assessed.

World English lessons are designed on two-page spreads so students can easily see what is expected and what the context is. The goal that directly relates to the final application activity is identified at the beginning. Students, as well as instructors, can easily evaluate their performance as they attempt the final activity. Students can also readily see what tools they will practice to prepare them for the application activity. The application activity is a task where students can demonstrate their ability to perform what the lesson goal requires. This information provides direction and purpose for the learner. Students, who know what is expected, where they are going, and how they will get there, are more apt to reach success. Each success builds confidence and additional communication skills.

Tools and Skills

Once the lesson objective has been identified and a context established, the lesson developer must choose the tools the learner will need to successfully perform the task or objective. The developer can choose among various areas in communication building including vocabulary, grammar and pronunciation. The developer must also choose skills and strategies including reading, writing, listening, and speaking. The receptive skills of reading and listening are essential components to communication. All of these tools and skills must be placed in a balanced way into a context providing practice that can be transferred to their final application or learner demonstration which ultimately becomes evidence of communication building.

World English units are divided into “lessons” that each consists of a two-page spread. Each spread focuses on different skills and strategies and is labeled by a letter (A-E). The units contain the following lesson sequence:

- A: Vocabulary
- B: Listening and Pronunciation
- C: Language Expansion
- D: Reading/Writing
- E: Video Journal

Additional grammar and vocabulary are introduced as tools throughout to provide practice for the final application activity. Each activity in a page spread has the purpose of developing adequate skills to perform the final application task.

LAST WORD

The philosophy of *World English* is to provide motivating context to connect students to the world through which they build communication skills. These skills are developed, practiced, and assessed from lesson to lesson through initially identifying the objective and giving learners the tools they need to complete a final application task. The concept of performance is highlighted over merely learning new information and performance comes from communicating about meaningful and useful context. An accumulation of small communication skills leads to true and effective communication outside of the classroom in real-world environments.

Rob Jenkins, Series Editor

Unit Goals

Grammar

Vocabulary

UNIT 1
People and Places Page 2

- Discuss reasons for living where you do
- Explain why you plan stay or leave
- Describe a new place
- Describe the city where you live

Present perfect tense vs. present continuous tense

She has moved three times in her life.

It's been raining all day.

So + adjective + **that**

It's **so** dry here **that** water is brought in on trucks.

Migration
Climate

UNIT 2
The Mind Page 14

- Talk about learning strategies
- Talk about your senses
- Talk about your fears
- Describe an emotional experience

Gerunds as subjects and after prepositions

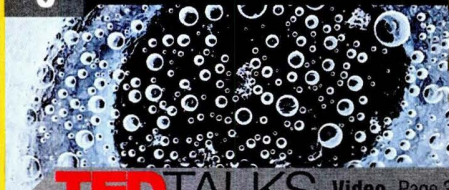
Learning English is important.

We talked about **studying** together.

May, might, and could for possibility

We **may** find dangerous animals in the jungle.

Thought processes
Scientific studies

UNIT 3
Changing Planet Page 26

- Suggest solutions to environmental problems
- Discuss causes and effects
- Talk about invasive species
- Discuss effects on the future

The passive—all tenses

Often, trees **are removed** to make room for farming.

The past perfect

By the time sea level **had risen** ten feet...

Environmental changes
Large numbers

TED TALKS Video Page 38 Paul Nicklen: Tales of Ice-bound Wonderlands

UNIT 4
Money vs. Wealth Page 42

- Describe your financial habits
- Discuss things that people value
- Talk about banking
- Talk about different types of wealth

Gerund vs. infinitive

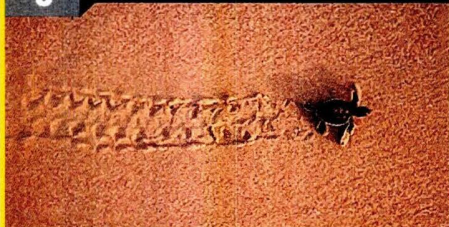
I try to make a budget. / **I enjoy finding** bargains.

Review of the passive voice

Coffee **is grown** in Brazil.

That movie **was made** by two teenagers.

Money transactions
Banking

UNIT 5
Survival Page 54

- Talk about emergency situations
- Evaluate survival methods
- Describe how animals survive
- Write a Brochure

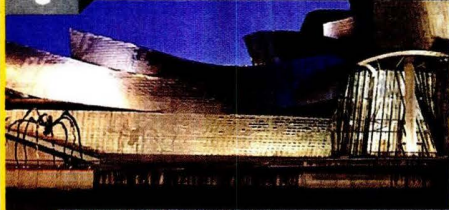
Unreal conditional in the present

If they **weren't** inside the shelter, they **would** quickly **die**.

Wish in the present

I wish I had **brought** a good book to read in the shelter.

Survival skills
Environmental conservation

UNIT 6
Art Page 66

- Report what another person said
- Express your opinions about a piece of art
- Describe your favorite artists and their art
- Talk about public art

Reported speech

She said she was tired and her head hurt.

Subject adjective clauses

An artist **who works with clay** has strong hands.

Art
Art materials

TED TALKS Video Page 78 Amit Sood: Building a Museum of Museums on the Web

Listening**Speaking and
Pronunciation****Reading****Writing****Video Journal**

Focused listening
Interviews about why
people live where
they do

Discussing reasons for
staying or moving
Contractions with *have*
and *be*

National Geographic:
"Pioneers of the Pacific"

Writing a paragraph
about a city

National Geographic:
"San Francisco's Mission
District"

Listening for general
understanding and specific
information
A radio program about
the unusual condition
of synesthesia

Talking about sensations
Th sounds

National Geographic:
"In Your Face"

Writing about a
personal experience

National Geographic:
"Memory Man"

General and focused
listening
Climate change

Discussing cause and
effect
Linking words together

TED TALKS
"Salvation (and Profit)
in Greentech"

Writing a news article

National Geographic:
"The Netherlands: Rising
Water"

General and focused
listening
Radio program:
The history of money

Giving suggestions for how
to have fun for free
Reduction of *to*

TED TALKS
"Music is Medicine, Music
is Sanity"

Writing a paragraph
about valued things

National Geographic:
"Making a Deal"

Listening for general
understanding
A radio program
interviewing survivors

Simulation:
working with a team in a
survival situation
Reduced sounds:
d'ya and *didja*

National Geographic:
"Survival School"

Writing an advertising
brochure

National Geographic:
"Andean Weavers"

Listening for general
understanding
Conversations in a museum

Discussing personal
selections
Thought groups

National Geographic:
"Saving a City's
Public Art"

Writing a detailed
description

National Geographic:
"Faces of India"

		Unit Goals	Grammar	Vocabulary
UNIT 7	Getting Around Page 82 	<ul style="list-style-type: none"> • Talk about new developments • Discuss choices in transportation • Use English to get around • Make recommendations for improving transportation 	Passive voice with the present continuous and present perfect tenses <i>The new plane is being tested now. /Computers have been used for more than 50 years.</i> Indirect questions <i>Do you know if the bus stops here?</i>	Modern transportation Public transportation
UNIT 8	Competition Page 94 	<ul style="list-style-type: none"> • Talk about sports • Explain which sport is best for you • Talk about positive and negative aspects of competition • Discuss competitive advantages 	Negative questions <i>Don't you want to go downtown with us?</i> Adjective clauses with object pronouns <i>The medal that he won was made of gold.</i>	Sportsmanship Sports
UNIT 9	Danger Page 106 	<ul style="list-style-type: none"> • Discuss ways to stay safe • Talk about dangerous work • Discuss personal emergencies • Discuss dangerous situations 	Tag questions <i>Those spiders are poisonous, aren't they?</i> Adverbial clauses of time <i>I finished my project before I went home.</i>	Dangerous things Expressions for emergencies
TED TALKS Video Page 118 Mark Bezos: A Life Lesson from a Volunteer Firefighter				
UNIT 10	Mysteries Page 122 	<ul style="list-style-type: none"> • Speculate about mysteries • Discuss types of mysteries • Talk about plans you used to have • Explain a mysterious image 	Modals for speculating about the past <i>He might have seen a large fish instead of a sea monster.</i> The future in the past <i>The two sisters were going to have a picnic by the lake.</i>	Ancient mysteries Reactions to surprise
UNIT 11	Learning Page 134 	<ul style="list-style-type: none"> • Talk about educational choices • Discuss your learning style • Talk about choosing a university major • Propose a new approach to teaching 	Should have, Would have, Could have <i>I should have applied for a scholarship.</i> Noun clauses <i>I don't know when the deadline is.</i>	Education University majors
UNIT 12	Space Page 146 	<ul style="list-style-type: none"> • Talk about the future • Talk about life in space • Speculate about the future • Summarize a sequence of events 	Talking about the future <i>Space exploration will/is going to be even more international in the future.</i> Modals and modal-like phrases to talk about the future <i>We'll be able to see it from here.</i>	Space exploration Future time expressions
TED TALKS Video Page 158 Bill Stone: I'm Going to the Moon. Who's with Me?				

Listening**Speaking and
Pronunciation****Reading****Writing****Video Journal**

Focused listening
A discussion:
Subway systems

Role-play:
solving an airport problem
Reduced *are*

National Geographic:
"The Rickshaws of Kolkata"

Writing a letter to the
editor of a newspaper

National Geographic:
"Big City Bicycle Messengers"

Listening for general
understanding and specific
information
Sports interviews

Matching sports to
personalities
Intonation to show surprise

National Geographic:
"In Sports, Red is the
Winning Color"

Writing a list of
competition tips

National Geographic:
"Women in The Rodeo"

Focused and general
listening
Radio program:
An unusual job

Role-play:
a newspaper interview
Intonation of tag questions

TEDTALKS
"Three Things I Learned
While My Plane Crashed"

Writing about
emergency preparations

National Geographic:
"Destroyers"

Listening for general
understanding
Interview of sea monster
expert

Discussing different types
of mysteries
Intonation: Finished and
unfinished ideas

National Geographic:
"Hands Across Time"

Writing a comparison

National Geographic:
"Crop Circles"

Listening for general
understanding
Learning experiences

Discussing quiz results
Past modals

TEDTALKS
"Five Dangerous Things
(You Should Let Your
Children Do)"

Writing about new
approaches to teaching

National Geographic:
"Butler School"

General and focused
listening
Interview of an astronaut

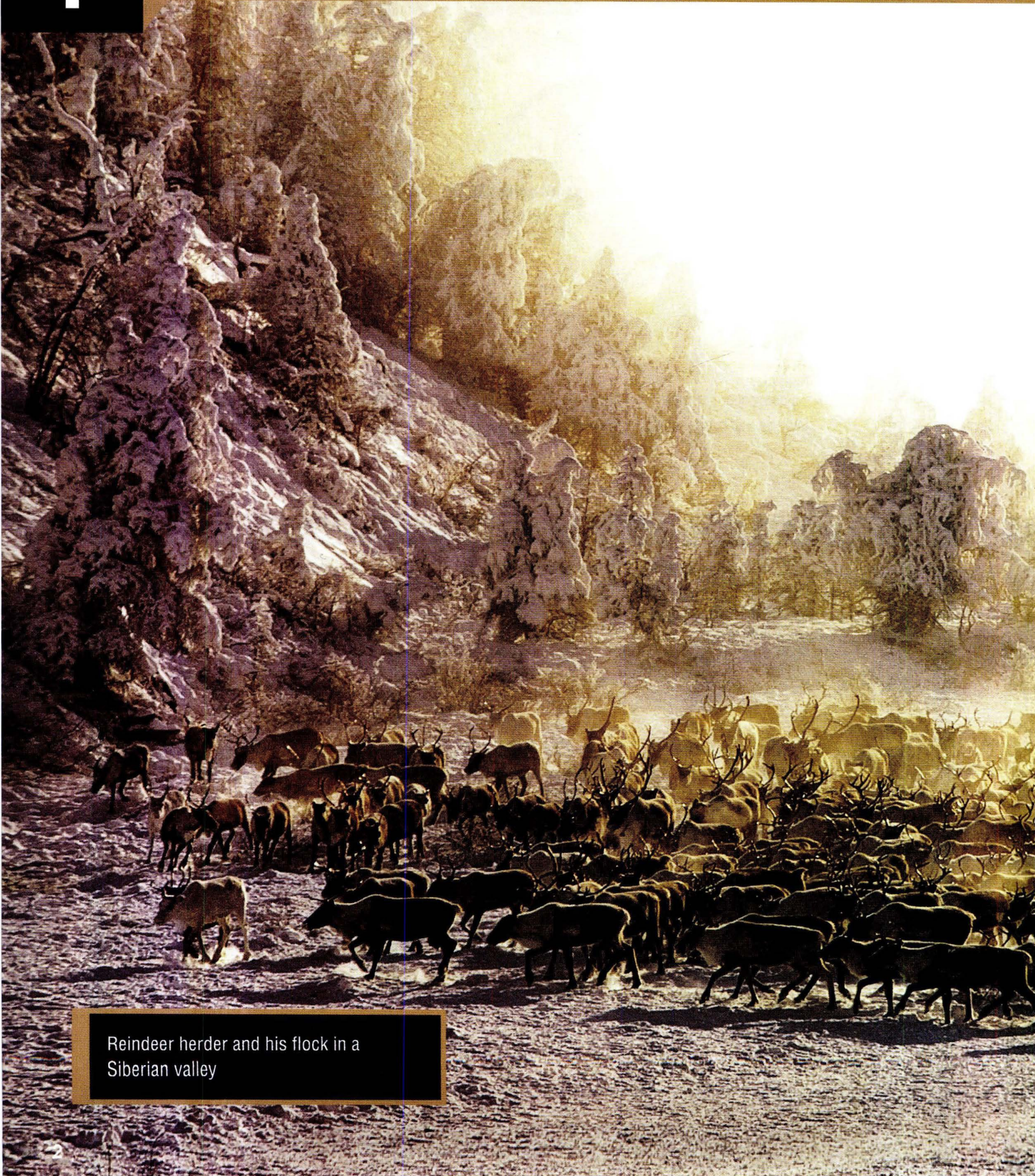
Role-play:
Choosing a space
experiment
Stress in compound nouns

National Geographic:
"The Hubble Space
Telescope"

Writing about space
exploration

National Geographic:
"Daring Mighty Things:
Curiosity Lands on Mars"

People and Places

A large herd of reindeer is gathered in a snowy, mountainous valley. The reindeer are dark-colored with prominent antlers. The background features steep, snow-covered mountains and dense evergreen forests. The scene is illuminated by a bright, warm light, possibly from the sun low on the horizon, creating a golden glow. The ground is covered in a thick layer of snow, and the overall atmosphere is serene and cold.

Reindeer herder and his flock in a Siberian valley

Look at the photo,
answer the questions:

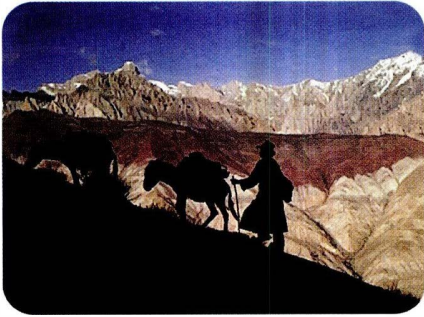
1 What do you see in the
picture?

2 Why do you think people
live in this place?

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UNIT 1 GOALS

1. Discuss reasons for living where you do
2. Explain why you plan to stay or leave
3. Describe a new place
4. Describe the city where you live



▲ Woman walking with cargo in the Andes, Peru

Word Focus

We often use *for* and *since* with the present perfect to talk about how long a situation has lasted.

Vocabulary

A Read the text and notice the words in blue.

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Why do people move to new places? Long ago, **ancient** people wanted to **inhabit** places with plenty of food and other resources. These people got food in the same ways we do now: farming, **hunting** or **herding** animals, or **fishing** if they **lived** near water.

Because of competition for food, overcrowding was one reason early people moved. They sometimes walked very long distances or rode on animals, or they would **sail** across the ocean.

Nowadays, modern people may move in search of **employment** or a better climate. The **migration** of large groups of people may **occur** because of economic problems or a lack of food or water. **Political** problems can also cause people to migrate.

B Write the words in **blue** next to their meanings in your notebook.

- | | |
|-------------------------------------|----------------------------|
| 1. to live in a place | 6. a job; work |
| 2. travel in a boat | 7. very old |
| 3. catching fish | 8. caring for animals |
| 4. moving from one place to another | 9. to happen |
| 5. killing animals for food | 10. relating to government |

Grammar: Present perfect vs. present perfect continuous tense

Form the present perfect with: Subject + <i>has/have</i> + (<i>not</i>) + past participle of a verb.	Sean has moved five times in his life, and he plans to move again next year.
Use the present perfect to talk about things that: <ol style="list-style-type: none"> 1. began in the past and continue until now. 2. have happened several times. 3. happened at an unspecified past time and are connected with the present. 	<ol style="list-style-type: none"> 1. Professor Brown has spoken Swahili since he was a child. 2. We've had three big earthquakes this year, and many people have left. 3. I've already eaten breakfast, so I'll just have some coffee, please.
Form the present perfect continuous with: Subject + <i>has/have</i> + <i>been</i> + present participle (<i>-ing</i> form) of a verb.	Laura has been staying with her cousins while her parents are in Europe.
Use the present perfect continuous to emphasize: <ol style="list-style-type: none"> 1. that things which began in the past are unfinished or temporary. 2. how long something has been in progress. 	<ol style="list-style-type: none"> 1. They've been trying to improve the city's transportation system, but it's still difficult to get around. 2. It's been raining all day.

A Complete the sentences. Use the present perfect or present perfect continuous.

1. Can we go to a different movie? I _____ (see) that one already.
2. My father _____ (work) on a fishing boat his whole life.
3. So far it _____ (snow) three times this week.
4. Our teacher _____ (live) in five countries, so she's not surprised by different beliefs and customs.
5. I can't find my dictionary, so I _____ (use) my friend's this week.
6. George _____ (try) to find a better job, but he hasn't found one.



▲ Harbor in Cape Town, South Africa

Conversation

A 2 Listen to the conversation. What does Sonia like about where she lives?

Jacob: Do you like living here?

Sonia: Sure. Don't you?

Jacob: I guess so, but I've been reading about a lot of interesting places, and I've been thinking about moving someplace else.

Sonia: Well, Cape Town is a pretty interesting place, too. People have lived here for a long time because it's a good place to live.

Jacob: Why do you say that?

Sonia: It's near the ocean, for one thing, so there's always fresh seafood.

Jacob: That's true.

Sonia: And the weather is usually nice. It's never very cold, and we don't get serious storms very often.

Jacob: OK, but is it really an interesting place?

Sonia: I think so. Hey, let's go to the historical museum. We can find out about some of the fascinating things that have happened here.

B Practice the conversation with a partner. Make new conversations about your home town, your country's capital city, or the city you're living in now.

C Make a chart like the one on the right in your notebook. Write at least three reasons for each section of the chart.

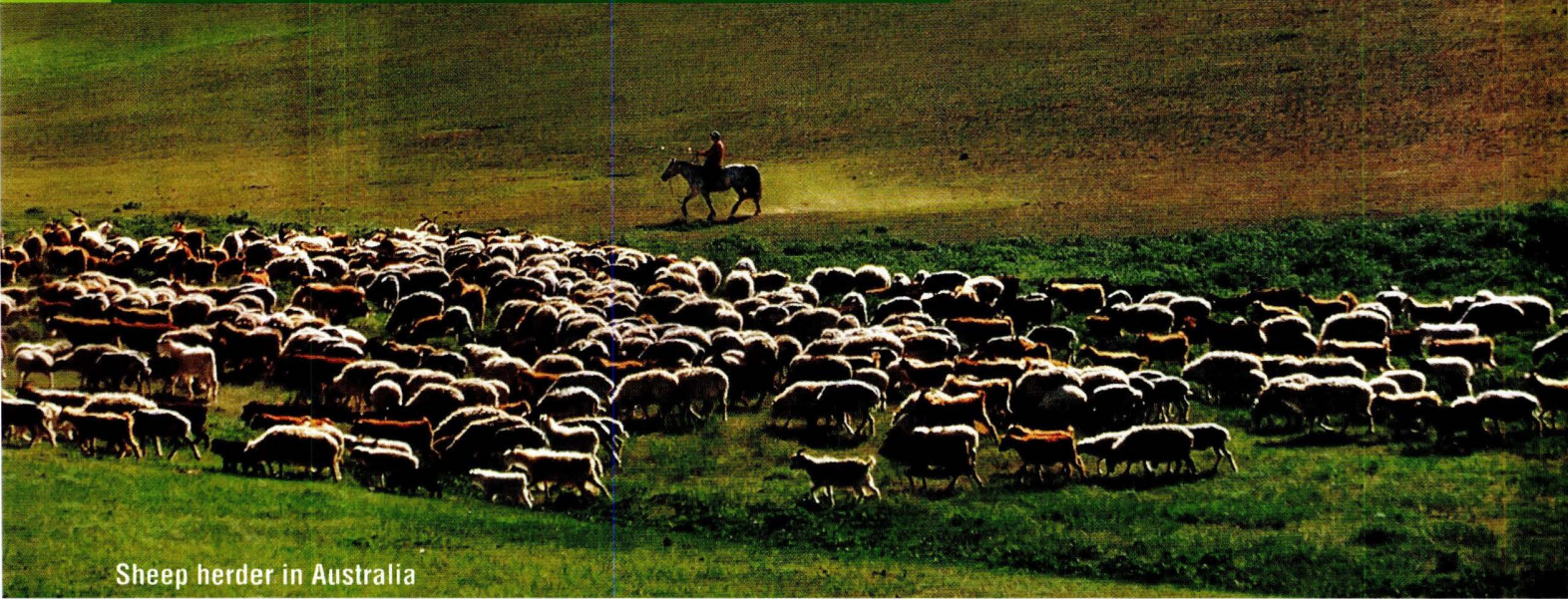
D **GOAL CHECK** Discuss reasons for living where you do

Tell a partner why you live where you live. Has your family lived there for a long time? What do you like and dislike about living there? Why?

Why people want to live
in a place

Why people want to
move away

B GOAL 2: Explain Why You Plan to Stay or Leave



Sheep herder in Australia

Listening

- A

Rank the reasons for living in a certain place (1 = most important), and add one more reason. Share your rankings with a partner.
- _____ the climate

_____ one's ancestors lived there

_____ having family members nearby

_____ environmental quality (clean air, water, etc.)

_____ employment opportunities

- B


3 Listen to people talk about where they live, and answer the questions.

	Where does the speaker live?	Why does the speaker live there?	Does the speaker plan to move?
Speaker #1			
Speaker #2			
Speaker #3			
Speaker #4			


- C

3 Listen again. Do the speakers mention any of the reasons from exercise A? Which ones?


Pronunciation: Contractions with *have* and *be*

A  **4** English speakers often use contractions with auxiliary verbs. Listen to the pronunciation of *have* and *has*. Listen again and repeat the sentences.

I have never been to Africa. I've never been to Africa.
Ron has gone there twice. Ron's gone there twice.

B  **5** Listen to the full and contracted forms of *be*. Listen again and repeat the sentences.

Tanya is moving to Singapore. Tanya's moving to Singapore.
We are paid twice a month. We're paid twice a month.

C  Work with a partner. Change the full forms of *have* and *be* to contractions, and then practice saying the sentences.

1. We have been living in Beijing for seven years.
2. Marsha is planning to visit us in December.
3. I am going to give her a call tonight.
4. They have never stayed in the same place for more than two years.
5. We are taking the train from Nairobi to Mombasa.
6. I have always wanted to go there.




▲ Park in Autumn, Sapporo, Japan


Real Language

To *give someone a call* means to call someone on the telephone.

Communication

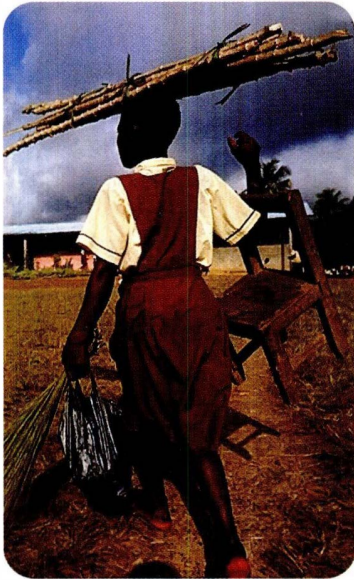
A  Interview your partner and take notes on his or her answers.

Why do you live where you live?	
How are your reasons different from your parents' or grandparents' reasons?	
What might make you want to move to a new place?	

B  Join another pair of students. Tell the group what you learned about your partner.

C  **GOAL CHECK**  Explain why you plan to stay or leave

In a small group, find out how many people plan to move someday. Ask those people to explain why they want to go to a new place. Ask the people who don't want to move to give their reasons for staying.



▲ A hot, dry day in Ghana, Africa

Language Expansion: Climate

A Match the adjectives with the places they describe. Use your dictionary to help you.

tropical
temperate
snowy
rainy
arid
frigid

places that receive very little rain
places that receive a large amount of rain
places with distinct seasons that are never extremely hot or cold
places that receive a large amount of snow
extremely cold places
hot, humid places near Earth's equator

B With a partner, fill in the blanks with places on Earth that fit the descriptions.

1. _____ has a tropical climate.
2. _____ has a temperate climate.
3. _____ has a snowy climate.
4. _____ has a rainy climate.
5. _____ has an arid climate.
6. _____ has a frigid climate.

Grammar: *So* + adjective + *that*

Use *so* + adjective + *that* to explain that:

(1) a condition is quite extreme and (2) that it has a result.

Condition	Result
He was so tired	that he fell asleep when his head touched the pillow.
The climate is so dry here	that water is brought in on trucks.

A Complete the conversation. Use *so* + adjective + *that*.

Mia: How was your trip to Ghana?

Daniel: Great! But Ghana has a tropical climate, so it's hot all the time.

Mia: Really? How hot was it when you were there?

Daniel: It was (1) _____ I didn't mind taking cold showers every day. It also rained a lot while I was there.

Mia: How rainy was it?

Daniel: It was (2) _____ I carried my umbrella everywhere I went. The people in Ghana were very friendly, though, so I didn't mind the weather.

Mia: That's good. How friendly were they?

Daniel: Many of them were (3) _____ they invited me to their homes for dinner right after they met me. I ate some wonderful home-cooked meals!

B Complete the sentences with any appropriate adjective.

1. Yesterday, I was very _____.
2. In January, my country is very _____.
3. Before an important test, most students are very _____.
4. The climate in Antarctica is very _____.
5. Someday, I will be very _____.

C Take turns. Say a sentence from exercise **B**. Then ask questions using *how* and answer them with *so* + adjective + *that*.

Conversation

A Listen to the telephone conversation. How has Ryan's life changed recently?

- Sandra:** How's it going, Ryan? Are you getting used to your new home?
Ryan: I'm all right. It's a very big city, though, so it takes forever to get anywhere.
Sandra: Really? What about the new subway system? Isn't it fast?
Ryan: The trains are fast, but they're so crowded that sometimes you have to wait for the next one. I can take buses, of course, but they make a lot of stops.
Sandra: I see what you mean.
Ryan: Fortunately, I love my new job, and it's right downtown.
Sandra: That's nice! You can walk around on your lunch hour.
Ryan: That's exactly what I've been doing! I've been looking for good restaurants.
Sandra: That's great! You know I like trying new restaurants.
Ryan: That's right. When you visit me, I'll know where to take you to eat.

B Practice the conversation with a partner. Switch roles and practice it again.

C Continue the conversation. Use your imagination to ask and answer questions about the topics in the box:

- the climate where Ryan lives now
- the people who live there
- Ryan's new job

D **GOAL CHECK** Describe a new place

Imagine that you've been living in a new place for a few weeks. Where are you? Tell a partner about your life in your new home.



▲ Walking through a penguin colony in Antarctica

Yesterday, I was very happy.

How happy were you?

I was so happy that I couldn't stop smiling.

Real Language

When you *get used to* something, it becomes normal for you.
You can say that something *takes forever* when it feels like a very long time.

Reading

A Find answers to these questions in the reading.

1. When did the Lapita migration occur?

2. Where did the Lapita voyages begin?

3. How far into the Pacific did the Lapita people travel? _____
- _____

4. What aspect of Lapita culture came from the Philippines? _____
- _____

5. In which direction do the trade winds usually blow? _____
- _____

6. How does El Niño affect the trade winds? _____
- _____

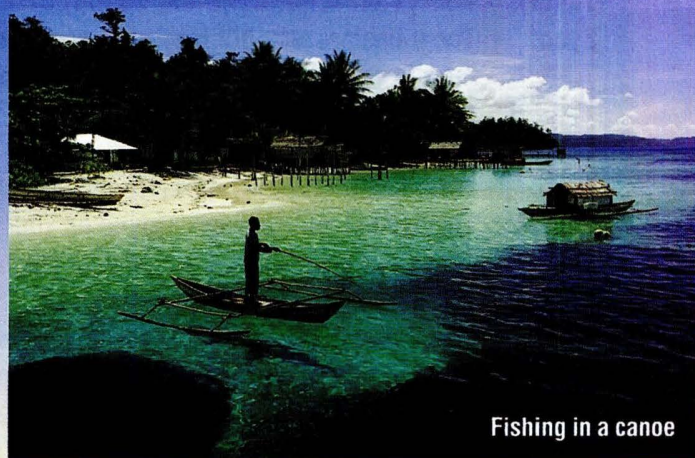
B After you read, talk to a partner about possible answers to these questions.

- Why do you think the Lapita left their homes and sailed to Pacific Islands?
- What might archaeologists find in a cemetery that would help them to understand an ancient culture?
- How might the Lapita have sailed so far and located so many islands without modern technology?

South Pacific

PIONEERS OF THE PACIFIC

No one is sure how they did it or even why they did it, but over 3,000 years ago people sailed into the enormous emptiness of the Pacific Ocean in simple canoes. Within a few centuries, these people—now known as the Lapita—had migrated from the volcanoes of Papua New Guinea to the island of Tonga, at least 2,000 miles to the east. They explored millions of square miles of the Pacific, and they discovered and then inhabited dozens of tropical islands never before seen by human eyes: Vanuatu, New Caledonia, Fiji, Samoa.



Fishing in a canoe



voyage a long journey on a ship **cemetery** a place where people are buried
sediment soil that has settled to the bottom

There is much we do not know about the Lapita. Although their voyages began in the northern islands of Papua New Guinea, their language came from Taiwan, and their style of pottery decoration probably had its roots in the northern Philippines. So who were the Lapita? Did they come from a single point in Asia or from several different places?

Now, archaeologists Matthew Spriggs and Stuart Bedford of the Australian National University are working to answer these questions. A Lapita cemetery on the island of Éfaté in the Pacific nation of Vanuatu has revealed information about Lapita customs, and DNA from the ancient bones may help to answer questions about the Lapita people. "This represents the best opportunity we've had yet," says Spriggs, "to find out who the Lapita actually were, where they came from, and who their closest descendants are today."

But even if the archaeologists can answer these questions, we still won't know how the Lapita sailed so far east against the

trade winds, which normally blow from east to west. Atholl Anderson, professor of prehistory at the Australian National University, suggests that El Niño, the same warming of ocean water that affects the Pacific today, may have helped. Climate data obtained from slow-growing corals around the Pacific and from lake-bed sediments in the Andes of South America indicate a series of unusually frequent El Niños around the time of the Lapita expansion. By reversing the regular east-to-west flow of the trade winds for weeks at a time, these *super El Niños* might have carried the Lapita sailors on long, unplanned voyages far over the horizon.

However they arrived on the islands, the Lapita came to stay. Their descendants have inhabited the region for thousands of years, and why not? They're living in an island paradise that many of us only dream about.



A modern Hawaiian voyaging canoe built on ancient designs


D GOAL 4: Describe the City Where You Live

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Traveling on a canoe in Fiji,
Melanesia, South Pacific

climate and beauty of
the city
cultural attractions and
activities
employment
public transportation
quality of life

Communication

A  Imagine that the city where you live is trying to encourage more people to move there. Follow the instructions with a partner.

1. Use the topics in the box to discuss the benefits of life in your city.
2. For each topic, list two or three positive things that your city offers.

Writing

A Write a paragraph about one attractive aspect of life in your city. Follow the steps.

1. Choose a topic from exercise **A** or use your own idea.
2. Write a good topic sentence to begin your paragraph. Then write supporting details that describe the good things about your city to a reader. For example, write:

Centerburg has been a cultural center for a long time, and there are so many enjoyable cultural activities here that it is difficult to choose just one. People who want to reflect on the past, for example, can enjoy the historical museum, which has beautiful old objects from this country and from around the world. On weekends, the museum offers special classes just for children...

Word Focus

Use a variety of words in
your writing:

positive	attractive
good	beneficial
enjoyable	pleasant

B  **GOAL CHECK**  Describe the city where you live

Read your paragraph aloud to a small group or to the whole class. Ask your classmates to suggest other details you could add to your paragraph.

Golden Gate Bridge,
San Francisco, U.S.A.



Before You Watch

- A** Discuss these questions with a partner. What do you know about San Francisco, California? What might attract immigrants to that city? What parts of their culture do immigrants bring with them?

While You Watch

- A** Watch the video and match the people with their roles.

- | | |
|----------------------------|---------------------------------------|
| 1. Ray Patlan ____ | a. mural artist |
| 2. Juan Pedro Gaffney ____ | b. priest at Saint Peter's Church |
| 3. Father Dan McGuire ____ | c. director of Choir of San Francisco |

- B** Complete the video summary with words from the box.

The Mission District is special in several ways. Religion has played a role in the community since the (1) _____ arrived. Today, large (2) _____, such as the Mission Dolores Basilica, are places where immigrants practice their religious traditions. Music also makes the neighborhood (3) _____. The Spanish Choir of San Francisco has performed to raise money for people after natural disasters in (4) _____ America. The visual arts also make it a special place. Balmy Alley is famous for its murals, and a local (5) _____ organization leads people on walking tours. A priest explains that the (6) _____ of different cultures makes the Mission District a beautiful place.

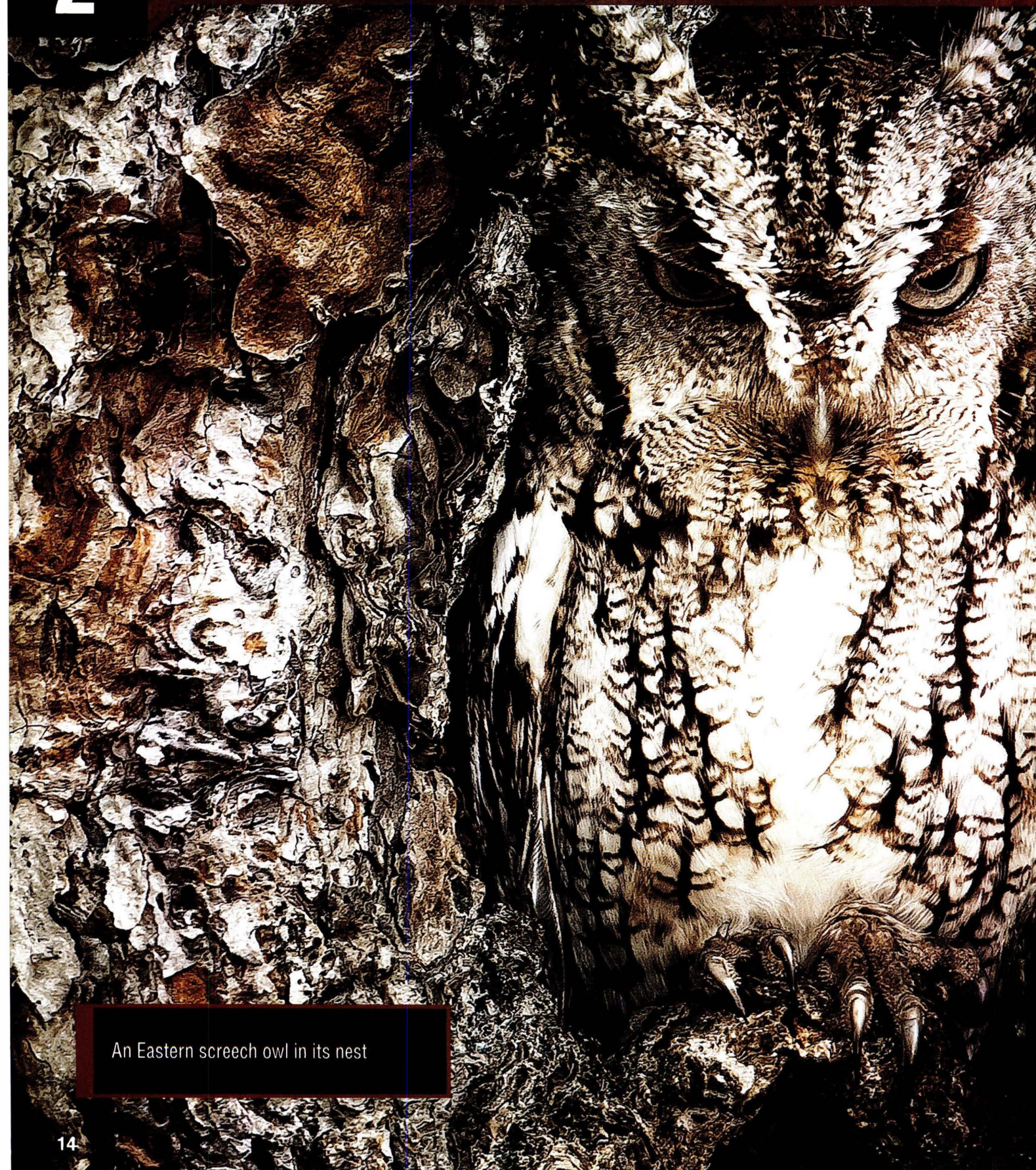
churches arts
Spanish Central
special integration



▲ Large mural in an alley way in San Francisco, CA.

After You Watch/Communication

- A** If you lived in the Mission District, what would you enjoy about the neighborhood?



An Eastern screech owl in its nest

Look at the photo,
answer the questions:

- 1 What can you see in the picture? 2 Why is it difficult to see the image?

UNIT 2 GOALS

1. Talk about learning strategies
2. Talk about your senses
3. Talk about your fears
4. Describe an emotional experience

A GOAL 1: Talk About Learning Strategies



▲ Taxi in London, England

- a. ways of doing an activity
- b. learn to remember exactly
- c. microscopic part of the body
- d. make a picture in your mind
- e. remembering
- f. keep, continue to have
- g. part
- h. in your mind
- i. respond
- j. outstanding building or other feature

Vocabulary

A Read the article. Match the words in blue with their meanings in the box.

A Bigger Brain

Every day, Glen McNeill rides his motorbike around London for seven hours. He wants to become a taxi driver, so he must **memorize** every street in the city and then pass a test called "The Knowledge of London." He will answer questions about 400 routes between important places. It's an incredible test of memory. The examiner names two places, and candidates must **react** quickly and give the names of every street and **landmark** along the route between those two places.

Preparing for the exam takes three years, and passing it is extremely difficult. Some people try as many as twelve times. McNeill uses many different **techniques** for studying at home. He **visualizes** all the places on a route to make a **mental** map. He also concentrates on **recalling** street names that sound similar.

Now scientists have discovered important differences in these drivers' brains. The **portion** of the brain that **retains** information about places is larger in London taxi drivers than in other people. Learning "The Knowledge" might make their brains grow new **cells**.

- | | |
|----------------------|--------------------|
| 1. memorize <u>b</u> | 6. landmark ____ |
| 2. react ____ | 7. portion ____ |
| 3. techniques ____ | 8. retain ____ |
| 4. visualize ____ | 9. cell ____ |
| 5. mental ____ | 10. recalling ____ |

B Discuss these questions with a partner. Do you think you would pass "The Knowledge" test? What would you do to learn all the streets of London?

Grammar: Gerunds as subjects and after prepositions

A gerund is a noun formed from a verb + *ing*.

ask → *asking* sit → *sitting* try → *trying*

Gerunds can be used as the subject of a sentence.

Saying new vocabulary words is a good way to remember them.

Learning English is important for my future.

Gerunds can be used after a preposition.

I'm interested in ***becoming*** a taxi driver.

We talked about ***studying*** together.

He's afraid of ***flying*** on airplanes.

Engage!

What was the most difficult exam you have ever taken? How did you prepare for it?

A Find five gerunds in the article about taxi drivers. Tell a partner why each one was used.

B Complete each sentence with the gerund form of a verb from the box.

study do travel learn forget lose

1. He's tired of _____ for the taxi driver's exam.
2. Jackie is interested in _____ to China to learn about Chinese history.
3. I worry about _____ information from professors' lectures. What if I can't remember it when I take the exam?
4. For many people, _____ with their eyes, or visual learning, is the best way to remember things.
5. _____ something physical, like making something with one's hands, can be a good way to learn.
6. I'm afraid of _____ my wallet, so I always keep it in the same place.

C Tell your partner about good ways to do these things. Use gerunds.

remember birthdays practice listening to English get more exercise

Conversation

A Listen to the conversation with your book closed. What did Diane forget?

Katie: Hi, Diane. You don't look very happy.

Diane: I'm not. I had an important business meeting this afternoon, and I completely forgot to bring my laptop. My boss was really upset.

Katie: Everybody forgets things sometimes. You shouldn't worry about it.

Diane: I have such a terrible memory!

Katie: Making a list is a good way of remembering things. That always helps me.

Diane: But I'll just forget about the list!

Katie: If you put it on top of your keys, you'll see it when you go out. That's what I always do.

B Practice the conversation with a partner. Then make new conversations about important things you need to remember and good ways to remember them.

C **GOAL CHECK** Talk about learning strategies

Discuss the learning strategies in the box. How could you use each strategy to remember new vocabulary or other things that you need to memorize?

Word Focus

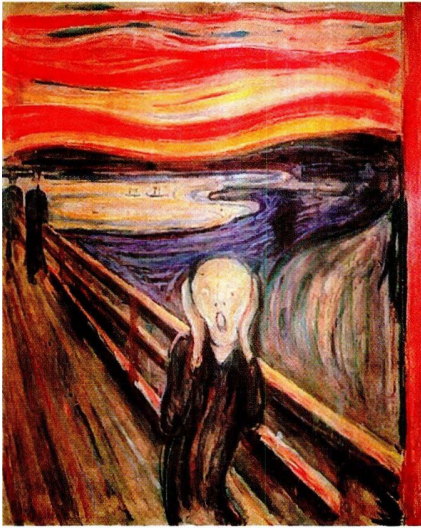
Other common combinations of verb + preposition:

worry about
look forward to
plan on
be tired of
think about

Walking to school is a good way to get more exercise.

You could learn a new grammar structure by practicing it a lot.

taking notes making lists
concentrating/paying attention
asking questions/participating
visualizing practicing



▲ The Scream by Edvard Munch, who had synesthesia

Listening

A Discuss these questions with a partner.

1. What's your favorite song? Why do you like it?
2. When you listen to the song, does it make you think of any of these things?

B 8 Listen to a radio program about an unusual brain condition called *synesthesia*. Circle the answers.

1. When a person has synesthesia, two kinds of (memories | senses) work together.
2. Lori Blackman is unusual because she always sees (letters | sounds) in different colors.

a person a color an experience a place a season a picture

SYNESTHESIA

C 8 Listen again. Circle **T** for *true* and **F** for *false*.

- | | | |
|---|----------|----------|
| 1. The word <i>synesthesia</i> comes from the Greek words for <i>together</i> and <i>senses</i> . | T | F |
| 2. There are two different kinds of synesthesia. | T | F |
| 3. Lori's father has synesthesia, too. | T | F |
| 4. Some artists and musicians have synesthesia. | T | F |
| 5. Lori has a lot of problems because of synesthesia. | T | F |

D 8 Listen again and fill in the information.

1. The most common kind is called _____ synesthesia.
2. Lori realized she was unusual when she was _____ years old.
3. For Lori, the letter B is light _____.
4. About one person in _____ has synesthesia.

E Discuss the questions with a partner.

1. Do you know someone who has had experiences like this?
2. Would you like to have synesthesia? If so, what kind? If not, why not?



Pronunciation *Th* sounds

- A** **9** *Th* has two pronunciations in English—voiced /ð/ and unvoiced /θ/. Listen and repeat the words, and notice the pronunciations of *th*.

Voiced /ð/	Unvoiced /θ/
the	think
this	three
that	theater

- B** Take turns saying the words. Decide which /*th*/ sounds are voiced /ð/ and which are unvoiced /θ/.

thousand those Thursday they thank thief thirsty them

- C** Read the sentence below. Which words have voiced /ð/? Which words have unvoiced /θ/? Say the sentence out loud as fast as you can.

I thanked that thin thief for the three theater tickets.

Communication

- A** Look at the pictures on the page. Imagine you are in these situations. What can you see, hear, smell, taste, and feel? Describe as many details as you can. Use your imagination!

- B** **GOAL CHECK** **Talk about your senses**

Work with a partner. Imagine you are in your favorite place in the world. What can you see, hear, smell, taste, touch, and feel right now?



I feel warm sand under my feet. I smell the ocean.



Green tree python

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Language Expansion: Scientific studies

laboratory—a place where scientists work

research—studying something to discover new facts

theory—a scientific idea

survey—collecting the same information from people

experiment—a scientific test to see if something is true

results—the information that scientists get after an experiment

conduct—organize and carry out

conclusion—something you decide after looking at all the information

A Study the words in the box about science and their meanings.

B Complete the article with the correct form of a word from the box.

Everyone is afraid of snakes, right? In one (1) _____, 51 percent of people said that snakes are their biggest fear! One (2) _____ says that fear is built into our brain. But (3) _____ shows we might also learn to be afraid of things. Scientists (4) _____ an interesting (5) _____ with monkeys to find out if this is true. The monkeys were born in a (6) _____ at a university. First, they showed the monkeys videos of snakes, and the monkeys didn't react. However, when they showed videos of wild monkeys acting afraid of snakes, the lab monkeys became afraid too.

Next, a new video was shown where the wild monkeys appeared to be afraid of flowers. This time, the lab monkeys did not develop a fear of flowers. The (7) _____ of this experiment show that monkeys can learn some of their fear by watching other monkeys. The researchers' (8) _____ was that fear is partly built into monkeys' brains, but can also be learned.

C Discuss these questions with a partner. Are you afraid of snakes? Why or why not? Are you afraid of any other animals? Explain your reasons.

Grammar: *May, might, and could* for possibility

Use *may, might, and could* + base verb to say that something is possible, now or in the future.

Use *may, might, and could* to express that we are not completely sure about something.

We **may find** dangerous animals in the jungle.
Monkeys **might learn** to be afraid of things.
People **could develop** a fear of snakes.

Scientists say that other fears **are** learned. (The scientists are sure about this.)
Scientists say that other fears **might be** learned. (The scientists are not sure about this, but it's possible.)

- A** Why are these people afraid? Complete each sentence in your notebook with *may*, *might*, or *could* and a phrase from the box.

get on the wrong train see a snake have an accident
need a filling in my tooth fall off make a mistake

1. I don't like to walk across high bridges because I could fall off.
2. Jose Luis is afraid of speaking English because _____
3. My grandmother gets nervous when she's driving because _____
4. I don't like camping because _____
5. Nancy never takes the subway because _____
6. I worry about going to the dentist because _____

- B** What are you afraid of? Tell your partner, and explain the reasons with *may*, *might*, or *could*.

Conversation

- A** Listen to the conversation with your book closed. What is Andy afraid of?

Susan: You look really nervous, Andy. What's up?
Andy: Oh, I always feel like this before I take a trip. I hate flying!
Susan: Really? But you travel a lot!
Andy: I never feel comfortable. The plane might fly into bad weather, or the pilot could make a mistake.
Susan: I used to be afraid of flying too, but I got over it.
Andy: Really? How?
Susan: Listening to music on the plane makes me feel calm.

- B** Practice the conversation in exercise **A** with a partner. Then make new conversations using the list below. Use your own ideas for ways to get over these fears.

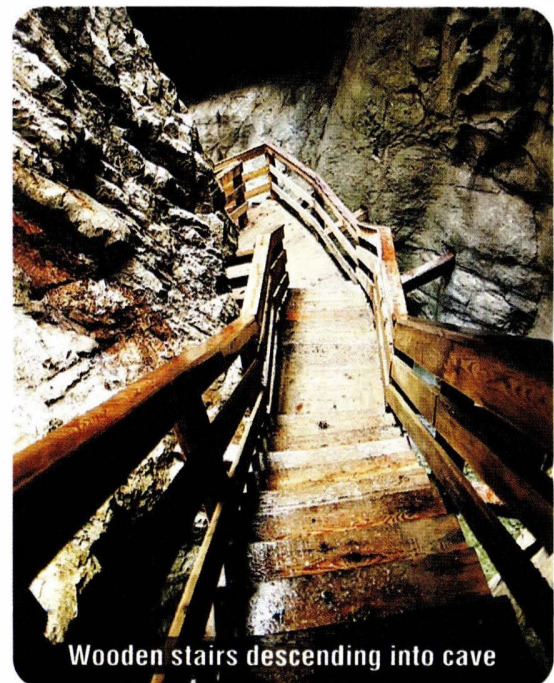
swimming in deep water being in high places
speaking in front of the class visiting the doctor/dentist

- C** **GOAL CHECK** Talk about your fears

Tell your partner about something you're afraid of. Why are you afraid of it?

Real Language

When you *get over* a bad experience or an illness, you recover from it.



Wooden stairs descending into cave

Reading

A Discuss these questions with a partner.

1. What happened to the person in the photo? Why does he feel like this?
2. What other emotions are there?

B Circle **T** for *true*, **F** for *false*, and **NI** for *no information* (if not in the reading).

1. Paul Ekman studied people's faces in different cultures. **T F NI**
2. Ekman did research in several countries and got different results. **T F NI**
3. Americans get angry more often than the Fore people from New Guinea. **T F NI**
4. Ekman thinks that emotions are the same everywhere because they are a part of our brain. **T F NI**
5. Two people might feel different emotions about the same thing. **T F NI**
6. Fear is the most difficult emotion to change. **T F NI**

C Look back at the reading and think about the meaning of the words in bold. Circle the answers.

1. If you do something *in reverse*, you do it again (the same way | the opposite way).
2. If something is *universal*, it's (the same | different) in every country.
3. When you *deal* with a problem, you (take action | don't think about it).
4. An emotional *trigger* makes an emotion (happen | stop).

San Francisco, California, USA

IN YOUR FACE

Why is this man so angry? We don't know the reason, but we can see the emotion in his face. Whatever culture you come from, you can understand the feeling that he is expressing.

Forty years ago, psychologist Paul Ekman of the University of California, San Francisco, became interested in how people's faces show their feelings. He took photographs of Americans expressing various emotions. Then he showed them to the Fore people, who live in the jungle in New Guinea. Most of the Fore had never seen foreign faces, but they easily understood Americans' expressions of anger, happiness, sadness, disgust, fear, and surprise.

Then Ekman did the same experiment in reverse. He showed pictures of Fore faces to Americans, and the results were similar. Americans had no problem reading the emotions on the Fore people's faces. Ekman's research gave powerful support to the theory that facial expressions for basic emotions are the same everywhere. He did more research in Japan, Brazil, and Argentina, and got the same results. According to Ekman, these six emotions are **universal** because they are built into our brains. They developed to help us deal with things quickly that might hurt us. Some emotional triggers are universal as well. When something suddenly comes into sight, people feel fear, because it might be dangerous. But most emotional triggers are learned. For example, two people might smell newly cut grass. One person spent wonderful summers in the country as a child, so the smell makes him happy. The other person remembers working very hard on a farm and being hungry, so he feels sad.

Once we make an emotional association in our brain, it is difficult, and sometimes impossible, to change it. "Emotion is the least changeable part of the brain," says Ekman. But we can learn to manage our emotions better.

There are many differences between cultures in language and customs. But a smile is exactly the same everywhere.





Three children are surprised by a lizard.

happiness fear
surprise sadness
anger disgust

Word Focus

You can use a variety of verbs to describe experiences.

observe
notice
sense
perceive
imagine
become aware of

Communication

A Think about a time when you felt one of the emotions in the box. Tell your partner about your experience. Your partner will ask you for more details.

1. What happened?
2. How did you feel?
3. What did you do?
4. What did you learn from the experience?

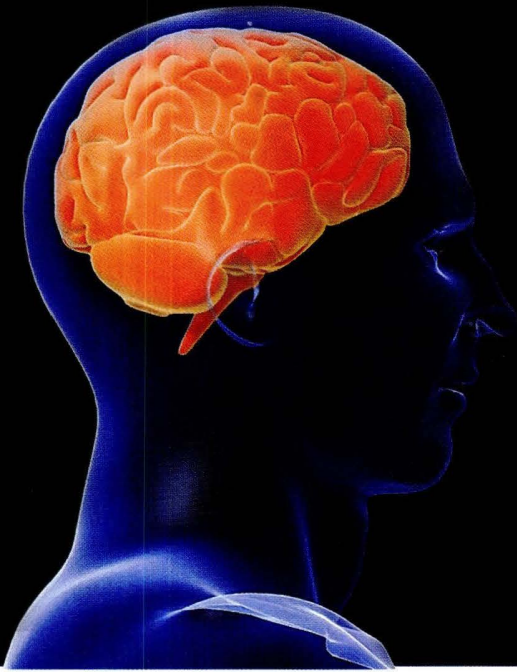
Writing

A In your notebook, write a paragraph about the experience you described in the Communication exercise. Include a topic sentence and interesting details. Use *and*, *but*, *or*, and *so* to connect your ideas.

B Share your writing with a different partner or with the entire class. Your partner or classmates will tell you what they liked about your paragraph.

C **GOAL CHECK** Describe an emotional experience

Write each emotion from the box in exercise **A** on a small piece of paper. Mix up the pieces and place them facedown. Take turns choosing a piece of paper and talking about a time when you had that emotion. The first pair of students to finish talking about all six emotions wins.



How does memory work?

When we get new information, it goes into a part of the brain called the **hippocampus**. There the information is **coded** and put into memory. But why are some people better at remembering? Some scientists think a good memory comes from **heredity**. We get it from our parents through their **genes**. Other people say a good memory comes from practice.

Before You Watch

A Read the information in the box and study the words in **bold**.

While You Watch

A Watch the video. Complete the sentences.


1. Gianni Golfera is blindfolded, but he can still do something that's _____.
2. He has memorized more than _____ books.
3. Researchers are studying how memory and _____ change the brain.
4. For Gianni, improving his memory has become a _____.
5. Gianni's life is not all about _____, though.
6. Gianni's practice is making his memory _____.

After You Watch/Communication

A Discuss these questions with a partner. Why do you think Gianni Golfera has such a good memory? Would you like to take Gianni's memory class? Explain your reasons.

B Follow the steps to play a famous memory game.

1. Choose twelve small objects. Put them on top of a desk and cover them.
2. Go to another desk. In one minute, memorize the objects you see.
3. List all the objects you can remember in two minutes. Check your lists. Who remembered the most objects?

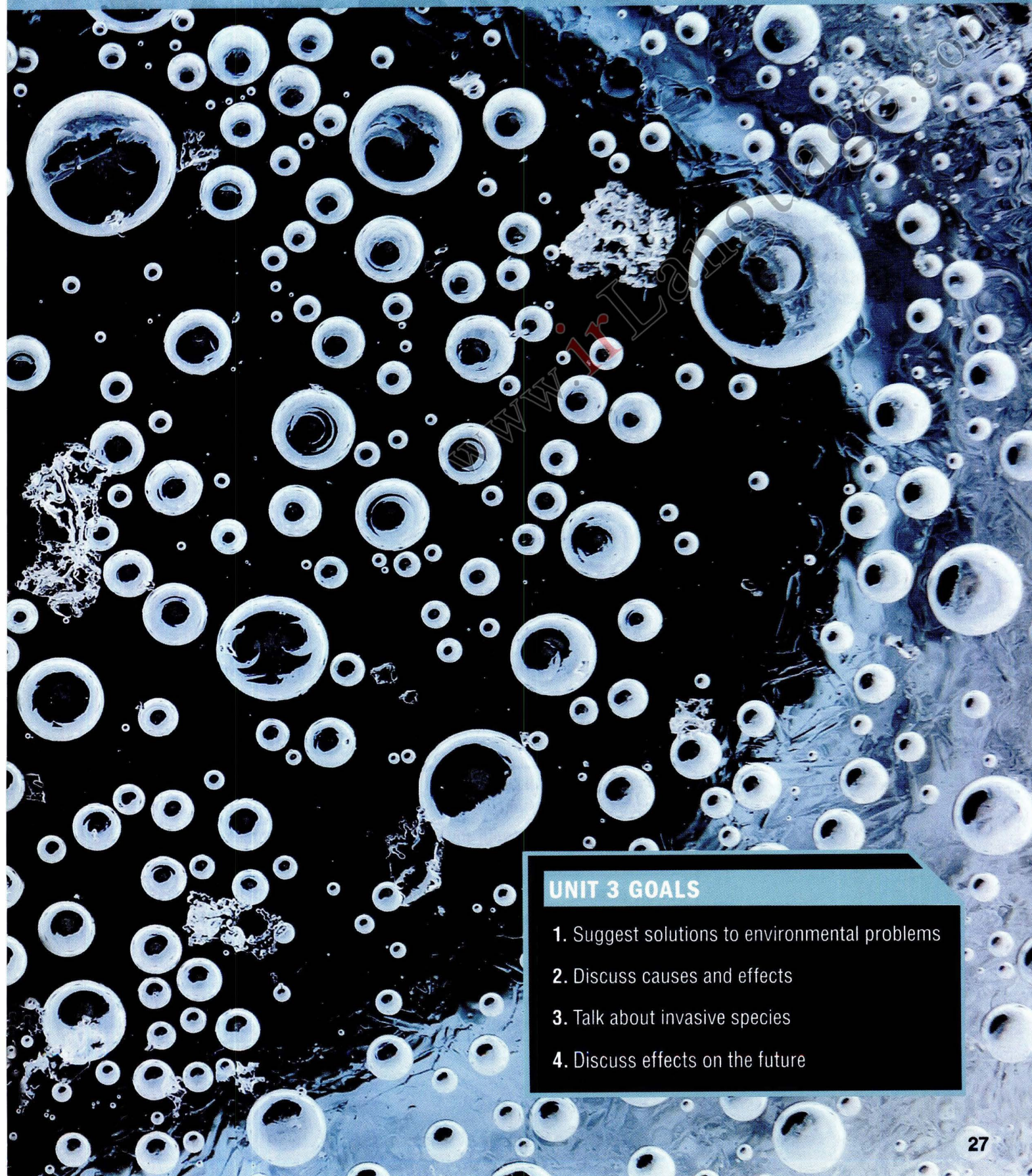


Buried air and gas from bacteria and algae bubble to the ice's surface in Greenland.

Look at the photo,
answer the questions:

1 What do you see in the picture?

2 How does this affect our
environment?



UNIT 3 GOALS

1. Suggest solutions to environmental problems
2. Discuss causes and effects
3. Talk about invasive species
4. Discuss effects on the future



▲ Access roads and terraced fields in Sarawak, Borneo, Malaysia

Vocabulary

A Read the article below from an environmental magazine.

A New Mother Earth?

The Earth is changing fast—with a little help from people, of course. Our use of coal and oil for energy has led to global warming. This warming has led to an increase in temperatures and sea levels, and much less polar ice. But warming is not the only effect on the planet. Climate change means more extreme weather of all kinds: heat, cold, rain, and drought.

The effects of human activity can also be seen in the planet's plant and animal life. Demand for tree products and farmland leads to deforestation, and global travel provides easy transportation for invasive species—plants and animals that are brought in from other places.

Fortunately, even though we humans are the cause, we can also be part of the solution. We can use much less coal and oil if we practice conservation, for example, and better land management would save forests from being destroyed. Invasive plants and animals can even be controlled, but only with a good understanding of the environment.

B Write each word in blue next to its definition in your notebook.

- | | |
|--------------------------------------|----------------------------------|
| 1. a thick liquid used as a fuel | 6. amount becoming greater |
| 2. very great in degree or intensity | 7. rise in Earth's temperature |
| 3. the cutting down of forests | 8. the average water levels |
| 4. a period with much less rain | 9. caused, resulted in |
| 5. protecting the environment | 10. a change in weather patterns |

Grammar: The passive

Form the passive with *be* + the past participle of the main verb.

We can use the passive with any verb tense.

Use the passive:

1. when the agent (the doer) is not known or not important.
2. to emphasize the object of the verb.

Use a *by* phrase to say who or what does something (the agent).

Often, trees **are removed** to make room for farming.

Thousands of acres of forest **have been destroyed** in recent years.

Oil can **be refined** into gasoline and diesel fuel for cars, trucks, and ships.

Six countries in the region **were affected** by drought last year.

New trees are being planted **by local children**.


A Rewrite sentences in your notebook in the passive. Use a *by* phrase when needed.

1. People use coal and oil for heating and transportation.
2. Conservation groups raise money for environmental projects.
3. Extreme weather has caused many problems in recent years.
4. Immigrants brought invasive species to Australia during the 1800s.
5. Palm oil plantations are causing deforestation in Southeast Asia.
6. In many parts of the world, people are conserving energy.
7. One company developed an excellent land management plan.
8. Recycling has kept tons of paper and plastic out of landfills.

B Complete the sentences with an appropriate agent.

1. Those nests in that tree were made by _____.
2. This textbook was published by _____.
3. Oil is being used as fuel by _____.
4. My favorite kind of shampoo is made by _____.
5. Rising sea levels are caused by _____.

Conversation

A  **11** Close your book and listen to the conversation. What does Pedro think should be done about climate change?

Sonia: Hey, what's up? You look worried.

Pedro: I am worried.

Sonia: About what?

Pedro: I hear a lot about climate change, but I feel like nothing is being done about it.


Sonia: I know what you mean, but what do you think should be done?


Pedro: Well, look at this neighborhood. More trees could be planted.

Sonia: Would that help?

Pedro: Definitely! Trees keep cities cooler, so they don't become heat islands.

Sonia: Heat islands! I learn something new every day.

B  Practice the conversation with a partner. Make new conversations with your own ideas for solving the climate change problem.

C  Discuss how climate change is affecting your country. Make a list of things that are being done about it (or that could be done) where you live.

D  **GOAL CHECK**  Suggest solutions to environmental problems

Share your group's list from exercise **C** with the class.

Real Language

When you have a *heat wave*, you have days or weeks of extreme heat.

Laws have been passed to reduce pollution from cars.

Right. We can only drive on certain days of the week.



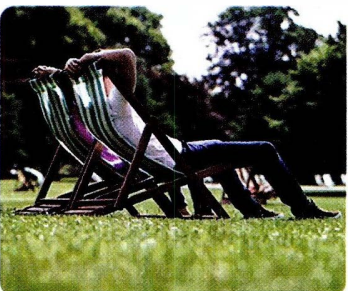
1. _____



2. _____



3. _____



4. _____

Listening

A Rank these types of extreme weather from most serious (1) to least serious (5) in your opinion. Then compare your rankings with a partner.

- _____ floods
- _____ very cold weather
- _____ hurricanes/typhoons
- _____ drought
- _____ very hot weather

B 12 Listen to four people talk about climate change. Write the name of a place below each picture on the left.

C 12 Listen again. Answer each question in your notebook.

1. According to Mari, what is happening to the cattle?
2. How many deaths occurred in Europe during one heat wave?
3. Why do some scientists say that global warming isn't causing the heat waves?
4. According to Joseph, how many hurricanes and tropical storms occurred one year?
5. How does warm ocean water cause strong storms?
6. How are recent floods in Jasmine's country different than in the past?


Pronunciation: Linking words together

When a word ends in a consonant sound and the next word begins with a vowel sound, the words are linked together.


What's the capital of Japan? (Can you hear the word *of*?)

When a word ends in a consonant sound and the next word begins with the same consonant sound, the words are linked and the sound is only pronounced once.

We didn't feel like going home, so we went to the museum. (Can you hear *fee-like* and *wen-to*?)


A  **13** Underline the sounds that link together. Then listen and check your answers.

1. Climate change has been in the news lately.
2. We've received dozens of letters.
3. Will this rain never end?
4. The heat takes a toll on the human body.
5. The governor is worried about food shortages.
6. Is that a good way to save energy?

B  Write sentences using these word pairs in your notebook. Then practice saying the sentences with a partner.

1. weather report
2. gone over
3. above average
4. coldest temperatures
5. drought ended
6. more rainfall

Communication

A  How do these things happen? Match the causes with their effects.

Causes

1. burning coal and oil
2. deforestation
3. movement of people and goods
4. climate change
5. increasing temperatures

Effects

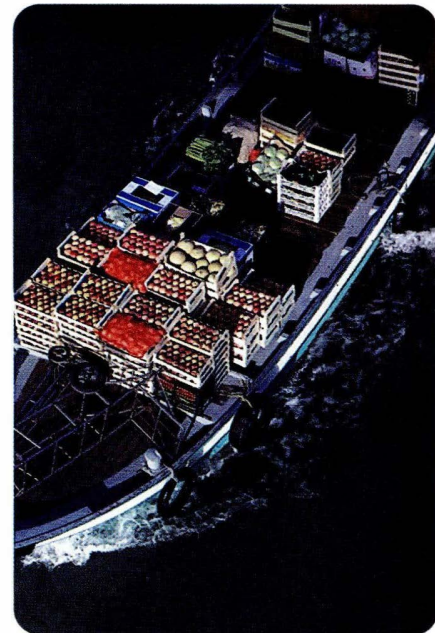
- a. rising sea levels
- b. invasive species
- c. pollution in the atmosphere
- d. fewer trees
- e. more extreme weather

B  Compare answers with another pair. Does everyone agree?

C  **GOAL CHECK**  Discuss causes and effects

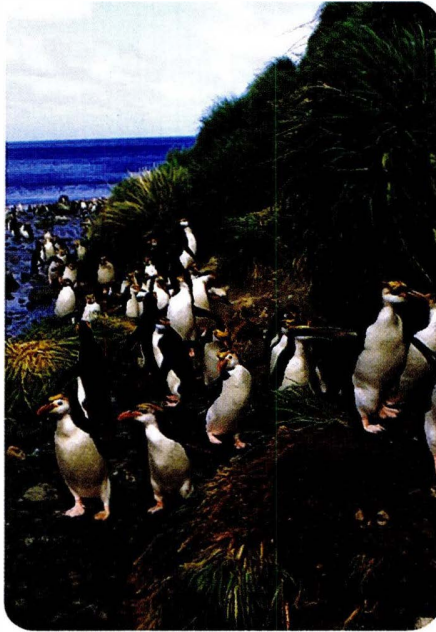
Make a list of things you do every day that affect the environment. Then explain your list to the class.

irLanguage.com



Air pollution is caused by burning coal and oil.

Yes, and air pollution causes an increase in temperatures.



▲ Royal penguins returning to their colony in Macquarie Island, Australia

What do you think? 8,000, 80,000, or 800,000?

I think it's 8,000.

Language Expansion: Large numbers

Saying Large Numbers

To say large numbers in English, start at the left, and say the numbers in groups:

hundreds (100s)	524 → five hundred (and) twenty-four
thousands (1,000s)	1,250 → one thousand, two hundred (and) fifty
ten thousands (10,000s)	17,400 → seventeen thousand (and) four hundred
hundred thousands (100,000s)	432,060 → four hundred thirty-two thousand (and) sixty
millions (1,000,000s)	2,400,900 → two million, four hundred thousand (and) nine hundred

A Discuss these questions with a partner.

1. What are invasive species? Can you think of an example?
2. Why are invasive species a problem?

B Read about Macquarie Island. Guess which number is correct.

Like many places, Macquarie Island has invasive species—species of nonnative plants and animals with no local natural controls on their populations. First came the cats, which were used on ships to control rats. Then came the rabbits, which were brought by seal hunters as a source of food. The hunters came because Macquarie Island is visited by around **(8,000/80,000/800,000)** elephant seals each year. No hunting is allowed now, however, because the island is a wildlife sanctuary.

Macquarie Island has also been an accidental sanctuary for its invasive species. The rabbits found plenty to eat, and they ate an enormous amount of the island's plant life. In 1968, scientists wanted to decrease the rabbit population, so the European rabbit flea (which carries a virus called myxomatosis) was introduced. By the 1980s, the rabbit population had declined from **(1,300/13,000/130,000)** to only **(2,000/20,000/200,000)**, and the vegetation on the island had begun to recover. But with fewer rabbits to eat, the cats began to prey on the island's sea birds, so scientists decided to kill the island's cats.

Problem solved? Unfortunately, the virus had only reduced the rabbit population, and with the cats gone, the rabbits' numbers increased again. Now that so much of the island's vegetation is gone, there have been landslides after heavy rains. One expert estimates that it will cost **(\$162,000/\$1,620,000/\$16,200,000)** to finally solve the invasive species problem on Macquarie Island.

C Take turns asking about the numbers in the article.

Grammar: The past perfect


Use the past perfect tense to talk about something that happened before another event in the past. subject + had + (not) + past participle	The game warden arrived on Wednesday and saw that many fish had died . They had not had problems in that lake previously.
The simple past tense is often used with words such as <i>before</i> or <i>after</i> that make the time relationship clear. Both forms are grammatically correct.	Cats had come to the island on ships before the rabbits arrived. Cats came to the island on ships before the rabbits arrived.

A Read each sentence and underline what happens first.


1. The Nile Perch had been a river fish before it was brought to Lake Victoria.
2. The lake had not had such a large predator before the perch arrived.
3. By the late 1980s, the perch population had grown enormously.
4. James called his mother after he finished playing soccer.
5. Before the sun went down, Rita found a good place to watch the fireworks.

B Read the article about Macquarie Island again and underline the verbs in the past perfect tense. Why is the past perfect used in those sentences?

Conversation

A  14 Close your book and listen to the conversation. What does Henry want to do?

Abdullah: Look at this, Henry.
Henry: Eeeew . . . What is it?
Abdullah: I'm not sure. It's some kind of insect, but I've never seen one like it.
Henry: Maybe it came here on a ship—in a box of food.
Abdullah: Right! The ship had probably been to another country to pick up . . . carrots!
Henry: Sure. And after that, the ship came here.
Abdullah: And now our country will be invaded by the terrible Carrot Beetle!
Henry: Not if we do something about it first.
Abdullah: Hold on, Henry. We can't kill it if we don't even know what it is.
Henry: You're right. Maybe we should show it to the biology teacher.

B  Practice the conversation. Have new conversations about invasive species in your city with a partner.

C  **GOAL CHECK**  Talk about invasive species

With a partner, discuss the events on Macquarie Island in your own words. What had the island been like before people arrived? What problem did each new species cause?

irLanguage.com



▲ Leaf beetle

Reading

A Check (✓) the actions in the list that can affect our future. Share your ideas with a partner.

- _____ 1. If everyone drives their own car, we might run out of fuel.
- _____ 2. If we use energy-efficient light bulbs, we will use less electricity.
- _____ 3. If the world's population keeps growing, we might not have enough food and water.
- _____ 4. If we protect wilderness areas, we can save endangered species.
- _____ 5. If we use biofuels, we might reduce CO₂ emissions.

B Read the text. Match the actions with the results. Compare your answers.

- | | |
|--|--|
| _____ 1. Make small changes in how we use energy | a. Make decisions that are good for the future |
| _____ 2. Use renewable biofuels | b. Save money on lighting and air conditioning |
| _____ 3. Paint building roofs white | c. Have a big impact on the planet |
| _____ 4. Know the ecological cost of our choices | d. Keep tons of CO ₂ out of the air |

C Complete the sentences.

- 1. John Doerr's main job is in finance, but he is also interested in _____.
- 2. A compact fluorescent light bulb can last as long as _____ years.
- 3. In _____, 40% of vehicles use biofuels instead of gasoline.
- 4. According to Doerr, companies can also help the environment by changing the way they use _____.

TED Ideas worth spreading

John Doerr Venture Capitalist

SALVATION (AND PROFIT) IN GREENTECH

John Doerr might not be the first person you think of when you make a list of environmental activists. He is better known as a "money man" in Silicon Valley, where he invested in big companies like Amazon and Google.

But Doerr is also passionate about saving the planet. He and his business colleagues have spent a lot of time studying "green technology." He has learned that when businesses and individuals make even small changes in the way they use energy, it can have a big impact on the planet. Doerr believes that businesses, individuals, and governments all need to be involved to solve environmental problems, and that it will require exciting and radical innovations.

One of the biggest changes everyone can make, Doerr says, is to switch the light bulbs in their houses to energy-efficient bulbs, which are also called "compact fluorescent bulbs." These light bulbs use three to five times less energy than regular light bulbs, which reduces CO₂ emissions, and they last much longer—some can last up to eight years! They are more expensive than regular bulbs, but the energy they save over time makes up for the difference in price.

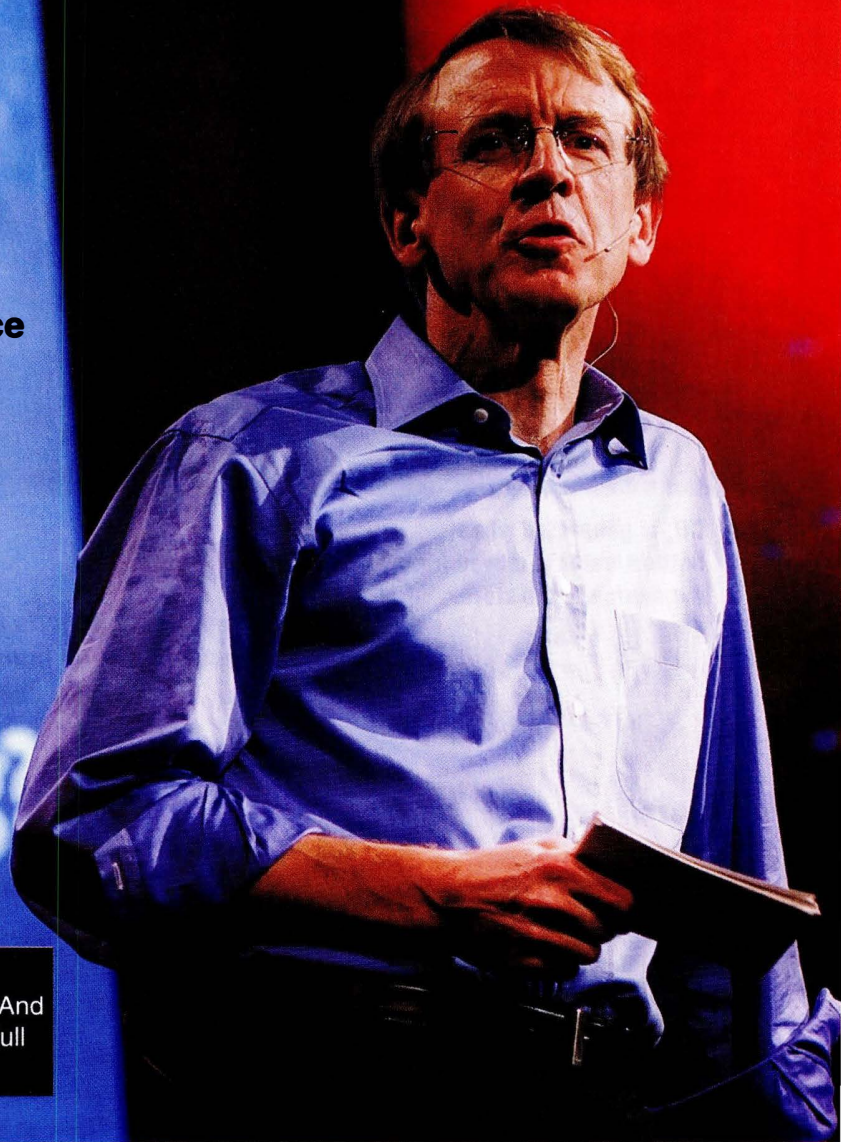
Doerr recommends using more renewable biofuels in our cars and trucks. Very few vehicles in the world run on these special fuels right now. However, some countries are making it easier for drivers to use them. In Brazil, for example, about 40% of vehicles use biofuels, which keeps millions of tons of CO₂ out of the air. And researchers are working to develop better biofuels all the time, which will save more energy, keep the air cleaner, and make the planet healthier.

Companies can make changes that impact the environment, too. A large chain of retail stores painted the roofs of about 25% of their buildings white and

“I really, really hope that we multiply all of our energy, all of our talent, and all of our influence to solve this problem.”

Global warming?

John Doerr's idea worth spreading is that being green is the most important thing anyone can do. And we need to do it more—right now. Watch Doerr's full TED Talk on TED.com.



installed skylights. As a result, they saved money on lighting and air-conditioning, and reduced the CO₂ emissions associated with those energy uses.

In order to make decisions that will affect the future in positive ways, we need to know as consumers how much our choices cost, Doerr says. Those costs can be financial, like the price of a light bulb or a liter of fuel, or they can be environmental. Did you ever wonder how much CO₂ it takes to put water in a plastic bottle and to transport it from its source to your refrigerator? By asking the right questions, we can make the right decisions.

impact a powerful or major influence or effect

renewable able to be replaced by nature

biofuel a material produced from plants that is burned to produce heat or power


CO₂ a gas that is produced when people and animals breathe out or when certain fuels are burned, and that is used by plants for energy: carbon dioxide

skylight a window in the roof of a house or on a ship's deck



- ▲ CO₂ is generated when bottled water is moved from the source to the store.

Communication

- A**  Think about actions and their environmental impact that can affect the future. Rank them from most positive to most negative. Share your ideas with a partner.

Writing

- A** Complete the sentences with the simple past or past perfect of the verbs.

1. After we _____ (receive) a huge electric bill, we _____ (decided) to change all of our light bulbs to compact fluorescents.
2. John Doerr _____ (work) in finance for many years before he _____ (become) concerned with protecting the environment and preventing climate change.
3. By 2007, many vehicles in Brazil _____ (change) to using biofuels.

- B** Rewrite the newspaper article in the box by changing the underlined text to the passive voice in your notebook.

- C** Write a news article about actions we can take to affect the environment in a positive way. Remember to use the passive voice.

D GOAL CHECK Discuss Effects on the Future

Share your rankings of actions that affect the future. Brainstorm two more positive and negative actions. Who is responsible for these actions? Doerr mentions individuals, businesses, and governments. What could each group do about these actions?

(1) The government released a new report yesterday. It showed how (2) our actions have clear effects on the environment. (3) We save energy when we switch to compact fluorescent bulbs. Bigger changes were also reported, such as when (4) stores reduce CO₂ emissions because they make changes to their buildings. (5) Finally, the report says that even small actions create important impacts.



A canal in Amsterdam



Before You Watch

A Read some quick facts about the Netherlands.

- Another name for the Netherlands is Holland.
- About half of the country's land is below sea level.
- The Dutch have built walls called *dikes* between the sea and the land. They have created new areas of dry land.
- Windmills move water to the sea, and as the water is removed, the land **sinks** even lower.
- As sea levels **rise** due to global warming, the Dutch must decide how to deal with the rising water. Should they continue to **struggle** against the sea?

While You Watch

A Watch the video and choose the best phrase to complete each sentence.

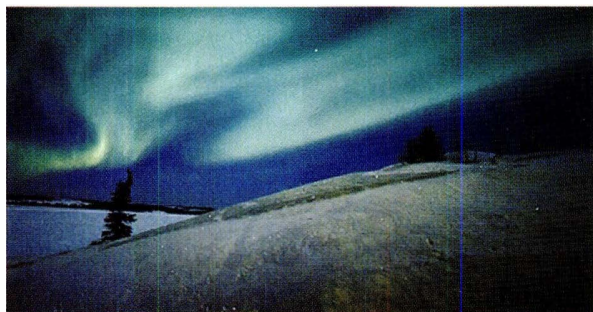
1. Instead of fighting the sea, it might be necessary to _____.
 - a. struggle against the sea
 - b. give land back to the sea
2. Flood control lakes could be used for _____.
 - a. recreation and wildlife
 - b. farmland
3. Older Dutch people don't like the idea because they think _____.
 - a. fighting the water is necessary
 - b. water makes a pretty landscape

After You Watch/Communication

A What are the advantages of letting some of the land in the Netherlands fill up with water? What are the disadvantages?

Before You Watch

- A** Look at the picture and answer the questions with a partner.



1. What do you think it would be like to grow up in a place like this?
2. How would it be different from where you live?
3. What types of things could you learn from living in this type of environment?

- B** How much do you know about climate change? Mark each item *True* or *False*. Compare your answers with a partner.

1. Climate change is caused by the sun's activity, not by human activity. _____
2. A change of only one or two degrees in global average temperatures can have a major effect on our lives. _____
3. A small rise in sea level will have a major impact on animals like polar bears. _____
4. A small rise in sea level will have a significant impact on people. _____
5. Melting polar ice will not affect me. _____
6. It is too late to do anything about climate change. _____

- C** Here are some words you will hear in the Ted Talk. Complete the paragraph with the correct words. Not all words will be used.

Paul Nicklen's idea worth spreading is that the loss of polar ice could devastate entire ecosystems, including the remarkable animals that inhabit them. Watch Nicklen's full TED Talk on TED.com.

dejected *adj.* sad
feed *v.* give food to; eat
Inuit *n.* native people of Canada
grab *v.* take, catch
starve *v.* die from lack of food
threat *n.* danger

Global warming is a (1) _____ to many animals. For example, emperor penguins live on Antarctic ice. If the ice melts, this will impact the penguins and also the animals that eat them. For example, leopard seals eat these penguins. If the penguins disappear, the seals will not be able to (2) _____ their babies and may (3) _____. Global warming is a serious and complicated problem. It makes many people feel (4) _____.

- D** You are going to watch a TED Talk about Paul Nicklen's adventures in Antarctica. What do you think you will see in the video? Discuss with a partner.

- E** Watch the TED Talk. Put the quotes on Page 39 in order that you hear them. Write the number in the boxes provided.

- F** Watch the talk again. Put these events in order.

1. a. Paul goes to Antarctica.
- ___ b. A leopard seal brings Paul a live penguin.
- ___ c. Paul's family moves to Northern Canada.
- ___ d. The seal makes a threat display to another seal to protect Paul.
- ___ e. Paul becomes interested in polar areas.

“So what I’m trying to do with my work is [make] people understand... that if we lose ice, we stand to lose an entire ecosystem.” – Paul Nicklen



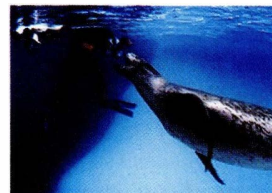
TED



☐ “The leopard seal did this threat display for a few minutes and then the most amazing thing happened. She totally relaxed.”



☐ “The penguin doesn’t know it’s cute and the leopard seal doesn’t know it’s big and monstrous; this is just the food chain unfolding.”



☐ “I was laughing so hard, and [I was] so emotional, that my mask was flooding because I was crying underwater just because it was so amazing.”

☐ “I don’t think I’ll ever have another experience like I did with these leopard seals.”

Challenge! Can you paraphrase the quotes from Paul Nicklen? Take turns with a partner.

After You Watch

A Mark each statement *True* or *False*. Correct the false statements in your notebook.

1. As a boy, Paul learned about nature from TV and computers. _____
2. Paul says people don't like leopard seals. He travels to Antarctica to find out more about them. _____
3. The second time the seal made a threat display, she wanted to bite Paul. _____
4. The seal only tried to feed Paul once, then gave up. _____
5. Paul had a bad experience in Antarctica with the penguins. _____
6. In Antarctica, Paul learned that leopard seals are not vicious (dangerous); they are misunderstood. _____

B Fill in the blank with the correct verb form.

1. Paul Nicklen _____ (has worked / had worked) with polar animals for years.
2. He _____ (was taught / has taught) about these animals by the Inuit people he lived with in Canada.
3. Paul is worried that global warming _____ (may have / has) a negative effect on species like the leopard seal and the polar bear.
4. _____ (To take / Taking) pictures of polar animals is his way of putting faces to the crisis of climate change.
5. His pictures _____ (are published / could publish) in *National Geographic* Magazine.
6. Paul wants people _____ (knowing / to know) the wonderful animals that inhabit the polar regions.

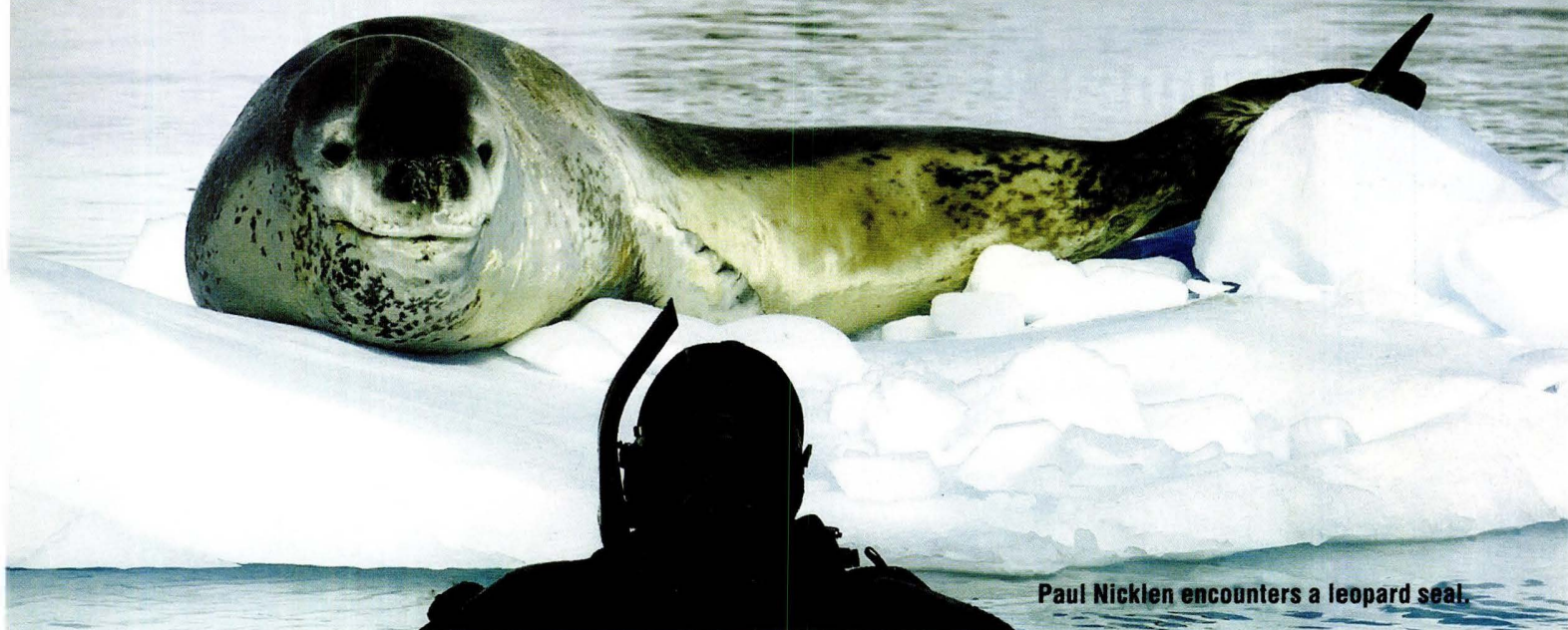
C With a partner, role-play an interview with Paul Nicklen. You will switch roles to each answer as Paul.

STUDENT 1 ASKS:

1. Paul, can you tell me about when you moved to Northern Canada?
2. Why did you become interested in leopard seals?
3. What were you thinking on the boat before you got in the water with a seal for the first time?

STUDENT 2 ASKS:

1. What was the most amazing moment you had with the leopard seals?
2. Why is it important to protect the polar regions?
3. Why are you worried about ice disappearing ?



Paul Nicklen encounters a leopard seal.

D Survey your classmates. Write a question for each item. Ask a different person each question. Ask a follow-up question for more details. Answer your classmates' questions.

- Andrea, have you ever lived in a different place?
- Yes, when I was 15.
- Where did you move?

	Question	Name	Details
1. live in a different place			
2. experience an extreme climate			
3. describe an incredible photo			
4. worry about climate change			
5. see an endangered animal			

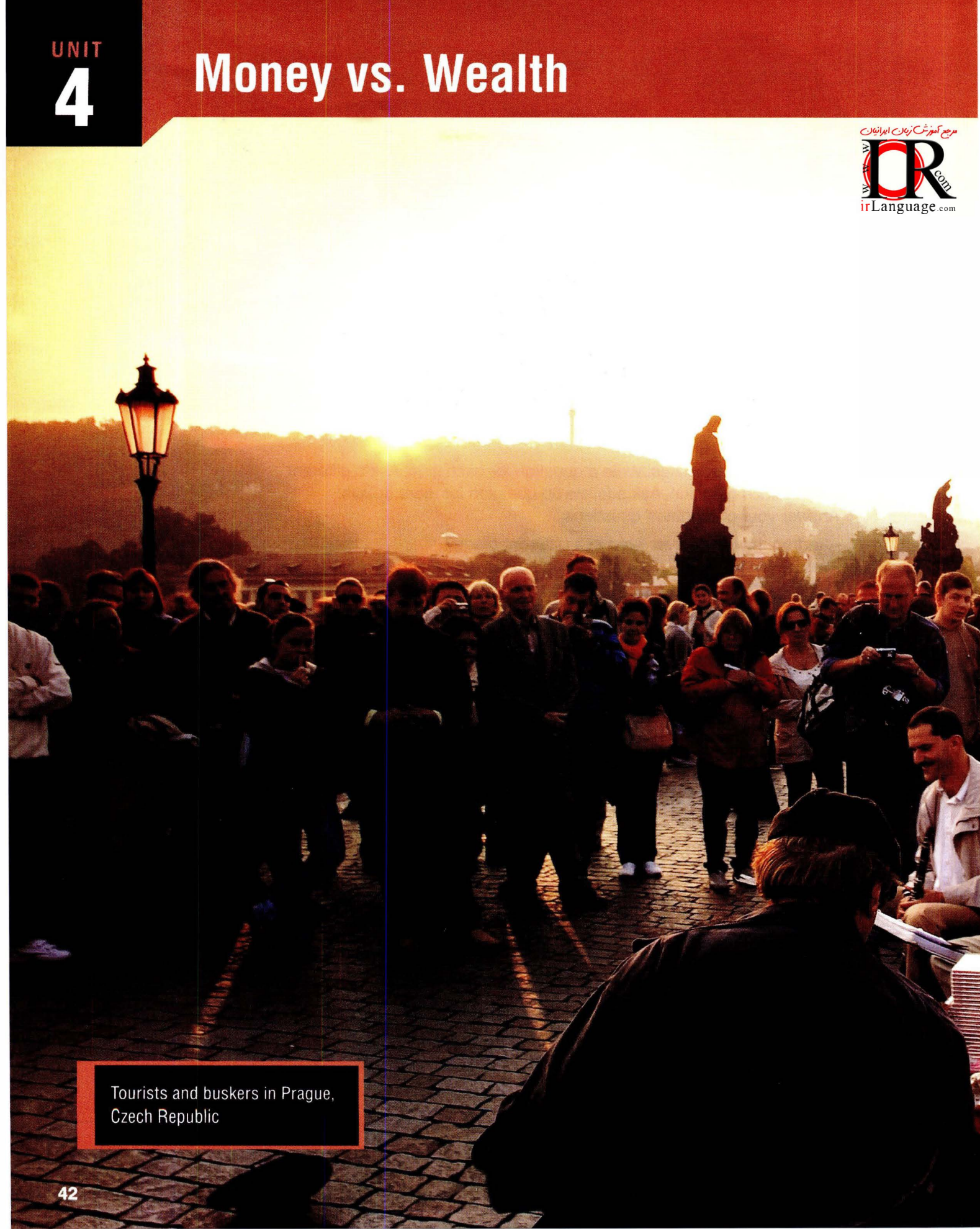
Challenge! Paul Nicklen talks about many more animals in his TED Talk. In groups of three, research his work. Pick another one of his projects and prepare a short presentation.

- Watch the full TED Talk, or visit his Web site to find more stories.
- Write a short summary of the area/animal Paul studied.
- Assign each member of the group a portion of the presentation.

Presentation Strategy

Using Visuals

Paul Nicklen uses many photos to make his talk more interesting.

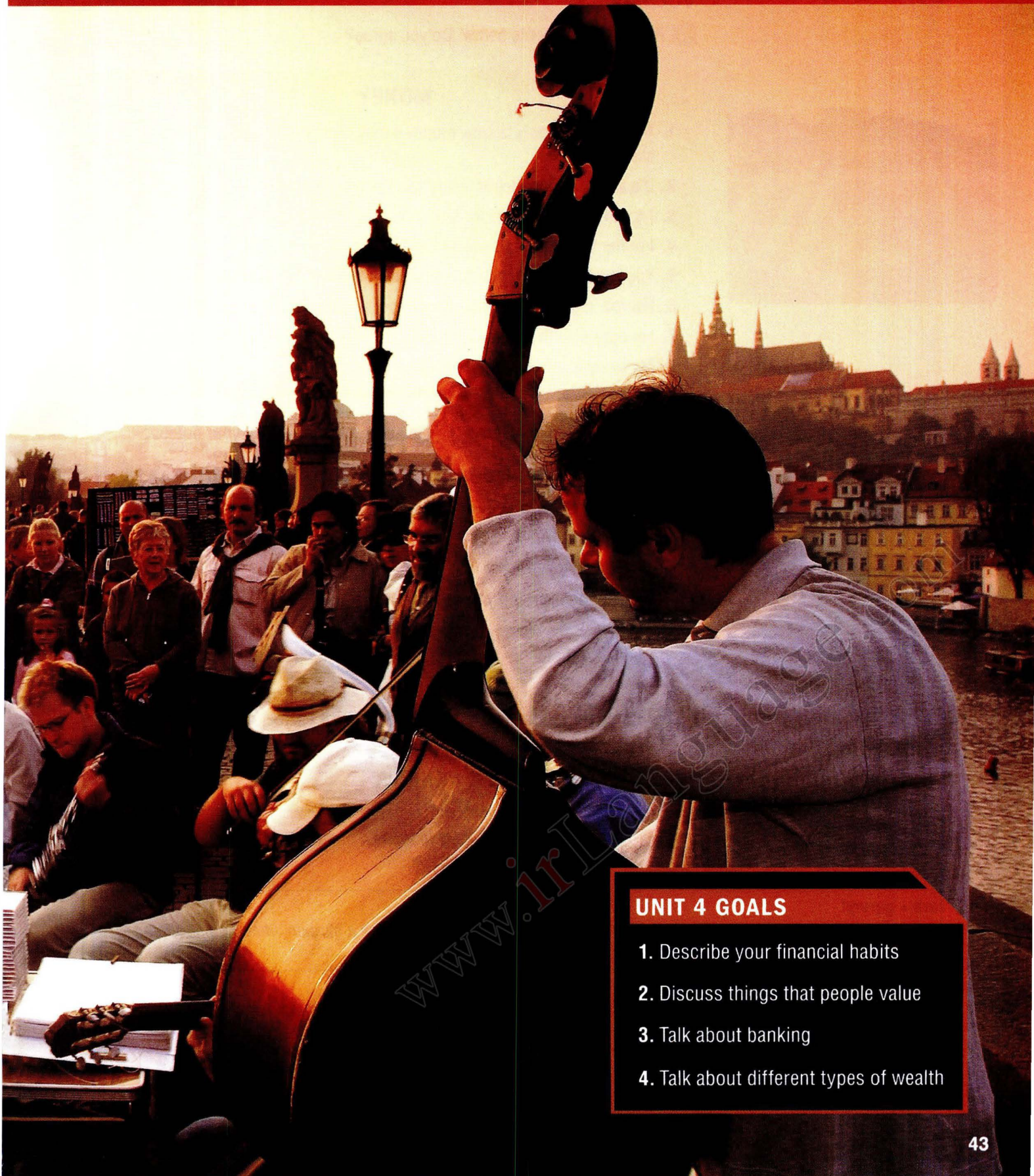


Tourists and buskers in Prague,
Czech Republic

Look at the photo,
answer the questions:

1 What are the people doing?
Why?

2 What are the buskers doing?
Why?



UNIT 4 GOALS

1. Describe your financial habits
2. Discuss things that people value
3. Talk about banking
4. Talk about different types of wealth

Vocabulary

A Read the statements below. Do you agree?




MONEY

1. People should only **borrow** money if they want to buy something big, like a car.
2. It's always a bad idea to **lend** money to your friends.
3. I try to make a **budget** for how I will spend my money.
4. I prefer to pay in **cash** when I buy things.
5. Young people can **have debt** because they can pay it back in the future.
6. For me, a good **income** is more important than an interesting job.
7. I'm careful with money, and I enjoy finding a **bargain** when I go shopping.
8. My living **expenses** are very high.

B Write the words in **blue** next to their correct meanings in your notebook.

- | | |
|---|---------------------------------------|
| 1. money in coins and bills | 6. money that you receive for working |
| 2. to receive a loan that you will return | 7. something good for a low price |
| 3. money that you spend | 8. money owed to a bank or a company |
| 4. a plan for spending your money | |
| 5. to give money to a person for a period of time | |

C  Compare your answers in exercise **A** with a partner's answers.

Grammar: Gerund vs. infinitive

Verb + infinitive We use infinitives after certain verbs, including: hope try want learn need promise decide agree	<i>I try to make a budget for how I will spend my money.</i>
Verb + gerund We use gerunds after certain verbs, including: avoid enjoy stop finish give up consider	<i>I enjoy finding a bargain when I go shopping.</i>
Verb + infinitive or gerund We can use infinitives or gerunds after certain verbs, including: like prefer hate begin continue love	<i>I prefer to pay in cash. Or I prefer paying in cash.</i>

A Complete the sentences with the infinitive or gerund of the verb in parentheses.

1. I decided _____ (save) money for a new computer.
2. Mark agreed _____ (work) on Saturdays so he can have Mondays off.
3. I stopped _____ (eat) in restaurants, and I learned _____ (cook) simple meals.
4. Loren hopes _____ (study) in Australia next year.
5. If you are in debt, you should avoid _____ (borrow) more money.
6. I'm trying _____ (get) a different job so I can have a higher income.

I hope to buy
a car next year.

Really? What
kind of car?

B Tell your partner about your money habits using the verbs in the box with gerunds or infinitives. Ask questions about things your partner says.

I love ... I hope ...
I decided ... I stopped ...
I usually avoid ...

Conversation

A Listen to the conversation with your book closed. When does the man go out with his friends?

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- Beth:** I love eating in restaurants, but it's so expensive now!
- Rick:** Yeah, I know. That's why I stopped going out for dinner. I meet my friends on Saturday at noon because lunch is a bargain at lots of places.
- Beth:** That's a good idea.
- Rick:** We like to eat in small, neighborhood restaurants. They're not so expensive.
- Beth:** And they usually have better food.
- Rick:** I think so, too. And one more thing—I avoid having dessert. That's another good way to save money.
- Beth:** You don't have dessert? That's a little too extreme for me!



B Practice the conversation with a partner.

C With your partner, list three ideas for how to save money on each of the things below. Make new conversations.

food clothes vacations

D Share your money-saving ideas with the class.

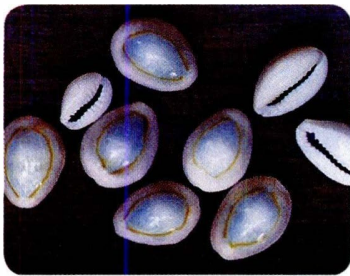
E **GOAL CHECK** Describe your financial habits

Are your money habits similar to your friends' habits or different? Tell a partner.

GOAL 2: Discuss Things That People Value



Two gold coins, one showing the head of Nero, a Roman emperor



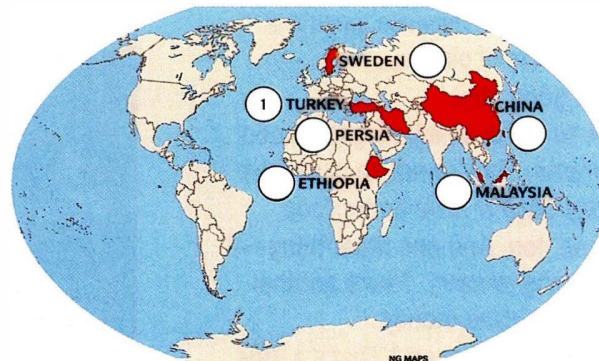
Listening

A 16 Listen to a radio program about the history of money. Circle the main idea of the program.

1. People have used many different things as money.
2. People's ideas about money have been the same for thousands of years.
3. Money causes different problems in people's lives.



B 16 Listen again and number the places on the map in the order that you hear about them.




C 16 Listen again. Circle **T** for *true* and **F** for *false*.

- | | | |
|--|----------|----------|
| 1. Coins were made in Turkey about 3,000 years ago. | T | F |
| 2. Paper money is older than coins. | T | F |
| 3. The people in Persia liked to use paper money because it was new. | T | F |
| 4. Coins and bills are the only kinds of money. | T | F |
| 5. The Native Americans in North America had a form of money. | T | F |

D Discuss these questions with a partner.

1. Why do people want money? Talk about as many reasons as you can.
2. Does having more money always make people happier? Explain your answer.

Pronunciation: Reduction of *to*

A  **17** The word *to* is usually pronounced very quickly, with a /ə/ sound. Circle the word *to* in these sentences, and then listen to the pronunciation.


1. The king told all the people to use paper money.
2. People began to use coins a long time ago.
3. I try to learn five English words every day.
4. I like to find a bargain when I go to the store.
5. He sent an e-mail to his parents to ask them for money.
6. We go to the library after class.


B  Read the sentences in exercise **A** to a partner. Pay attention to the pronunciation of *to*.

Communication

A Read the saying. What do you think it means?

The best things in life are free.

B  Make a list of things you enjoy that don't cost any money. Then share your list with a partner.

C  Your class is going to write a guidebook for people who want to have fun without spending money. Follow these steps:

1. With your group, list as many ideas as you can for fun activities that don't cost money in your notebook.

Things to do at home	Things to do with your friends	Things to do in your city

2. Write your lists on the board.
3. With the class, choose the best ideas in each category.

D  Which of the activities have you done? Which activities do you want to try?

E  **GOAL CHECK** Discuss things that people value

Work with a partner. Talk about things that people value in your country. Are these things different now than in the past? Why or why not?

Language Expansion: Banking

A Label the pictures with words from the box.

savings account teller PIN number deposit receipt ATM checking account withdraw



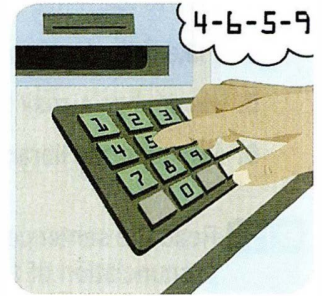
1. _____



2. _____



3. _____



4. _____



5. _____



6. _____



7. _____



8. _____

B Which of the things in exercise **A** do you have experience with?

Grammar: Review of the passive voice


Form the passive with: Subject + <i>be</i> + past participle (+ <i>by</i> agent).	The money is usually deposited by the store manager.
Affirmative statement Negative statement Yes/No questions Wh- questions	The receipt will be printed automatically. Bank tellers are not paid very much. Are credit cards accepted here? Where was that coin made ?
The focus of the passive is usually on the result of the action, not on who does the action (the agent).	Coffee is grown in Brazil (by farmers). We were not told about the quiz (by the teacher).
Use the passive with any verb tense. Change the form of <i>be</i> to show the tense.	Lunch is being served on the terrace. Gold coins have been used for a long time.
The agent, or <i>by</i> phrase, is included only if that information is important or surprising.	<i>Hamlet</i> was written by William Shakespeare. (important) That movie was made by two teenagers. (surprising)

A Read the article about how an ATM works, and fill in the verbs in the passive voice.

A man in Paris needs money from his bank in Washington. He goes to an ATM. In seconds, he receives 100 Euros from his savings account. How does this work?

The card (1) _____ (insert) into the machine, and the PIN (2) _____ (enter). The information (3) _____ (send) to the bank's computer. The computer sees that it's a foreign ATM card, so an electronic message (4) _____ (transmit) to the banking center in Belgium, and then to the center in Detroit, and finally to the bank in Washington. The account (5) _____ (check). If there is enough money in it, a message (6) _____ (return) to the ATM in Paris and the cash (7) _____ (deliver).

ATMs (8) _____ (invent) in the 1970s. At first, they (9) _____ (not use) very much. Now they (10) _____ (find) all around the world.

B  Work with a partner. Which of these sentences should include an agent? Why? Cross out the agent where it's not needed.

1. My computer was made ~~by factory workers~~ in Malaysia.
2. Our homework is collected every day by our teacher at the end of class.
3. I love to wear this dress because it was made by my grandmother.
4. While shopping in Central Market, Alex's wallet was stolen by a thief.
5. The ATM was introduced by Barclay's Bank.
6. The first paper money was used by the Chinese about 1,000 years ago.

Conversation

A  **18** Listen to the conversation with your book closed. How much money does the woman want?

Teller: Next? May I help you?

Annie: Yes. I need to withdraw \$100.

Teller: Please fill out this form and write your account number here.


Annie: OK.

Teller: Do you want to withdraw the money from your savings account or your checking account?

Annie: From my checking account, please.

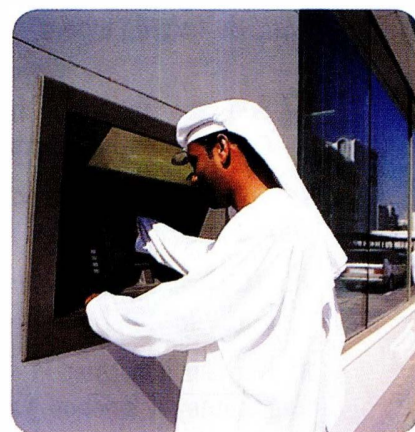
Teller: Here you are, \$100. And here's your receipt. Have a good day.

Annie: Thank you. You, too.

B  You want to do the things in the box. Make new conversations.

C  **GOAL CHECK**  Talk about banking

Do you think it's important to have a checking or savings account at a bank? Why or why not?



Engage!

How often do you use an ATM? Why?


Real Language

Here you are. People use this expression when they hand something to someone.


deposit \$200 in your
checking account
withdraw \$150 from your
savings account

GOAL 4: Talk About Different Types of Wealth

Reading

A  What things do you value most? Check (✓) the items in the list. Share your ideas.

- _____ 1. lots of money
- _____ 2. being healthy
- _____ 3. a nice house
- _____ 4. having a family
- _____ 5. your passion (music, sports, nature, etc.)
- _____ 6. helping others

B  Read the text. Circle the correct option. Compare your answers with a partner.

1. Robert Gupta is a talented
(doctor | musician).
2. Nathaniel Ayers studied music
(at a school | on his own).
3. Gupta is interested in
(money | science) as well as music.
4. Ayers spent many years living
(on the streets | in a hotel).
5. A (journalist | actor) named Steve Lopez wrote about Ayers.

C Write *True* or *False* next to the statements below.

- _____ 1. Robert Gupta began to play with the Los Angeles Philharmonic when he was 19.
- _____ 2. Gupta met Nathaniel Ayers on the streets of Los Angeles.
- _____ 3. A movie was made about Gupta's life.
- _____ 4. Ayers works as a professional musician now.
- _____ 5. Gupta will play music with Ayers any time he can.

TED Ideas worth spreading

Robert Gupta Violinist, Mental Health Activist

MUSIC IS MEDICINE, MUSIC IS SANITY

Even though some people believe that money makes the world go around, many people would choose health over wealth, opinion polls tell us. For someone like violinist Robert Gupta, who was on his way to becoming a physician before joining the Los Angeles Philharmonic at age 19, music, health, and wealth are all part of the same package.

In addition to music, Gupta is deeply interested in neurobiology. Because of his dual interests, he has had the chance to work with Nathaniel Anthony Ayers, a talented musician whose career was sidelined by **schizophrenia**. Although Ayers studied music at the Juilliard School in New York City, his mental illness got in the way of professional success.

After dropping out of Juilliard and having unsuccessful medical treatment for his schizophrenia, Ayers moved to Los Angeles where he ended up **homeless**. In 2005, a journalist for the *Los Angeles Times* named Steve Lopez heard Ayers playing music in the streets. Lopez wrote a book about Ayers and became his friend. Their friendship became the subject of a movie, and because of the book and the movie, Ayers has had a chance to perform his music in some of the most famous concert halls in the world.

It seemed like Ayers had found his happy ending. However, he refuses to take medication to treat his schizophrenia. He says it keeps him from "hearing the music." Because of this, Ayers is still **prone** to schizophrenic episodes and sometimes leaves his home to go back to the streets.

Gupta was introduced to Ayers after Lopez took his friend to a performance of Beethoven's First and Fourth **symphonies**, and Ayers asked Gupta for a violin lesson. When they first met, Ayers was agitated and on edge. Gupta was afraid that if he taught the

“The redemptive power of music brought him back into a family of musicians that understood him, that recognized his talents and respected him.”



Robert Gupta's idea worth spreading is that music can be medicine. Watch Gupta's full TED Talk on TED.com.

lesson in his usual way, Ayers would react violently. Finally, he just began playing. A change came over Ayers. Gupta said, "And in a miracle, he lifted his own violin and he started playing." The two musicians played many violin pieces together that day. A **bond** was formed.

Music, Gupta realized, is a way to deal with our emotions, even our most unpleasant ones. "This was the very reason why we made music (. . .) through our creativity, we're able to shape those emotions into reality," he says.

Now, Gupta says, "I will always make music with Nathaniel, whether we're at Walt Disney Concert Hall or on Skid Row, because he reminds me why I became a musician."

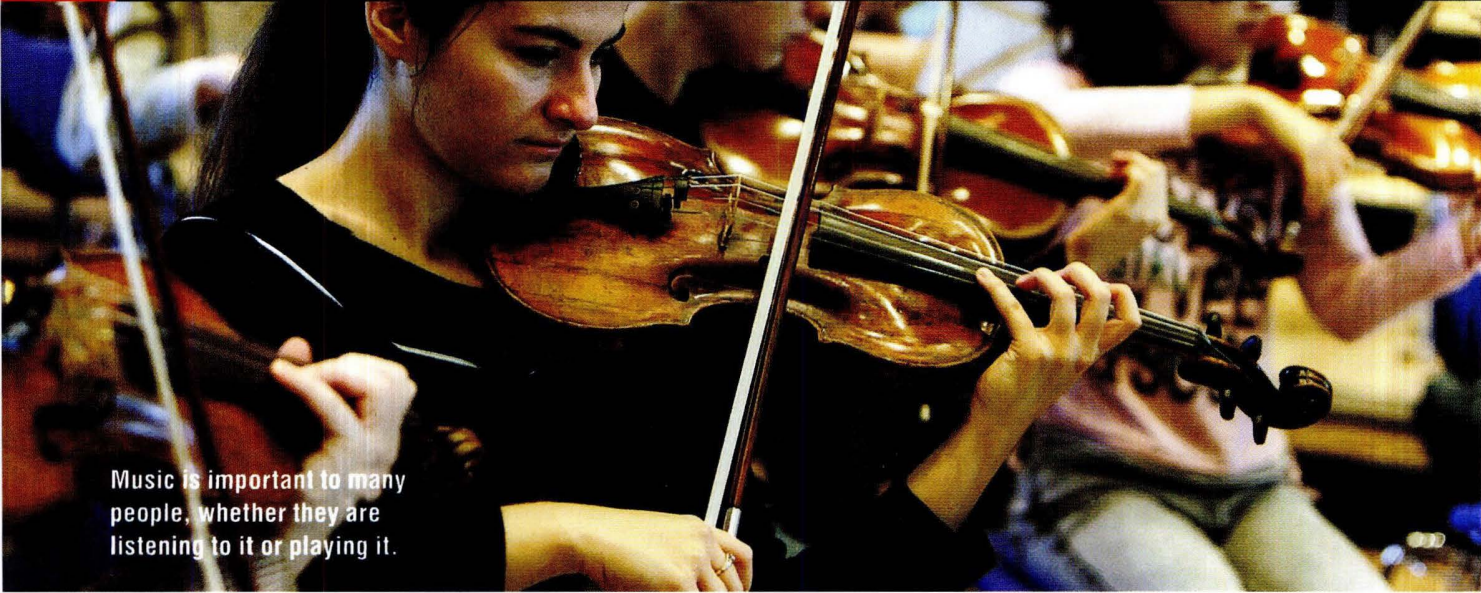
schizophrenia a very serious mental illness in which someone cannot think or behave normally and often experiences delusions

homeless having no place to live

prone likely to do, have, or suffer from something

symphony a long piece of music that is usually in four large, separate sections and that is performed by an orchestra


bond something (such as an idea, interest, experience, or feeling) that is shared and forms a connection between people



Music is important to many people, whether they are listening to it or playing it.

When he was young, Robert Gupta hoped (1) _____ (become) a doctor. However, he also loved (2) _____ (play) the violin. He finally decided (3) _____ (follow) his heart, becoming a professional musician when he was 19. One day, Gupta met Nathaniel Ayers, who was also a talented musician. However, because of mental illness, Ayers had given up (4) _____ (study) music. Gupta and Ayers played violin together, and Gupta saw that Ayers enjoyed (5) _____ (play) music for the music alone, not for money or fame. Gupta realized that music was more valuable to Ayers than anything else.

Communication

- A**  Think about the things that are valuable to you in life. How many of them can be bought with money? How many cannot?

Writing

- A** Complete the sentences with the passive form of the verbs.

1. Nathaniel Ayers _____ (discover) playing music on the streets.
2. His story _____ (tell) by journalist Steve Lopez.
3. A movie _____ (make) about Nathaniel Ayers in 2009.
4. Gupta and Ayers _____ (introduce) after a concert in L.A.
5. After they played together, a bond _____ (form) between Ayers and Gupta.

- B** Complete the paragraph in the box with the gerund or the infinitive.

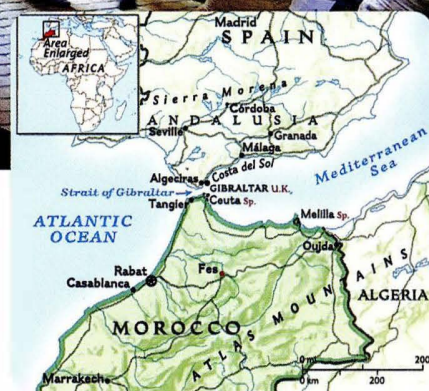
- C** Write a paragraph about the things that you value in life. Be sure to use gerunds and infinitives.

- D**  **GOAL CHECK**  Talk about different types of wealth

Share your ideas about what is valuable to you. Do you value music in the way that Gupta and Ayers do? What other things are valuable to you, and why? Give reasons for your opinions.



Marketplace in Marrakech



Before You Watch

- A** You are going to watch a video about shopping in a marketplace in Morocco. What do you think people can buy there? List your ideas in your notebook.


While You Watch

- A** Watch the video *Making a Deal*. Circle the things you see from your list.
- B** Watch the video again. Circle **T** for *true* or **F** for *false*. Correct the false sentences in your notebook.

- | | | |
|---|----------|----------|
| 1. In the souk, only the seller decides the price. | T | F |
| 2. Foreigners and Moroccans pay different prices in the market. | T | F |
| 3. If you aren't good at bargaining, you might pay 10 percent more. | T | F |
| 4. The vendors are trying to steal money from the shoppers. | T | F |
| 5. The hat shop is the most difficult place for tourists. | T | F |
| 6. Tourists can learn how to bargain by watching Moroccans. | T | F |

After You Watch/Communication

- A** Discuss the questions with a partner. Do you think bargaining for prices is a good system? Explain your reasons. Have you ever bargained for something? Talk about your experience.
- B** Try selling something by bargaining! Choose something you have with you now, such as your watch or cell phone. Think of a description and decide on the price you would like to sell it for. Show the item to a partner and describe it. Bargain until you agree on a price. Tell the class about the things you "bought" and "sold."

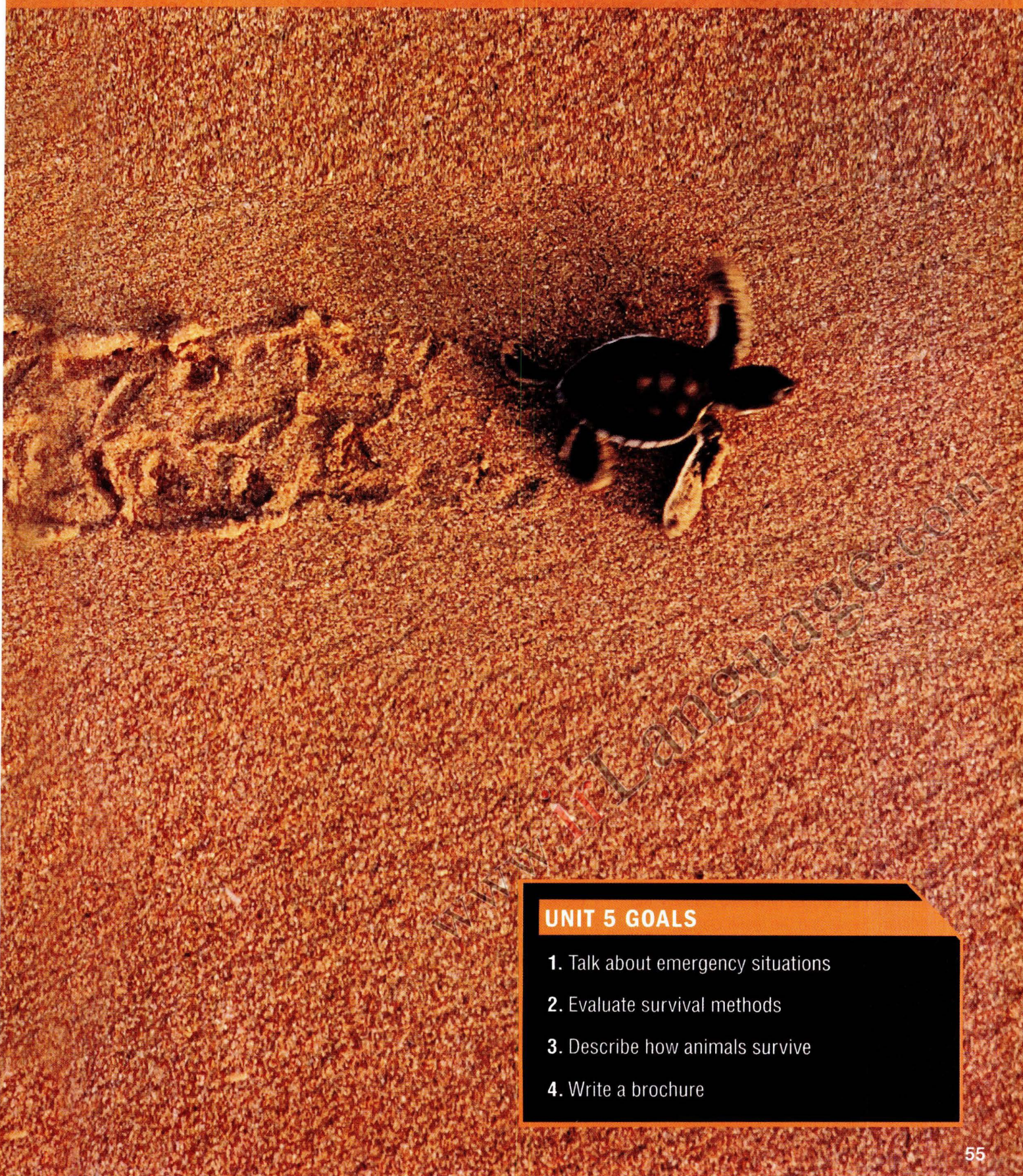


A green sea turtle hatchling runs to the sea leaving tiny tracks in Bentota, Sri Lanka.

Look at the photo,
answer the questions:

1 What do you see in
the picture?

2 How do animals survive in a
place like this?



UNIT 5 GOALS

1. Talk about emergency situations
2. Evaluate survival methods
3. Describe how animals survive
4. Write a brochure



▲ natural disaster

Vocabulary

A Read part of a survival brochure. Notice the words in blue.

Survival Advice

According to experts, there are several things you can do to increase your chances of survival in an **emergency** such as a fire, or a **natural disaster** such as an earthquake.

- **Preparation** can be the key to survival. Be sure you have food, water, and other **supplies** in your home. Having a backpack prepared for family members is a good idea in case you have to **evacuate** quickly.
- Before going camping, hiking, or mountain climbing, make sure you have the proper **equipment**. Tents, sleeping bags, and a **first-aid** kit can save your life in case of bad weather, injury, or illness.
- Staying calm can help you **cope** with any emergency **situation**. Swimmers, for example, sometimes get caught in strong ocean currents. If they **panic**, they may become exhausted and unable to swim. If they relax and swim slowly, they will have the energy to swim to shore once they are out of the current.

Word Focus

To **cope with** a situation means to deal with it successfully.

B Discuss these questions with a partner.


1. What kinds of natural disasters can happen where you live?
2. What equipment and supplies do people need to survive natural disasters?
3. What kind of emergency situation have you experienced in your life?
4. What happens when people panic in emergency situations?
5. What kind of preparation helps people to be ready to evacuate their homes?
6. What's the best way to cope with an emergency such as a heart attack?

Grammar: Unreal conditional in the present

Use the present unreal conditional to talk about a situation that is not true now.	If you were in an emergency situation, you would know what to do. (You're not in an emergency situation at the moment.)
Conditional sentences have two clauses: the condition clause and the result clause.	Condition: <i>if</i> + subject + past tense verb Result: subject + <i>would</i> + base form of verb
The condition clause can be at the beginning or end of the sentence.	I would bring a lot of warm clothes if I were you. If I were you, I would bring a lot of warm clothes.
When the verb <i>be</i> is in the condition clause, we always use <i>were</i> . (<i>Was</i> is only used informally.)	If the building were on fire, we would evacuate. If it was on fire, we wouldn't panic.
Note: Use a comma when the condition clause is at the beginning of a sentence.	


A Match the conditions to the results.

- | | |
|---|-------------------------------------|
| 1. If you fell from a high place, ____ | a. a doctor would diagnose it. |
| 2. If you planned for emergencies, ____ | b. if you were struck by lightning. |
| 3. You would die of thirst ____ | c. you would be better prepared. |
| 4. If you had a serious illness, ____ | d. you would break your leg. |
| 5. You would be electrocuted ____ | e. if you were in the desert. |

B  What would you do? Complete the sentences and then compare your ideas with your partner's ideas.

1. If I were bitten by a poisonous snake, I would _____
2. If this building were on fire, I would _____
3. If I were in a flood, I would _____
4. If I felt an earthquake happening, I would _____
5. If I had to buy supplies for a camping trip, I would _____


Conversation


A  **19** Close your book and listen to the conversation. What advice does Nathan give Isabel?

- Isabel:** Nathan, do you ever get worried?
Nathan: About what?
Isabel: Oh, you know—about things that can kill you.
Nathan: Sometimes I think about how we would get out of this apartment building if there were a fire.
Isabel: Right! Or what you would do if you were lost in the mountains after a plane crash!
Nathan: Well, that doesn't sound very likely.
Isabel: That's true, and I hope it never happens, but what if it did happen?
Nathan: Look, you can't worry about everything, but you can prepare for some things.
Isabel: Which things?
Nathan: Things that are more likely to happen, like fires or earthquakes.
Isabel: Good idea. Let's start by making an evacuation plan in case we need to get out of this building.



▲ Traffic caused by forest fire

B  Practice the conversation with a partner. Then switch roles and practice it again.

C  Make new conversations about the things you worry about.

D  **GOAL CHECK**  Talk about emergency situations

Talk with a partner about emergency situations that are likely to happen where you live. What would you do in these situations?



▲ Students practicing martial arts

Engage!

Did the callers on the radio show do the right thing? Is there anything you would do differently in those situations?

Notice

When people speak quickly, they sometimes shorten or reduce words. For example:

Do you → *D'ya*
Did you → *Didja*

Listening

A 20 Listen to a radio call-in show. What situations did the callers survive?

Caller #1: _____

Caller #3: _____

Caller #2: _____

B 20 Listen again. Circle the answers.

- When was Caller #1 in an emergency situation?
 - last week
 - last month
 - last year
- Where was Caller #2 when his emergency occurred?
 - at home
 - at work
 - at school
- What was the result of Caller #3's emergency?
 - cuts and bruises
 - serious injuries
 - a large payment

Pronunciation: Reduced speech: *D'ya* and *didja*

A 21 Listen and repeat.

Full form	Reduced speech
1. Do you know the answer?	1. <i>D'ya</i> know the answer?
2. Did you get the message?	2. <i>Didja</i> get the message?
3. Do you have a plan?	3. <i>D'ya</i> have a plan?
4. Did you take an aspirin?	4. <i>Didja</i> take an aspirin?

B 22 Listen to the questions and circle the form you hear.

- | | | | | | |
|----|------|---------|----|------|---------|
| 1. | full | reduced | 4. | full | reduced |
| 2. | full | reduced | 5. | full | reduced |
| 3. | full | reduced | 6. | full | reduced |

C Write two questions with *Do you . . . ?* and two with *Did you . . . ?* Then ask a partner your questions using reduced speech.

Communication



- A** Talk about the survival situations in the box with a partner. What kinds of problems would you face in each situation?

lost in a forest
vehicle broken down in a desert
trapped in a building after an earthquake

- B** Choose one of the survival situations from exercise **A**. Discuss with your partner how each of the items below could help you survive in an emergency. Then choose the three most useful items.

a blanket	a cell phone	a first-aid kit
water	a radio	matches
a knife	an empty can	a flashlight
a plastic trash bag	snack foods	a light-colored towel

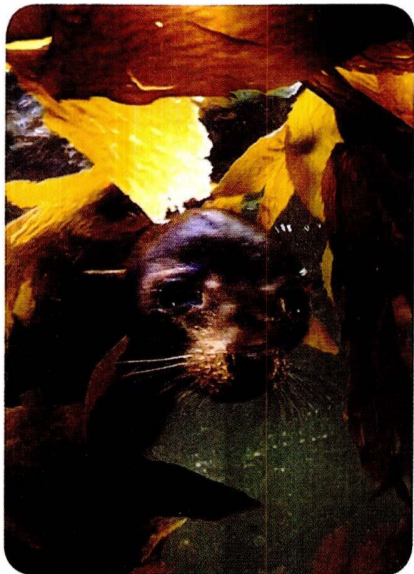
- C** Brainstorm ways in which the three items you chose in exercise **B** could help you to survive.

D **GOAL CHECK** Evaluate survival methods

Join another pair of students and compare the items you chose. Explain why each item you chose in exercise **B** would be very important in a survival situation.

Language Expansion: Environmental conservation

A Read the article. Notice the words in blue.



▲ A New Zealand fur seal swims through kelp.

New Zealand is doing something to protect its ocean **species**. The country has **banned** all types of fishing in 31 ocean **reserves**—areas devoted to the **preservation** of marine life.

When the first reserve was opened in 1977, many residents in the area were opposed to the idea. But when the fishing stopped, the **ecosystem** recovered quickly. The snapper returned to the area, and these **predatory** fish began to eat the sea urchins that had destroyed many ocean plants. As the ocean habitat was **restored**, **endangered** species increased in number.

Surprisingly, New Zealand's coastal reserves have also helped the fishing industry. Fish eggs and baby fish drift outside the reserves into surrounding areas where fishing is allowed. Today, commercial fishermen are some of the strongest defenders of the reserves.

B Fill in each blank with one of the words in blue.

1. Parts of the ocean where you can't go fishing are called _____.
2. _____ animals eat other animals.
3. When something is _____, it goes back to the way it was before.
4. A _____ is a certain kind of plant or animal.
5. When something is _____, it is prohibited by law.
6. _____ means keeping or maintaining something.
7. An _____ is plants and animals in a certain area.
8. An _____ species might become extinct.

Engage!

Do you think fishing or hunting should be banned where you live? What other ways can you think of to preserve plant and animal species?

Grammar: *Wish* in the present

We use <i>wish</i> when we want things to be different than they really are.	I wish I didn't have to get up early. (In reality, I do have to get up early.)
The verb after <i>wish</i> is in the past tense.	I wish the fish were protected. (They're not protected.) I wish you spoke Russian. (You don't.)
After <i>wish</i> , the auxiliary verbs <i>can</i> or <i>will</i> change to <i>could</i> or <i>would</i> .	We wish you could come to our house. I wish they would ban fishing here.

A Fill in each blank with the correct form of the word in parentheses.

1. I wish I _____ (know) the answer, but I'm afraid I can't help you.
2. I wish I _____ (live) in New Zealand.
3. Akira wishes he _____ (can) do more to help wildlife.
4. I wish people _____ (not, kill) so many wild animals.
5. Many people wish they _____ (have) more money.
6. I wish my best friend _____ (be) here. I want to talk to her.

B Use the ideas below to tell your partner about things you wish were different than they are. Add two ideas of your own to share with the class.

Tigers and pandas are endangered. People destroy animal habitats.
People kill elephants for their tusks. _____
People catch sharks for shark fin soup. _____

Conversation

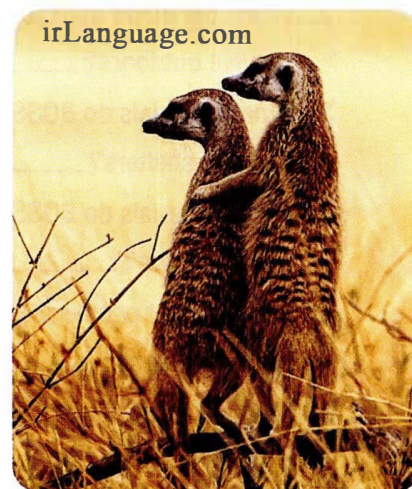
A Close your book and listen to the conversation. In what ways do meerkats cooperate in order to survive?

- Andrew:** Do you ever wish you were an animal?
Caleb: Sure. Sometimes I wish I were a bird so I could fly.
Andrew: I wish I were a meerkat.
Caleb: A meerkat? What's that?
Andrew: It's an African animal. It survives by living in groups and cooperating.
Caleb: How do they cooperate?
Andrew: When there's a predator nearby, they make a warning sound. Then all the meerkats go into their holes.
Caleb: That sounds helpful. What else do they do?
Andrew: They babysit for each other. That way, the parents have a chance to find food.
Caleb: I see what you mean. They're a very social animal.
Andrew: Right, and if I were a meerkat, I wouldn't have to carry these boxes by myself. I could get some help from you!
Caleb: Oh, sorry. Can I give you a hand with those?

B Practice the conversation with a partner. Then switch roles and practice it again.

C **GOAL CHECK** Describe how animals survive

Work in a group. Make a list of several animals and discuss some of the things these animals do to survive. Tell your group which animal you wish you were and why.




▲ Two meerkats guarding the group

Real Language


When you *give someone a hand*, you help them do some work.

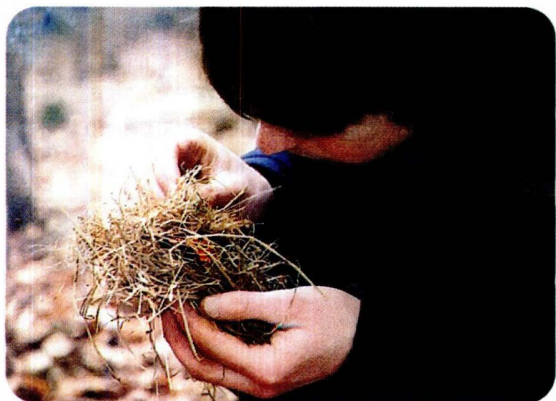
Reading

- A**  What happens at a survival school?
Discuss with a partner. List three activities you think you will read about in the article.
-
-
-

- B** Answer the following questions. If necessary, look back at the article.

1. Give two reasons people might want to visit southern Utah. _____
2. When did BOSS start teaching people to survive outdoors? _____
3. What materials do BOSS students use to make shelters? _____
4. What materials do BOSS students use to make a fire? _____
5. What kind of people can participate in BOSS courses? _____
6. What do BOSS students like about survival school? _____

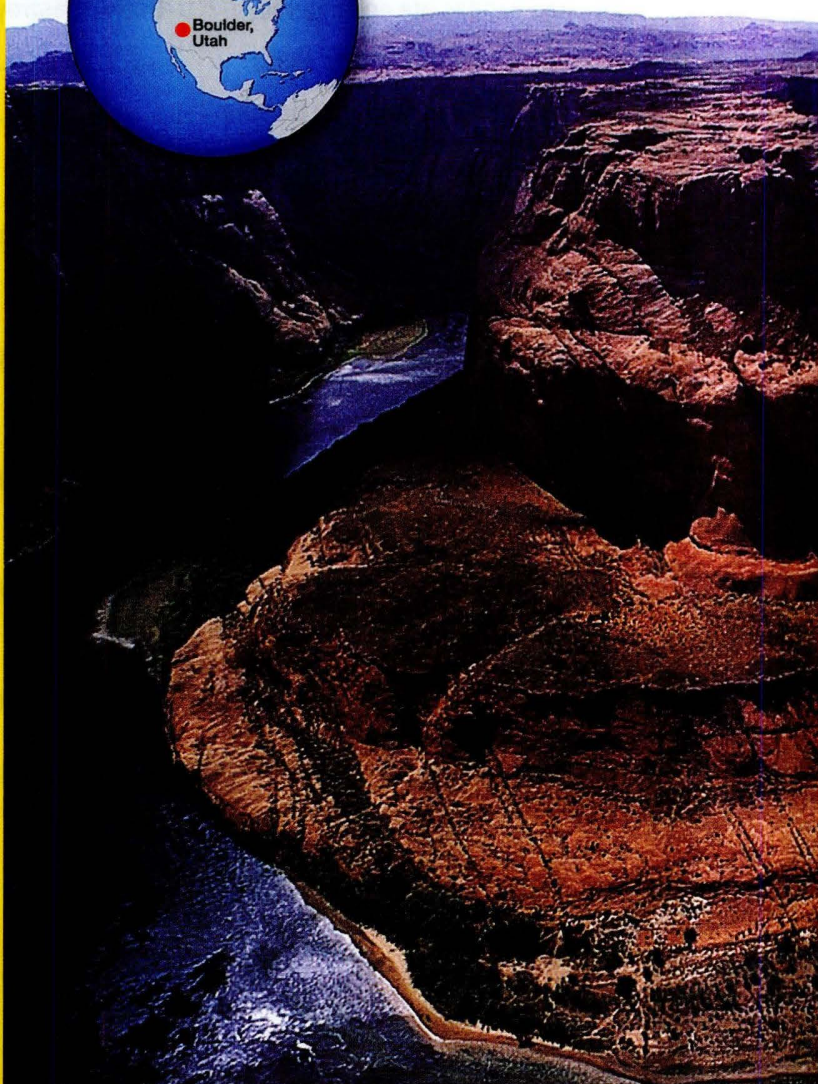
- C**  Tell a partner about the kind of challenges you enjoy. Then talk about a specific experience in your life that has increased your confidence.



▲ Lighting dry tinder by blowing on ember

Boulder, Utah, USA

SURVIVAL SCHOOL



Big Bend in Colorado River, near Lake Powell,
Utah, Arizona, USA

***purify** to make safe to drink **brush** dry plants and sticks used for burning
endure to continue with an activity over a long period of time
canyon a narrow, steep area between two mountains
enthusiast a person who is very interested in an activity or subject*



Southern Utah in the United States is a land of extremes. The normally dry desert is occasionally drowned in summer rainstorms. The high altitude of Utah's mountains makes the days very hot and the nights very cold. It is also a beautiful place with a long history of human habitation. Utah is named after the Ute tribe of Native Americans, and before the Ute, the Anasazi people made their home there.

Perhaps it's no surprise that modern outdoor adventurers come to southern Utah to go hiking, camping, and horseback riding in the area's national forests, or to see the fantastic rock formations in Bryce Canyon National Park. What might surprise you is that some of the adventurers choose to spend their time outdoors with little food or water and no modern camping equipment. Instead, they're learning to live in the wilderness the old-fashioned way.



The Boulder Outdoor Survival School (BOSS), founded in 1968, is the world's oldest survival school. With its philosophy of "Know more; carry less," BOSS teaches its students techniques for surviving outdoors without tents, backpacks, or sleeping bags. Participants learn to make shelters from leaves or snow, to find and **purify** water for drinking, and to eat what they can find in the wild. The students and instructors end their day around a crackling campfire, but the fire is made using stones and **brush** from the area, not matches.

The school's courses are not for everyone. Students must arrive in excellent physical health in order to **endure** hikes of up to 30 miles through Utah's deserts and **canyons**. They must be active learners because they'll need all the skills the BOSS instructors teach them in order to survive a field course, which can last from one week to one month. The field course also includes "solo" time, when students are tested in a very real way on everything they've learned.

For the people who take BOSS's courses, there is nothing better. If they wanted to spend time outdoors in comfort, they would pack their camping equipment and perhaps their GPS system and join the rest of Utah's outdoor **enthusiasts**. Instead, these campers love the way BOSS challenges their minds and bodies. And the confidence they gain from knowing how to survive without a lot of technology is the reward these brave people are looking for.

Survival school activity at night

Communication




- A**  Think of a place in your country where a survival school would work well. Make a list of several reasons why it would be a good place for a survival school. Then list things the students would learn and experience.
- B**  Get together with another pair of students and compare your lists. Try to agree on which location would be the best for a survival school.

Compound Sentences

Connect clauses and show relationships between ideas with *and*, *or*, *but*, and *so*.

*Students must survive alone in the forest, **but** they have all the supplies they need, **so** they will be safe.*

Writing

- A** Follow the directions below.
1. Choose one of the locations you discussed in the Communication exercise and write two paragraphs for an advertising brochure.
 2. In the first paragraph, describe the place and explain why it's a good location.
 3. In the second paragraph, describe the things students do and learn at the school. Use compound sentences if possible.
- B**  Exchange brochures with a partner and answer the questions. Does the information in the first paragraph help you to imagine the place? Does the information in the second paragraph make the school sound interesting? Does your partner use compound sentences to show relationships between ideas?
- C**  **GOAL CHECK**  **Write a brochure**
- Tell your partner which parts of his or her brochure you like the most. Suggest other details your partner could add.



Before You Watch

- A** Chinchero, Peru, is a small village in the Andes Mountains. Underline the ways you think the Chinchero villagers might make their living.

herding animals such as sheep
raising crops such as potatoes
working in big office buildings

selling local crafts to tourists
managing a large discount store
teaching at local schools

While You Watch

- A** Circle **T** for *true* and **F** for *false*. Make the false statements true.

- | | | |
|--|----------|----------|
| 1. Sheep are raised for their wool in Chinchero. | T | F |
| 2. Many of the men in Chinchero are farmers. | T | F |
| 3. Many of the women in Chinchero weave textiles. | T | F |
| 4. Farming is the only way to make money in Chinchero. | T | F |
| 5. Older women teach weaving to younger women. | T | F |

- B** Watch the video again and take brief notes to answer these questions:

- How does weaving contribute to economic survival in Chinchero?
- How does weaving contribute to cultural survival in Chinchero?

After You Watch / Communication

- A** Design a tourism brochure with a brief description of traditional products made where you live.
- B** You are members of the Center for Traditional Textiles cooperative. Brainstorm a list of new ways to market and sell products.



Guggenheim Museum Bilbao
in Bilbao, Spain

ok at the photo,
answer the questions:

1 What is this a picture of?
Where is it?

2 Do you like it? Why or
why not?

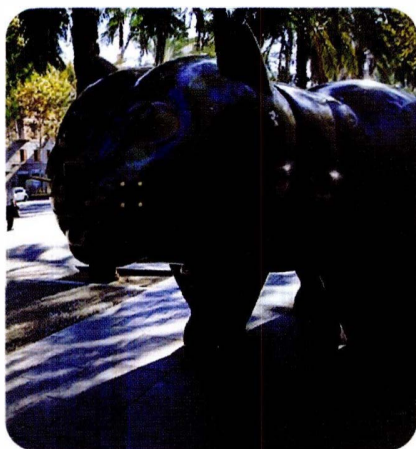


UNIT 6 GOALS

1. Report what another person said
2. Express your opinions about a piece of art
3. Describe your favorite artists and their art
4. Talk about public art

Vocabulary

A Read the article. Notice the words in blue.



▲ Botero sculpture in Ramble del Ravel, Barcelona, Spain

Public art is an enjoyable part of daily life in Singapore. Large **sculptures** and colorful **paintings** called murals can be found in parks, shopping centers, and along this island nation's coastlines. The artistic **styles** range from quite **realistic** to completely **abstract**.

Some of the art is by well-known artists from other countries, including Fernando Botero of Colombia. His sculpture of a bird **represents** peace and optimism. Sculptures by Singaporean artist Chong Fah Cheong **depict** people living and working in traditional ways along the Singapore River. Since Chong didn't study art formally, he developed his **techniques** for sculpting metal on his own.

Public art in Singapore is supported by businesses and government, and whether or not people are **aware** of it, the art contributes to a high quality of life for people in this vibrant and culturally **diverse** city.

B Write the words in blue next to their meanings in your notebook.

- | | |
|---|----------------------------------|
| 1. methods or procedures | 6. art made from solid materials |
| 2. similar to real life | 7. not a concrete thing |
| 3. to paint or draw a person or a thing | 8. knowing that something exists |
| 4. having a lot of variety | 9. pictures on a flat surface |
| 5. is a symbol for something | 10. kinds of artistic design |

Grammar: Reported speech

Use reported speech to say what another person said. The word <i>that</i> is optional.	"I'm an artist." Meg said (that) she was an artist.
The verb in reported speech usually changes: 1) from present to past 2) from past to past perfect	"I paint every day." He said that he Painted every day. "I won an award." She said she had won an award.
Pronouns usually change in reported speech.	" We saw some sculptures downtown." Tom told me they had seen some sculptures downtown.
Other words can also change in reported speech.	"I'm returning the books tomorrow ." She said that she was returning the books the next day .

A Read what Andy Chao, Young Artist of the Year, said in an interview. Write his statements in reported speech.

1. "I make sculptures with glass and metal." He said he
2. "My newest sculpture is 10 meters tall." _____
3. "I'm flying to Germany tomorrow." _____
4. "I don't know how long I'll stay in Berlin." _____
5. "I'm going to show my work in a famous gallery." _____
6. "I can't talk about my next sculpture." _____

B Think about the last time you talked to your best friend on the phone. Use reported speech to tell your partner about the conversation.

Carmen said she was having a very bad day.

Really? What happened?

Conversation

A Listen to the conversation with your book closed. What did Jennie's brother say about the paintings?

- Mia:** Hi, Jennie. What did you do over the weekend?
Jennie: Nothing special on Saturday, but on Sunday I went to the student painting show at the art institute.
Mia: You're kidding! I thought you didn't like art very much.
Jennie: Not usually, but my brother told me about the show. He said the paintings were amazing.
Mia: So, what did you think of them?
Jennie: I thought they were great! A lot of them were realistic, with the most wonderful details.
Mia: Did you meet any of the artists?
Jennie: Yes, I met one of them. She told me her painting represented energy. It was just three blue circles!
Mia: That sounds pretty abstract.

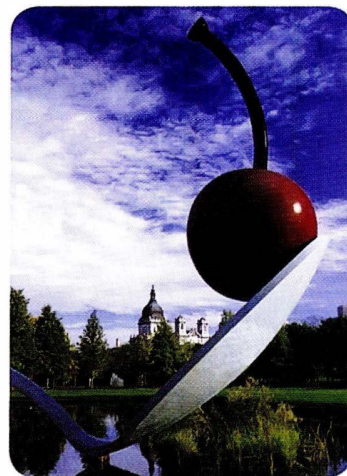
B Practice the conversation with a partner. Then make new conversations about the picture on the right.

C **GOAL CHECK** Report what another person said

What did your partner say about the picture in exercise B? Tell a new partner. Use reported speech.

Real Language

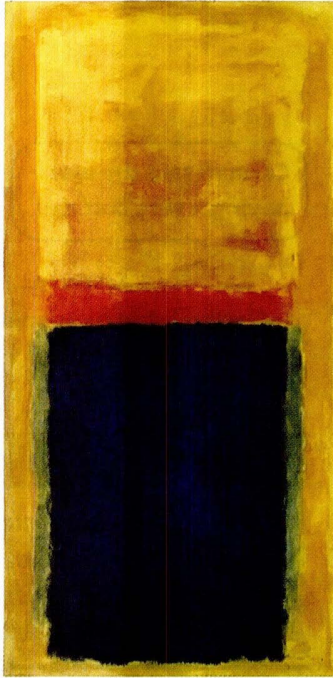
You're kidding! is an informal expression that shows you're surprised or don't believe what the other person said.



▲ sculpture garden

GOAL 2: Express Your Opinions About a Piece of Art

Painting A is abstract,
but I think it represents
feelings.



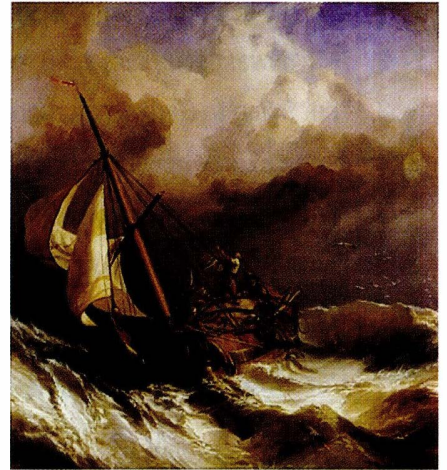
a.

Listening

A Look at these paintings.
Describe them to a partner.



b.



d.



c.



e.

Engage!

Which of the paintings do you
like the most? Why?

B You are going to hear conversations in a museum about three of these paintings. Write the letter of the painting the people are talking about.

Conversation 1: _____ Conversation 2: _____ Conversation 3: _____

C Listen to the conversations again. What did the people say about the paintings? Circle the correct answer.

Conversation 1

1. The man said the painting was (interesting/boring).
2. The woman said the painting was (peaceful/beautiful).

Conversation 2

3. The man said the painting was (abstract/dramatic).
4. The woman said the painting was just colored (lines/shapes).

Conversation 3

5. The man said the scene in the painting was (happy/realistic).
6. The woman said the painting was (bright/large).


D Do you agree with the man's ideas about the paintings? Explain your answers to a partner.

Pronunciation: Thought groups


When speaking, we usually divide long sentences into phrases called “thought groups.” These groups are on one topic or are part of one grammatical structure. A thought group usually 1) has one focus word, and 2) ends with a falling intonation and sometimes a slight pause.

A  **26** Listen and repeat these sentences. Notice the thought groups.


1. Ruth said | that abstract sculptures | were her favorite | kind of art.
2. The realistic sculpture | of children going swimming | is called *The First Generation*.
3. “Let’s come back tomorrow,” | said Lee, | “when the museum | is less crowded.”
4. In the evening, | we like to walk | along the river.
5. Moneera said, | “If you like this painting, | you can buy a print | from the gift shop.”
6. The instructor said | we had done well | on the quiz, | which made us happy.

B  With a partner, underline the focus word in each phrase.


1. I really like the painting | because it represents freedom.
2. Johan told Maria | she could see the sculptures | in McKinley Park.
3. “In a moment,” | said Mr. Wong, | “we’ll go upstairs | to see the paintings.”
4. He said | we were leaving | in an hour.
5. I didn’t realize | that most of her techniques | were developed in Malaysia.
6. Cindy said, | “If we don’t leave soon, | we’ll be late | for the concert.”

C  **27** Listen to the sentences from exercise **B** and check your answers. Then practice saying the sentences with your partner.

Communication

A  Discuss the paintings on the previous page and pick the best one to hang in each of these places.

- a very expensive restaurant
- the living room of a family apartment
- the waiting room in a hospital
- the office of a company president

B  Explain your decisions to the class. Use thought groups to divide your longer sentences.

C  **GOAL CHECK** Express your opinions about a piece of art

Which of the paintings do you like the least? Explain your opinion to a partner.

Content words have a specific meaning, not just a grammatical function. They include:

nouns

verbs

question words

adjectives

adverbs

The **focus word**, often the last content word in a sentence or phrase, receives extra emphasis.

Center Valley Arts and Crafts Fair

Don't miss your chance to buy directly from well-known artists! You'll find:

Jewelry – **Silver** earrings and bracelets for yourself or for gifts

Pottery – Cups, containers, and other items made from **clay**

Sculptures – Beautiful figures made from **wood**, **stone**, or **bronze**

Art Glass – Colorful, decorative items handmade from **glass**

Clothing and Bags – Scarves, vests, and purses made from **textiles** and **leather**

The Fiori di Como chandelier by glass sculptor Dale Chihuly

Language Expansion: Art materials

A Read the advertisement and notice the words in **blue**.

B Write each word in **blue** next to its definition. Use a dictionary to help you.

1. _____ semi-hard material from trees
2. _____ material made at high temperatures
3. _____ any kind of woven cloth
4. _____ expensive, light-colored metal
5. _____ soft material made from earth and water
6. _____ material made from animal skin
7. _____ dark-colored, brown metal
8. _____ hard material found in the ground

C  What are some traditional crafts from your country? What are they made of?

Grammar: Subject adjective clauses

You can meet people. (They make traditional crafts.)
You'll find presents. (They are perfect for all your friends.)
An artist has strong hands. (He works with clay.)

You can meet people **who make traditional crafts**.
You'll find **presents that are perfect for all your friends**.
An artist **who works with clay has strong hands**.

* An adjective clause modifies (gives more information about) a noun. It comes after the noun.

* Use **who** in adjective clauses about people, to replace *he*, *she*, or *they*.

* Use **that** in adjective clauses about things, to replace *it* or *they*. We can use **which** instead of **that** in more formal sentences.

A Write sentences with adjective clauses about these artists' works. Use the information in the box.


1. A painter is a person who paints pictures.
2. A poet _____
3. A songwriter _____
4. A sculptor _____
5. An author _____
6. A director _____

paint pictures
write books
make movies
write poems
carve statues
write pop songs


B Write sentences with subject adjective clauses that modify the underlined word.

1. I bought a pot. It was made in Korea. I bought a pot that was made in Korea.
2. Jenna has two brothers. They are artists. _____
3. The woman is from Brazil. She lives next door. _____
4. Everyone learned a lot. They took the class. _____
5. Where is the book? It was on the table. _____
6. I don't like those paintings. They are hard to understand. _____

Conversation

A  28 Listen to the conversation with your book closed. What kind of crafts does Carrie like?

- Emily:** Where did you get that jacket, Carrie? It's really beautiful!
- Carrie:** Thank you! I bought it in the Fair Trade store. They have crafts from all different countries, and they pay the artists a fair price.
- Emily:** Sounds interesting. What else do they have there?
- Carrie:** Oh, lots of cool things! I also bought some coffee cups from Mexico, and I've been using them every day. I really like crafts that are useful.
- Emily:** Do you? For me, the most important thing is the style. I want crafts that look handmade—not like they came from a machine.
- Carrie:** Well, I'm sure you can find something you like there.
- Emily:** Next time you go, I'd like to go along.

B  Practice the conversation with a partner. Then make new conversations about these things. Use your own opinions.

paintings cooking utensils clothes

I like clothes that don't cost too much!

C  **GOAL CHECK**  Describe your favorite artists and their art

Work with a partner. Take turns describing your favorite artists and their creations. Use subject adjective clauses in your descriptions.

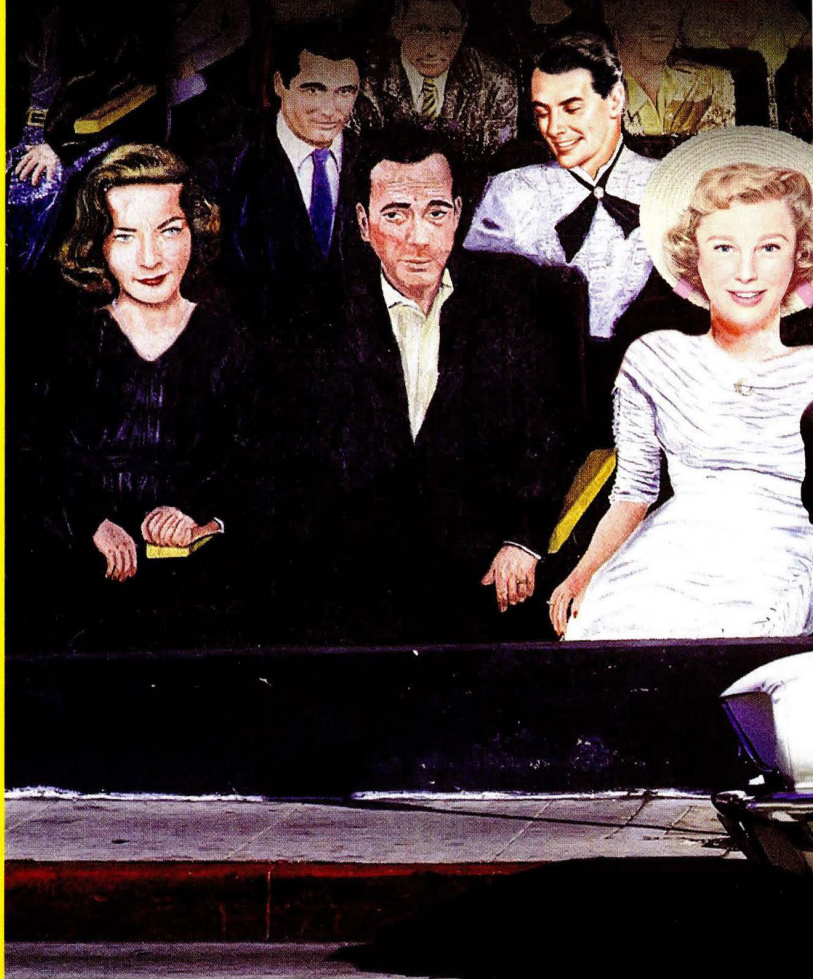
Reading

- A** List all of the places where you can see art in your city. What can you see in each place?
- B** Read the article. Match the sentence parts to show the reasons.
- | | |
|--|---|
| 1. The murals are in bad condition ____ | a. because it is unusually long. |
| 2. Artists didn't maintain the murals ____ | b. because of dirty air and hot weather. |
| 3. Artists in L.A. started painting murals ____ | c. because people drive through it. |
| 4. Judith Baca's mural is special ____ | d. because so many people see them. |
| 5. Kent Twitchell calls his mural a gateway ____ | e. because it was difficult and dangerous. |
| 6. Many artists like murals ____ | f. because they liked the work of Mexican artists. |
- C** Discuss these questions with a partner.
- Describe the mural in the picture. What do you think it represents?
 - What is your opinion of this mural? Explain your answers.
 - Would murals like this be popular in your city? Why or why not?

People like art that makes them smile!

Los Angeles, California, USA

SAVING A CITY'S



Avoiding L.A.'s traffic jams may be impossible, but the city's colorful highway murals can brighten even the worst commute. Paintings that depict famous people and historical scenes cover office buildings and highway walls all across the city. With a collection of more than 2,000 murals, Los Angeles is the unofficial mural capital of the world.

But a combination of graffiti, pollution, and hot sun has left many L.A. murals in terrible condition. In the past, experts say, little attention was given to caring for public art. Artists were even expected to maintain their own works—not an easy task with cars racing by on the highway! Now the city is beginning a huge project

PUBLIC ART



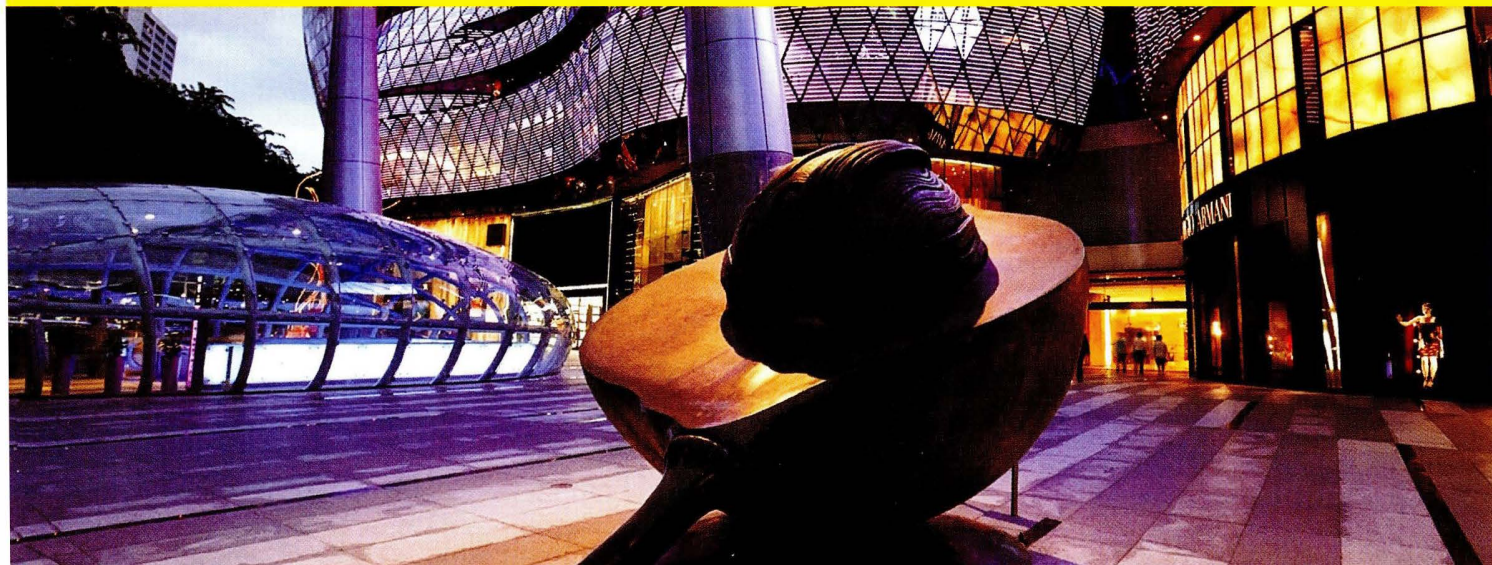
to **restore** its murals. So far, 16 walls have been selected, and more may be added later.

Until about 1960, public murals in Los Angeles were rare. But in the '60s and '70s, young L.A. artists began to study early 20th-century Mexican mural painting. Soon, the young artists' own murals became a symbol of the city's cultural diversity.

The most famous mural in the city is Judith Baca's "The Great Wall," a 13-foot-high (4-meter-high) painting that runs for half a mile (0.8 kilometer) in North Hollywood. The mural represents the history of different **ethnic groups** in California. It took eight years to complete, with 400 teenagers painting the designs, and is probably the longest mural in the world.

One of the murals that will be restored is Kent Twitchell's "Seventh Street Altarpiece," which he painted for the Los Angeles Olympics in 1984. This **striking** work depicts two people facing each other on opposite sides of the highway near downtown Los Angeles. "It was meant as a kind of **gateway** through which the traveler to L.A. must drive," said Twitchell. "The open hands represent peace." Artists often call murals *the people's art*. Along a busy highway or hidden in a quiet neighborhood, murals can reach people who might never pay money to see fine art in a museum.

restore return to original condition **ethnic groups** people from a certain culture
striking visually impressive **gateway** opening in a wall or fence



▲ *Nutmeg and Mace* by
Kumari Nahappan

**We want a sculpture that
will represent the children
of this community.**

**It will be in the park which is
near the elementary school.**

Communication

A Imagine your group is in charge of planning a new piece of public art for the area near your school. Discuss the questions.

1. What kind of art will you have: a mural, sculpture, stained glass window, or something else?
2. Where will the art be located, and why is it a good location for the art?

B Draw a picture of the public art piece your group imagined in exercise A. Present your group's ideas to the class, using adjective clauses to describe the art and location.

Writing

A Write one or two paragraphs about a work of public art that you like. Describe what the art looks like, what it represents, and explain why you like it.

B Exchange your writing with a partner. Read your partner's writing carefully.

C **GOAL CHECK** **Talk about public art**

Use reported speech to tell another pair of students what your partner wrote about in his or her paragraph.

My partner wrote about the mural on Main Street. She said it is in a realistic style, and that it represented the history of exploration.

Writing Strategy

Provide plenty of details to help the reader imagine the thing you're describing.

A Rabari herdsman with his animals in India

Award-winning photographer Steve McCurry has spent over 30 years traveling the world and taking pictures of the people he meets. He has traveled to India many times and documented that country's rich cultural diversity. In this video, McCurry discusses the people and culture of Rajasthan—a state in northern India.

Before You Watch

- A** Read about National Geographic photographer Steve McCurry. What do you think are the positive aspects of working as a photographer?
- B** Discuss the questions with a partner.
1. Do you enjoy photographing people? Why or why not?
 2. What must a photographer do in order to take good pictures of people?

While You Watch

- A** Take notes on things you see in the video.
1. The land in Rajasthan _____.
 2. Making a living in Rajasthan _____.
 3. Clothing in Rajasthan _____.
 4. McCurry's behavior _____.
- B** Fill in the blanks with words you hear in the video.
1. McCurry's first job after college was working for _____.
 2. The state of Rajasthan is on India's border with _____.
 3. McCurry says going to Rajasthan is like going to another _____.
 4. McCurry thinks it's the _____ that tells a story, not the eyes or any one particular feature.

After You Watch / Communication

- A** Discuss the quotation with your classmates. What do you think McCurry means?

There's no place in the world that has the depth of culture like India.

BUILDING A MUSEUM OF MUSEUMS ON THE WEB

Before You Watch



A Look at the picture and answer the questions with a partner.

1. Where is this person? What is he doing?
2. Why do people go to museums?
3. When was the last time you went to a museum? What did you see there?

B In his TED Talk, Amit Sood describes a very unusual museum. Here are some words you will hear in his TED Talk. Complete the paragraph with the correct word. Not all words will be used.

access *n.* a way of being able to use or get something

annotate *v.* to add notes or comments to (a text, book, drawing, etc.)

brushstrokes *n.* the paint left on a painting by a movement of the artist's brush

cracks *n.* thin lines in the surface of something that is broken but not separated into pieces

launch *v.* to offer or sell (something) for the first time

negotiations *n.* formal discussions between people who are trying to reach an agreement

When Amit Sood was growing up in India, he didn't have (1) _____ to museums. Now, he works at Google, where he has just (2) _____ a project that will bring museums to people everywhere. Sood has been in (3) _____ with some of the most important museums in the

Amit Sood's idea worth spreading is that we should all have access to the world's best museums and artwork at any time of the day or night. Technology can let us have that. Watch Sood's full TED Talk on TED.com.

world to get their art online. The Google Art Project allows you to view art even closer than you can in real life—you can see the artist's (4) _____ and the (5) _____ that have developed after many years. Even more interesting is the ability to (6) _____ the images with your own ideas and share it with your friends. It's a completely new way of looking at art.

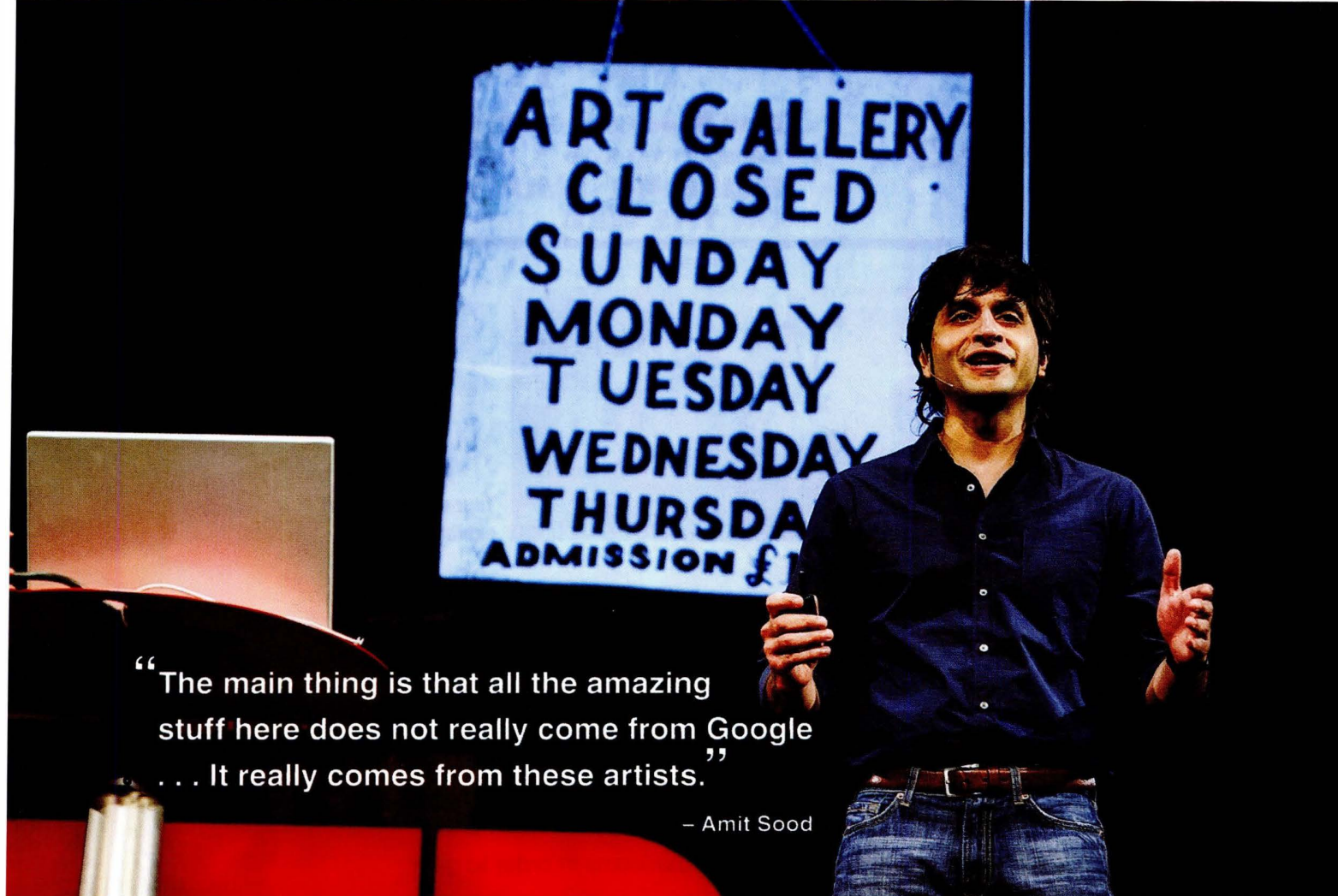
C Look at the pictures on the next page. Check (✓) the information that you predict you will hear in the TED Talk.

- _____ 1. It was very expensive to create the Google Art Project.
- _____ 2. There are many images on the Google Art Project Web site.
- _____ 3. If you have a computer, you have access to museum collections around the world.

While You Watch

A Watch the TED Talk. Circle the main idea.

1. It is important for people to see as much art as possible.
2. Amit Sood didn't go to many museums when he was growing up in India.
3. Sood developed the Google Art Project to make art accessible through technology.



B The photos below relate to the ideas in the TED Talk. Watch the talk again and write the letter of the caption under the correct photo.

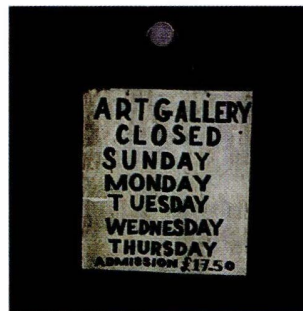
- a. Many people lack access to museums.
- b. The Google Art site contains artwork from more than 300 museums.
- c. You can create collections of images and share them with your friends.
- d. Using Google Art, it's possible to view the details of the paintings.



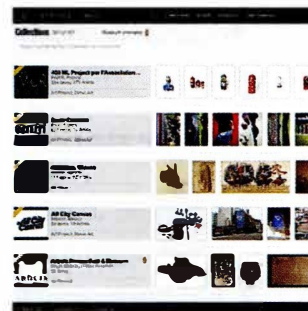
1. ____



2. ____



3. ____



4. ____

Challenge! What other cultural resources do you think should be available on the Internet? Share your ideas with a partner.



Tour of Chinese art exhibition

After You Watch

A Complete the summary with the words in the box.

artwork computer goal negotiate study

The Google Art Project has a unique (1) _____ to share the world's greatest (2) _____ on the Internet. Amit Sood and his team (3) _____ with important museums in order to gain access to their works. If you have a (4) _____, you can move around in a museum, (5) _____ the art, and save the paintings and sculptures you like best.

B Match the phrases to complete sentences from the TED Talk.

Cause

Effect

- | | |
|---|----------------------------------|
| 1. _____ The Google Art Project was developed | a. as many as 10 billion pixels. |
| 2. _____ The project began with | b. you can save it or share it. |
| 3. _____ You can look at the images | c. 17 museums in 9 countries. |
| 4. _____ Some images can contain | d. in 18 months. |
| 5. _____ When you find an image you like, | e. at normal size or close up. |

C Read the statements below. Circle the ones that paraphrase Amit Sood's ideas.

- I wanted to make it possible for many people to see the art in these museums.
- It is necessary for users to understand that it was difficult and expensive to create the Google Art Project.
- One of my favorite parts of the project is seeing the details of the paintings.
- The most important thing about the Google Art Project is the artists themselves. The technology is amazing, but not as amazing as the art itself.



Project

- A** Look at the list of cultural resources. Circle the two that are most important in your life.

archaeological sites architecture public art museums opera
community festivals orchestra theater cinema

- B** Compare your choices in exercise **A** with a partner. What reasons do they give for their choices? Would you change any of your choices as a result?
- C** Work with a group. Choose three cultural resources in your city or country that you want to share with the world on the Internet. Use the table to organize your ideas.

Cultural Resource	Information to Include	Images

Challenge! Although Amit Sood is the head of the Google Art Project, he didn't create it alone. Go to his speaker profile on TED.com and read more about the team's inspiration for the project. In addition to technology know-how, what other kinds of skills do you think the team members needed to create their virtual museum?

Research Strategy

Looking for additional information

It's often helpful to begin researching a subject at its official Web site. Click on related links to obtain more information.

UNIT
7

Getting Around

Bullet train at station

**Look at the photo,
answer the questions:**

1 Which form of transportation is the most important in your country now?


2 Which will be the most important in the future?



UNIT 7 GOALS

1. Talk about new developments
2. Discuss choices in transportation
3. Use English to get around
4. Make recommendations for improving transportation

Vocabulary

A  Read the article. Which of these ideas do you think will be successful?



▲ A view of video screens on the backs of seats of an airplane

The Future of Flying

- Today, the largest airplanes carry over 850 **passengers**, and the size of planes will only increase. New airplanes have been designed that will carry up to 900 people.
- Huge aircrafts are being planned that will carry **vehicles** and other goods across the ocean. They will fly only seven meters above the water at a low **speed**.
- Very small planes called "Personal Air Vehicles" are also in the works and may someday take you, and perhaps a few of your friends, **directly** to your **destination**.
- Quieter and more **efficient** planes are being developed as well, and new materials and designs will **reduce** their use of **fuel**.
- Many modern airplanes are actually flown by computers between takeoff and landing. In the future, some planes won't have a pilot at all!

B Write the words in **blue** next to their meanings.

- _____ place you are going to
- _____ how fast something moves
- _____ without stopping or changing direction
- _____ substance burned to give power
- _____ means of transportation, such as cars
- _____ to make smaller
- _____ not using too much time or energy
- _____ people who are traveling in a vehicle

Grammar: Passive voice with the present continuous and present perfect tenses

The passive voice can be used with any verb tense. Use the passive with the present continuous to talk about things that are in progress now.

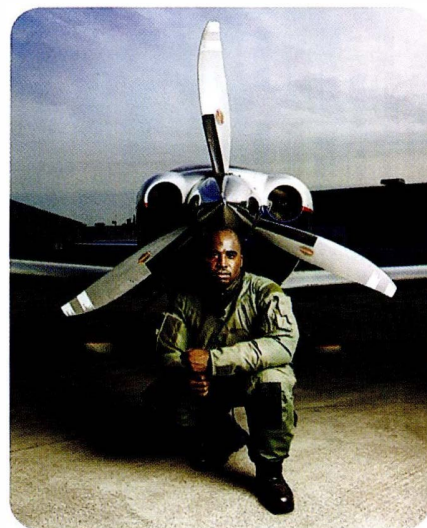
am/is/are + being + past participle
Larger planes **are being developed**.
The technology **is being tested** now.

Use the passive with the present perfect to talk about things in the past that have an effect on the present.

have/has + been + past participle
New types of planes **have been designed**.
Computers **have been used** for decades.

A Complete the paragraph with the passive present perfect of the verb.

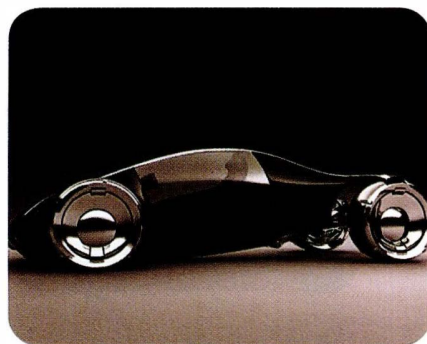
Many solo flights around the world (1) _____ (make) since the first one in 1933. However, such a flight (2) _____ (complete) only once by a person born in Jamaica. It happened in 2007, when Barrington Irving was only 23 years old. Since then, Irving has been teaching children about building and piloting airplanes, and he (3) _____ (name) one of National Geographic's Emerging Explorers. Around the world, many young people (4) _____ (inspire) by people such as Irving who are able to share themselves and their careers and motivate others to do great things.



B Complete the article with the passive present continuous of the verb.

Cars for Tomorrow

New discoveries (1) are being made (make) every day. Automobiles are changing very fast. Already, energy-efficient cars (2) _____ (sell) in many countries. Very small, light cars for one person (3) _____ (design). Cars that run on hydrogen (4) _____ (test), and electric vehicles (5) _____ (use) in some cities. More corn (6) _____ (grow) to make ethanol for fuel.



Conversation

A 2 Listen to the conversation with your book closed. What kind of car will Jake get next month?

Cassie: The price of gas is getting so high. I think I'm going to get rid of my car and take the bus.

Jake: Not me! I'm getting a new car next month. It's a hybrid.

Cassie: You mean, one of those electric cars?

Jake: Not exactly. It uses both electricity and gasoline.

Cassie: Well, I don't like to be the first person to try something new. New technology always has a lot of problems.

Jake: That's not always true. Besides, electric cars have been used for a long time.

Cassie: Well, I'd like to see your hybrid car when you get it. Will you take me for a ride?

Jake: Sure! And maybe I'll even let you drive it.



B Practice the conversation. Then talk about these new kinds of cars.



C **GOAL CHECK** Talk about new developments

Tell your partner about ways transportation is changing in your part of the world.



B GOAL 2: Discuss Choices in Transportation




Listening

- A**  Discuss these questions with a partner. What are some famous cities with subways? Have you ever used a subway? What are some advantages and disadvantages of subways?
- B**  **3** You will hear a radio program about things from the past discovered while building subways. Listen and write the name of each city and the discovery that was made there.

City: _____	City: _____	City: _____
Discovery: _____	Discovery: _____	Discovery: _____
Year of discovery: _____	Year of discovery: _____	Year of discovery: _____
They decided to: _____	They decided to: _____	They decided to: _____
_____	_____	_____
_____	_____	_____


- C**  **3** Listen again and fill in the rest of the information in the chart.
- D**  Discuss these questions with a partner.
- Do you think it's important to preserve archaeological discoveries when roads and subways are being built? Explain.
 - What are some other ways the construction of transportation systems might impact a city or a neighborhood?

Pronunciation: Reduced *are*

- A**  4 The word *are* can sound like /ə/ in the middle of a sentence. Notice the pronunciation of *are* in the sentences below.

The buses **are** crowded.

Cars **are** parked on the street.

- B**  Read these sentences, paying attention to the pronunciation of *are*.

1. Those books are really funny.
2. How much are the tickets?
3. Those computers are made in China.
4. People are talking about him.
5. Cheaper cars are being sold.
6. Where are my keys?




▲ Airport terminal hall

Communication

- A** Read about the situation.

Airport Construction Delayed

Lomeria is a large city in a developing country. The airport in Lomeria is old and too small for many kinds of airplanes. Because of this, Lomeria is building a new airport. Now the terminal is being built, and an ancient city from 2,000 years ago has been uncovered by workers. Construction has stopped until the city government decides what to do. People in the neighborhood don't want a new airport. They say it will cause noise and pollution. Other people say the airport is necessary for the many tourists who come to Lomeria to experience its history and culture.

- B**  You are members of the Lomeria City Council. Add one more idea to the plans below. Then decide which plan is the best. Write two or three sentences to explain why your plan is the best one for Lomeria.

Plan 1: Continue building the new airport. Don't change the plan.

Plan 2: Build a smaller airport in the same place and preserve one part of the ancient city.

Plan 3: Stop construction and use the money to preserve the ancient city.

Plan 4: Stop construction and try to get more money to build a new airport in a different place.

Plan 5: _____

- C**  **GOAL CHECK**  Discuss choices in transportation

As a group, role-play a meeting about the airport problem. Make sure everyone explains his or her plan. Agree on the best plan.



Bus Rapid Transit, Curitiba, Brazil

Language Expansion: Public transportation

A Read the article and notice the words in **blue**.

Buses for the Future

The Bus Rapid Transit system of Curitiba, Brazil is famous for its convenience and design. Buses for up to 300 people travel all around the city. Passengers **board** the buses from comfortable glass **tube stations**. If they don't have a **pass** or a **ticket**, they pay their **fare** in the station, so everyone gets on the bus quickly when it arrives. They can **transfer** to another **route** without paying again. Where different bus routes connect, there are comfortable **terminals** with small shops and restrooms. The system is efficient, and it's very popular with the people of Curitiba.

B Discuss the questions with a partner. Use the words in **blue** from exercise **A**.

1. What are three ways to pay your fare on the Bus Rapid Transit system?
2. Where can people wait when they transfer from one route to another?
3. How do people in Curitiba feel about the bus system?
4. How do you feel about the public transportation where you live?

Grammar: Indirect questions

Indirect questions are inside statements or other questions. Use indirect questions to be more polite.

Use statement word order with indirect questions.
Use *if* or *whether* in indirect *yes/no* questions.

Do you know **if the bus stops** here?

Could you please tell me **how much the tickets cost**?

Could you tell me **how long it takes** to get downtown?

Do you know **if/whether the train will be** on time?

A Match the questions beginnings to their endings.

- | | |
|---|--|
| 1. Do you know whether _____ | a. the train station is? |
| 2. Could you please tell _____ | b. from Route 12 to Route 31? |
| 3. I'd like to know _____ | c. me how much the fare is? |
| 4. Can you tell me where I can transfer _____ | d. the flight from Brasilia has arrived yet? |
| 5. Do you know where _____ | e. if the terminal is open late at night. |

B In your notebook, write polite indirect questions.

- Does this train go to Central Station? (Do you know ...)
- What time does the next flight leave? (Can you tell me ...)
- Is there a subway station near here? (Could you please tell me ...)
- How much does a round-trip ticket cost? (I'd like to know ...)
- Where is the restroom? (Do you know ...)



▲ Girl at ticket machine in Shibuya, Tokyo

Conversation

A **5** Luis is in a subway station in Tokyo. Listen to the conversation with your book closed. Where does he want to go?

- Luis:** Excuse me. Do you speak English?
Yuki: Yes, a little.
Luis: Could you please tell me how to get to the Imperial Palace Garden?
Yuki: From here, you take the Tozai subway line to Hibiya Station. Then you walk for about five minutes.
Luis: And can you tell me where I can buy a ticket?
Yuki: You get them from that machine. Let's see ... the fare is 250 yen. You put your money in here and push this button.
Luis: Great! Oh, one more question—do you know where I board the train?
Yuki: Just go down those stairs and you'll see a sign that says Tozai Line. It's in English.
Luis: Thanks for your help!
Yuki: You're welcome.

Real Language

We often start a conversation with a stranger by saying
Excuse me, ... Pardon me, ...
I'm sorry to bother you, but ...

B Practice the conversation. Then switch roles and practice it again.

C **GDAL CHECK** Use English to get around

Make new conversations with a partner about how to get to places in your city.

You take bus number 7 to the university, and then transfer to ...

Reading

A Discuss these questions with a partner.

1. What kinds of transportation did your city have 50 years ago?
2. Are those kinds of transportation still used today? Why or why not?

B Quickly skim the article. For each paragraph below, write **P** if it contains *positive* ideas about the topic or **N** if it contains *negative* ideas.

- a. _____ Paragraph 2
- b. _____ Paragraph 3
- c. _____ Paragraph 4

C Circle **T** for *true* and **F** for *false*. Correct the false statements in your notebook.

1. Rickshaws are a traditional form of transportation in Kolkata. **T F**
2. The men who pull the rickshaws earn a lot of money. **T F**
3. Rickshaws can be used in parts of the city where buses can't drive. **T F**
4. Rickshaws are mostly used by wealthy people. **T F**
5. Rickshaws are a problem in heavy traffic. **T F**
6. The government is trying to increase the number of rickshaws. **T F**
7. There are programs now to help the rickshaw pullers get new jobs. **T F**

Word Focus

aging = in the process of getting older


narrow = not wide

crawling = moving very slowly

Kolkata, India

THE RICKSHAWS OF KOLKATA



A full-page photograph of a man pulling a rickshaw in Kolkata, India. The man is in the foreground, seen from the side, wearing a white tank top and blue patterned shorts. He is barefoot and wearing sandals. He is pulling a rickshaw that is partially visible on the left. The background shows a narrow street with a weathered wooden door and a wall with graffiti. The lighting is bright, suggesting daytime.

Human-powered rickshaws first appeared in Kolkata, India a century ago, and about 6,000 of them still roll through the streets today. Most of the men who pull the rickshaws are poor, **aging** migrants from the countryside. Their vehicles are not being made any more, and as the parts wear out, they cannot be replaced. It appears that the days of the rickshaw are nearing their end in Kolkata.

Rickshaws are an important form of transportation in this city of nearly 15 million people. They are cheap and convenient. Poor and middle-class residents rely on rickshaws to move through **narrow** lanes in areas of the central city that are not served by public transportation. Families often pay a rickshaw puller to take their children to and from school.

Rickshaws also provide delivery service for hotels, shops, and homes around the city, carrying everything from food for 500 wedding guests to live chickens. Ladies on shopping trips depend on rickshaw pullers to wait while they make several stops before returning home. Some people even use a rickshaw instead of an ambulance!

Despite their usefulness, rickshaw pullers usually live in extreme poverty. Most of them are homeless. Some sleep in a *dera*, or rickshaw garage; others simply live in their rickshaws or on the street. They work for more than 12 hours at a time, earning about 100 rupees (\$2.50 USD) a day. Their top priority is paying the rent on their vehicles, and then buying food and shelter. Any extra money goes to their families.

For the last ten years, the government has been trying to get rid of rickshaws. City authorities say they want to modernize Kolkata's image. They also want to reduce traffic congestion. "We must be fair to the cars and buses that are **crawling** because of the rickshaws," one city official said.

What does the future hold for rickshaw pullers? Most are 40 to 60 years old and have no other job skills. Local authorities have talked about programs to retrain the pullers. They could drive auto-rickshaws, for example, work in parking lots, or make traditional crafts. However, nothing has been done to start these programs, and rickshaw pullers are understandably very worried about the future. "I'll try anything, even learning a new job, if it will help my family," one puller said.

D GOAL 4: Make Recommendations for Improving Transportation



go to school
go shopping
go to work
visit your friends
go to another city

Communication

- A** Tell your partner about the form of transportation you or your family members use for the activities in the box.
- B** With your partner, make a chart and list some of the positive and negative aspects of the forms of transportation you mentioned in exercise **A**.

Form of transportation	Positive aspects	Negative aspects

Dear Editor,

~~~~~

~~~~~

~~~~~

~~~~~

~~~~~

~~~~~

~~~~~

Sincerely,

## Writing

- A** How would you improve the transportation system in your city? Write a letter to the editor of a newspaper explaining your ideas. Begin your letter "Dear Editor,". End it with "Sincerely," and sign your name.
- B** Exchange letters with your partner. Ask each other questions about your ideas, and make suggestions for changes and improvements.
- C** Revise your letter based on your partner's suggestions.
- D** **GOAL CHECK** Make recommendations for improving transportation

Read your letter aloud to the class, and answer any questions your classmates have about your ideas.





Bicycle messenger in  
New York City

## Before You Watch

- A** Discuss the question with a partner: How many kinds of transportation can people use to get around your city? Rank them from fastest to slowest in your notebook.

## While You Watch

- A** Watch the video and complete the summary.

Every day, in the city of (1) \_\_\_\_\_, thousands of documents and packages are delivered by people riding (2) \_\_\_\_\_. Their work is dangerous because they must ride very (3) \_\_\_\_\_ in heavy traffic. Even though it's difficult, most messengers (4) \_\_\_\_\_ their work.

- B** Watch the video again and write in your notebook one reason why . . .

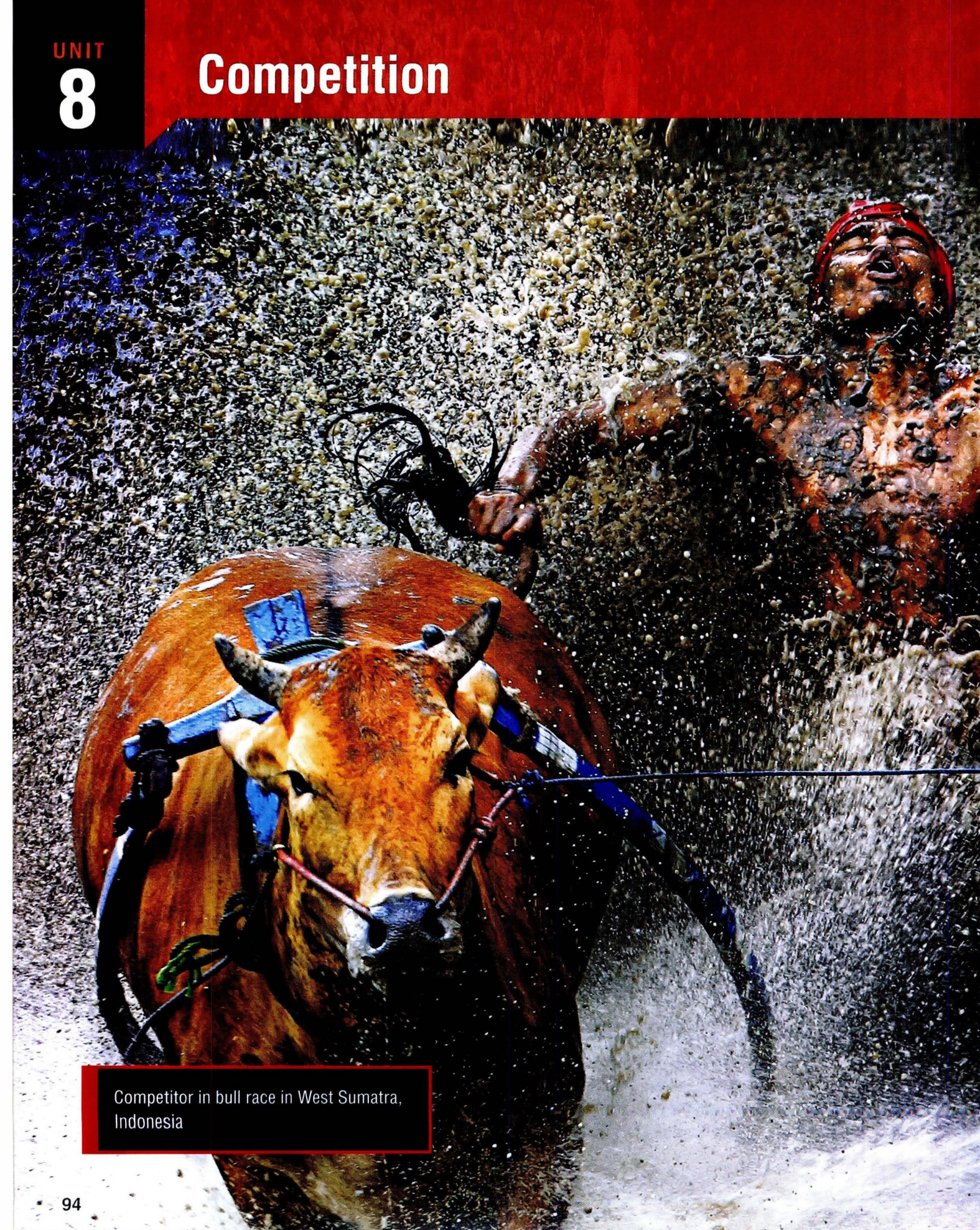
1. bicycle messengers like their job:
2. police officers get angry at messengers:
3. people in New York dislike bicycle messengers:
4. bicycle messengers don't like people in cars:

## After You Watch / Communication

- A** What could be done to make bicycle messengers' jobs safer? With your group, list as many ideas as you can. Then choose a role from the box and role-play a meeting with the city council. Make three recommendations to the city council about rules bicycle messengers should follow.

a bicycle messenger  
a police officer  
a parent with small children  
a business owner



A high-action photograph of a bull race. In the foreground, a brown bull with blue harnesses is running through a muddy, splashing track. A person, the competitor, is riding the bull, partially submerged in the mud. The competitor is wearing a red headband and has a determined expression. The background is a dense, muddy wall of splashes, creating a sense of intense competition and physical effort.

Competitor in bull race in West Sumatra,  
Indonesia



**Look at the photo,  
answer the questions:**

**1** What type of competition  
is this?

**2** Besides sports, what other situations can  
you think of that involve competition?



### **UNIT 8 GOALS**

1. Talk about sports
2. Explain which sport is best for you
3. Talk about positive and negative aspects of competition
4. Discuss competitive advantages





### Word Focus

We rarely use the word *sportsmanship* by itself. We talk about *good sportsmanship* or *poor sportsmanship*.

## Vocabulary

**A** Read the article. Notice the words in **blue**.

**Competitive** sports can be a lot of fun, especially when you or your team wins a **game** or a **match**. On the other hand, some **athletes** show poor **sportsmanship** when they **lose**—getting angry or even worse. In order to understand this kind of bad behavior, it's important to remember the amount of daily **training** that athletes do and whether they play an **individual** sport, such as golf, or a team sport, such as soccer. For them, they don't just lose a game; they lose the time and effort they invested before the game ever began.

**B** Write each word in **blue** next to its synonym or definition.

1. \_\_\_\_\_ practicing
2. \_\_\_\_\_ group of players
3. \_\_\_\_\_ one person
4. \_\_\_\_\_ players
5. \_\_\_\_\_ behavior in sports
6. \_\_\_\_\_ does better than everyone else
7. \_\_\_\_\_ having winners and losers
8. \_\_\_\_\_ not do as well as everyone else
9. \_\_\_\_\_ sports event in basketball, etc.
10. \_\_\_\_\_ sports event in tennis, etc.

## Grammar: Negative questions

Negative questions in the simple present begin with *don't/doesn't* or *aren't/isn't*.

Use negative questions to show that we expect a certain answer or to show attitudes such as surprise.

Negative questions can also begin with the negative form of a modal such as *won't, can't, shouldn't, or wouldn't*.

Answer negative questions in the same way as regular questions.

**Don't** you want to go downtown with us?  
(The speaker may expect you to say *yes*.)

**Aren't** you happy about winning?  
(The speaker may be surprised because you don't look happy.)

**Shouldn't** you call your parents?  
**Won't** they be worried?

**Didn't** the Tigers win yesterday?  
**Yes, they did.** (if they won)  
**No, they didn't.** (if they didn't win)



**A** Read each situation and circle the correct answer.

1. Your friend offers you an orange.

**You:** No, thank you.

**Your friend:** Oh, don't you like oranges?

Your friend is probably ( surprised | angry ).

2. A student gives an assignment to his teacher.

**Teacher:** Wasn't this due yesterday?

**Student:** Yes, it was. I'm sorry it's late.

The teacher is probably ( happy | annoyed ).

3. You and a friend are talking about last week's soccer game.

**You:** Now the team might not be in the World Cup.

**Your friend:** But didn't they win last week's game?

Your friend thinks the team ( did | did not ) win last week's game.

4. You arrive home after a long bus trip and you look tired.

**Your mother:** Aren't you glad to be home?

Your mother expects you to say ( yes | no ).

**B** Work with a partner. Think of a possible situation for each of these negative questions. Imagine and practice the conversations.

- Don't you have any money?
- Doesn't the game start at two thirty?
- Isn't your sister a swimmer?
- Aren't you cold?
- Aren't these your glasses?
- Don't you need this?

## Conversation

**A** Listen to the conversation with your book closed. What do Milena and Betty plan to do tonight?

**Milena:** How about the tennis match last night. Sanders acted crazy!

**Betty:** Really? What did he do?

**Milena:** Didn't you see it? He got really angry and broke his tennis racket.

**Betty:** No, I didn't, but I'm surprised. Sanders is usually such a good sportsman.

**Milena:** I know, but not last night! Well, I should get going.

**Betty:** Aren't you going to join us for dinner?

**Milena:** No, not tonight. The finals start at seven o'clock.

**Betty:** You're a true tennis fan. Well, have fun watching!

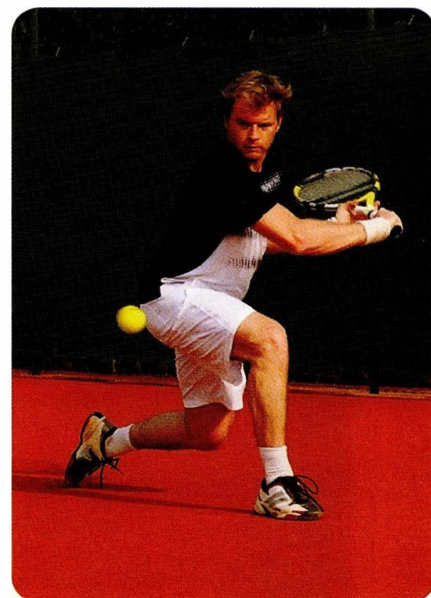
**B** Practice the conversation with a partner. Switch roles and practice it again.

**C** **GOAL CHECK** Talk about sports

Have a new conversation about sports. Use negative questions if you expect your partner to say *yes* or to show surprise.

## Word Focus

The sporting event called a **soccer game** in the U.S. is called a **football match** in the U.K.





## B GOAL 2: Explain Which Sport Is Best for You



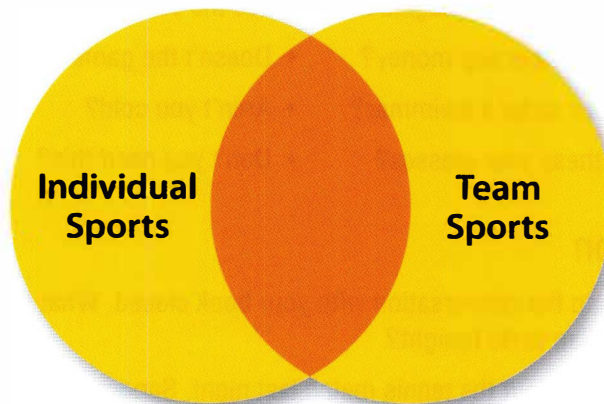
*Tae kwon do* is a popular martial art.

مرجع زبان ایرانیان

|            |              |
|------------|--------------|
| baseball   | soccer       |
| badminton  | tennis       |
| skiing     | martial arts |
| swimming   | bicycling    |
| volleyball | boxing       |
| basketball | golf         |

### Listening

**A** Work with a partner. Write each sport in the correct place in the diagram.



☐ golf  
☐ volleyball  
☐ a marathon  
☐ the soccer team  
☐ martial arts  
☐ basketball

**B** Discuss these questions with a partner. Give reasons for your answers. What type of person enjoys playing individual sports? What type of person enjoys playing team sports?

**C** 7 Listen to three people talking. Decide which sport in the box would be best for each person.

- Rita should probably play:
- Chris should probably train for:
- Susan should probably sign up for:


**D** 7 How did you make your choices in exercise **C**? Listen again and take brief notes on what the speakers say in your notebook. Then share your reasons.

### Real Language


When you *count on someone*, you depend on them to do something that's important to you.



## Pronunciation: Intonation to show surprise

**A**  **8** We can use rising intonation in statements to show that we're surprised by something we just heard. The rising intonation makes the statements sound like questions. Listen and repeat these sentences.

1. He left this morning?
2. You're joining a volleyball team?
3. They won by fifteen points?
4. He plays professional golf?


**B**  Practice the conversation with a partner. Use rising intonation to show surprise in the underlined sentences.

- Barb:** Is that your son, Arturo?  
**Arturo:** Yes, that's Michael. It seems like he's always getting hurt.  
**Barb:** Aren't you worried? He's not getting up.  
**Arturo:** Oh, he'll be OK. There's the team doctor now.  
**Barb:** I hope you're right. This is why I don't let my daughter play sports.  
**Arturo:** You don't let her? But most kids love to play sports!  
**Barb:** Sure, but they can also get hurt when they play.  
**Arturo:** I think that's part of life.  
**Barb:** I guess you're right. Hey, isn't that Michael on the field?  
**Arturo:** That's him. He's up and running again!

## Communication

**A**  Take turns. Ask a partner these questions about personality types.

1. Are you an introvert (quiet, shy) or extrovert (social)?
2. Are you a perfectionist, or do you need outside pressure to motivate you?
3. Are you very focused when you do something (you forget about everything else), or are you aware of everything going on around you?
4. Do you like vigorous exercise, such as running, or more gentle exercise?
5. Do you like to concentrate on one thing for a long time, or do you prefer shorter activities that are constantly changing?

**B**  Recommend a sport for your partner to play based on his or her answers.

**C**  **GOAL CHECK**  Explain which sport is best for you

Tell the class which sport your partner recommended for you. Explain why the sport is a good match for your personality, or choose a different sport if you think it's not a good match.



# C GOAL 3: Talk About Positive and Negative Aspects of Competition



## Language Expansion: Sports

**A** Write each word from the illustration below next to its correct meaning.

1. a large sign that shows the score at a sports event \_\_\_\_\_
2. someone who trains a person or a sports team \_\_\_\_\_
3. a prize given to the winner of a competition \_\_\_\_\_
4. the total number of points received in a sports event \_\_\_\_\_
5. the numbers that are added together to give the score \_\_\_\_\_
6. a metal disk given as a prize in a sports event \_\_\_\_\_

**B** Take turns. Ask and answer these questions about the illustration.

1. What was the final score of the championship game?
2. How many points did the winning team have?
3. What is the coach presenting to the team?
4. What is every player wearing around his neck?



## Grammar: Adjective clauses with object pronouns

|                                                                                                                                    |                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| An adjective clause can modify a noun that is the object of a verb or a preposition.                                               | He won <u>a medal</u> . It was made of gold.<br>The medal <b>that he won</b> was made of gold.         |
| Use the object pronoun <i>that</i> or <i>which</i> in adjective clauses about things.                                              | I'm on <u>a team</u> . It was formed last year.<br>The team <b>which I'm on</b> was formed last year.  |
| Use the object pronoun <i>that</i> or <i>who</i> (or <i>whom</i> in writing or formal speaking) in adjective clauses about people. | We met <u>a woman</u> . She plays basketball.<br>The woman <b>that/who(m) we met</b> plays basketball. |



**A** Complete the journal entry with *that*, *which*, or *whom*.

Yesterday, I ran into an old friend (1) \_\_\_\_\_ I hadn't seen in several months. We started chatting, and I told my friend about the new job (2) \_\_\_\_\_ I got last week. As I talked to her, I could see something that surprised me. It was envy! Most of the people (3) \_\_\_\_\_ I had told about my job were happy for me, but this friend has always been very competitive.

The lesson (4) \_\_\_\_\_ I learned that day was simple: It's possible to be too competitive. Competitiveness is not helpful in every situation. Instead, just forget about the envy and be happy for the friends (5) \_\_\_\_\_ you care about.

**B** Complete each sentence with your own ideas.

1. The kind of person who I like is \_\_\_\_\_.
2. The sports that I prefer are \_\_\_\_\_.
3. One activity that I dislike is \_\_\_\_\_.
4. A person whom I met recently was \_\_\_\_\_.

## Conversation

**A**  Listen to the conversation with your book closed. What does Dean decide to do?

**Dean:** Hi, Kirsten. Can I talk to you about something?

**Kirsten:** Sure. What is it?

**Dean:** Some of my friends want me to try out for the wrestling team, but I just don't have a competitive personality.

**Kirsten:** Well, some people are more competitive than others.


**Dean:** Right, and sometimes I am competitive. I think about my classmates who get good grades, and it motivates me to work harder.

**Kirsten:** There you go.

**Dean:** On the other hand, I don't really like people that always want to be the best. Sometimes other people are the best.

**Kirsten:** And you want to be happy for those other people.

**Dean:** Exactly! Maybe I could talk to a few guys on the wrestling team and find out if it's the right sport for me.

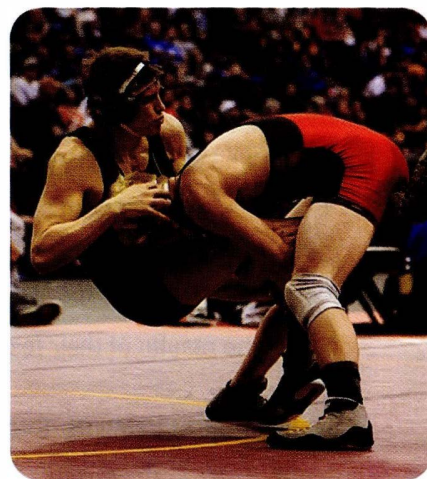
**B**  Practice the conversation. Then talk about when you have competed for something.

**C**  **GOAL CHECK**  Talk about positive and negative aspects of competition

Talk about times when being competitive is good motivation. Then talk about when being competitive brings out the worst in people.

## Engage!

Are the lessons that competitive sports teach us helpful or harmful?



## Real Language

You can say *there you go* when you agree with someone or you think someone has a good idea.



## Reading

- A** Use a dictionary to look up the meanings of the words in **blue**.

You may think that in sports, winning is always about strength, speed, and other athletic abilities, but two **anthropologists** from England wanted to know whether the color of athletes' *clothing* can affect the final scores of sporting events!

The scientists already knew that animals respond to the color red. Having red on their bodies helps some animals to attract a **mate**, and **dominant** male animals sometimes have more red on their bodies than non-dominant males. Is it possible that human beings respond to red in a similar way?

- B** As you read the article, take notes on the scientific research.
- the names and university of the scientists who did the research in Athens
  - what those scientists wanted to find out
  - the method they used (How did they do their research?)
  - the results of their research
- C** Read the statements. Circle **T** for *true*, **F** for *false*, or **NI** for *no information* (if the information is not in the reading).
- Hill and Barton are both interested in primates. **T F NI**
  - Female mandrills use red coloration to attract a mate. **T F NI**
  - Red was not an advantage for zebra finches. **T F NI**
  - The red plastic rings were left on the finches permanently. **T F NI**
  - Hill and Barton believe athletes in red are more likely to win. **T F NI**
  - Hill and Barton think some Olympic athletes cheated. **T F NI**

Athens, Greece

# IN SPORTS, RED IS THE WINNING COLOR





**W**hen **players** of a game are equally matched, the team dressed in red is more likely to win, according to a new study.

British anthropologists Russell Hill and Robert Barton of the University of Durham reached that conclusion by studying the **final scores** of boxing, *tae kwon do*, Greco-Roman wrestling, and freestyle wrestling matches at the 2004 Summer Olympics in Athens, Greece.

In each event, Olympic staff randomly assigned red or blue clothing or body protection to competitors. When competitors were equally matched with their opponents in fitness and skill, the athletes wearing red were more likely to win.

"Where there was a large point difference—presumably because one athlete was far **better than** the other—color had no effect on the outcome," Barton said. "Where there was a small point difference, the effect of color was sufficient to tip the balance."

Joanna Setchell, a primate researcher at the University of Cambridge in England, has found similar results in nature. Her work with the large African monkeys known as mandrills shows that red coloration gives males an advantage when it comes to mating. The finding that red also has an advantage in human sporting events does not surprise her, and she adds that "the idea of the study is very clever."

Hill and Barton got the idea for their study from a mutual interest in animals—"red seems to be the color, across species, that signals male dominance," Barton said. For example, studies by Setchell, the Cambridge primate researcher, show that **dominant** male mandrills have increased red coloration in their faces and rumps. In another study, scientists put red plastic rings on the legs of male zebra finches, which increased the birds' success in finding a **mate**.



Barton said he and Hill speculated that "there might be a similar effect in humans." Hill and Barton found their answer by viewing Olympic competitors in the ring, on the mat, and in the field. "Across a range of sports, we find that wearing red is consistently associated with a higher probability of winning," the researchers write.


Barton adds that this discovery of red's advantage might lead to new rules on sports uniforms. In the Olympic matches which he studied, for example, it is possible that some medal winners may have had an unintended advantage—their clothing!




Coach speaks to the players  
during basketball Game

sleep   training schedule  
diet   advice from coaches

## Communication


**A**  A competitive advantage is something that makes you more likely to win or succeed. Besides wearing the color red, what other things give an athlete a competitive advantage? Discuss the topics in the box with a partner and add some of your own ideas.

**B**  Join another pair of students and share your ideas from exercise A.

## Writing

**A** In your notebook, make a bullet-point list of advice for a coach to give to athletes. Use phrases such as:

- It's a good idea to ...
- It's absolutely necessary to ...
- You should always ...
- Be sure to ...
- Don't forget to ...

**B**  Read your list to your group and explain how your advice would give an athlete a competitive advantage. Ask your classmates to comment on your ideas.

**C**  **GOAL CHECK**  **Discuss competitive advantages**

With your group, discuss what gives people a competitive advantage outside of sports; for example:

at school   in a career   in social situations   other \_\_\_\_\_

I have a friend who manages his time well. That's certainly an advantage at school.





Riders in action in Utah, USA

In the huge, open lands of the American West, herding **cattle** is one way to make a living. The image of the **cowboy** on his horse is a familiar one, but in reality, women also participate in **ranch** work. This reality can be seen in the **rodeo**, where cowboys and cowgirls compete in roping young **steer** and riding adult **bulls**. Throwing a **rope** around a steer is something ranchers must do to mark the steers as their property. On the other hand, riding on the back of a large bull is purely for sport—a dangerous sport. But that danger doesn't stop the men and women who love the rodeo.

## Before You Watch

- A** Read about the origins of rodeo competitions. Use a dictionary to find out the meanings of the words in **blue**.

## While You Watch

- A** Watch the video and check (✓) each expression when you hear it.

- \_\_\_ **a man's sport** = a sport that was traditionally played by men
- \_\_\_ **to go head-to-head with someone** = to compete directly with someone
- \_\_\_ **to be in the saddle** = to ride on horseback; to use horses to do one's work
- \_\_\_ **times are changing** = traditional ways are being replaced with new ways
- \_\_\_ **it seems like an eternity** = it seems to take a very long time

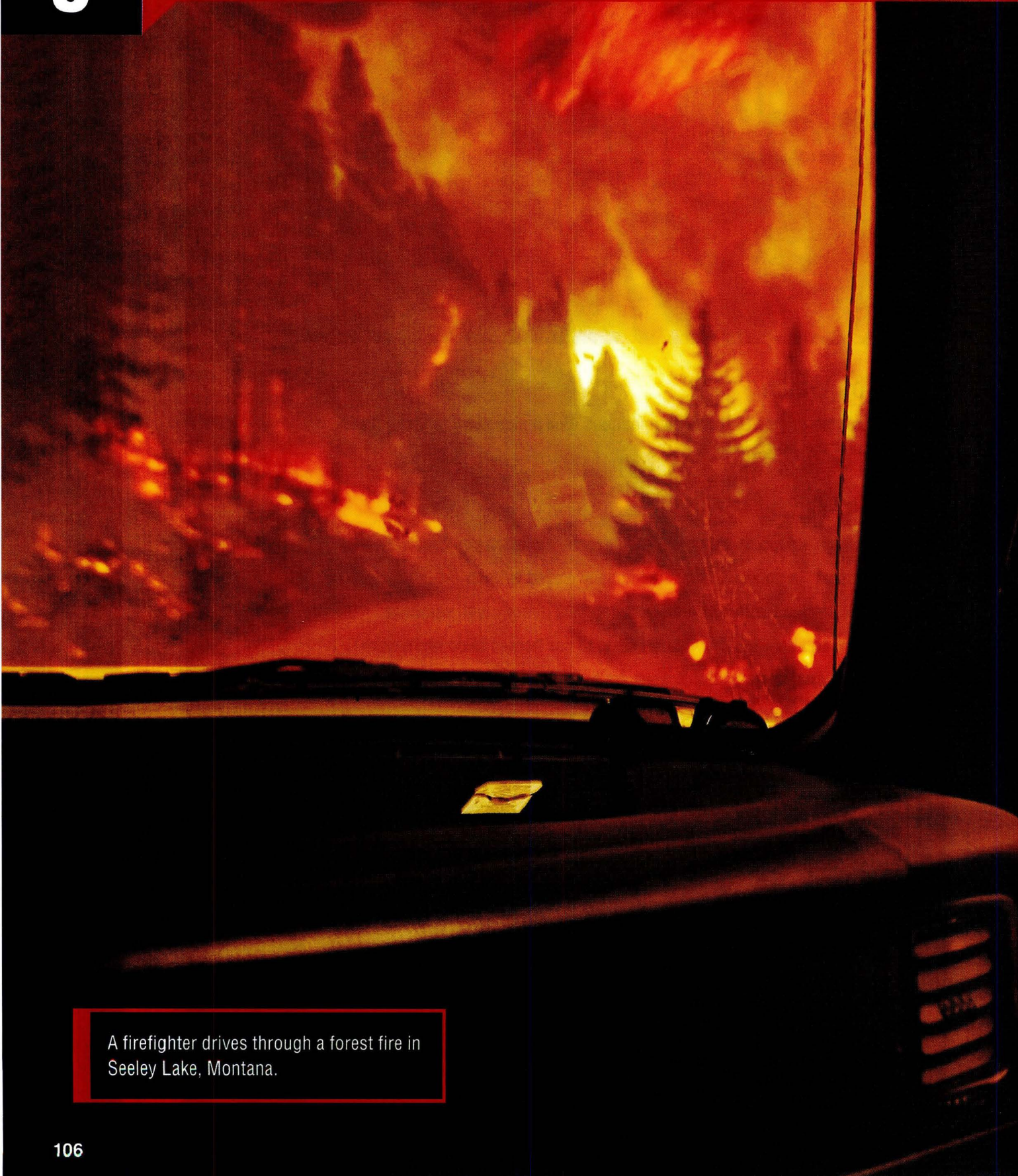
## After You Watch / Communication

- A** Discuss the quotation in the box with a partner. In your opinion, what does the quote tell us about Ms. Crawford?
- B** Rodeo competitions test the skills of ranchers. Choose a job. Then imagine a new sport that tests the skills people need to do that job. Think of two "events" people can compete in. What must they do to win the events?

A lot of times I like to show up, and the guys are like, "There ain't no way she's gonna ride." I like to go out there and do my best and show them I can ride because they think I can't. You've got to keep your head up and say, "I'm just as good as you all are."

DeDee Crawford, 2001 world champion female bull rider



A dramatic photograph taken from the driver's perspective inside a fire truck. The truck is moving through a dense forest fire at night. The view through the windshield is dominated by intense orange and yellow flames and thick black smoke. The truck's dashboard and steering wheel are visible in the foreground, silhouetted against the bright fire. The overall atmosphere is one of extreme danger and urgency.

A firefighter drives through a forest fire in  
Seeley Lake, Montana.



**Look at the photo,  
answer the questions:**

**1** What would you do in this situation?

**2** What are some other dangerous situations?



#### **UNIT 9 GOALS**

1. Discuss ways to stay safe
2. Talk about dangerous work
3. Discuss personal emergencies
4. Discuss dangerous situations



- \_\_\_ mosquito
- \_\_\_ shark
- \_\_\_ elephant
- \_\_\_ smoking
- \_\_\_ alligator
- \_\_\_ going to bed

## Vocabulary

**A** Look at the items in the box and rate them: 1 = very dangerous, 2 = somewhat dangerous, 3 = not dangerous.

**B** Read the information below. Which answers would you change in exercise **A**?

What's *really* dangerous?

- Scientists **estimate** that mosquitoes kill 3 million people in the world every year.
- Over 125 deaths a year are caused by elephants (mostly in Africa and Asia).
- Spiders kill 6 people in the U.S. every year with their **poison**. The **risk** is higher for children.
- In the last 60 years, alligators have killed 18 people in Florida.
- Around 1,909 people have been killed by sharks since 1530—about 5 per year. Many people **survive** shark attacks.
- Tobacco plays a role in 18.1 percent of all deaths in the U.S. It has over 30 **substances** that are **toxic**.
- Every year, 36,000 people are **injured** in accidents with their beds. These accidents can be easily **prevented**.

▲ A great white shark

**C** Write the words in **blue** next to their meanings.

1. chance that something bad will happen \_\_\_\_\_
2. something that kills people \_\_\_\_\_
3. hurt a person's body \_\_\_\_\_
4. to guess the amount or extent \_\_\_\_\_
5. containing poison \_\_\_\_\_
6. solids, liquids, or gases \_\_\_\_\_
7. stopped from happening \_\_\_\_\_
8. live through a dangerous situation \_\_\_\_\_

## Grammar: Tag questions

|                                                                                                             |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Use tag questions to check information in a sentence that you're not sure about or to confirm your opinion. | That kind of snake is poisonous, <b>isn't it?</b> (I'm not sure.)<br>You started smoking again, <b>didn't you?</b> (I think you probably did.) |
| Affirmative sentences have negative tag questions, and negative sentences have affirmative tag questions.   | You're a student, <b>aren't you?</b><br>You're not allergic to bee stings, <b>are you?</b>                                                     |
| Answer tag questions in the same way as other questions.                                                    | I'm too late to help you, <b>aren't I?</b><br><b>Yes, you are.</b> (If he is too late.)<br><b>No, you're not.</b> (If he's not too late.)      |

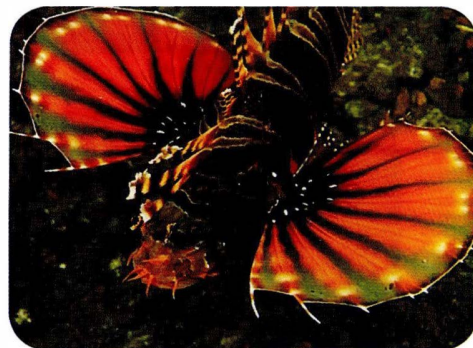


**A** Match each sentence with the correct tag question.

- |                                                   |                 |
|---------------------------------------------------|-----------------|
| 1. Tigers don't hunt at night, _____              | a. did he?      |
| 2. Accidents injure many people, _____            | b. isn't there? |
| 3. Ron didn't start smoking, _____                | c. are we?      |
| 4. There's safety information on the label, _____ | d. don't they?  |
| 5. She's at risk for a heart attack, _____        | e. do they?     |
| 6. We aren't in an earthquake zone, _____         | f. isn't she?   |

**B** Add tag questions to these sentences.

- Some kinds of fish are poisonous, \_\_\_\_\_?
- We don't have dangerous weather here, \_\_\_\_\_?
- There isn't any danger in this classroom, \_\_\_\_\_?
- There aren't any dangerous animals in cities, \_\_\_\_\_?
- The exits are clearly marked in this building, \_\_\_\_\_?
- They don't allow toxic substances in food, \_\_\_\_\_?



▲ A zebra lionfish

## Conversation

**A** **10** Listen to the conversation. Why is Ruthie worried?

**Ruthie:** You know, I really don't like driving. It scares me to death.

**Dan:** Really? Why is that?

**Ruthie:** Well, it's dangerous, isn't it? Just think of all the people who are killed in their cars every year!

**Dan:** That's true, but there's a lot you can do to stay safe.

**Ruthie:** Like what?

**Dan:** For one thing, you should stop texting or talking on your cell phone when you drive. That causes a lot of accidents.

**Ruthie:** I suppose you're right.

**Dan:** And you should keep enough distance from other cars.

**Ruthie:** That's not a bad idea.

### Engage!

In informal speaking, we say something *scares us to death* if it frightens us a lot. What scares you to death?

**B** What can you do to stay safe in these situations? Think of several ideas with a partner. Then make new conversations.

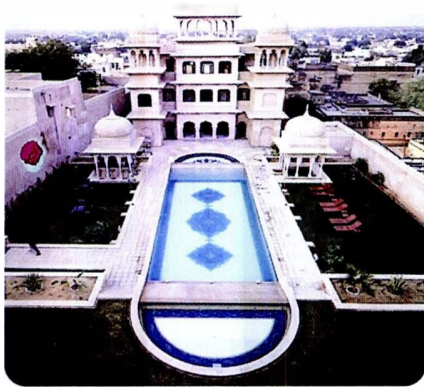
thunderstorms   flying on an airplane   fixing the roof

**C** **GOAL CHECK** Discuss ways to stay safe

Talk to your partner about how to stay safe in another situation.

irLanguage.com





▲ Mathura Prasad, food taster to the *thakur*, or lord, of Castle Mandawa



## Listening

**A** 11 Listen to a radio program about an unusual job. Then read the statements and choose the correct answer.

- The job of a food taster is to make sure that food is \_\_\_\_\_.  
a. delicious      b. healthy      c. not poisoned
- Today, there are \_\_\_\_\_ food tasters.  
a. no more      b. only a few      c. many

**B** 11 Listen again. Then complete the summary of the radio program.

In the past, kings and queens used food tasters to protect themselves against (1) \_\_\_\_\_. Their job was to taste all the food in the king's meal and make sure it was (2) \_\_\_\_\_ to eat. Mathura Prasad was a food taster for the lord of Castle Mandawa in (3) \_\_\_\_\_. When the food was ready, some of it was fed to a (4) \_\_\_\_\_. Then Mathura Prasad (5) \_\_\_\_\_ it before it went to the lord's table. Food tasters have a long (6) \_\_\_\_\_. For example, Christopher Columbus used (7) \_\_\_\_\_ to test food on his trips. Today, most countries don't use food tasters, but in (8) \_\_\_\_\_, soldiers sometimes taste the president's food. And in (9) \_\_\_\_\_, the king's food is checked by mice.

**C** Discuss these questions with a partner. What were the good points and bad points of Mathura Prasad's job? Why do you think he did this job?

## Pronunciation: Intonation of tag questions

**A** 12 The intonation of tag questions shows how sure we are of the answer. If we are sure and want agreement, we use falling intonation. If we are not sure and want to check the information, we use rising intonation. Listen and repeat the sentences, noticing the intonation.

- Mathura had a dangerous job, didn't he? (sure)
- There aren't many food tasters now, are there? (not sure)





**B** **13** Listen to the statements and circle *sure* or *not sure*. Then practice reading them to a partner.

- |                                            |      |          |
|--------------------------------------------|------|----------|
| 1. That plant isn't poisonous, is it?      | sure | not sure |
| 2. He knows all about it, doesn't he?      | sure | not sure |
| 3. That bridge doesn't look safe, does it? | sure | not sure |
| 4. You were here yesterday, weren't you?   | sure | not sure |
| 5. His name is David, isn't it?            | sure | not sure |
| 6. This exercise was easy, wasn't it?      | sure | not sure |

## Communication

**A** Complete the chart with your ideas about dangerous jobs.

| Description                                                        | Bad things about the job                          | Good things about the job |
|--------------------------------------------------------------------|---------------------------------------------------|---------------------------|
| firefighter:<br>puts out fires in<br>houses and other<br>buildings | – could be burned<br>– has to work really<br>fast | – saves people's lives    |
| race car driver:                                                   |                                                   |                           |
| tiger trainer:                                                     |                                                   |                           |

**B** Role-play a newspaper reporter interviewing the people in exercise A. Use tag questions to check information and add your own ideas.

You run into burning buildings, don't you?

**C** **GOAL CHECK** Talk about dangerous work

Discuss these questions with a partner.

1. Would you like to do any of the jobs in exercise A? Why or why not?
2. What other jobs are dangerous? Why?
3. Why are people attracted to dangerous jobs?

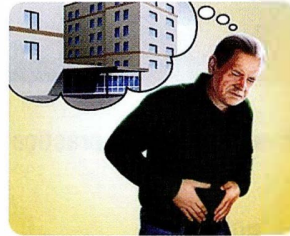
That's right. It's incredibly hot in there!



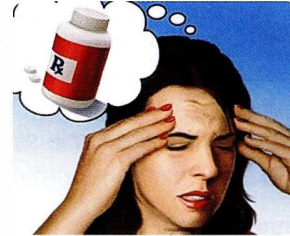
## Language Expansion: Expressions for emergencies

**A** What should you say? Write the correct sentence for each picture.

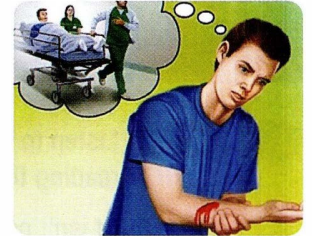
Where's the nearest pharmacy? Where's the emergency room?  
Where's the nearest hospital? Call the police!  
Call the fire department! Call an ambulance!



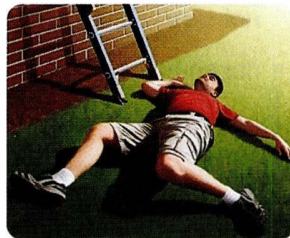
1. \_\_\_\_\_



2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_

If your child swallows something toxic, you should ask, "Where's the nearest hospital?"

**B** Think of one more situation for each of the sentences in exercise A.

## Grammar: Adverbial clauses of time

Adverbial clauses give more information about the main verb of the sentence.

An adverbial clause of time answers the question: *When?*

The adverbial clause can come before or after the main clause.

If the adverbial clause comes before the main clause, it is followed by a comma.

They ran out of the house **when** they saw the fire.

The ambulance will come **as soon as** it can get here.

Kim always looks around **before** she gets out of her car.

**After** Jack broke his arm, he was more careful.

**While** you're in the hospital waiting room, you can read magazines.




**A** Underline the adverbial clause. Then rewrite the sentences in your notebook with the adverbial clause first.

1. I take a shower and eat breakfast before I go to class.
2. He called the fire department as soon as he saw the flames.
3. We feel nervous whenever we have a test.
4. I like to watch the news on TV while I eat breakfast.
5. I screamed when I saw the snake.

**B** What should you do in these situations? Complete the sentences with adverbial clauses of time.

1. When you see a car accident, you should \_\_\_\_\_.
2. You should \_\_\_\_\_ as soon as you smell smoke in a building.
3. Before you climb a ladder, you should \_\_\_\_\_.
4. You should \_\_\_\_\_ after you are bitten by an animal.
5. You should \_\_\_\_\_ while you're waiting for an ambulance to arrive.

## Conversation

**A**  **14** Listen to the phone conversation with your book closed. What was the problem at Jen's house?

**Jen:** Hello?

**Lily:** Hi, Jen. It's Lily, your neighbor ... Are you OK? I saw the fire truck in front of your house!

**Jen:** Don't worry, we're fine. We had a fire in our kitchen, but everything's OK now.

**Lily:** Oh, no! What happened?

**Jen:** I was cooking dinner, and I went to check on the baby. When I went back, the kitchen was full of black smoke!

**Lily:** How awful!

**Jen:** As soon as I saw the smoke, I called the fire department. After I called them, I took the baby out of the house.

**Lily:** Did it take them long to get there?

**Jen:** Only a few minutes. They put out the fire before it got very far. But my whole house smells like smoke now.

**Lily:** I'm so glad you're OK!

**B**  Practice the conversation with a partner.

**C**  **GOAL CHECK**  Discuss personal emergencies

Tell a partner about an emergency or serious problem that you had.

### Real Language

We say *Oh no!* or *How awful!* when someone tells us about something very bad that happened.



## Reading

**A** Which situations do you think are the most dangerous? Rank the items in the list below. Share your ideas with a partner.

- \_\_\_\_\_ 1. driving or riding in a car
- \_\_\_\_\_ 2. exploring a cave
- \_\_\_\_\_ 3. flying in an airplane
- \_\_\_\_\_ 4. walking at night in a city you don't know
- \_\_\_\_\_ 5. working in a mine

**B** Read the text. Circle the correct option. Compare your answers with a partner.

1. U.S. Airways Flight 1549 crashed ( on land | in water ).
2. Ric Elias is a ( pilot | businessman ).
3. Elias learned ( one | three ) important lessons because of the crash.
4. He understood he wanted to be a better ( parent | leader ).
5. In 2012, Elias helped start a ( university | scholarship ) for immigrants to the U.S.

**C** Write *True* or *False* next to the statements below.

- \_\_\_\_\_ 1. Many people were killed when Flight 1549 crashed.
- \_\_\_\_\_ 2. Elias decided to spend more time with people he loves.
- \_\_\_\_\_ 3. Elias believes that it is more important to be right than happy.
- \_\_\_\_\_ 4. Ric Elias wants to help other people succeed.
- \_\_\_\_\_ 5. Elias believes he was lucky to survive the plane crash.

# TED Ideas worth spreading

**Ric Elias** Entrepreneur, CEO of Red Ventures

## THREE THINGS I LEARNED WHILE MY PLANE CRASHED

On January 15, 2009, US Airways flight 1549 crash-landed on the Hudson River in New York City. A flock of large geese had flown into its engines and caused both of them to fail. Due to a combination of pilot skill and pure luck, everyone on the plane survived the accident. And it's safe to guess that most, if not all of them, changed the way they think about their lives as a result.

Although it is an experience that he hopes no one else has to have, passenger Ric Elias learned a lot that day. He says that three important lessons came out of that terrifying moment. The first is that in a life-or-death situation, "everything changes in an instant." He realized that it was important to do the things he wanted to do without postponing them. Whether it is fixing a friendship that has problems or going on an adventurous vacation, Elias says we shouldn't wait.

As the plane went down, the second lesson Elias learned was that it was important to eliminate negative energy from his life. He saw that he had spent too much time on winning arguments and feeling important. Now, he says, "I no longer try to be right; I choose to be happy."

The final important lesson Elias learned was that although it wasn't frightening to look death in the eye, it was sad. He realized the only thing he wanted was to see his children grow up. He understood that "the only thing that matters in my life is being a great dad." He encourages other parents to be the best mothers and fathers they can be, above all else.

Since then, Elias has lived those lessons. Even though he is the CEO of a growing company, he has also taken time to do good works. In 2012, he contributed \$1 million toward the founding of Golden



“What would you get done that you’re waiting to get done because you think you’ll be here forever? How would you change your relationships and the negative energy in them?”

TED2011

TED

Ric Elias's idea worth spreading is that life can change in an instant, so don't delay. Be the best person you can be right now. Watch Elias's full TED Talk on TED.com.



Door Scholars, which provides scholarships for immigrant students who want to attend university. Elias says he has also improved his relationships with his wife, family, and friends.

As Elias remembers that cold winter's day in 2009, he knows "I was given the gift of a miracle, of not dying that day. I was given another gift, which was to be able to see into the future and come back and live differently." If you could look into your own future, what would you change now?

---

**crash-land** to land (an airplane, helicopter, etc.) in an unusual way because of an emergency

**flock** a group of birds or animals

**postpone** to decide that something which had been planned for a particular time will be done at a later time instead

**eliminate** to remove (something that is not wanted or needed)

**miracle** a very amazing or unusual event, thing, or achievement





Planning for dangerous situations is important. Everyone should have an emergency plan

(1) \_\_\_\_\_

they are actually in a dangerous situation.

For example,

(2) \_\_\_\_\_

you stay in a hotel, look for the emergency exits.

(3) \_\_\_\_\_

you are aware of danger, put your plan into action.

(4) \_\_\_\_\_

you are safely outside, call the police or fire department. Remember, it's too late to plan for an emergency

(5) \_\_\_\_\_

you are in the middle of one!

## Writing

**A** Add tag questions to the sentences.

1. Rick Elias learned important lessons, \_\_\_\_\_?
2. It's a miracle that no one was injured in the crash, \_\_\_\_\_?
3. We should all think about what needs to change in our lives, \_\_\_\_\_?
4. Everything changes in a life-or-death situation, \_\_\_\_\_?
5. Everyone can take time to do good things for others, \_\_\_\_\_?

**B** Complete the article in the margin about preparing for emergencies, using the adverbial expressions below. Then write a paragraph about emergency preparation.

after as soon as before when whenever

## Communication

**A** Think about dangerous situations people face. How could they be made safer? Share your ideas with a partner.

**B** **GOAL CHECK** Discuss dangerous situations

Share your ideas about dangerous situations. Can we prepare for every possible danger in life? Is it possible to be *too* careful? Give reasons for your opinions.





## Before You Watch

**A** Work with a partner and discuss the questions.

1. Are the appliances in the photos dangerous?
2. How could they be dangerous?

## While You Watch

**A** Watch the video. Circle **T** for *true* and **F** for *false*.

1. Underwriters Laboratories (UL) was started in 1994.
2. Some of the tests at UL are the same as in the past.
3. The *drop test* is a test for appliances.
4. Engineers at UL only test the correct way to use an appliance.
5. At the end of the day, UL employees can keep the appliances.
6. Employees sometimes call UL *the Fun House*.

|          |          |
|----------|----------|
| <b>T</b> | <b>F</b> |
| <b>T</b> | <b>F</b> |
| <b>T</b> | <b>F</b> |
| <b>T</b> | <b>F</b> |
| <b>T</b> | <b>F</b> |
| <b>T</b> | <b>F</b> |

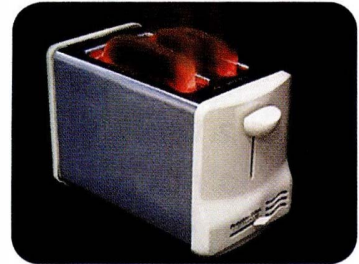
## After You Watch / Communication

**A** If a person uses a product incorrectly and gets hurt, who is responsible—the person or the maker of the product? Explain your reasons to a partner.

**B** Imagine you are a group of safety engineers, like the ones in the video. Choose a common appliance. Make a list of ways that people might use this appliance incorrectly, and plan the tests that you will do. Share your ideas with the class. (DON'T do any real tests!)



▲ iron



▲ toaster



▲ microwave



▲ blender



## A LIFE LESSON FROM A VOLUNTEER FIREFIGHTER

### Before You Watch



**A** Look at the picture and answer the questions with a partner.

1. Where is this person?
2. What is he doing?
3. How do you think he is feeling?

**B** Like the man in the picture, Mark Bezos is a firefighter. He described this dangerous and exciting work in a talk at TED. Here are some words you will hear in his TED Talk. Complete the paragraph with the correct words. Not all words will be used.

**flames** *n.* the hot, glowing gas that can be seen when a fire is burning  
**footrace** *n.* a running race  
**homeowner** *n.* a person who owns a home, or an apartment  
**load** *n.* the amount of goods or material that is carried  
**remarkable** *adj.* unusual or surprising  
**vocation** *n.* a strong desire to spend your life doing a certain kind of work

Volunteer firefighters are (1) \_\_\_\_\_ people. Although they have other jobs, they also feel a strong (2) \_\_\_\_\_ to help others. Even when (3) \_\_\_\_\_

Mark Bezos's idea worth spreading is that every act of generosity matters—even the small ones. Watch Bezos's full TED Talk on TED.com.

are burning through the walls of a building, volunteer firefighters ignore the heavy (4) \_\_\_\_\_ on their backs and run in to save the (5) \_\_\_\_\_, their family, and even their pets.

**C** Look at the pictures on the next page. Check (✓) the information that you predict you will hear in the TED Talk.

- \_\_\_\_\_ 1. There are many volunteer firefighters around the world.
- \_\_\_\_\_ 2. Being a volunteer firefighter is very important to me.
- \_\_\_\_\_ 3. My colleague was assigned to rescue the homeowner's dog.

### While You Watch

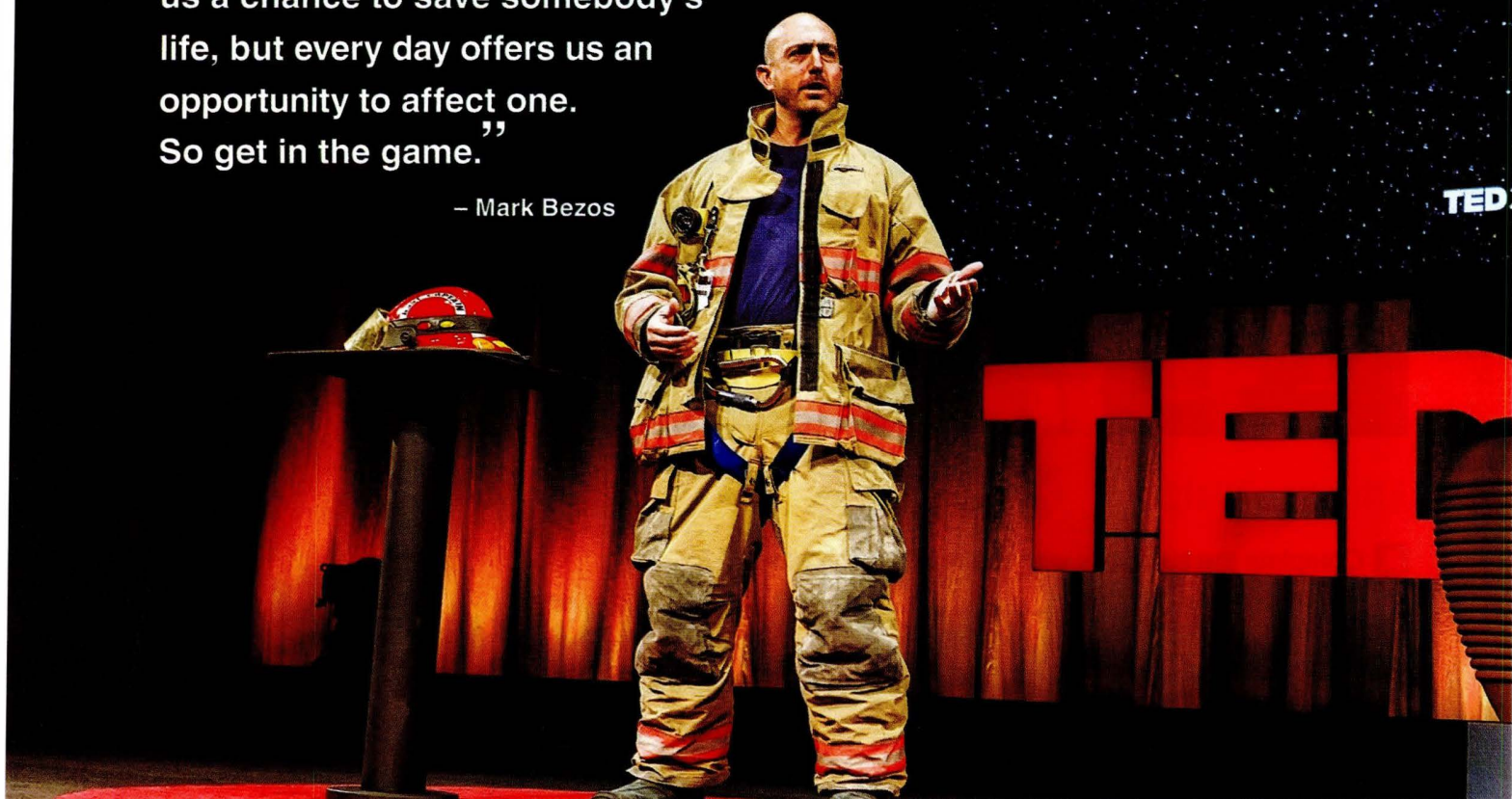
**A** Watch the TED Talk. Circle the main idea.

1. If you are interested in volunteering, there are many ways to help in your community.
2. Sometimes the small things we do for others are more important than we think they are.
3. Even though it can be dangerous, it is very rewarding to be a volunteer firefighter.



“Not every day is going to offer us a chance to save somebody’s life, but every day offers us an opportunity to affect one. So get in the game.”

– Mark Bezos



**B** The photos below relate to the ideas in the TED Talk. Watch the talk again, and write the letter of the caption under the correct photo.

- a. Mark Bezos is proud of his work as a volunteer firefighter.
- b. We can all make a difference in someone's life.
- c. Volunteers can also help clean up parks.
- d. Bezos felt a bit jealous of his colleague who rescued a dog.



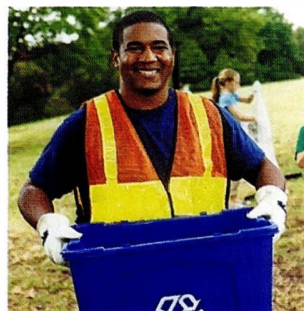
1. \_\_\_\_



2. \_\_\_\_



3. \_\_\_\_



4. \_\_\_\_

**Challenge!** What do you think Mark Bezos enjoys the most about his work as a volunteer firefighter? Share your ideas with a partner.



## A LIFE LESSON FROM A VOLUNTEER FIREFIGHTER



### After You Watch

#### A Complete the summary with the words in the box.

Mark Bezos is not a (1) \_\_\_\_\_ firefighter, but he's very (2) \_\_\_\_\_ to the fire company he works with. As a (3) \_\_\_\_\_, he receives assignments from the fire captain. Sometimes, he gets an (4) \_\_\_\_\_ assignment, but other times they don't seem that way. At his first fire, the captain asked Bezos to get the (5) \_\_\_\_\_ shoes from a burning house. Even though it seemed like a small thing, Bezos later learned that it made a big (6) \_\_\_\_\_ to her. He learned that day that it's important to take every opportunity to help others, no matter how small it may seem.

|              |            |
|--------------|------------|
| committed    | exciting   |
| homeowner    | volunteer  |
| professional | difference |

#### B Match the phrases to complete sentences from the TED Talk.

##### Cause

1. \_\_\_\_\_ Mark Bezos is the
2. \_\_\_\_\_ Bezos believes we should all
3. \_\_\_\_\_ One way we can help others is to
4. \_\_\_\_\_ We can also help by
5. \_\_\_\_\_ It's not hard to make a

##### Effect

- a. cleaning up our local park.
- b. serve food at a soup kitchen.
- c. Head of Development for a non-profit company that helps poor people.
- d. difference in our community.
- e. look for ways to help others.

#### C Read the statements below. Circle the ones that paraphrase Mark Bezos' ideas.

1. Everyone should try to volunteer as a firefighter.
2. You don't always get to do what you want to do.
3. If you can help another person, don't wait.
4. We can find ways to contribute to society every day.





Young volunteers  
cleaning up a beach

## Project

Mark Bezos encourages us to take every opportunity we can to help others. He believes that even a small act of kindness can make someone's life better. Use his ideas to survey your classmates about volunteering in your community.

- A** Look at the list of ways to volunteer. Circle the ones that are possible to do in your community.

visiting sick or elderly people  
collecting used clothes  
helping young children

cleaning up a park  
feeding people at a soup kitchen  
helping at an animal shelter

- B** Compare your choices in exercise **A** with a partner. Are there any volunteer opportunities you'd like to add to the list?
- C** Survey your classmates. Write a question for each item in your notebook. Ask a follow-up question for details. Answer your classmates' questions.

|                                     | Question | Name | Details |
|-------------------------------------|----------|------|---------|
| 1. way to help the sick and elderly |          |      |         |
| 2. way to help in education         |          |      |         |
| 3. way to help the environment      |          |      |         |
| 4. way to help animals              |          |      |         |

Pedro, what's a way  
you could help sick  
and elderly people?

I could read to them.

Why does it interest  
you?


### Presentation Strategy

#### Storytelling

Mark Bezos uses a humorous personal story to keep his audience engaged and to illustrate his larger message about the importance of helping others.

**Challenge!** In addition to being a volunteer firefighter, Mark Bezos has a full-time job in New York City. Go to TED.com and read more about Bezos in his speaker profile. What can you learn about his life? How are his full-time job and his role as a volunteer firefighter connected?





Moai at Ahu Akivi beneath the milky way,  
Easter Island, Chile



**Look at the photo,  
answer the questions:**

**1** What do you think of when you  
hear the word *mysteries*?

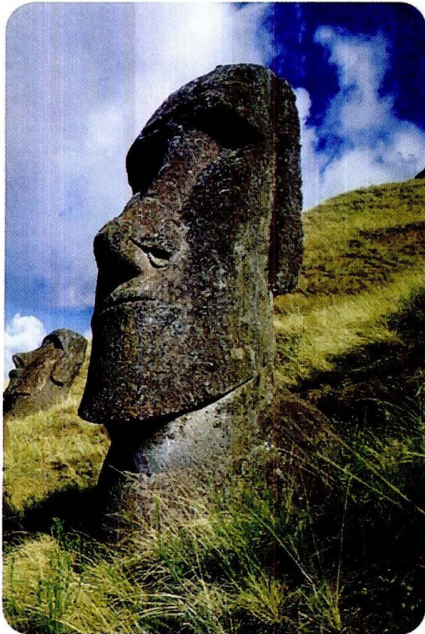
**2** What kinds of unsolved mysteries  
have you heard about?



### **UNIT 10 GOALS**

1. Speculate about mysteries
2. Discuss types of mysteries
3. Talk about plans you used to have
4. Explain a mysterious image





▲ Monument to ancestors on Easter Island, Chile

### Word Focus

Two verb + preposition combinations you should know are **search for**, and **speculate about**.

## Vocabulary

**A** Read the information. Notice the words in blue.

Chile's Easter Island was first seen by an outsider, Dutch explorer Jacob Roggeveen, in 1722. Since that time, people have been trying to **figure out** the mysteries of the large stone statues called Moai. Even today, we wonder how people with no modern technology managed to **carve** the stone, and we **speculate** about how they moved the **massive** statues.

The Moai were made between 900 and 1500 CE, so they're not **prehistoric**, but the native people of Easter Island have no written history of how the statues were made or of their purpose. Scientific **investigations** have **revealed** that the island was once covered in trees and palms, which could have been used to make ropes for moving the statues. The **remains** of dolphins in early garbage dumps are further **evidence** for the presence of trees, which must have been used for making canoes to carry fishermen out to sea. Much about Easter Island, however, is still a mystery.

**B** Write each word in blue next to the correct meaning.

1. speculate make guesses about something
2. \_\_\_\_\_ research projects, studies
3. \_\_\_\_\_ clues or signs that something is true
4. \_\_\_\_\_ parts of something that are left after most of it is gone
5. \_\_\_\_\_ try to find out what happened or what is true
6. \_\_\_\_\_ showed something; made people aware of something
7. \_\_\_\_\_ shape stone, wood, or other hard materials using sharp objects
8. \_\_\_\_\_ very large and heavy
9. \_\_\_\_\_ describes people or things that existed before information was written down

## Grammar: Modals for speculating about the past

| Explanation                                                                                                                                                                  | Example                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use the modals <i>may</i> , <i>might</i> , and <i>could</i> to speculate, or make guesses, about the past. After the modal, use <i>have</i> + the past participle of a verb. | The people of Easter Island <b>may have rolled</b> the statues over logs.<br>They <b>might have used</b> fish oil to make the statues easier to move.<br>The Moai <b>could have represented</b> kings. |
| When we are almost certain about our speculation or guess, we use <i>must</i> .                                                                                              | They <b>must have had</b> a way to travel on the ocean.                                                                                                                                                |



**A** Complete the sentences with the correct form of the verb and an appropriate modal.

1. We don't know what happened to Amelia Earhart, but we think her plane \_\_\_\_\_ (crash) on an island in the Pacific.
2. I don't know where my keys are, but I \_\_\_\_\_ (have) them with me when I left the apartment, because the door is locked.
3. We don't think it was really a UFO. It \_\_\_\_\_ (be) an unusual cloud or a large balloon.
4. The explorers \_\_\_\_\_ (run out) of food and water, or they \_\_\_\_\_ (get lost) in the mountains.
5. No one knows what happened to the treasure ship, but some people think it \_\_\_\_\_ (sink) in the Mediterranean Sea.

**B** Read the information in the box above. In your notebook, write five sentences with modals to speculate about Atlantis.

More than two thousand years ago, the philosopher Plato wrote about the lost island of Atlantis. It may have been a legend or simply fiction, but Plato wrote that Atlantis was an advanced and powerful nation that sank into the ocean in one unfortunate day and night.

**The workers might have put the stones in boats on the Nile River.**

## Communication

**A**  Talk about these famous places. Use modals for speculating about the past.

1. The pyramids at Giza, Egypt, are the subject of much speculation. The largest of the three pyramids was completed some 4,500 years ago and was made from over 2 million massive stone blocks. How do you think workers constructed these pyramids?
2. The Nazca lines in Peru are a group of enormous pictures made by removing reddish surface stones to expose the light-colored ground below. Because of their large size, it's impossible to see any one of the pictures from the ground, and there are no nearby mountains. What do you think was the purpose of these pictures?
3. Archaeologists have discovered hundreds of stone spheres in Costa Rica. The largest of the nearly perfect spheres are more than two meters across! They were probably made between 200 BCE and 1500 CE, but no one knows how people were able to carve these perfectly geometric balls from solid stone.

**B**  **GOAL CHECK**  **Speculate about mysteries**

Talk to a partner about mysterious places or events in your country or your region of the world. Why are the places mysterious? What do you speculate about these places?

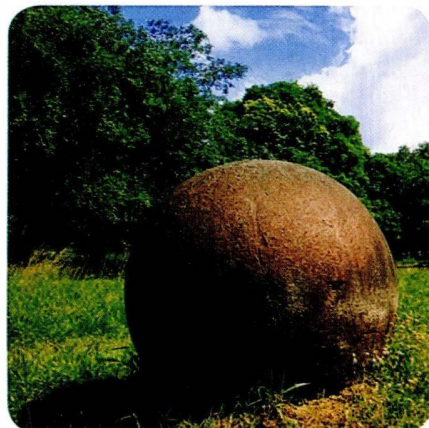
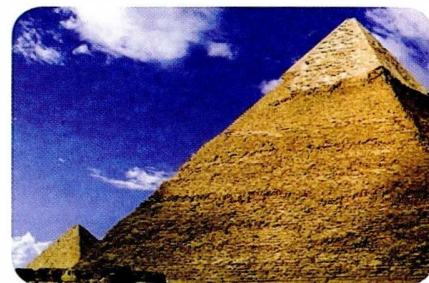






Illustration of a sea monster

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## Listening

**A** Discuss these questions with a partner.

1. Do you know any stories about sea monsters?
2. Do you think sea monsters might really exist?
3. Do you know what *fossils* are?

**B** **15** Listen to an expert talking about sea monsters. Write the name of a place and the monster in your notebook.

**C** **15** Listen again and choose the correct answer to each question.

1. According to the expert, at one time, sea monsters \_\_\_\_\_.  
a. didn't exist                      b. might have existed                      c. did exist
2. When scientists found fossils near Loch Ness, people speculated that Nessie might be \_\_\_\_\_.  
a. a skeleton                      b. a dinosaur                      c. a rock
3. According to legends, the Unktehila were destroyed by \_\_\_\_\_.  
a. snakes                      b. Native Americans                      c. Thunder Beings
4. Millions of years ago, \_\_\_\_\_ lived in North America.  
a. alligators                      b. mosasaurs                      c. crocodiles
5. Some Chinese dragons represented good luck because they could \_\_\_\_\_.  
a. bring rain                      b. find fossils                      c. sail in boats

## Engage!


Why do people enjoy mysteries?


**D** **15** Listen again. Then discuss the questions with a partner.


1. Which sea monster story was the most interesting to you?
2. If you could talk to the expert, what questions would you ask?




## Pronunciation: Intonation: Finished and unfinished ideas

**A**  **16** In a conversation, it's important to know when someone has finished speaking. One way speakers show that they are finished is falling intonation. When they are not finished, they may use steady or rising intonation. Listen to the finished and unfinished ideas in the box.

**B**  **17** When you hear an unfinished idea, the speaker may plan to continue. Listen to the examples.

**C**  Practice these sentences with a partner. End the sentence with steady or rising intonation when you see three dots (. . .). End with falling intonation when you see a period (.).

1. Loch Ness is 37 kilometers long and very deep.
2. The pilot said he saw a large object flying beside the airplane.
3. The ship's captain tried to send a radio message, . . .
4. People see different things when they look at the painting.
5. Some people may have dreams about the future, . . .

**D**  For each unfinished idea in exercise **C**, speculate about what the speaker will say next.

### Finished

He thought he saw something in the water.


These stories can't possibly be true.

### Unfinished

At first he thought it was a fish, . . .

But some people believe them, . . .

## Conversation

**A**  **18** Listen to the conversation with your book closed. Why does Tommy think Joan won't like the book?

- Joan:** Hi, Tommy. What are you reading?  
**Tommy:** It's a mystery novel—*The Clock Strikes at Midnight*.  
**Joan:** Is it any good?  
**Tommy:** It's all right, . . .  
**Joan:** Then maybe I'll read it when you're done.  
**Tommy:** Maybe not. I was going to say it's good, but I don't think you'd like it.  
**Joan:** Why not? I like mystery novels.  
**Tommy:** I know, but in this one, a young child is missing. I know you don't like to read about kidnappings, or murder, or . . .  
**Joan:** You're right. It doesn't sound like my kind of book.

**B**  Practice the conversation with a partner. Then switch roles and practice it again.

**C**  **GOAL CHECK**  **Discuss types of mysteries**

Some people like a good ghost story. Others enjoy murder mysteries. Tell a partner about the kinds of mysteries you enjoy hearing about or reading about. Then talk about mysterious things that you'd rather not hear or read about.

### Real Language


We can say *It's (not) my kind of \_\_\_\_\_* to talk about things we like or dislike.



Stonehenge, a prehistoric monument in Wiltshire, England

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## Language Expansion: Reacting to surprises

**A**  **19** Listen to a tour guide talk about Stonehenge. Fill in the blanks as you listen.

**Tour guide:** You can see that Stonehenge is very old. In fact, people started building Stonehenge nearly \_\_\_\_\_ years ago.

**Tourist:** Wow!

**Tour guide:** That's right. And while no one really knows why Stonehenge was built, there are some things we do know. The largest stones you see are these *trilithons*—two huge upright stones with a third stone laid on top. On average, these stones are \_\_\_\_\_ meters high.

**Tourist:** That's amazing!

**Tour guide:** I agree. What's even more amazing is that prehistoric people transported these stones \_\_\_\_\_ kilometers. And that was without any modern machinery.


**Tourist:** Really?!


**Tour guide:** And would you believe that these smaller bluestones came from a site in Wales, around \_\_\_\_\_ kilometers away!

**Tourist:** You're kidding!

**Tour guide:** I'm not! And the builders of Stonehenge must have known a lot about transportation because each of these "smaller" stones weighs around \_\_\_\_\_ kilos!

**Tourist:** Remarkable!

**B**  **19** Listen again and notice the way the tourists express their surprise.

**C**  Talk about mysterious things you know about. Your classmates will use expressions from exercise **A** to show surprise.

## Grammar: The future in the past

Use subject + *was/were* + *going to* + verb to talk about future plans that were made at a past time.

He **was going to** visit Stonehenge as soon as he could.

This structure sometimes means that the plans did not actually happen.

We **were going to** take the train from London, but we drove there instead.



**A** Fill in the blanks to complete the future-in-the-past structure.



In 1501, the Portuguese explorer Gaspar Corte-Real left Portugal with three ships. He (1) \_\_\_\_\_ search for a route to India. He sailed northwest, and although he didn't reach India, he did find a land he called Terra Verde, or Greenland. Then, all three ships sailed south. They (2) \_\_\_\_\_ return to Portugal. Unfortunately, only two ships arrived in Lisbon. Corte-Real's ship was never seen again.

Then in 1502, Gaspar's brother Miguel Corte-Real set out on an expedition with two ships. He (3) \_\_\_\_\_ look for his brother. Unfortunately, no one knows whether he found Gaspar. After sailing for some time, Miguel had the two ships go separate ways, thinking they (4) \_\_\_\_\_ cover more area and have a better chance of locating Gaspar. But Miguel's ship never returned to Portugal.

That left one surviving brother, Vasco Annes, who asked the king for permission to launch a third expedition. He (5) \_\_\_\_\_ do what Miguel had failed to do—find his brother. Perhaps wisely, King Manuel refused to give Vasco Annes permission for the journey.



## Conversation

**A** **20** Listen to the conversation with your book closed. Why didn't Eric visit Takeda Castle?

**Lenora:** Hi! I was hoping I would see you! I want to hear all about your trip.

**Eric:** We had a wonderful time, except for one day.

**Lenora:** What happened?

**Eric:** We were going to visit Takeda Castle. They call it Japan's Machu Picchu.

**Lenora:** That sounds interesting.

**Eric:** Yes, it's in the mountains, and the view from there is supposed to be amazing.

**Lenora:** Is it very far from Kyoto?

**Eric:** Only about three hours. We were going to take the train, but that morning, my wife hurt her ankle.

**Lenora:** And, of course, you wanted to walk around the ruins.

**Eric:** Of course, and we wanted to hike from the train station to the castle, too.

**Lenora:** That's a shame, but now you have a good reason to go back to Japan.



▲ Takeda Castle in Hyogo, Japan

**B** Practice the conversation with a partner. Then have new conversations about places you would like to visit.

**C** **GOAL CHECK** Talk about plans you used to have

Tell a partner about plans you had for the future when you were a child. What were you going to be when you grew up? Where were you going to live? What was your life going to be like?



## Reading

**A** Discuss these questions with a partner.

1. When you imagine scientists at work, where do you see them?
2. Do you think it's important to learn about prehistoric people?

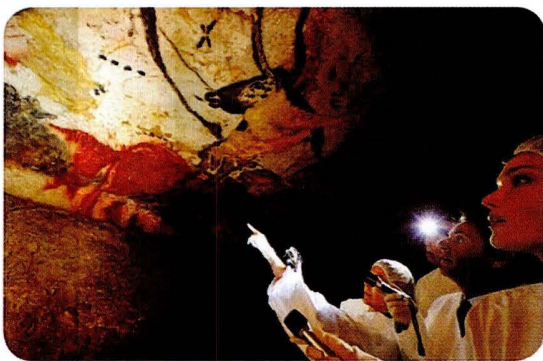
**B** Try to figure out the meaning of each word in bold without using a dictionary.

1. trek \_\_\_\_\_
2. facing \_\_\_\_\_
3. handprints \_\_\_\_\_
4. shamanistic \_\_\_\_\_
5. fragile \_\_\_\_\_

**C** What do you think the scientists wondered when they first saw the Kalimantan cave paintings? Write three questions they might have asked themselves.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**D** Compare your questions with a partner's questions. Then speculate about the possible answers.



▲ Visitors looking at cave paintings

Indonesian Borneo

# HANDS ACROSS TIME



Marang Mountains, Indonesia





**T**hey're known as *cavers*—people whose idea of a good time is exploring dark and sometimes dangerous caves. And that was exactly what first drew Luc-Henri Fage to the Island of Borneo in 1988. His goal at the time was an adventurous trek across the island along with other cavers.

On that first trip to Borneo, Luc-Henri saw ancient charcoal drawings on the ceiling of a large rock overhang. When he returned to France, he couldn't find any information about rock art in the region, so he returned to Borneo. Over the years, he kept returning and was joined by a French archaeologist and an Indonesian anthropologist. They found numerous caves with not only drawings, but also mysterious and obviously very old paintings. Then, in 1999, they saw the hands for the first time.

Exploring the region of Kalimantan, the Indonesian part of Borneo, is not an easy task. There are no roads to the Marang Mountains, so Fage and the others made their way up the Bungulun River in canoes, camping along the way, at times facing storms and fire ants that tried to join the campers to get out of the rain. The Marang Mountains rise out of the hot, humid jungle below, and their steep sides hold the caves that first brought Fage here. The rock art is found in the highest of these caves, often painted on a very high ceiling. As Fage points out, "If something goes wrong, you die."

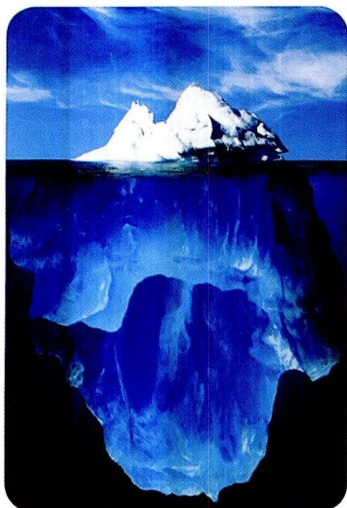
One large cave contains drawings of humans and animals, and around 350 images of **handprints**, some of them covered in patterns that look something like tattoos or body painting. Fage has counted 57 types of symbols depicted on the hands and is working hard to decode their meaning. Since the caves don't contain evidence of people living in them, it's likely that they were used for ceremonial or spiritual purposes. "We're dealing with **shamanistic** practices here . . . but I'm not sure what kind," says archaeologist Jean-Michel Chazine. The team thinks that the people who created these works of art more than 10,000 years ago may have been related to the aboriginal people of Australia.

Like cave paintings everywhere, the ones in Borneo are very **fragile**, and many of them may have already disappeared due to weather and time. The scientific community has learned about them only recently and is working to provide information that could lead to the protection of the rock art. Currently, Fage and Chazine display photos of the rock art and give information in French and English on their Web site, [www.kalimanthrope.com](http://www.kalimanthrope.com). It's a place in cyberspace where anyone in the world can learn more about the mysterious caves of Kalimantan.





Sandstorm in Iraq



▲ Iceberg in the Atlantic Ocean

## Communication

- A** Amazing photographs are easy to find on the Internet, but since images can be changed with computer software programs, you can't always believe what you see. Talk to a partner about these two pictures. Try to agree on which image is real and which is an example of *fauxtography*—a photograph that's designed to deceive the viewer.

## Writing

- A** Write a paragraph about each picture. Briefly describe the image, and then speculate about how the photograph was taken or changed to get the effect you see.

1. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
2. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## **B** GOAL CHECK Explain a mysterious image

Take turns. Read your paragraphs to a partner. Try to agree on the best explanation for each image.





## Before You Watch

- A** Discuss these questions. Is there any evidence that aliens from outer space visit Earth? How would they get here? What would they do here?

## While You Watch

- A** Watch the video and complete each statement in the box to show the person's opinion.

- B** Complete the video summary with words from the box. Then watch the video again and check your answers.

This video examines crop circles, a strange (1) \_\_\_\_\_ that occurs in England. These complex designs appear mysteriously in farmers' fields overnight, and people want to know if they're made by (2) \_\_\_\_\_, such as you and me, or if the circles are (3) \_\_\_\_\_ messages from aliens. To one researcher, crop circles are a (4) \_\_\_\_\_—a mystery that he would like to solve. For one crop circle maker, on the other hand, there is no mystery. He thinks that artists and graphic designers make the crop circles using wooden (5) \_\_\_\_\_ to flatten the grain and (6) \_\_\_\_\_ to help them create the designs.

### 1. Reg Presley, Crop Circle Researcher:

Most crop circles are probably man-made, but

### 2. Matthew, Crop Circle Maker:

Some people believe it's not possible for humans to make crop circles, but

otherworldly   puzzle  
boards   mortals  
phenomenon   markers

## After You Watch / Communication

- A** Agree on some questions you would like to ask the crop circle makers. Think of questions for both alien and human crop circle makers. Then take turns answering them.





Students practicing handstands in China



Look at the photo,  
answer the questions:

1 What are the children learning to do?

2 What is the best way  
for someone to learn?



### UNIT 11 GOALS

1. Talk about educational choices
2. Discuss your learning style
3. Talk about choosing a university major
4. Propose a new approach to teaching

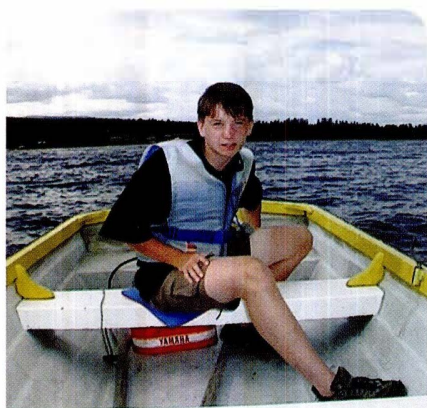


## Vocabulary

**A** Read the article. Write the words in **blue** next to their meanings.

## Study Abroad Programs: SEA Semester

For students who want to spend a **semester** away from their **campus**, the SEA Semester is a wonderful opportunity. Thirty-five students spend six weeks in Massachusetts, USA, taking **courses** about biology and the sea—and then use what they learn on a six-week trip on a small sailing ship, doing research with professional scientists. Each year, SEA Semester ships travel around the Atlantic and the Pacific. Students from colleges and universities in many countries **enroll** in the program. The **tuition** is not cheap—about \$25,000—but **scholarships** are available. You don't have to have a science **major**, and sailing experience is not a **requirement**. You do have to **apply** very early, though—the **deadline** is six months before the program starts.



I love the ocean.

Yes, but six weeks is a long time on a small ship!

1. money given to good students to pay for their studies \_\_\_\_\_
2. main subject that you are studying \_\_\_\_\_
3. a series of lessons or lectures about a subject \_\_\_\_\_
4. the last day to do something \_\_\_\_\_
5. to fill out a form to ask for something \_\_\_\_\_
6. money you pay to study \_\_\_\_\_
7. an area of land with college or university buildings \_\_\_\_\_
8. something that is necessary \_\_\_\_\_
9. to join a school or a class \_\_\_\_\_
10. half of a school year \_\_\_\_\_

**B** Discuss these questions with a partner. What are the good points and bad points of this program? Would you like to participate in this program? Why or why not?

Grammar: *Should have, Would have, and Could have*

Use modals with *have* + a past participle to imagine a different past. They are often used to talk about lost opportunities or possibilities.

Use *should have* if something was advisable, or a good idea.

Use *could have* if something was possible.

Use *would have* if someone was willing to do something or if something was likely to happen.

Larry **should have applied** for a scholarship. (He didn't apply.)

Mary **couldn't have** enrolled sooner. (She enrolled as soon as possible.)

We **shouldn't have missed** the deadline. (We missed it. That wasn't a good idea.)

I **could have read** the information more carefully. (I didn't read it carefully.)

They **would have given** you money. (They were willing, but you didn't ask.)

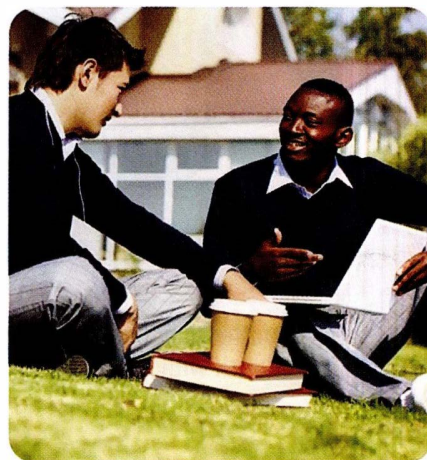


**A** Complete the sentences. Use *should (not) have*, *could (not) have*, or *would (not) have* with a verb from the box.

buy help give  
practice spend like

1. We \_\_\_\_\_ so much money last week. Now we don't have enough to pay the bills.
2. You didn't have to walk to the meeting. I \_\_\_\_\_ you a ride there.
3. Mike's mother is upset because he forgot her birthday. He had enough money, so he really \_\_\_\_\_ her a nice gift!
4. Andrew failed his driving test yesterday. He \_\_\_\_\_ more before he took the test.
5. Emma didn't apply to that school because she \_\_\_\_\_ living there. The town is really small and there's not much to do.
6. Tareq teaches calculus, so he \_\_\_\_\_ me with my homework. He didn't, however, because he thought I should figure the problems out myself.

**B** Talk with your partner about the things in the box. Use *should have*, *could have*, or *would have*.



1. a bad decision that you made
2. an experience that you didn't try

## Conversation

**A** Listen to the conversation with your book closed. Where does Josh want to study next year?

**Jamal:** Hi, Josh. What's up?

**Josh:** Not much. I have to study. I need to review 30 Japanese words for my quiz tomorrow, and they all look the same.

**Jamal:** You really picked a tough major!

**Josh:** The big problem is that I don't get many chances to speak the language. My college has a summer program in Tokyo. I should have applied for that.

**Jamal:** Why didn't you?

**Josh:** Because I missed the deadline! I could have spent two months in Japan. I would have studied 12 hours a day . . .

**Jamal:** Well, don't worry about it. I'm sure you'll have other chances.

**Josh:** Yeah, you're right. If I get good grades, there's an exchange program. I could spend next year at a Japanese university. I'm definitely going to apply.

I could have lived in London for a year.

Really!? Why didn't you go?

**B** Practice the conversation. Then have new conversations about your own experiences at school.

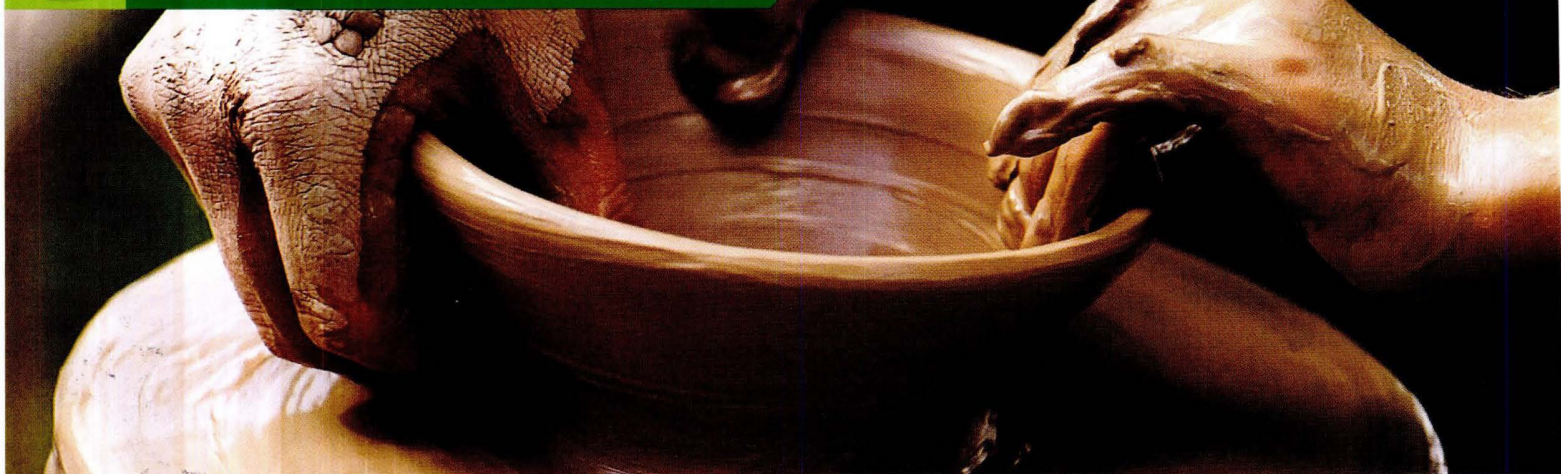
**C** **GOAL CHECK** Talk about educational choices

Talk about how you chose the school you attend or the classes you are taking. How did you make the choices, and do you regret any of your decisions?



# B

## GOAL 2: Discuss Your Learning Style



- ▲ A potter teaching someone to work with clay

### Listening

- A** Read the information in the chart below.

#### Learning Styles

What is the best way to learn new information? One theory suggests that each person has a learning style they prefer. It proposes that there are four different kinds of learners.

##### Auditory learners

prefer to get information by listening. They like to learn through lectures, group discussions, and conversations.

##### Visual learners

like to take in new information by seeing. Photos, charts, drawings, and diagrams help them to understand new ideas.

##### Kinesthetic learners

understand things best through experience and practice. They like to make things and use their bodies.

##### Reading/Writing learners

understand new information best when they read or write words. Using a textbook and reading articles are activities they prefer.

Speaker 1: \_\_\_\_\_

Speaker 2: \_\_\_\_\_

Speaker 3: \_\_\_\_\_

- B** 22 Listen to three speakers talk about their learning experiences. What did each person in the box study?

- C** 22 Listen to the speakers again. What is each person's learning style?

|                   |          |        |             |                 |
|-------------------|----------|--------|-------------|-----------------|
| <b>Speaker 1:</b> | auditory | visual | kinesthetic | reading/writing |
| <b>Speaker 2:</b> | auditory | visual | kinesthetic | reading/writing |
| <b>Speaker 3:</b> | auditory | visual | kinesthetic | reading/writing |

### Pronunciation: *Should have, Could have, and Would have*

- A** 23 Listen to the sentences. Notice how the word *have* can be reduced to sound like /ə/ or /əv/.

1. I should have paid my tuition on time.
2. Marty shouldn't have chosen a science major.
3. We could have just stayed home.
4. I would have preferred to learn this by doing it.



**B** Say these sentences to a partner. Use a reduced pronunciation, not a full pronunciation, of the word *have*.

1. Our teacher should have told us about the quiz.
2. He could have forgotten about the meeting.
3. I would have preferred to hear a lecture.
4. They could have studied in England last year.
5. She should have come to class that day.
6. The other instructor would have given a slide presentation.



## Communication

**A** Give a partner this learning-style quiz. Read the questions to your partner, and circle his or her answers. Then check your partner's score.

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. If I don't know how to spell a word, I . . .</p> <ol style="list-style-type: none"> <li>a. pronounce it slowly.</li> <li>b. try to see the word in my mind.</li> <li>c. write it several ways and choose one.</li> <li>d. look it up in the dictionary.</li> </ol> <p>2. If I need directions to a place, I like people to . . .</p> <ol style="list-style-type: none"> <li>a. tell me the directions.</li> <li>b. draw a map for me.</li> <li>c. take me there.</li> <li>d. write the directions for me.</li> </ol> <p>3. If I have problems installing a new computer printer, I . . .</p> <ol style="list-style-type: none"> <li>a. call someone to ask questions.</li> <li>b. look for a diagram online.</li> <li>c. experiment until I figure it out.</li> <li>d. read the instructions.</li> </ol> | <p>4. I prefer classes that have lots of . . .</p> <ol style="list-style-type: none"> <li>a. lectures and discussion.</li> <li>b. pictures and diagrams.</li> <li>c. field trips and projects.</li> <li>d. books and reading.</li> </ol> <p>5. When I study for a test, I like to . . .</p> <ol style="list-style-type: none"> <li>a. have someone ask me questions.</li> <li>b. look at charts and pictures.</li> <li>c. make flash cards and models.</li> <li>d. review my notes.</li> </ol> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Your score:** If you have three or more A answers, you are an auditory learner. If you have three or more B answers, you are a visual learner. If you have three or more C answers, you are a kinesthetic learner. If you have three or more D answers, you are a reading/writing learner.

**B** Discuss these questions with two or three other students.

1. What was your preferred learning style from the quiz in exercise A?
2. Do you agree with the results of the quiz? Explain.

**I should have made a recording of my vocabulary words!**

**C** **GOAL CHECK** Discuss your learning style

What is the best way for you to learn these things: new vocabulary, an English grammar structure, reading and writing skills? Discuss ideas with your partner.





economics    education  
 agriculture    law  
 business    engineering  
 psychology    chemistry  
 social work    geology

## Language Expansion: University majors

**A** University students are talking about their majors below. Read what they say, and write the major from the box.

- I'm studying why some companies are so successful. **Major:** business
- Our professor talked about why people have legal problems.  
**Major:** \_\_\_\_\_
- I'm learning about how money systems work. **Major:** \_\_\_\_\_
- Our class today was about where petroleum is found in the earth.  
**Major:** \_\_\_\_\_
- In class, we talk about why some children learn more slowly.  
**Major:** \_\_\_\_\_
- We study how we can help poor people. **Major:** \_\_\_\_\_
- I had a lecture about where crops grow well in our country.  
**Major:** \_\_\_\_\_
- I learn how I can help people with mental problems. **Major:** \_\_\_\_\_
- We are studying how new chemicals are made in a laboratory.  
**Major:** \_\_\_\_\_
- I've learned why some roads and bridges last for a long time.  
**Major:** \_\_\_\_\_

**B** Discuss the questions with a partner.

- What is your major? (or What will your major be?/What was your major?)
- What are some things that people learn when they study that major?
- Do you think it's better to choose a major because you enjoy it or because it will help you to get a good job?

My major was history.  
I took a lot of courses  
about...

## Grammar: Noun clauses

|                                                                   |                                                                                                                                                                                                         |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A noun clause can take the place of a noun in a sentence.         | Do you remember <u>the reason</u> ?<br>Do you remember <b>why she called</b> ?                                                                                                                          |
| Make noun clauses with a <i>wh</i> - word, a subject, and a verb. | I don't know <b>when the deadline is</b> .<br>I'm interested in <b>how children learn</b> .                                                                                                             |
| Noun clauses can be used in different parts of the sentence.      | <u>Subject position</u> : <b>What you said</b> was very interesting.<br><u>Object position</u> : I liked <b>what you said</b> .<br><u>After a preposition</u> : I'll think about <b>what you said</b> . |



**A** Write answers with noun clauses.

1. Where are my keys?

I don't know where your keys are.

2. What did he talk about?

I don't remember \_\_\_\_\_.

3. When is the lecture?

Nobody told me \_\_\_\_\_.

4. Where does Katie live?

I'm not really sure \_\_\_\_\_.

5. Why did John major in drama?

I can't understand \_\_\_\_\_.

**B** Take turns asking these questions. Use noun clauses in your answer. What are some things you're curious about? What was your favorite class last year? What did you learn about? What do you want to learn more about in the future?

**In history class, the teacher talked about how people lived in the past.**

## Conversation

**A** Listen to the conversation with your book closed. What two majors is Annie thinking about?

**Mike:** What's the matter, Annie? You look worried.

**Annie:** I guess I am. I just got a letter from the university, and it said the deadline for choosing my major is Friday.

**Mike:** You mean you still haven't decided?

**Annie:** It's so hard to make up my mind! Psychology is interesting because you learn why people do things. But if I studied agriculture, I would be able to help farmers produce more food.

**Mike:** Well, maybe you should think about what you do in class.

**Annie:** What do you mean?

**Mike:** You know, you don't like writing long papers, and a psychology major has to write tons of papers.

**Annie:** That's a good point. And I really like classes where I can use my knowledge of math and chemistry.

**Mike:** So it sounds like agriculture or maybe soil science are better options for you.

**Annie:** I think you're right.

**B** Practice the conversation with a partner. Then make new conversations about the majors in the box.

**C** **GOAL CHECK** Talk about choosing a university major

Think about two majors you are interested in. Why do you think they would be good for you? Why might they not be good? Discuss with a partner.

### Real Language

We use *You mean . . .* to check if we understood what someone just said.


### Word Focus

**make up my mind** = decide

- a. history and education
- b. English and business



## Reading

**A**  What are the best ways to teach children? Check (✓) the items in the list.

- \_\_\_ 1. reading books
- \_\_\_ 2. writing information on the board
- \_\_\_ 3. doing research on the Internet
- \_\_\_ 4. showing them how to do things
- \_\_\_ 5. having them play and do experiments

**B** Read the text. Match the numbers with the correct information.

- |             |                                                        |
|-------------|--------------------------------------------------------|
| ___ 1. 30   | a. Tulley founded Tinkering School                     |
| ___ 2. 2006 | b. target number of students at Brightworks for 2016   |
| ___ 3. 12   | c. Tulley founded Brightworks School                   |
| ___ 4. 80   | d. highest grade at Brightworks School                 |
| ___ 5. 2011 | e. number of students at Brightworks in its first year |

**C** Complete the sentences.

1. Gever Tulley's background is in \_\_\_\_\_.
2. By doing dangerous things, kids can learn how to be \_\_\_\_\_.
3. Tulley founded the Tinkering School to let kids learn by \_\_\_\_\_.
4. Students at Brightworks do \_\_\_\_\_ projects that build academic and social skills.
5. People who are comfortable taking \_\_\_\_\_ can make a big difference in the world.

# TED Ideas worth spreading

**Gever Tulley** Tinkerer; Founder of the Tinkering School

## FIVE DANGEROUS THINGS (YOU SHOULD LET YOUR CHILDREN DO)

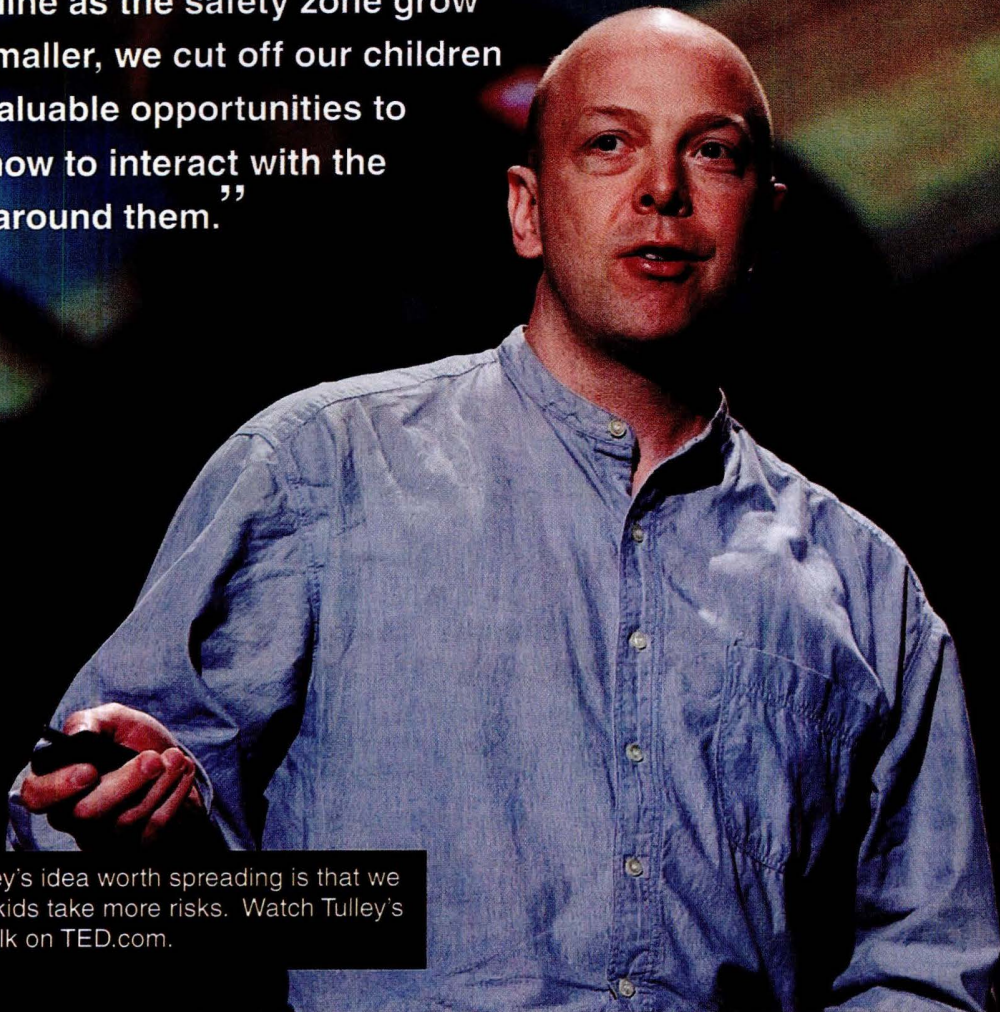
Gever Tulley is a man with a **mission**. He thinks that things like government safety regulations encourage modern parents to overprotect children, and that it is affecting their ability to learn and think. He wants kids to do dangerous things. In fact, he even wrote a book called *Fifty Dangerous Things (You Should Let Your Children Do)* to encourage parents to allow their children to experiment—safely—with fire, pocket knives, and power tools. He thinks they should lick nine-volt batteries and take appliances apart, among many other activities that might seem a little dangerous, at least to their parents.

This might sound crazy, but Tulley is serious. He argues that children who experiment and explore their world learn about natural phenomena, develop attention and concentration skills, and understand how complicated systems work. He thinks that activities like throwing a spear can even help children's brains develop more fully and improve their skills in visualization and prediction. Most importantly, Tulley says, his goals behind encouraging kids to take risks is promoting "safety and [...] simple things that we can do to raise our kids to be creative, confident and in control of the environment around them." Tulley wants parents and kids to do these activities together, but with kids taking the lead.

Gever Tulley knows a lot about taking risks. Although his **background** is in computer science, he has developed programs to help children have the kind of experiences he **advocates** in his book. First, in 2006, he started the **Tinkering School**, a summer camp



“ . . . As the boundaries of what we determine as the safety zone grow ever smaller, we cut off our children from valuable opportunities to learn how to interact with the world around them.”



Gever Tulley's idea worth spreading is that we should let kids take more risks. Watch Tulley's full TED Talk on TED.com.

where “kids learn how to build the things they think of.” Kids at Tinkering School have built a treehouse, a bridge, and lots of boats and vehicles.

After that risk, Tulley took an even bigger one. In 2011, he and a colleague, Bryan Welch, started a school in San Francisco, California, called Brightworks. From its first class of 11 students, the school has grown to 30 students, and there are plans to **enroll** 80 students by 2016. Students at Brightworks learn through doing group projects that build their academic and social skills, at the same time as they grow as community members.

Just imagine what kind of risks these kids will take as adults and the changes they will create in the world around them. Why not take a risk yourself?

---

**mission** a task or job that someone is given to do

**background** the experiences, knowledge, education, etc., in a person's past

**advocate** a person who argues for or supports a cause or policy

**tinker** to try to repair or improve something (such as a machine) by making small changes or adjustments to it

**enroll** to join as a member or participant





The old ways of learning don't work anymore. In the past, schools often taught children through memorization. They

(1) \_\_\_\_\_ had the chance to play and experiment more.

For example, in a biology class, students

(2) \_\_\_\_\_ grown plants or they

(3) \_\_\_\_\_ raised small animals.

This way, they

(4) \_\_\_\_\_

learned about the life cycle. Their parents and teachers

(5) \_\_\_\_\_

let them take risks—that's how people make big discoveries and changes.

## Communication

- A** Discuss the questions with a partner. Which ways of teaching do you think work best with the subjects in the box?

art biology history computer science literature mathematics

## Writing

- A** Complete the conversation with noun clauses.

**Martha:** You want to be a teacher, don't you? What subject are you going to teach?

**Juan:** I'm not sure (1) \_\_\_\_\_. Math interests me a lot, but I'm better at science. What do you think I should choose?

**Martha:** Oh, I have no idea (2) \_\_\_\_\_!

**Juan:** Well, I have some time to decide. Who was your favorite teacher when you were a child?

**Martha:** I don't remember (3) \_\_\_\_\_. It seems like a long time ago! Maybe Mrs. Jackson, my music teacher. . . We made a lot of noise in that class.

- B** Complete the opinion paragraph in the box with *should have*, *could have*, or *would have*.

- C** Write an opinion paragraph about new approaches to teaching. Be sure to use *should have*, *could have*, or *would have*.

- D** **GOAL CHECK** Propose a new approach to teaching

Share your ideas about approaches to learning. Which approaches do you think would be most successful? What are your reasons?





## Before You Watch

- A** Discuss these questions with a partner. Which country had butlers in the past? Where did butlers work? What did they do? Have you ever seen a butler in a movie or TV show? Describe the character.

## While You Watch

- A** Watch the video *Butler School* and circle the answers.

1. The students come from ( the same | many ) countries.
2. The students think the course is ( difficult | fun ).
3. The students learn to be a butler by ( practicing | reading ).

- B** Watch again and circle the things students study at this school.

- |                                 |                               |                         |
|---------------------------------|-------------------------------|-------------------------|
| 1. how to walk correctly        | 4. how to drive a car         | 7. how to stop a thief  |
| 2. what to say to a king        | 5. how to cook expensive food | 8. how to speak English |
| 3. what to say on the telephone | 6. how to iron a newspaper    |                         |

## After You Watch / Communication

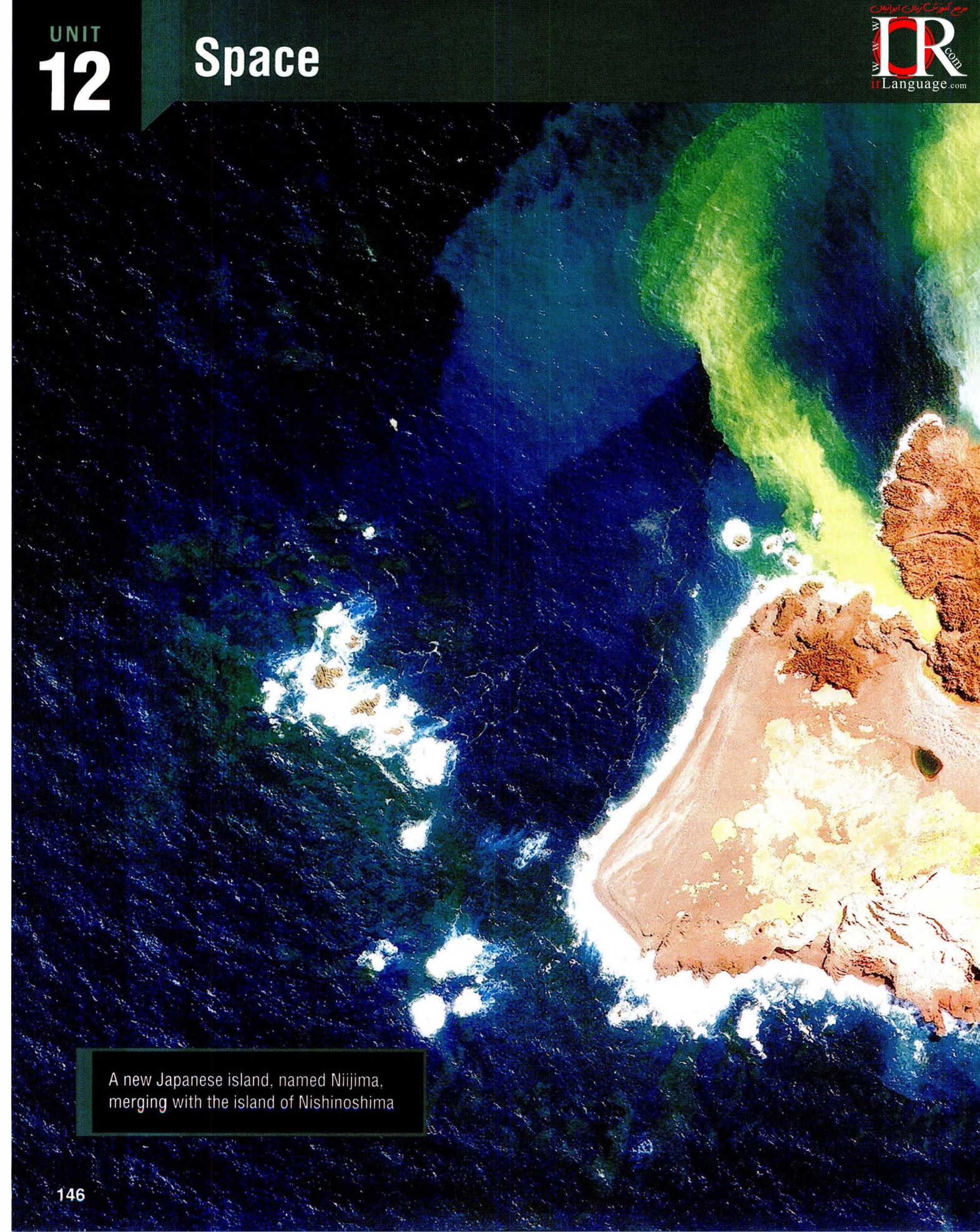
- A** Role-play the situations in the box.

- B** Make a magazine advertisement for a butler school. Include information on a butler's work, what students will learn at the school, and why being a butler is a good job. Decorate your ad with drawings.

**Student A:** You are a wealthy professional who needs a butler.

**Student B:** You have graduated from butler school, and you are applying for a job.



A satellite photograph showing a large, reddish-brown island on the right side of the frame, which is Nishinoshima. To its left, a smaller, more irregularly shaped island, Niijima, is visible. The two islands are separated by a narrow channel of water, and the surrounding ocean is a deep blue. The image captures the natural process of island formation and merging.

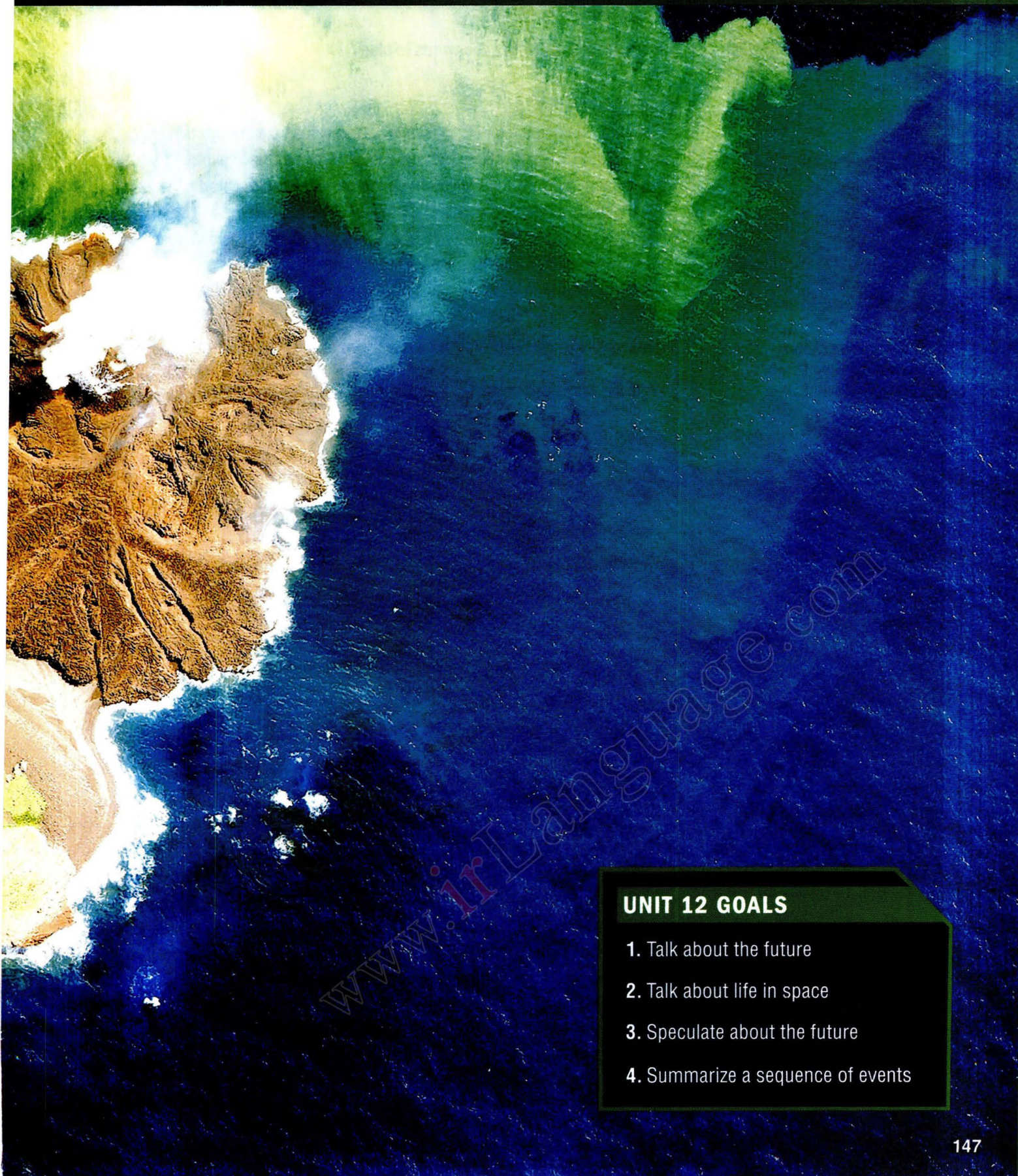
A new Japanese island, named Niijima, merging with the island of Nishinoshima



Look at the photo,  
answer the questions:

**1** What do you see in  
the photo?

**2** How do you think this  
photo was taken?



### UNIT 12 GOALS

1. Talk about the future
2. Talk about life in space
3. Speculate about the future
4. Summarize a sequence of events





▲ Astronaut Edwin Aldrin walks on the Moon.

## Vocabulary

**A** Read the article. Notice the words in blue.

### Space Exploration

The space age began in 1957, when Russia put the **satellite** *Sputnik* into **orbit** around the earth. Since that time, human beings have explored the **solar system** with **manned missions** to the moon and **unmanned spacecrafts** to Mars, Jupiter, and other **planets**. Closer to Earth, working on board the **space station** has taught us much about people's ability to live in space. This knowledge has changed some people's ideas about human beings **colonizing** the moon or Mars, while others continue to dream about this possibility.

**B** Write the words in blue next to their meaning. There are two phrases.

1. with people on board \_\_\_\_\_
2. the sun, moon, and planets \_\_\_\_\_
3. vehicle designed to travel or stay in space \_\_\_\_\_
4. without people on board \_\_\_\_\_
5. natural objects such as Earth or Saturn \_\_\_\_\_
6. man-made space object for communication or collecting information \_\_\_\_\_
7. curved path in space around a planet, moon, or star \_\_\_\_\_
8. the act of populating a new place, such as the moon \_\_\_\_\_
9. special journeys or tasks \_\_\_\_\_
10. spacecraft on which people live and do scientific work for weeks or months at a time \_\_\_\_\_

## Grammar: Talking about the future

Use *will* or *be going to* + verb to talk about the future.  
Also use *will* + verb to decide something suddenly.

Space exploration **will/is going to** be even more international in the future.

Is that tea? I'll have some, please.

Use the present continuous tense to talk about definite future plans.

Joyce and Walter **are flying** to Mexico City next month.

Use the simple present tense to talk about scheduled events in the future.

Our train **leaves** at 8:30 a.m.  
The movie **starts** in five minutes.




- A** Read this message from a student to her former teacher. Underline the expressions that refer to the future.

Dear Mr. Taylor,


I hope you're doing well, and I hope you have a few minutes to read the attached document. It's a story that I'm writing about a brother and sister in the future. The year is 2025, and the brother is going to be part of a manned mission to Mars. He's going there on a spacecraft that leaves the next day. The sister is a photographer, and she plans to take pictures of the launch. The conflict in the story occurs when the brother feels very sick after dinner. They decide that the sister will pretend to be him, and she will take his place on the mission to Mars. If you don't mind, I'd really like to hear your opinion of the story.

Thanks very much,  
Roberta Battaglia

- B**  Work with a partner. What will these be like in the future? Make predictions with *be going to* and *will* about the topics in the box.

transportation   the environment   communication   food

## Conversation

- A**  **25** Close your book and listen to the conversation. When does the training program start?

**Tina:** Alex, what are you going to do after high school?

**Alex:** Whoa! I don't even know what I'm doing after school today!

**Tina:** Very funny. I'm going to enroll in a training program.

**Alex:** What kind of training program?

**Tina:** They teach you to be a laboratory assistant. It doesn't take very long, and it starts a week after graduation.

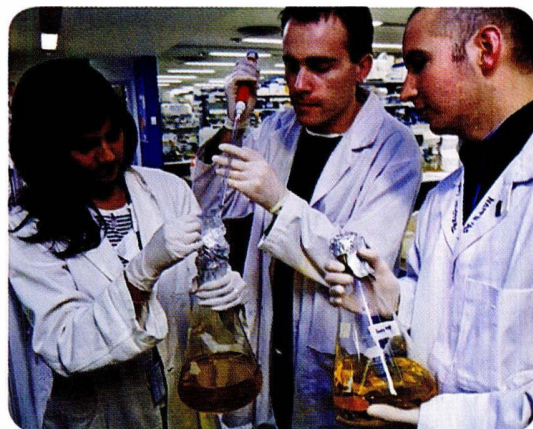
**Alex:** That sounds all right. And what will you do when you finish the program?


**Tina:** I'll look for a job in a scientific laboratory. All of them need lab assistants.

**Alex:** That's a pretty good idea. Eric is joining the military when he graduates.

**Tina:** So everybody has a plan except you.

**Alex:** True. That's what I'll do after school today! I'll plan my future!



- B**  Practice the conversation with a partner. Switch roles and practice it again.

## **C** **GOAL CHECK** Talk about the future


Think about your own future. Tell your partner what you will probably do in:

- the immediate future (this afternoon, tonight, tomorrow).
- the near future (next month, next year, after you graduate).
- the more distant future (in five years, in ten years, when you retire).




Astronaut Jerry L. Ross attached to the Remote Manipulator System

## Listening

**A**  26 Listen to a radio interview with an astronaut. Check (✓) the things she has done.

- ☐ studied botany (the science of plants)
- ☐ conducted experiments on board the International Space Station
- ☐ made repairs outside the International Space Station
- ☐ slept attached to a wall of the International Space Station
- ☐ returned to Earth

**B**  26 Listen again and complete the chart.


Plants involved in Wilma Foster's experiments:

Exciting aspects of life on board the International Space Station:

Difficult aspects of life on board the International Space Station:

### Engage!


Why do some people enjoy exploring extreme places such as space, high mountains, or deep parts of the ocean?

**C**  Discuss these questions with a partner.


1. Why do you think Dr. Foster wants to return to the International Space Station?
2. Why are the results of experiments conducted in space important?




## Pronunciation: Stress in compound nouns

- A**  **27** Listen to and repeat the words. Notice how the stress is on the first part of each compound noun.

spacecraft backpack lifesaver hardware bedroom


- B**  **28** Some compound nouns are written as two words, and some are hyphenated. Listen to and repeat the words.


space walk fruit juice space station follow-up check-in

- C**  Fill in each blank with a compound noun from exercises **A** and **B**. Then compare your answers with a partner's, and take turns reading the sentences aloud.

1. I'm thirsty! Do we have any \_\_\_\_\_?
2. The \_\_\_\_\_ orbits the Earth.
3. That study guide was a real \_\_\_\_\_! I might not have passed the exam without it.
4. I think it would be difficult to sleep without a \_\_\_\_\_.
5. After you arrive at the hotel, you will need to \_\_\_\_\_ at the desk.
6. Hector left his \_\_\_\_\_ at home, and all his books were in it!

## Communication

- A**  Imagine that your group is going to be part of a mission to the International Space Station. Research the experiments done there. What kind of experiments will your group do? Then make a list of everything you will need to take on board the space station in order to conduct your experiments.

- B**  Do a short presentation for the class. Talk about your plans for the space station mission, and explain the items on your list.

- C**  **GOAL CHECK**  **Talk about life in space**

Would you enjoy living and working aboard the International Space Station? Explain to a partner why you would or would not want to be an astronaut.



▲ Astronaut Kathryn Sullivan looks at the Earth from the Challenger

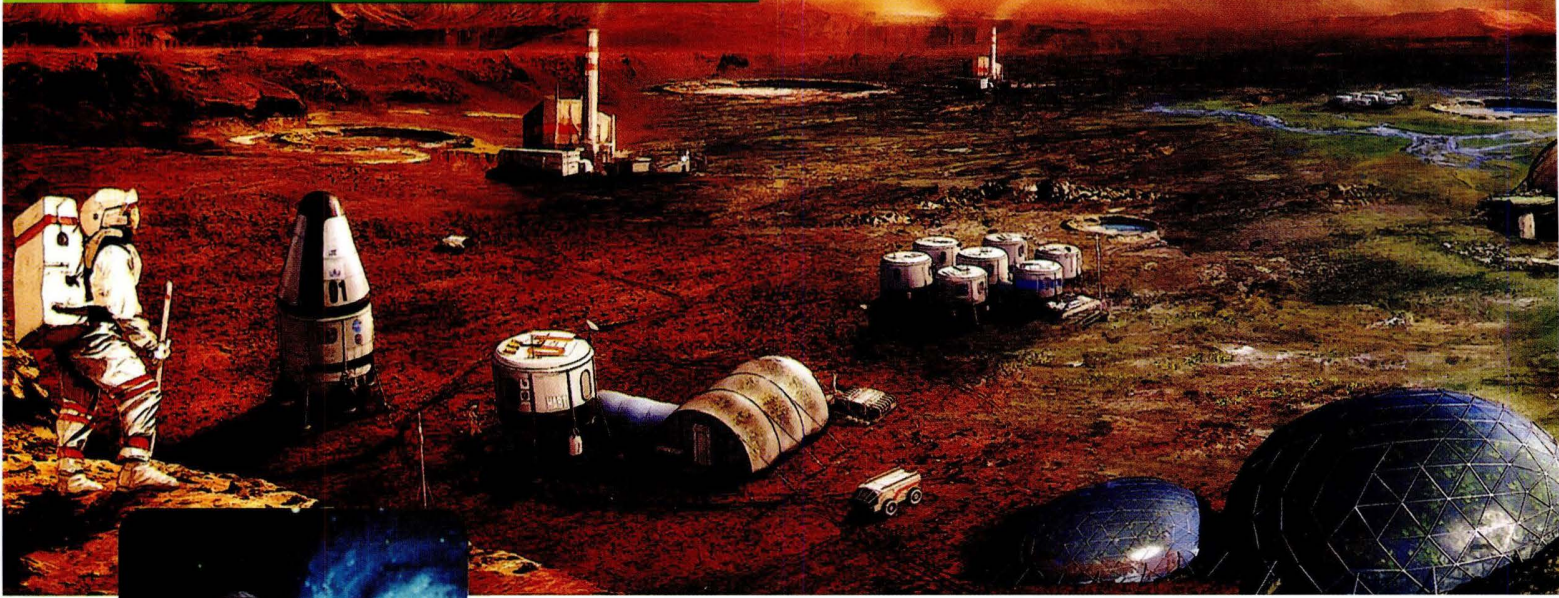
### Word Focus

Scientists **conduct** experiments.



## C

## GOAL 3: Speculate About the Future



## Speaker A

in a little while  
one day  
in ten years



## Speaker B

someday soon  
one of these days  
sooner or later

## Language Expansion: Future time expressions

- A** 29 Listen to two university professors. Underline the time expressions on the left when you hear them.
- B** 29 Listen again to Speaker A, and make a simple time line. Which event happens the soonest? Which happens in the more distant future?
- C** 29 Listen again to Speaker B. Which two events is the speaker less certain about? Which event is she more certain about? How do you know?

## Grammar: Modals and modal-like phrases to talk about the future

Use the modals *may*, *might*, and *could* + a verb to express a future possibility or to speculate about the future.

She **may** teach part-time next year.  
The launch **might not** be delayed this time.  
All of this **could** happen within our lifetime.

Use modal-like phrases to express ability or necessity in the future.

I **am not going to be able to** call you tomorrow.  
Scientists **will have to** solve this problem someday soon.

Do not use single-word modals with *will* or *be going to*.

People **will (can) be able to** live on Mars someday.  
Sherry **is going to (must) have to** take Physics 322 sooner or later.



**A** Fill in the blank with any appropriate expression from the chart. Not all items need an expression.


1. In the near future, people will \_\_\_\_\_ live longer than they can now.
2. More women \_\_\_\_\_ run for president in future elections.
3. I'm sure I'm going to \_\_\_\_\_ pay a lot for the jacket I want.
4. Do you think people \_\_\_\_\_ live on the moon someday?
5. The space station (not) \_\_\_\_\_ stay in orbit forever.

**B** Answer the questions in your notebook using expressions from the chart.

1. What do you think people will be wearing in 2050?
2. What do you think transportation will be like in 20 years?
3. When do you think people will be able to travel to Mars?
4. What do you think people are going to need to take to Mars?
5. What kinds of new jobs do you think there will be in the future?

**C** Take turns asking the questions and sharing your answers from exercise B.

## Conversation

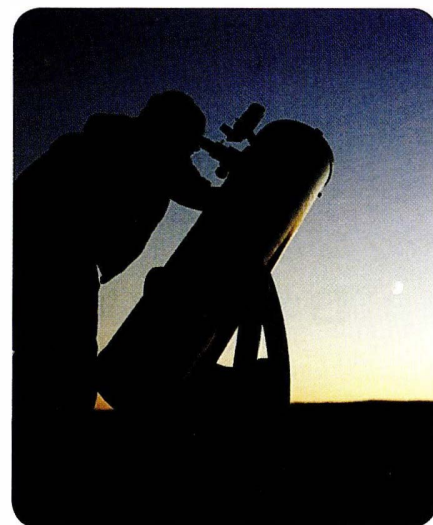
**A**  **30** Close your book and listen to the conversation. Which speaker is the most convincing to you?

- Jacob:** What do you think? Will people ever walk on the moon again?
- Matthew:** I don't know. They might, but there are still problems with the technology.
- Jacob:** Do you mean the space shuttle accidents?
- Matthew:** Of course. It's risky to send people into space.
- Jacob:** That's true, but it's the only way to experience the moon firsthand.
- Matthew:** Sure, but unmanned spacecraft can travel much farther than the moon.
- Jacob:** And there are going to be technical problems with those missions, too.
- Matthew:** OK, any future space exploration could have technical problems.
- Jacob:** But a human being could repair equipment and solve problems!
- Matthew:** You're right. Maybe I'll get lucky and they'll send you into space.

**B** Practice the conversation with a partner. Switch roles and practice it again.

**C**  **GOAL CHECK**  **Speculate about the future**

Talk in a small group. Do you know about any space exploration that is happening now? What parts of space do you think people will travel to or explore in the near future and in the distant future?



### Real Language

You can disagree with someone politely by saying, *That's true, but . . .*




## Reading

**A** How quickly can you find the answers in the article?

1. Why is Earth's atmosphere a problem for astronomers? \_\_\_\_\_
2. What did Lyman Spitzer propose?  
\_\_\_\_\_
3. What kind of object was Shoemaker-Levy 9? \_\_\_\_\_
4. When was the final Hubble service mission completed? \_\_\_\_\_

**B** Circle **T** for *true*, **F** for *false*, or **NI** for *no information* (if the answer is not in the reading).

1. The best telescopes on Earth are not affected by the atmosphere. **T F NI**
2. Lyman Spitzer was Russian. **T F NI**
3. Spitzer thought the orbiting telescope would mainly add to the scientific ideas that already existed. **T F NI**
4. Hubble has confirmed that black holes really exist. **T F NI**
5. The universe is expanding more quickly than it used to. **T F NI**

**C**  The reading passage is organized in chronological order. With a partner, discuss what the article says about telescopes in the past, present, and future.

## Word Focus

**supplement** = add to

**modify** = change

**expanding** = becoming larger; moving outward

**acceleration** = moving faster

## Space

# THE HUBBLE SPACE TELESCOPE

For centuries, astronomers looking at the moon, the planets, and the stars have faced a basic problem: the earth's atmosphere. Although it provides the air we breathe as well as protection from the sun, the atmosphere prevents us from seeing clearly into space—even with the largest and most advanced telescopes.

Then came Lyman Spitzer, an astrophysicist with a remarkable idea: put a large telescope in orbit around the earth, *outside* of the earth's atmosphere. Spitzer suggested this idea in 1946, eleven years before Russia launched the world's first man-made satellite and long before technology such as digital imaging or the space shuttle existed. Spitzer said the telescope would not only test existing ideas, but also inspire completely new ones. "The chief contribution of such a radically new and more powerful instrument," he predicted, "would be, not to **supplement** our present ideas of the universe we live in, but rather to uncover new phenomena not yet imagined, and perhaps to **modify** profoundly our basic concepts of space and time."

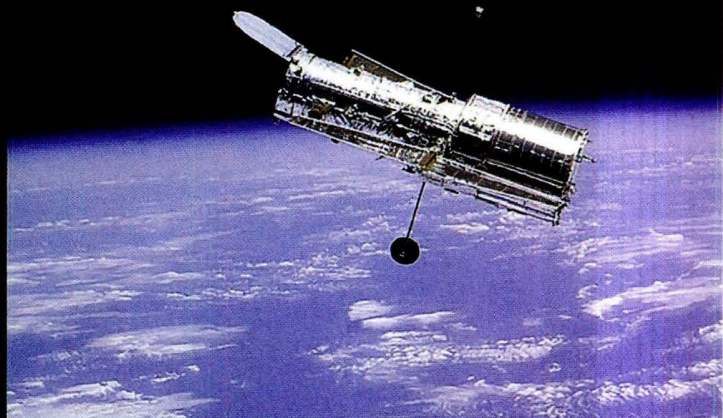
Spitzer was right. In 1993, NASA released the first images from the Hubble telescope. Since then, scientists have used Hubble to follow the comet Shoemaker-Levy 9 as it hit the giant planet Jupiter. They have produced images of the amazing and unique beauty of planetary nebulae—giant clouds of gas produced by dying stars. They have proved the existence of black holes at the centers of galaxies. And just as Spitzer predicted, Hubble has provided new information that has changed our ideas about the universe.

Astronomers already knew that the universe was **expanding**, but they expected this expansion to be slowing down due to the gravity of all the material in the universe, just as a ball thrown into the air falls back to Earth. Instead, astronomers discovered that the expansion is not slowing down at all—it is speeding up! It is as if a ball thrown into the air at first slowed, but then sped up and simply flew away. No natural force on Earth can do this, but some kind of energy must be causing the **acceleration**.



Scientists are calling this unknown force *dark energy* and are working to learn more about it. However, Hubble is getting old, and its final scheduled service mission was completed in 2009. Fortunately, other orbiting telescopes such as the Spitzer Space Telescope and the Chandra X-ray Observatory are sending information to Earth, and the gigantic James Webb Space Telescope is scheduled for launch in the near future. Together with a network of telescopes on the ground, these space observatories promise, as Lyman Spitzer said back in 1946, to change not only what we know, but also how we learn.

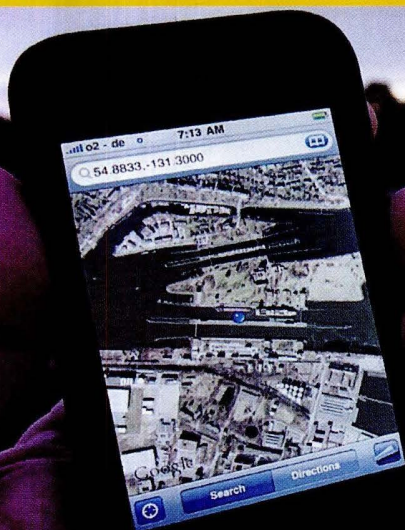
The Hubble telescope  
orbiting Earth



### The Orion Nebula







Technology tracks route for a tourist

Technology developed by space programs:

- artificial heart pumps
- weather satellites
- liquid-cooled garments to treat injuries
- robotic arm to assist in surgeries
- global positioning systems (GPS)
- technology for cleaning polluted land or water
- protective material for metal bridges


### Writing Strategy

A thesis statement is often at the end of the introduction.



Your thesis statement must:

- Make a claim that someone could disagree with.
- Provide a preview of your ideas.

## Communication

- A**  Read the information in the box. Discuss which kinds of technology could benefit you or someone you know.
- B** As you know, space exploration is extremely expensive. Make a list of other kinds of programs governments could spend money on in order to help people.

## Writing

- A** Write a three-paragraph composition with an introduction, a body paragraph, and a conclusion. In your composition, answer the following questions:
- In what ways does space exploration benefit human beings?
  - Do those benefits outweigh the costs of space exploration?
- B**  Exchange compositions. Read your partner's composition carefully, and write answers to the questions.
1. Introduction: Does it give background information about space exploration?
  2. Thesis statement: Does it make a claim and express a clear point of view?
  3. Thesis statement: Does it give the reader a preview of the writer's main points?
  4. Body paragraph: Does it give enough reasons and examples to support the thesis statement?
- C**  Talk with your partner about your answers to the questions above.



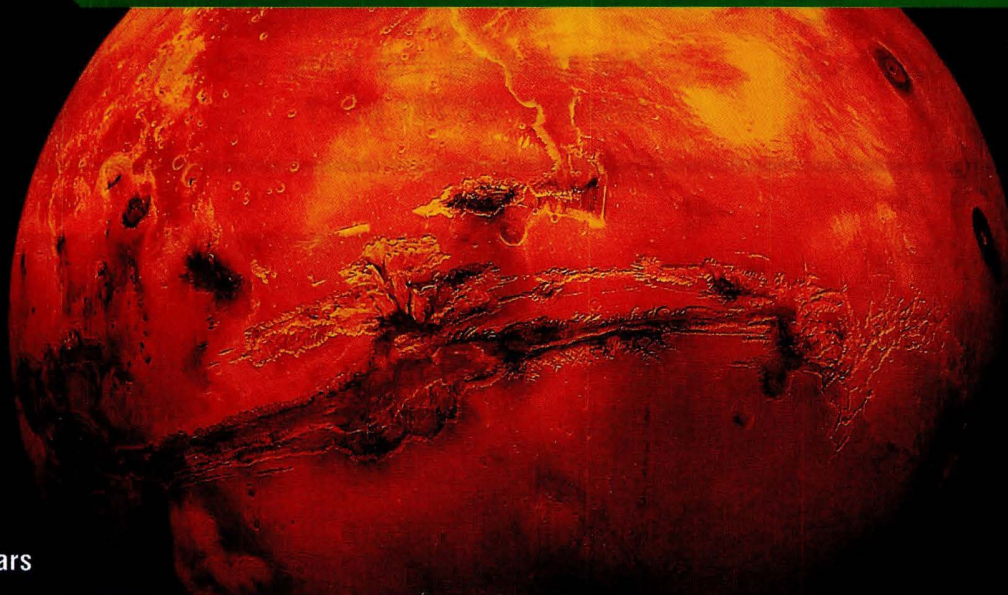


Image of Mars

## Before You Watch

- A** Read about the Curiosity rover. Use a dictionary to help you with the words in **bold**.

## While You Watch

- A** Number the steps in the order they happen.

\_\_\_\_\_ Launch      \_\_\_\_\_ Testing      \_\_\_\_\_ Touchdown      \_\_\_\_\_ Cruise

- B** Write answers to these questions in your notebook.

1. How many Americans were watching when the Curiosity rover landed on Mars?
2. How many minutes does it take for information from Mars to reach Earth?
3. When people on Earth learn that the spacecraft is at the top of Mars's atmosphere, how many minutes has the rover been on the planet's surface?
4. What role does the computer play in the Entry, Descent, and Landing?

A vehicle called a "rover" has been sent to Mars to study the planet's rocks and soil, but getting it there wasn't the most difficult part. In the seven minutes called "Entry, **Descent**, and Landing," a **parachute** helped to **decelerate** the spacecraft from 13,000 miles per hour down to zero. Then, a special vehicle called the "sky **crane**" lowered the rover to the **surface** of Mars and flew away!

## After You Watch / Communication

- A** Discuss the quotations from the video. What do you think the speakers mean?

1. Adam Steltzner: "It is the result of reasoned engineering thought, but it still looks crazy."
2. Tom Rivellini: "Entry, Descent, and Landing, also known as EDL, is referred to as the "seven minutes of terror . . . If any one thing doesn't work just right, it's game over."



## Before You Watch



**A** Look at the picture and answer the questions with a partner.

1. Where are these people?
2. What are they doing?
3. Would you be comfortable in a place like this? Why or why not?

**B** Engineer Bill Stone has explored deep caves like this one. Here are some words you will hear in his TED Talk. Complete the paragraph with the correct words. Not all words will be used.

**abyss** *n.* a hole so deep or a space so great that it cannot be measured  
**chamber** *n.* a space inside something else  
**expedition** *n.* a journey, especially by a group of people for a specific purpose (such as to explore a distant place or to do research)  
**illuminated** *adj.* lit by bright lights  
**obsolete** *adj.* no longer used because something newer exists  
**remoteness** *n.* the state of being far away or distant

Bill Stone has led many (1) \_\_\_\_\_ to some of the deepest caves on earth. In order to go down into a deep (2) \_\_\_\_\_, he has developed new devices and technology. He and his teams

Bill Stone's idea worth sharing is that the technology we use to explore deep under the earth and sea can also carry us to the moon to tap its resources—if we are bold and imaginative enough. Watch Stone's full TED Talk on TED.com.

camp below ground in places that are wet, cold, and not (3) \_\_\_\_\_ at all. Now he wants to explore the moon. He says that our old ways of thinking about travel to the moon are (4) \_\_\_\_\_. Despite its (5) \_\_\_\_\_, Stone believes that it is possible for people to live on the moon and to access its resources.

**C** Look at the pictures on the next page. Check (✓) the information that you predict you will hear in the TED Talk.

- \_\_\_\_\_ 1. When you explore a cave, you often find underground water.
- \_\_\_\_\_ 2. It is possible for human beings to live and work on the moon.
- \_\_\_\_\_ 3. We still don't know much about space travel.

## While You Watch

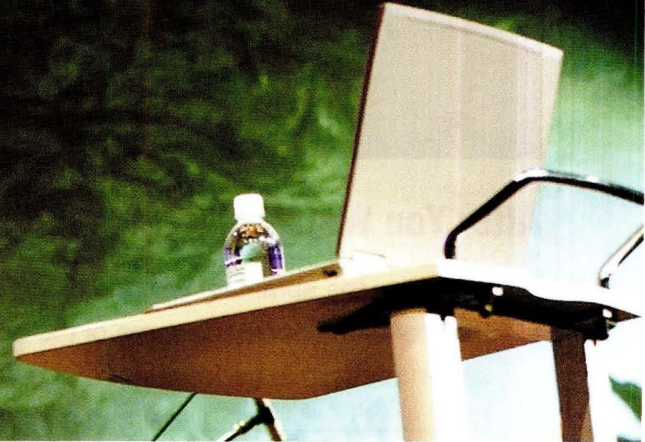
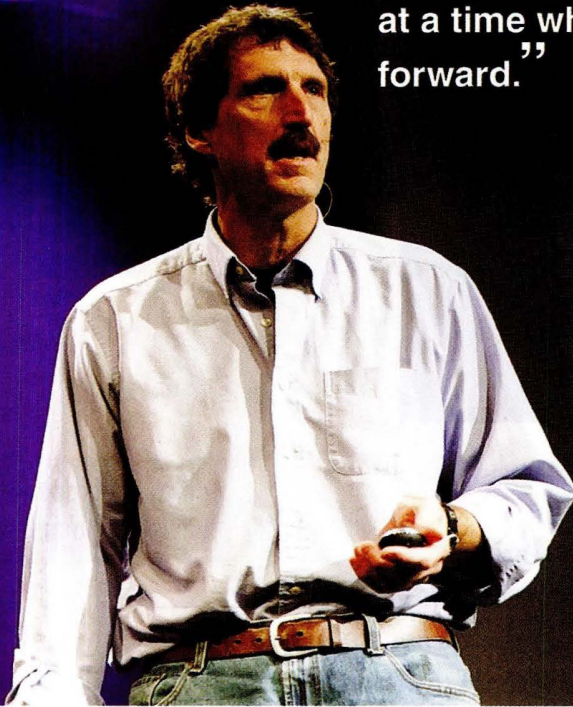
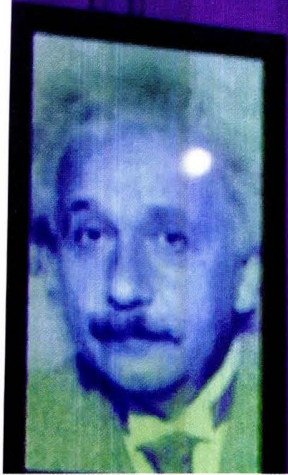
**A** Watch the TED Talk. Circle the main idea.

1. If we are going to explore underground, underwater, and in space, we need to leave old ideas behind.
2. It is very dangerous to be an extreme explorer because of underground water in caves.
3. We need to explore the moon and outer space more than we already have.



“There was once a time when people did bold things to open the frontier. We have collectively forgotten that lesson. Now we’re at a time when boldness is required to move forward.”

– Bill Stone



**B** The photos below relate to the ideas in the TED Talk. Watch the talk again, and write the letter of the caption under the correct photo.

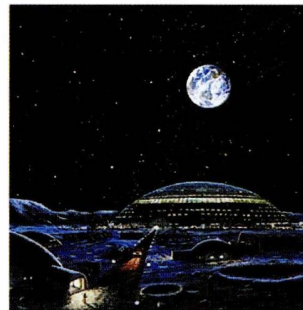
- a. Bill Stone thinks there will be commercial travel to the moon in the future.
- b. When Stone's teams explore deep caves, they make camp in one of its chambers.
- c. Humans may live on the moon in order to access its resources.
- d. There is often a great deal of water in very deep caves.



1. \_\_\_\_



2. \_\_\_\_



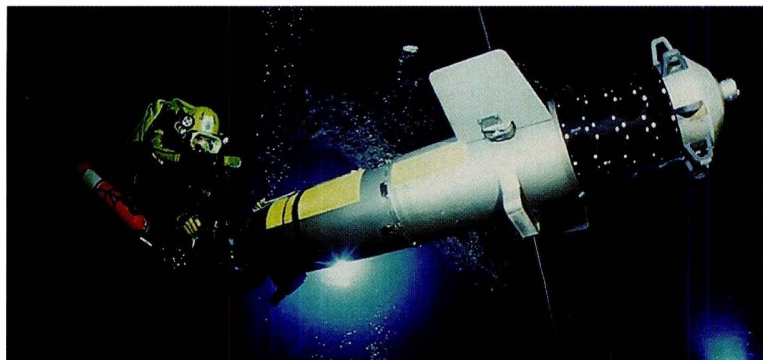
3. \_\_\_\_



4. \_\_\_\_

**Challenge!** Read Stone's speaker profile on TED.com to learn more about the incredible places he's been. Which one would you most like to visit? What questions would you ask Stone about his experiences as an explorer? Share your ideas with a partner.





## After You Watch

caves companies darkness  
 devices imagination

### A Complete the summary with the words in the box.

Bill Stone has gone into some of the world's deepest (1) \_\_\_\_\_, and in order to learn more about the world below, he has developed (2) \_\_\_\_\_ that can map huge chambers in complete (3) \_\_\_\_\_. Now he has turned his (4) \_\_\_\_\_ to the moon. Stone wants to see private (5) \_\_\_\_\_ build settlements on the moon so they can look for minerals and other resources.

### B Match the phrases to complete sentences from the TED Talk.

#### Cause

1. \_\_\_\_ Stone's cave exploration teams have had
2. \_\_\_\_ A space vehicle's fuel can equal
3. \_\_\_\_ NASA would like to return to the moon by
4. \_\_\_\_ One of Stone's devices can help an explorer breathe
5. \_\_\_\_ Europa, one of Jupiter's moons, has ice that is

#### Effect

- a. at 200 meters under water.
- b. 16 miles thick.
- c. as many as 150 members.
- d. 90% of its weight.
- e. the year 2024.

### C Read the statements below. Circle the ones that paraphrase Bill Stone's ideas.

1. It is now possible to explore deep underground without too many problems.
2. When you are designing new equipment to go underwater, you need to think about possible dangers.
3. Going to the moon in the same way as before will help us learn new things about space.
4. It is a good idea to let private companies explore the moon.





## Project

Bill Stone wants to build a base on the moon and allow private companies to access its resources. Has Stone convinced you that this is a good idea? Use his ideas to write a letter for or against industrial exploration.

- A** Work with a partner to find facts and opinions from the talk you can include.
- B** Decide with your partner which facts and opinions from exercise **A** to include. Choose the ones that support your idea the best.
- C** Write your letter. Show your letter to a different partner. Is your opinion easy to understand? Does he or she have ideas for improvement?

To the Editor:

I am writing to \_\_\_\_\_.

In my opinion, \_\_\_\_\_. If we don't \_\_\_\_\_, we will \_\_\_\_\_.

It is also important to \_\_\_\_\_. We will \_\_\_\_\_ if we \_\_\_\_\_.

Finally, I think \_\_\_\_\_. If \_\_\_\_\_, then \_\_\_\_\_.

Yours sincerely,

\_\_\_\_\_

**Challenge!** Bill Stone gave his TED Talk in 2007. Is Stone still working on this idea? How have industrial and commercial space exploration advanced since then?

### Presentation Strategy

#### Using Visuals

Bill Stone uses amazing photos and videos to share his experiences with his audience.



# GLOSSARY

## UNIT 1 PEOPLE AND PLACES

**ancient:** very old; from an earlier time  
**arid:** describes places that receive very little rain  
**employment:** having a job  
**fishing:** catching fish  
**frigid:** describes extremely cold places  
**herding:** caring for a group of animals such as cattle or sheep  
**hunting:** killing wild animals for food  
**inhabit:** to live in a place  
**migration:** moving from one part of the world to another  
**occur:** to happen  
**political:** relating to the way power is achieved or used in a society  
**rainy:** describes places that receive a large amount of rain  
**sail:** to move across water in a boat using the wind  
**snowy:** describes places that receive a large amount of snow  
**temperate:** describes places with distinct seasons that are never extremely hot or cold  
**tropical:** describes hot, humid places near the earth's equator

## UNIT 2 THE MIND

**cell:** the smallest part of an animal or plant  
**concentrate:** think very hard about something  
**conclusion:** something you decide after looking at all the information  
**conduct:** to organize and carry something out  
**experiment:** a scientific test to see if something is true  
**hearing:** your ability to sense sounds  
**laboratory:** a place where scientists work  
**landmark:** something easily seen, such as a tall building or a mountain  
**memorize:** learn so that you can remember exactly  
**memory:** your ability to remember things  
**mental:** in your mind  
**participate:** to take part in an activity or event  
**portion:** part  
**practice:** to do something repeatedly in order to perfect it  
**react:** speak or move when something happens  
**recall:** to remember  
**research:** studying something to discover new facts about it  
**results:** the information that scientists get after an experiment  
**retain:** keep, continue to have  
**sight:** your ability to see  
**smell:** your ability to sense the odor of things  
**survey:** collecting information by asking many people the same questions  
**taste:** your ability to sense the flavor of things  
**technique:** a way to do an activity  
**theory:** a scientific idea  
**touch:** your ability to sense how things feel  
**visualize:** make a picture in your mind

## UNIT 3 CHANGING PLANET

**climate change:** a change in the normal weather patterns

**coal:** a black mineral made of carbon taken from the ground  
**conservation:** saving and protecting the environment  
**deforestation:** the cutting down of trees over a large area  
**drought:** a time of little or no rainfall  
**extreme:** very great in degree or intensity  
**global warming:** a gradual rise in the earth's temperature  
**increase:** the number, level, or amount becoming greater  
**invasive species:** plants and animals with no local natural controls on their populations  
**led to:** caused  
**oil:** a thick liquid found underground and used as a fuel  
**sea level:** the average level of the ocean  
**temperature:** how hot or cold something is

## UNIT 4 MONEY

**ATM:** automatic teller machine (a machine that dispenses money)  
**avoid:** to stay away from  
**bargain:** something good for a low price  
**borrow:** get money that you will give back in the future  
**budget:** a plan for spending your money  
**cash:** money in coins and bills  
**checking account:** a bank account that you write checks from  
**decide:** to reach a conclusion  
**deposit:** put money into a bank  
**expenses:** money that you spend  
**hope:** faith that a situation will improve  
**in debt:** owing money to a bank or a company  
**income:** money that you receive for working  
**lend:** give money to another person that they will give back in the future  
**love:** to like with great intensity  
**PIN number:** personal identification number (secret number)  
**receipt:** a paper that shows how much money you have paid or given  
**savings account:** a bank account where you save money to spend later  
**stop:** to end a movement or activity  
**teller:** a person who works in a bank  
**withdraw:** take money out of the bank

## UNIT 5 SURVIVAL

**banned:** not allowed  
**cope:** deal with something successfully  
**ecosystem:** all the plants and animals in a certain area  
**emergency:** a bad situation that requires immediate attention  
**endangered:** with species, describes one that might become extinct soon  
**equipment:** items needed for a purpose  
**evacuate:** to leave a place because it has become dangerous  
**first aid:** emergency medical treatment  
**natural disaster:** earthquakes, floods, or other damaging natural events

**panic:** uncontrolled fear in response to danger  
**predatory:** describes an animal that eats other animals  
**preparation:** the process of getting ready  
**preservation:** keeping or maintaining something  
**reserve:** a place where hunting and fishing are not allowed  
**restore:** to return something to the way it was before  
**situation:** the way things are at a certain time  
**species:** a certain kind of plant or animal  
**supplies:** food, equipment, and other things people need

## UNIT 6 ART

**abstract:** describes art made with shapes and lines, not pictures of real things  
**aware:** conscious of, alert to  
**bronze:** a gray to reddish-brown metal made of tin and copper  
**clay:** a material made from earth  
**depict:** to describe or portray something through art  
**diverse:** varied, different from each other  
**express:** show what you think or feel about something  
**glass:** a hard transparent material used in windows, buildings, ornaments, and other objects  
**leather:** a material made from animal skin  
**painting:** a work of art made with paint  
**realistic:** describes art that looks like real things  
**represent:** be a symbol for something  
**sculpture:** a work of art made by carving stone, metal, or wood  
**silver:** a white, shiny, metallic element used for making jewelry, knives, forks spoons, and other objects  
**stained glass:** a work of art made with pieces of colored glass  
**stone:** a hard material found in the ground  
**style:** a way of making art that is used by one artist, or a small group  
**technique:** a particular way to do or make something  
**textile:** a cloth or fabric made by weaving  
**wood:** a material made from trees

## UNIT 7 GETTING AROUND

**board:** get on a plane, bus, or ship  
**connect:** come together  
**destination:** the place you are going to  
**directly:** without stopping or changing direction  
**efficient:** not using too much time or energy  
**fare:** money you pay to use public transportation  
**fuel:** a substance like gasoline or oil that is burned to give power  
**increase:** become greater in number or amount  
**pass:** a card that shows you have paid to use public transportation for a period of time  
**passengers:** a person who is traveling in a vehicle  
**reduce:** make smaller  
**route:** the way that a train or bus usually goes  
**speed:** how fast something moves  
**terminal:** the end of a train or bus route  
**ticket:** a paper that shows you have paid to use public transportation



**transfer:** change from one route to another  
**vehicle:** a car, truck, or bus

### UNIT 8 COMPETITION

**advice:** an opinion or opinions given to someone about what to do  
**athlete:** a person who plays sports  
**championship:** a competition to find the best player or team in a sport  
**coach:** someone who trains a person or a sports team  
**competitive:** a situation of competition where something tries to be as good or better than something else  
**diet:** a weight loss program  
**game:** an activity or sport, often with rules, that people play  
**individual:** one person  
**lose:** to be defeated by another person or team  
**match:** a competition such as a soccer match or tennis match  
**medal:** a metal disk given as a prize in a sports event  
**points:** the numbers that are added together to give the score  
**schedule:** a list of timed, planned activities or events  
**score:** the total number of points a player or team receives in a sports event  
**scoreboard:** a large sign that shows the score during a sports event  
**sportsmanship:** polite behavior during a sports event  
**team:** a group of people who compete together  
**training:** learning and practicing a sport  
**trophy:** a prize such as a cup given to the winner of a competition  
**win:** to score more points than another person or team

### UNIT 9 DANGER

**ambulance:** a vehicle used to bring sick or injured people to a hospital  
**emergency room:** part of a hospital that takes care of sick or injured people who need immediate attention  
**estimate:** guess about the number or amount of something  
**fire department:** the organization responsible for putting out unwanted fires in a town or city  
**hospital:** a medical institution that gives health care for sick or injured people  
**injured:** hurt a person's body  
**pharmacy:** a drugstore  
**poison:** something that kills people if they eat or drink it  
**police:** a part of the government whose men and women in uniform prevent crimes, enforce the law, and catch criminals  
**prevent:** make sure that something doesn't happen  
**risk:** possibility that something bad will happen  
**substance:** a solid, liquid, or gas  
**survive:** live through a dangerous situation  
**toxic:** containing poison

### UNIT 10 MYSTERIES

**carve:** to shape something by cutting it artistically and exactly  
**construct:** to build, make, or create something

**evidence:** clues that make you believe something is true  
**figure out:** to solve or understand something  
**investigate:** to try to find out what happened or what is true  
**massive:** something that is huge in size or quantity  
**prehistoric:** describes people or things that existed before information was written down  
**remains:** the parts of something that are left after most of it is gone  
**reveal:** to uncover something hidden  
**speculate:** to make guesses about something

### UNIT 11 LEARNING

**art:** the study of art, its history and its application  
**agriculture:** the study of farming  
**apply:** fill out a form to ask for something  
**biology:** the science and study of life  
**business:** the study of how companies work  
**campus:** an area of land with college or university buildings  
**chemistry:** the science of substances and how they react together  
**computer science:** the study computers and their use  
**course:** a series of lessons or lectures about a subject  
**deadline:** the last day to do something  
**economics:** the study of money  
**education:** the study of ways to teach and learn  
**engineering:** the study of how to build and make things  
**enroll:** join a school or a class  
**geology:** the science of earth and rocks  
**history:** the study of past events, including people and civilizations  
**law:** the study of how laws work  
**lecture:** a speech  
**literature:** the study of written works, such as novels, poems, and plays  
**major:** main subject that you are studying  
**mathematics:** the study of numbers, symbols, and forms that follow strict rules and laws  
**psychology:** the science of the mind  
**requirement:** something that you must have or do to be suitable for something  
**scholarship:** money given to good students to pay for their studies  
**semester:** half of a school year  
**social work:** the study of how to give help and advice to people with social problems  
**tuition:** money you pay to study

### UNIT 12 SPACE

**astronaut:** a person who goes into outer space  
**colonize:** the act of populating a new place such as the Moon  
**communication:** the act of passing on information  
**environment:** the air, land, water, and surroundings that people, plants, and animals live in  
**exploration:** the process of exploring; looking for new things  
**food:** something that can be eaten that nourishes  
**launch:** to send up into the air  
**manned:** with people on board  
**mission:** a special journey or task

**orbit:** a curved path in space around a planet, moon, or star  
**planet:** a large object such as Earth or Saturn that moves around a star  
**satellite:** a man-made object in space that moves around Earth  
**solar system:** the Sun, Earth, planets, moons, etc., that move around the Sun  
**spacecraft:** a vehicle that flies in space  
**space station:** a space craft that can support manned operations in space  
**transportation:** ways to move from one place to another  
**universe:** the whole of space and all the planets, stars, etc.  
**unmanned:** without people on board



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